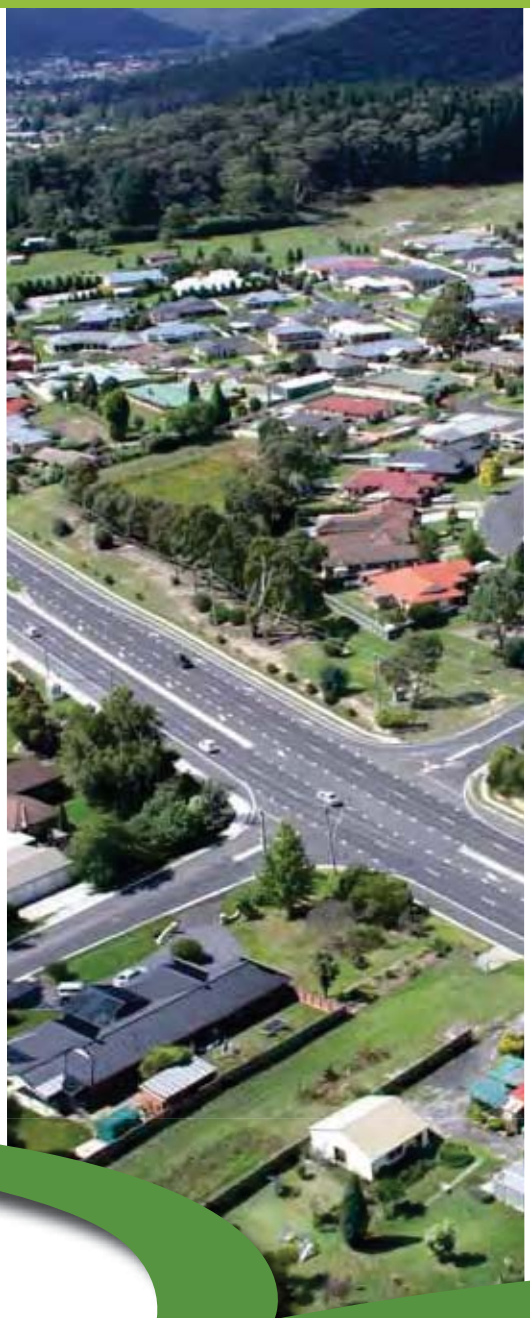
Lithgow

Land Use Strategy 2010 - 2030







Lithgow CITY COUNCIL

Surrounded by Nature · Steeped in History

Our Place ... Our Future

www.lithgow.nsw.gov.au

Lithgow City Council
PO Box 19
180 Mort Street
Lithgow NSW 2790
P: 02 6354 9999
F: 02 6351 4259
E: council@lithgow.nsw.gov.au
www.lithgow.nsw.gov.au

NSW GOVERNMENT
Department of Planning

A project partnered and jointly funded by the Planning Reform Fund Program (PRFP) of the Department of Planning.

Disclaimer

Any representation, statement, opinion or advice, expressed or implied, in this document is made in good faith, but on the basis that Lithgow City Council or its employees are not liable (whether by reason of negligence, lack of care or otherwise) to any person for any damage or loss whatsoever, which has occurred or may occur in relation to that person taking (as the case may be) action in respect of any representation, statement or advice referred to in the document.

LITHGOW LAND USE STRATEGY 2010-2030

CONTENTS

EXECUTIVE SUMMARY

PART 1 – STRATEGIC OVERVIEW

CHAPTER 1 BACKGROUND

CHAPTER 2 REGIONAL CONTEXT

CHAPTER 3 LEGISLATIVE AND POLICY FRAMEWORK

PART 2 – STRATEGIC DIRECTIONS AND PRINCIPLES

CHAPTER 4 GROWTH MANAGEMENT STRUCTURE

CHAPTER 5 SOCIAL AND ECONOMIC

CHAPTER 6 INFRASTRUCTURE

CHAPTER 7 ENVIRONMENTAL PROTECTION AND NATURAL RESOURCE MANAGEMENT

CHAPTER 8 CULTURAL AND BUILT HERITAGE MANAGEMENT

PART 3 – LAND USE DIRECTIONS AND PRINCIPLES

CHAPTER 9	RURAL LANDS
CHAPTER 9	RURAL LANDS SUPERCEDED
CHAPTER 10	LARGE LOT RESIDENTIAL
CHAPTER 11	RESIDENTIAL
CHAPTER 12	EMPLOYMENT LANDS (INDUSTRIAL, COMMERICAL AND TOURISM)
CHAPTER 13	OPEN SPACE

PART 4 – IMPLEMENTATION FRAMEWORK

CHAPTER 14	STRATEGY IMPLEMENTATION FRAMEWORK

APPENDICES

APPENDIX 1	SUPPLY AND DEMAND/CONSTRAINTS ANALYSIS
APPENDIX 2	COMMUNITY ID PROFILE
APPENDIX 3	HERITAGE LISTINGS

EXECUTIVE SUMMARY

This summary provides a simple overview of the key findings of the Lithgow Land Use Strategy 2010-2030. Please refer to the full document for more detail and for any references in this Summary.

INTRODUCTION

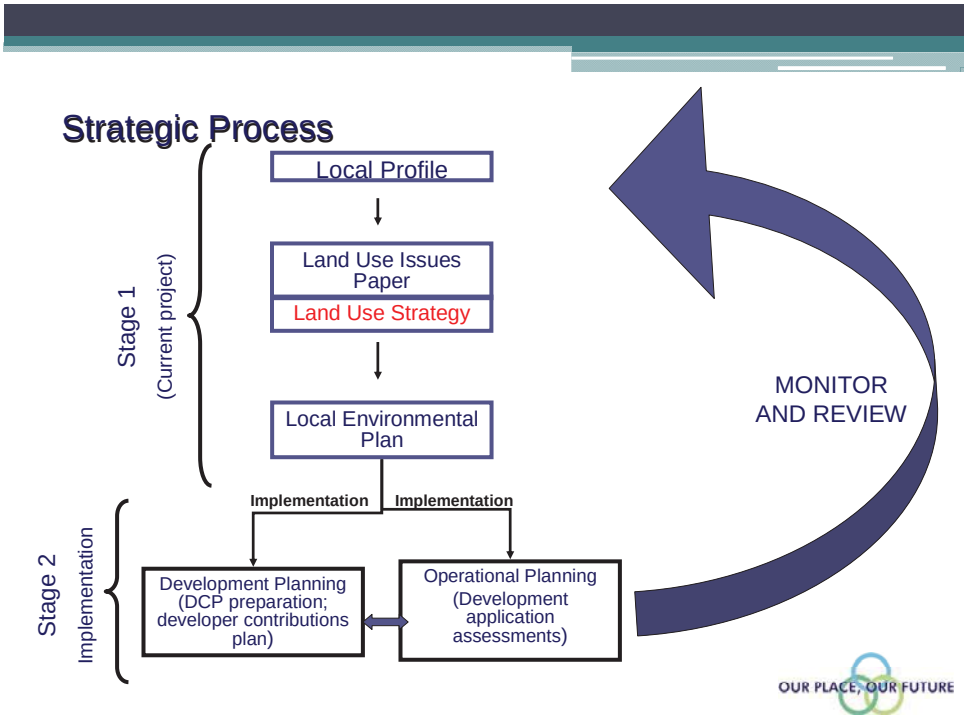
All local government authorities in NSW are required to prepare a new comprehensive local environmental plan (LEP) in accordance with the Standard Instrument Local Environmental Plan as introduced by State Government Planning Reforms in March 2006.

As part of the reforms, NSW Department of Planning provided funding through the Planning Reform Fund to assist with development of the comprehensive LEPs and any necessary strategic planning and studies required to inform the new LEPs. Lithgow City Council was successful in gaining considerable funding assistance under this fund and commenced the necessary strategic planning work in late 2005.

The Lithgow City Local Profile that provides a snapshot of the social, economic and environmental profile of Lithgow LGA was completed in 2007 and in part informed the 2007 Lithgow City Strategic Plan.

The Strategic Framework for the development of the new LEP is outlined in the Figure 1.

Figure 1. Strategic Process



This Strategy, being the Lithgow Land Use Strategy 2010-2030, is a combined Land Use Issues Paper and Strategy. It explores the issues that currently face the Lithgow LGA and recommends a new planning approach to address these issues. The Strategy will be implemented through the planning system, primarily through a new Local Environmental Plan and Development Control Plan, as well as Council's other, policy, regulatory and governance functions.

This Strategy is significant to Council and the community because it will set directions and policy for the LGA's settlement and land use management for the next 20 years. The Strategy will be reviewed throughout this period every five years to ensure that its findings and recommendations remain relevant, are in keeping with sound planning principle and are continuing to meet the needs and expectations of the community.

STRATEGY OVERVIEW

The strategy document is presented in four parts as follows:

PART 1 - STRATEGIC OVERVIEW

This part seeks to provide:

- The background to the development of the strategy and its aims and objectives;
- The regional context of the LGA and the external factors that impact upon its future planning
- The legislative and policy framework that underpins the development of the strategy and planning tools to implement its recommendations

PART 2 - STRATEGIC DIRECTION AND PRINCIPLES

This part seeks to identify strategic directions and actions as a response to consideration of issues that affect the following factors across the LGA:

- Growth Management and Structure
- Social and Economic
- Infrastructure
- Environmental Protection and Natural Resource Management
- Cultural and Built Heritage

PART 3 - LAND USE DIRECTIONS AND PRINCIPLES

This part seeks to identify strategic principles and actions as a response to consideration of the issues that affect the following land uses in the LGA:

- Rural
- Large Lot Residential
- Residential
- Employment Lands
- Open Space and Recreation

PART 4 - IMPLEMENTATION FRAMEWORK

This part seeks to bring together the findings of the Local Profile, Issues Analysis and recommendations of this Strategy for each of the planning precincts and their key settlement areas in the following way:

- A consolidated list of the recommended strategies and actions
- Summary of the key characteristics of each precinct with a SWOT analysis
- An implementation framework for each precinct presented spatially including:
    - A plan showing the existing zoning of each planning precinct
    - An LEP direction plan for each planning precinct and key settlement areas within that indicates the proposed land use changes and directions to be implemented and/or further considered in the 2012 LEP
    - A strategic directions plan that indicates the directions of the strategy that are deferred beyond the 2012 LEP. This plan represents the desired future land use and structure of each planning precinct that may be achieved in incremental stages over the 20 year life of the Strategy.

APPENDICES

The information presented in these appendices has been used to inform the identification of planning issues and the strategic responses to those issues.

Appendix 1 - Supply and Demand and Constraints Analysis

This appendix contains an analysis of supply and demand of all land use designations and the findings of a primary desktop constraints analysis.

All identified constrained lands have been removed from supply calculations to provide a more realistic supply scenario.

Appendix 2 - Community Profile by Precinct

This appendix contains a demographic profile of each planning precinct containing data taken from Council's on-line "Id community profile" considered most relevant to land use planning.

Appendix 3 - Heritage Listings

This appendix contains a consolidated list of proposed heritage items and conservation areas proposed to be listed in the 2012 LEP and a series of maps which spatially indicate the location of these conservation areas.

SUMMARY OF KEY LAND USE PLANNING ISSUES

The issues affecting land use planning within the LGA are identified and discussed within this Strategy. These key land use planning issues inform the development of the strategies and actions that will lead to the development of the new Local Environmental Plan and supporting Development Control Plan and policy framework. The key issues and their implications in each area as discussed in the Strategy are summarised in the Table1 below.

Table 1. Summary of Key Issues

DEMOGRAPHIC ISSUES	WHY IS IT AN ISSUE?
Static to Declining Population – Projected population stagnation to decline to 2031	• Population decline and/or stagnation impacts heavily upon the use and viability of commercial areas, community facilities, recreational activities and day to day services. This in turn impacts on the LGA's liveability, aesthetic appearance of the urban environment and overall sense of place. • Local Policy will need to respond to changes in the urban fabric as a result of diminished or changing demand to facilitate and encourage adaptable re-use of facilities and shop fronts. • A declining population also impacts the confidence with which Council can plan for future land allocation and infrastructure. Target growth rates and land release programs therefore need to be approached with caution to ensure that land and infrastructure are not provided too far in advance of demand, but can reasonably absorb shifts in demand over the life of this Strategy.
Smaller Household Sizes – LGA trend to smaller household size	• Smaller household sizes with fewer people living in each house will have an impact on the supply and demand of dwellings. As a result of the declining household sizes, it is likely that more dwellings will be required to house the population.
Increase in Ageing Population – LGA rapidly ageing and percentages of persons over 55 significantly increasing	Increased need for State and Local Policy to: • Facilitate inclusive balanced communities • Ensure people can shift to more suitable housing within their existing community • Provide for sufficient levels of adaptable and accessible housing • Provide for retirement villages • Provide and retain residential care facilities • Provide for sufficient levels of affordable housing • Provide for increased focus on planning and design to promote active ageing/walkability and range of open space and recreational facilities to meet the changing needs of the community • Provide for increased focus to Crime Prevention through Environmental Design (CPTED) • Provide for public transport options • Provide for commercial support services such as medical facilities, aids etc.
Increased Need for Diverse Housing – Current low percentage of medium and	• With the increase in lone person households and households with couples without children, there will be an increasing need for a more diverse housing structure to be provided. Currently there is a significant disproportion of

high density living opportunity	detached dwellings. Into the future this will impact upon housing affordability. • Land use planning policies will need to facilitate and encourage more medium and high density living opportunities close to core infrastructure and services. A detailed housing strategy is required to better inform the LGA's response to this issue.
Industry Profile – High proportion of employment in mining and retail	• The LGA is highly dependant upon mining and retail as the two highest employment providers. These employment sectors are inextricably linked as a reduction in mining employment significantly affects the LGA's disposable income and demand for retail services. • The diversification of the employment base will require the identification of land to cater for modern industrial land use in areas that enable clustering of like uses. • Local Policy will need to address the need for adaptive reuse of commercial areas when high vacancy rates occur to stabilise and strengthen the core retail precinct.
INFRASTRUCTURE ISSUES	**WHY IS IT AN ISSUE?**
Secure and reliable bulk water supply	• The provision of a bulk water supply is fundamentally critical to sustain any urban community. It also influences key investment decisions for prospective business and industry. • The LGA water supply is available through two sources, Famers Creek and Fish River Water Supply Scheme. Lithgow City Council is the authority for only the Farmers Creek supply. This creates issues surrounding water sharing, water allocations and pricing, agreements and responsibility for water quality and delivery of service. It also creates a disparity between service levels between Lithgow and the town centres of Portland and Wallerawang, villages and rural users. • The bulk water supply for the Lithgow LGA has been challenged in recent times through the effects of drought, a situation that may become more prevalent over time due to the vagaries of climate change. • In periods of sustained drought it would become necessary for Lithgow City Council to back supply water to the towns and villages through the Farmers Creek supply. This supply will not meet the peak daily demand of the existing serviced population base without extensive augmentation to the Clarence Water Transfer system. • Council along with its regional counterparts will need to investigate an alternative bulk water supply scheme, if the Lithgow and Oberon LGA's are to increase their population and industry base into the future.
Capacity of infrastructure head works to service new development	• All major Sewage Treatment Plants (STP) require augmentation to cater for future growth. The Lithgow STP upgrade is currently under construction and will provide for an additional 5,000 equivalent persons (EP) meaning that the potential growth scenarios for the existing urban zoned lands may be

	accommodated, however the future urban areas identified by this Strategy are beyond the capacity of this plant. • The Wallerawang STP upgrade has commenced and will provide an additional 1100 EP. Such will be sufficient to meet the demands of potential growth scenario of for the existing urban zoned lands; however the future urban areas identified by this Strategy may be beyond the capacity of this plant. • The Portland STP is currently at capacity and will not be upgraded prior to 2017. Growth in this town centre will be restricted to the capacity of the existing plant. Portland is not capable of absorbing any growth in real terms in the serviced areas until the STP is upgraded. This will require land allocation within this area to be restricted.
	• The Oakey Park Water Treatment Plant has a current operating capacity of 12ML per day. In order to totally remove reliance on the Fish River Water Supply Scheme and to supply water to all serviced areas of the LGA, this plant will require upgrading.
Aligning development to infrastructure provision	• Past practice in new release areas such as South Bowenfels of enabling developers to only provide infrastructure to connect development sites to services without due regard to the impact on the downstream trunk systems or key head works has led to a shortfall of infrastructure which now must be met by Council. • The timing of the provision of this infrastructure may lead to the development of some areas being delayed and continuing operating deficiencies for existing areas. • The lack of an adopted infrastructure strategy for South Bowenfels and the lack of a detailed development servicing plan may create a significant cost burden for Council and delays for further development in this area.
Dependence upon key state and regional road infrastructure	• Industry and business development is highly dependent upon a fast and efficient road network for freight movement and visitor traffic. Upgrades to the state and regional road networks are critical to the future growth potential of the LGA and diversification of its industry base. • Upgraded road links to the Sydney Basin will encourage further residential growth in the LGA as commuting time to employment and cultural /recreational facilities will be reduced, making the LGA a very attractive and affordable alternative to city living.
Provision and Maintenance of Local Road Network	• The current dispersed population particularly in the rural areas impacts upon Council's financial and physical resources to provide and maintain an effective local road network. • The demand being placed on Council's resources from rural areas are disproportionate to the rate base of these areas.
Waste Management	• All current land fill sites are at or nearing their end life capacity. Council is planning to develop a new centralised waste management facility at

	Blackmans Flat. • The effectiveness of a centralised facility will be challenged by the continued dispersed growth in rural living opportunities for the collection and appropriate disposal of waste. • Closure and rehabilitation of existing landfills and their future land use and compatibility with adjoining lands requires careful consideration.
ENVIRONMENTAL PROTECTION AND NATURAL RESOURCE ISSUES	WHY IS IT AN ISSUE?
Management of land within the Sydney Drinking Water Catchment	• A significant percentage (18.44%) of the LGA is within the Sydney Drinking Water Catchment Area. Therefore development in this area is subject to increased criteria for development to establish a neutral or beneficial effect upon water quality before such development can obtain development approval. • Impacts upon the strategic planning process include consideration of Strategic Land and Water Capability Assessments to determine land use zones, permissibility and density. Such consideration may limit or restrict development from areas where such uses are currently permissible.
Cumulative impact of on-site effluent disposal	• On-site effluent disposal has the ability to impact upon both surface water and ground water quality. Not all areas of the LGA are suitable for on-site effluent disposal. • Continued uncontrolled dispersed rural settlement places pressure on the land to effectively dispose of effluent and may lead to adverse environmental impact. • An audit and inspection of existing on-site systems has revealed a high percentage of systems are failing the required performance and operating standards. • Current minimum lot sizes for the disposal of effluent in the current unserviced village areas is not effective and will need to be increased in line with current best practice. • The Cullen Bullen village is currently experiencing adverse impacts from on-site effluent disposal systems.
Management of bushfire threat to settlement and areas of high biodiversity	• A large percentage of the LGA is bushfire prone land. Total avoidance of these areas for settlement is neither achievable nor practical. • The largest risk to increased bushfire threat is continued dispersed rural living. Fragmentation of rural lands within bush fire prone areas and intensification of development limits the ability of effective bushfire management. • A clustered planning approach and appropriate planning for high risk developments is required to minimise bush fire threat to the LGA.

Impact of flooding upon settlement areas	• Impact of flooding particularly along Farmers Creek in Lithgow will impact upon the planning of future land use in this area. • Current flood mitigation works will not alter the risk from rare flood events. • Council does not have a Floodplain Risk Management Plan to identify the different levels of planning for the area.
Loss or reduction of environmentally sensitive land, water and biodiversity resources	• A large percentage of the LGA has been identified as Environmentally Sensitive Areas. The largest threat to these areas is the continued increase of dispersed rural settlement. • Fragmentation of rural land for residential purposes increases the impact of land use conflict and limits the ability to achieve natural resource management outcomes.
Encroachment of development on the scenic quality of landscapes	• The largest threat to the scenic quality of landscapes within the LGA is from the inappropriate siting of rural and urban fringe dwellings. This development frequently interrupts the landscape and often is associated with vegetation loss and scaring due to clearing of building sites and access roads. • A future threat to landscape quality is the potential for increased alternative energy development such as wind and solar farms.
Management of contaminated lands	• Lithgow LGA has a strong industrial heritage that had the potential to contaminate lands. • Documentation of the history of these sites is not readily available and therefore cannot be effectively dealt with at the strategic planning level. This places additional burden on land developers to address this matter on a site by site basis. • Council does not currently have a contaminated lands policy or effective development control provisions to guide identification and assessment of potential contaminated lands. Council does rely solely on State Environmental Planning Policy 55 for management of contaminated lands.
HERITAGE ISSUES	**WHY IS IT AN ISSUE?**
Many items or places of heritage within the LGA remain unprotected by any statutory framework	• The 2000 Heritage Study recommended local listing of some 500-600 items. Only 96 items are currently listed in the Lithgow 1994 LEP. The identification of items in a community Heritage Study does not provide the necessary framework for managing the alteration, modification or demolition of these items through the force of law. • Without statutory protection Council and the community may be powerless to stop the diminishing or loss of heritage values and significance embodied in such items and places.
How best to manage a significant increase in listed heritage items	• The individual listing of up to 600 heritage items and places will significantly increase the resources required by both Council and the community to manage the future development of these items and properties in their

	vicinity. • Council will need to explore the use of conservation areas to more effectively manage heritage assessment.
Protection of Aboriginal Heritage	• Council does not have an Aboriginal Heritage Study to guide planning of future settlement and land use intensification away from sensitive areas. • This will defer consideration of these matters to the development assessment stage with greater potential for some matters to be missed, due to being unknown.
RURAL ISSUES	**WHY IS IT AN ISSUE?**
Unplanned dispersed settlement	• Past and current planning provisions have retained a range of provisions to enable the subdivision of rural land and the erection of a dwelling with limited to no consideration of natural and primary production resource management and protection. • What was initially intended to be an alternative to urban living has grown significantly in that the population now living in the urban areas has fallen from 95% in 2001 to 80% in 2006. Due to the unplanned and dispersed nature of this form of settlement growth, it has not led to the sustainability of rural villages. • Increased land fragmentation • Encroachment of development into more marginal lands without regard to the carrying capacity of the land. This places onus on the development assessment process to control impacts on a site-by-site basis and this has limited potential to address cumulative impact. • Increased potential for land use conflict leading to primary production lands being limited in their capacity to operate without restriction. • Increasing infrastructure and service costs particularly in relation to provision and maintenance of rural roads and garbage services, but also in social and governance services. • Loss of critical mass in urban areas to maintain and improve services and higher order infrastructure.
Increased risk of social isolation	• Increased risk of social isolation due to lack of community structure and the impacts of ageing of the population in rural areas.
Increased environmental footprint of development and impact upon environmentally sensitive lands and rural landscape.	• Reduced ability to achieve natural resource management objectives due to increased stakeholders with smaller parcels of land and different expectations. • Increased potential for negative impact upon natural resources such as water, soils, vegetation and biodiversity. • Increased threat of bushfire hazard. • Loss of rural landscape and rural character.
Land use conflict	• Proliferation of rural lifestyle development in primary production areas impacts upon the ability for these lands to maximise their potential in terms

impact on primary production resources (agricultural land, forestry, resource lands, mining, extractive industries) impact on environmental conservation	of the natural and primary resource. Specific examples of this conflict occurs in locations such as Blackmans Flat (impact on mining and power generating developments), Clarence (impact upon underground mining), Baal Bone Colliery (impact upon underground mining and surface works), Megalong and Kanimbla Valleys (impact on agricultural management). • Reduction in security of investment for both those seeking rural lifestyle and primary producers. • Rural lifestyle development introduces matters of land stewardship in relation to weed control, bush fire hazard reduction, introduction of domestic animals, maintenance of water quality and quantity and soil management. • Conflict occurs at the interface of DECCW and forestry lands and impedes the production and management regimes of these lands.
Fragmentation and conversion of primary production lands	• Conversion of lands from primary production inflates land values beyond primary production value, making it difficult for entry of rural producers and resource industries to buy in. • Land once converted in many cases will never revert back to primary production use. • Land parcel isolation. Rural land interspersed with rural lifestyle development is often cut off from other major land holdings making consolidation of land difficult for farm management.
LARGE LOT RESIDENTIAL ISSUES	**WHY IS IT AN ISSUE?**
A significant proportion (22.4%) of all development applications lodged between 1996 and 2009 were in clustered rural residential areas. In the years 1996-2001 the number of dwelling approvals in clustered rural residential areas exceeded approvals for the main urban areas.	• Areas of large lot residential development have grown in population size disproportionately to their role in an orderly settlement hierarchy and level of service provision. • Increasing infrastructure and service costs particularly in relation to provision and maintenance of rural roads and garbage services, but also in social and governance services. • Loss of critical mass in urban areas to maintain and improve services and higher order infrastructure. • Increased risk of social isolation due to lack of community structure and the impacts of ageing of the population in rural areas.
Potential for areas of clustered rural residential lands to grow in population beyond their capacity to provide services and facilities.	• Areas of large lot residential development have grown in population size disproportionately to their role in an orderly settlement hierarchy and level of service provision. This is particularly relevant to the Hartley area. • Community expectation and demand for services may not align with Council's ability or desire to provide services and facilities.
An apparent oversupply of clustered rural residential lands across LGA, based on current demand levels.	• The oversupply of land across the LGA will impede the effectiveness of any strategy to consolidate growth in urban areas. • Despite this supply level Council is still under pressure to release more lands for large lot residential development.

	• Some landowners of land currently zoned for this land use appear reluctant or unwilling to develop lands and therefore the market supply level may be different from the theoretical supply.
Land use conflict within clustered areas and at the interface with adjoining lands.	• The current zone and permitted land uses create an anomaly in expectation of amenity between residential and semi rural and therefore creates land use conflict. • Current development control provisions are ineffective
Potential cumulative impact upon water quality from on-site effluent disposal systems.	• Many of the on-site effluent disposal systems in these areas are failing to meet operational and performance standards. • Potential for these areas to grow in population beyond a level that can reasonably be serviced with on-site systems.
RESIDENTIAL ISSUES	**WHY IS IT AN ISSUE?**
Limitations of existing LEP	• The flexibility of the current LEP, instead of encouraging development opportunity has to some degree, stifled development as a result of an uncertain investment environment. • LEP does not provide a defined minimum lot size or density controls for differing residential form and types allowing market demand to dictate. • The range of permissible uses in the residential zone and other zones where residential development is permitted has created land use conflict. • The flexibility of the LEP is not supported by a detailed Development Control Plan.
Primary constraints impact on residential development opportunities	• The presence of natural and physical constraints defines the limits of the three urban centres and has led to a lateral expansion of these centres. • Primary constraints analysis may require some existing zoned areas to be back zoned or provide reduced density to avoid environmental impact. • The management of constrained areas will require more detailed development standards and provisions to be implemented through the LEP and/or DCP.
Defining and maintaining residential character and amenity	• The flexibility of the current LEP does not differentiate the desired character and amenity to be achieved in each residential neighbourhood. This creates conflict between new and existing development.
Housing choice and affordability	• The LGA has a high percentage of detached single dwellings (77.5%). This reduces the ability of the LGA to provide housing choice and affordability. • The LGA has an increase in lone person household and households with couples without children, indicative of an aging population, and therefore there will be an increasing need for more diverse housing structure to be provided.

	• A new planning approach will be required to encourage the development of a mix of housing types and forms.
Future provision of seniors' housing	• The rapidly ageing population will increase the need for varying forms of seniors' housing. • The planning system will need to respond positively to this form of development and should provide "go to areas" to encourage and facilitate development.
Potential for urban renewal and consolidation	• Despite the flexibility of the existing LEP, urban renewal and consolidation has not been considered a viable alternative to the development of new areas. This is due in part to the relative ease and cost of development in the new release areas. • As the existing housing stock ages and the demand for smaller housing increases there will be pressure on existing areas to accommodate higher density living opportunities and the potential for some areas to experience new development and change in character. • Planning for this scenario must be considered in the development of the new LEP and DCP.
Infrastructure and Service Provision	• The ability to service some of the existing zoned lands will require consideration of back zoning or reduction in density to ensure all future development can be adequately serviced. • Council currently does not have a development contributions plan or development servicing plan to ensure that the costs of servicing new development is equitably shared between developers and the existing community.
Managing supply and urban release	• The planning system should be able to regulate the supply of land to effectively manage the provision of infrastructure and create a positive living and investment environment. Both of these outcomes can be adversely affected by the provision of too little or too much residential land supply.
EMPLOYMENT LANDS ISSUES	**WHY IS IT AN ISSUE?**
Challenges of the Lithgow LGA demographic profile	• The demographic profile of a rapidly ageing population affects the LGA's ability to attract and retain business and industry investment as well as maintaining a well balanced and skilled workforce.
Limitations of the existing LEP	• The flexibility of the existing LEP in relation to employment related zones has created an uncertain investment environment and led to fragmentation of lands and land use conflict. • The LEP is not supported by a robust Development Control Plan
Lack of appropriate industrial lands	• There is currently an estimated 32.1ha of available industrial zoned land within the LGA. This represents a supply of 12.8 years based on an estimated demand level of 2.5ha per year.

	• Each of the existing industrial precincts is heavily constrained and their ability to provide for modern industrial development is limited. • Some of the areas zoned industrial have a higher and better land use capability. • The lack of suitable and serviced industrial land in a clustered estate format inhibits industry and business investment and diversification of the employment base of the LGA.
Land use conflict and ability of existing precincts to meet modern industrial needs	• Many of the existing precincts are located amongst and adjoining residential development. This restricts the ability of the lands to accommodate general industrial land use and does not provide ample areas for expansion. • The likelihood of land use conflict to severely impact upon the operational environment of industrial businesses is high and is a deterrent to large scale investment in these lands.
Catering for bulky goods retail	• The LGA does not have an established bulky goods retail area. The Main Street Commercial precinct cannot provide for this type of retail activity due to lack of access and loading areas and smaller floor spaces of existing business sites. • The establishment of a large out of centre bulky goods location under the current LEP zoning would have the ability to adversely impact upon the viability of the main CBD.
Fragmentation of the commercial centre	• The existing fragmentation of the commercial centre in Lithgow severely impacts upon the viability of the Main St CBD and will continue to do so if the out of centre Lithgow Valley Plaza and Pottery Plaza are able to expand without restriction.
Parking and accessibility	• The ability of Main St businesses to provide on-site car parking is minimal. The current practice of requiring on-site parking may stagnate redevelopment potential.
Planning and providing for tourism	• Council does not currently have a tourism strategy to inform the land use planning for this activity. • Tourism development if not appropriately located and planned may result in the loss of amenity and character of some areas.
OPEN SPACE AND RECREATIONAL ISSUES	**WHY IS IT AN ISSUE?**
Managing supply and demand of open space and recreational lands	• The LGA currently has an abundance of land within the open space network with reasonable distribution in the existing urban centres. Council does not have the ability to embellish and bring all this land into functional to meet desired service levels. • A rationalisation of the supply and demand of open space is necessary as quality of land is more important than quantity.

	• There is need to plan for the provision of new open space land in newly developing areas to ensure that it integrates and improves the open space network. • The lack of a development contributions plan that adequately identifies the need and type of open space required for new developments has led to the provision of inappropriate lands with little functional use.
Identifying and meeting changing community needs	• Open space planning needs to keep pace with and respond to the changing needs and of the community as a result of aging and other demographic indicators such as household size and income. • Trends for recreational activity also change over time and many structured sporting and recreational activities are experiencing a decline in participation rates in favour of adventure play and walking.
Managing accessibility and equity	• Open space planning needs to consider accessibility and ensure a reasonable spatial distribution within urban centres whilst providing for community meeting places in the outlying rural village and localities.
Providing a management framework	• Council relies heavily on the community to partner in the provision and maintenance of the open space network. • The lack of formal guidance in this area may lead to inequitable access to areas and facilities and disadvantage certain groups in the community.

SUMMARY OF KEY FINDINGS OF THE LAND USE STRATEGY

The key findings of the Draft Lithgow City Council Land Use Strategy 2010-2030 are summarised below. For further detail and discussion please refer to the main body of the document and Table 1 for detailed strategies and recommended actions.

- There is a need to revise down the ambitious target annual growth rate adopted in the 2007 Strategic Plan from 1-2% to 0.5% -1% to ensure growth occurs in a sustainable manner and does not place an undue burden on the existing community to meet the costs associated with growth.
- A defined settlement hierarchy is required to establish the foundation for future planning and governance decisions. This hierarchy supported by the implementation of sound growth management and sustainability principles will facilitate sound planning outcomes across all four sustainability considerations (social, economic, environmental and governance).
- There is a need to recognise the size and structure of the towns of Portland and Wallerawang and provide appropriate land use planning and zoning in these areas commensurate with their role in the settlement hierarchy.
- There are sufficient residential, commercial and open space lands within the LGA to cater for estimated demand over the life of the Strategy. Some modification of these areas is required to reflect the findings of the primary constraints and infrastructure analysis and strategic planning studies such as the 2010 Business and Retail Strategy and Open Space and Recreational Needs Study.

- There is a need to consolidate the commercial centre of Lithgow and differentiate between the Main St commercial precinct and the out of centre Plaza development to maintain the future viability of the Main St.
- There is a lack of suitable industrial zoned lands in the LGA to accommodate an increase in modern industrial land uses. The Strategy recommends the zoning of two new significant sites being the Minerals Processing Park and land to the north of Reserve Road Marrangaroo. The Strategy also identifies further strategic industrial parcels for consideration beyond the 2012 LEP.
- The Marrangaroo Study Area remains the preferred area for future urban growth opportunities for the LGA as identified in the adopted Marrangaroo Structure Plan. Zoning of this area has been recommended to be deferred until at least the 2016 LEP review.
- The trend towards rural living is unsustainable and should be resisted. This will require a new rural planning approach designed to limit further rural living opportunities and to assist with the protection of the natural and primary resource base of the LGA.
- There is sufficient supply of lands to cater for large lot residential land use within current land zonings without the need to consider rezoning of rural lands for this purpose in the 2012 LEP.
- There is a need to statutorily protect the LGA's identified items and places of environmental heritage in the 2012 LEP through a combination of individual listing and conservation area controls.

STRATEGY RECOMMENDATIONS

Table 1. Recommendations of the Lithgow Land Use Strategy 2010-2030

RECOMMENDATIONS OF THE LITHGOW LAND USE STRATEGY 2010-2030 GROWTH MANAGEMENT

Strategy	Action	Responsibility	Timeframe
Plan and manage growth in a sustainable manner for the future benefit of the Lithgow LGA community	• Consider and apply the principles of Sustainable Development to all land use planning decisions • Adopt the growth management and sustainability principles outlined in Chapter 4 and apply to underpin all future land use planning decisions • Adopt the planning principles outlined in this Strategy and apply to all future land use planning decisions • Adopt a target population growth rate of between 0.5% and 1%	Council	Ongoing
Identify a hierarchy of settlement for the LGA	• Adopt and apply the settlement hierarchy as detailed in Table and Figure 3 Chapter 4 and outlined below: Large Town/Regional Centres Bathurst/Penrith Small Town/LGA District Centre Lithgow Small Towns Wallerawang and Portland Villages Cullen Bullen, Capertee, Rydal Hamlets Tarana, Hartley, Clarence, Dargan, Glen Davis, Glen Alice, Ben Bullen, Bogee, Hampton, Sodwalls, Lowther, Good Forest, Hartley Vale Isolated Dwellings	Council and Government Agencies	Ongoing

Strategy	Action	Responsibility	Timeframe
	Wider Rural Areas of North and South precincts • Adopt and apply a clustered planning approach to future growth in the Lithgow LGA aligned with the adopted settlement hierarchy as indicated in Table 5, Figure 4 Chapter 4		
Recognise and strengthen the role of each town, village, hamlet and rural area commensurate with its place in the adopted settlement hierarchy.	• Control the growth of settlements and rural areas by using zoning and a range of rural minimum lot sizes manage current unsustainable rural planning provisions. • Minimise further rural lifestyle development opportunities outside of the defined 15km maximum outer limit, layer 3 figure 4 as outlined in Chapter 4. • Identify future urban growth areas within the defined urban core as indicated in Figure 4 Chapter 4. • Prepare a suite of land use zones for the towns of Wallerawang and Portland	Council	Short (2012 LEP) Short (2012 LEP) and ongoing Long Short (2012 LEP)
Provide for the economic growth of the LGA	• Implement the recommendations of the 2010-2014 Economic Development Strategy • Implement the recommendations of the 2010 Business and Retail Strategy • Protect the primary and natural resources upon which the LGA economy relies	Council, Government Agencies and Community Council, Government Agencies	Ongoing
Provide for the social and cultural growth of the LGA	• Provide for an appropriate mix of housing opportunities and form in both urban and rural settings • Provide sufficient land allocation for population growth over time • Prepare and implement a LGA Housing Strategy • Prepare and implement a LGA Ageing Strategy	Council Council and Government Agencies Council and Government Agencies	Short (2012 LEP) Medium and ongoing Short

Strategy	Action	Responsibility	Timeframe
	• Integrate the findings of the Community Strategic Plan 2021 into land use planning documents and decisions. • Implement the adopted Lithgow Cultural Precincts Study	Council Council/Government Agencies and Community	Medium and ongoing Ongoing
Ensure the Lithgow Land Use Strategy remains relevant over time and gives consideration to the changing needs of the community	• Conduct 5 yearly reviews of the document, following receipt of Census Population and Housing data	Council	Ongoing
Ensure that land is released in an effective and efficient manner	• Prepare a land monitor to track demand and take-up of all land use zones • Prepare a land release program to guide the future release of urban lands	Council and Government Agencies	Short and ongoing Medium

RECOMMENDATIONS OF THE LITHGOW LAND USE STRATEGY 2010-2030 LAND USE PLANNING

Strategy	Action	Responsibility	Timeframe
Develop a new suite of land use zones to implement the planning framework of the Lithgow Land Use Strategy 2010-2030	• Prepare a Standard Instrument LEP with a suite of land use zones to formalise the LEP directions identified in Figures 3, 4, 5, 6, 13, 14, 19, 20, 24, 27, 30, 33, 36, 39 and 42 in Chapter 14 and outlined in the summary of actions in all Chapters of Part 3 Lithgow Land Use Strategy 2010-2030	Council and Department of Planning (DoP)	Short (2012) LEP
Ensure the growth of rural lifestyle development in the primary rural zone is minimised and remains secondary to urban residential growth	• Introduce a variable minimum lot size in the new LEP for the erection of a dwelling in the primary rural zone of 40ha and 100ha as indicated in Figure 6 Chapter 9. • Retain through a savings provision all existing dwelling opportunities for all lots less than 40ha defined as existing holdings and all allotments created by an approved subdivision under any previous planning instrument. • Introduce a new existing holding savings clause in the 2012 LEP to retain dwelling opportunities in the primary rural zone for holdings between 40ha and 100ha as outlined in Option 1 Chapter 9.	Council and DoP	Short (2012 LEP)

Strategy	Action	Responsibility	Timeframe
	NOTE: These recommendations were NOT supported by Council. **Council has resolved (Min No 11-450) to: *ADOPT OPTION 3 "STATUS QUO" for rural planning directions for Council's Draft Land Use Strategy".*** **This means that the existing minimum lot sizes of 40ha in the existing 1(a) zoned areas and 100ha in the existing 1(e) zoned areas will be retained in the new LEP along with all other provisions governing the erection of a dwelling in rural areas.**		
Ensure that sufficient land is identified for future growth opportunity beyond the 2012 LEP	• Identify the Marrangaroo Study Area as the LGA's next urban release area and defer zoning until at least the 2016 LEP review. Development of this area to occur generally in accordance with the adopted Marrangaroo Structure Plan. • Carry out the further investigations required to inform the future development of the Marrangaroo Study Area as identified in Chapter 11. • Identify the existing Rural (Future Urban 1(d)) lands surrounding Lithgow, Wallerawang and Portland as strategic urban lands and protect from inappropriate fragmentation or land use that would diminish their future urban capability • Identify lands shown in Figure 9 and 15 in Chapter 14 as strategic industrial land and protect from inappropriate fragmentation and development that would diminish their desired future use • Identify the site on the corner of Great Western Highway and Castlereagh Highway and an area at Blackmans Flat as indicated in Figure 9 and 15 in Chapter 14 as strategic employment lands	Council and DoP	Long

Strategy	Action	Responsibility	Timeframe
	• Identify the corridor along the eastern side of the Great Western Highway as a strategic site for future use as an enterprise corridor • Identify opportunity areas for urban and rural lifestyle development to align with the adopted Settlement Hierarchy as indicated in Figure 5 in Chapter 4.		
Minimise the potential for land use conflict to impact upon the social, economic and environmental quality of the LGA	• Limit living opportunities in the primary production zone • Limit the range of permissible uses within the primary rural zone to those compatible with sustaining the natural primary resource base • Locate large lot residential lands so as to minimise land use conflict at the interface with the primary rural or environmental land use • Allow for a range of compatible uses in each zone consistent with its primary purpose • Prepare land use controls to provide effective buffers from potential incompatible uses including those that hold Environment Protection licences within zones and at the interface with adjoining zones	Council and DoP	Short (2012 LEP)
Recognise and protect the biodiversity resources of the LGA	• Consider applying environmental management/conservation zoning or overlays to the significant environmentally sensitive areas of the LGA as identified in the ESA mapping to control land use • Develop assessment criteria to consider the impact of development upon environmentally sensitive areas and the LGA's base biodiversity	Council and DoP	Short (2012 LEP)
Ensure that development upon flood prone areas recognise the level of flood hazard	• Limit new development on flood liable lands so that it does not increase the existing flood risk	Council and Government Agencies	Short (2012 LEP)

Strategy	Action	Responsibility	Timeframe
	• Develop appropriate LEP and DCP land use control provisions to guide development upon flood liable lands • Prepare a floodplain risk management plan		Medium
Ensure that development takes into consideration the impact upon water quality	• Apply the Strategic Land and Water Capability Assessment to determine land use zones, permissibility and land use controls within the Sydney Drinking Water Catchment • Introduce the following minimum lot sizes for the erection of a dwelling upon unserviced lands: o 2ha – Large lot residential o 4000sq m – Village/Urban • Develop appropriate DCP provisions to minimise the impact of development upon water quality	Council and SCA	Short (2012 LEP)
Ensure that there is adequate provision for tourist facilities	• Prepare and implement a Tourist Strategy for the Lithgow LGA • Limit the development of intensive tourism accommodation such as hotel and motel accommodation and serviced apartments to urban areas where such is not directly related to eco-tourism • Identify area of agglomeration of tourist development or potential for such development and consider introducing a tourist zone in 2012 LEP and/or specific controls in 2012 DCP. • Ensure that the rural villages provide a range of tourism support land uses such as accommodation, restaurants/cafes/service stations etc that does not detract from the rural character and amenity of the area	Council Council and DoP	Short Short (2012 LEP) & 2012 DCP
Ensure that the LGA has an efficient and effective open space network providing for both passive and active recreational activity	• Implement the adopted recommendations of the 2010 Open Space and Recreational Needs Study • Apply appropriate land use zones to identify, protect and appropriately manage the LGA's open space network having	Council and Community	Short (2012 LEP)

Strategy	Action	Responsibility	Timeframe
	regard to its primary classification/function. • Reclassify identified public lands identified as surplus to the open space network • Prepare and overarching Community Lands Plan of Management for all public community lands within the open space network including recreational parks.		Short
Prepare detailed management guidelines for land use within the LGA	• Prepare a Development Control Plan to support the LEP through the provision of appropriate land use management guidelines and best practice • Adopt and implement all key planning actions identified in the chapters of Part 2 and 3 of this Strategy	Council Council and Government Agencies	Short (2012 DCP) Ongoing
Ensure that the LEP and DCP remain relevant over time and meet changing community needs	• Conduct a five yearly review of the LEP and three yearly review of the DCP	Council	Medium and Ongoing

RECOMMENDATIONS OF THE LITHGOW LAND USE STRATEGY 2010-2030 INFRASTRUCTURE PROVISION

Strategy	Action	Responsibility	Timeframe
Ensure the LGA is provided with essential infrastructure	• Continue to investigate a reliable and secure bulk water supply for the Lithgow LGA to reduce dependency on the Fish River Water Supply Scheme • Identify and protect the catchment of Farmers Creek Dam from land degradation and inappropriate land use. • Continue to lobby State and Federal Governments for the upgrade of the Great Western Highway and development of the Bells Line Expressway • Continue to work closely with Sydney West Area Health Service to retain and attract medical services and facilities	Council and Government Agencies	Short and ongoing Short (2012 LEP) Ongoing

Strategy	Action	Responsibility	Timeframe
Align future growth and development with the provision of both social and physical infrastructure	• Ensure development does not occur at a rate, or within locations that would be to the detriment of the existing community	Council	Ongoing
	• Prepare and implement a Land Monitor to review the take-up of urban areas against infrastructure capacity	Council	Short and ongoing
	• Prepare an servicing/infrastructure strategy for the Marrangaroo Study Area and Minerals Processing Park	Council	Short
	• Pull back the supply of urban lands within the town of Portland to align with the capacity of the Sewage Treatment Plant	Council	Short (2012 LEP)
	• Stagger the release of subdivision certificates within the South Bowenfels Study Area to the provision of water and sewer infrastructure augmentation works	Council	Short to Medium
	• Prepare a Development Servicing Plan for the provision of water, sewer and stormwater infrastructure for the LGA	Council	Short
	• Prepare a Development Contributions Plan that includes provision of community facilities, urban and rural roads, pedestrian and cycling transport infrastructure	Council	Short to Medium
	• Prepare a LGA transport strategy to consider existing and future transport needs including, regional and local roads, pedestrian and cycling and public transport needs		
Ensure that all development is adequately serviced with water and effluent disposal	• Ensure all new urban development within Layers A and B of the Settlement Hierarchy are connected to reticulated water and sewer	Council	Ongoing
	• Develop appropriate policies and development standards to regulate the provision of adequate on- site provision of water and effluent disposal	Council	Short (2012 LEP and DCP)
Limit development in the primary rural zones to areas with adequate road access	• Prepare a road hierarchy to support the adopted LGA Settlement Hierarchy	Council	Short

Strategy	Action	Responsibility	Timeframe
	• Ensure that there are adequate levels of access to the villages and rural localities commensurate with their role in the settlement hierarchy		Ongoing
Consider the environmental impacts of infrastructure provision	• Implement a land use separation distance (buffer) from all sewage treatment plants, sewage pumping stations, water treatment plants, water reservoirs and landfill sites • Continue to prepare the 2010 Waste Management Strategy to transition to a centralised waste disposal facility at Blackmans Flat	Council	Short (2012 LEP) Short

RECOMMENDATIONS OF THE LITHGOW LAND USE STRATEGY 2010-2030 ENVIRONMENTAL PROTECTION AND NATURAL RESOURCE MANAGEMENT

Strategy	Action	Responsibility	Timeframe
Recognise and protect the biodiversity values of the LGA	• Direct settlement and rural living opportunities away from identified environmentally sensitive areas • Consider applying environmental management/conservation zoning or overlays to the significant environmentally sensitive areas of the LGA as identified in the ESA mapping to control land use • Limit land use permissibility in areas of environmental sensitivity to minimise loss or reduction in value • Apply the appropriate environmental conservation zone to all National Parks, State Conservation Parks and Nature Reserves within the LGA • Prepare a biodiversity strategy for areas identified by Environmentally Sensitive Areas mapping as moderate to high biodiversity	Council and DoP Council/Government Agencies in partnership with the community	Short (2012 LEP) Medium to Long as resources permit Ongoing

Strategy	Action	Responsibility	Timeframe
	• Implement the actions of the relevant Recovery Actions Plans that apply within the LGA that list Lithgow City Council as the responsible body		
Provide appropriate resources to increase awareness and involvement in identifying, protecting and enhancing biodiversity	• Prepare fact sheets identifying the LGA's biodiversity to be included in development application kits • Prepare development control provisions to assist the community to prepare Assessments of Significance as required by the Threatened Species Conservation Management Act	Council and Government Agencies	Short and ongoing Short (2012 DCP)
Ensure development contributes to achieving the water quality and river flow objectives of the relevant catchment management authorities	• Ensure new development is located so it does not have a detrimental impact upon nearby watercourses and incorporates measures to protect the riparian areas • All development is to utilise best practice for soil and water management to minimise impact both on and off the development site • Development within the Sydney Drinking Water Catchment is to achieve a neutral or beneficial effect on water quality • Ensure domestic and other forms of effluent disposal does not have a adverse impact upon water quality and is in accordance with the NSW Environment and Health Protection Guidelines for On- site Sewage Management for Single Households	Council and Government Agencies	Short (2012 LEP and DCP)
Ensure bush fire risk is considered in all land use planning decisions	• Limit the intensification of settlement and rural living opportunities in bush fire prone areas • Ensure that all future development adheres to the principles and requirements of Planning for Bushfire legislation • Ensure the community is aware of the bushfire risk of the LGA • Provide information on the Emergency Services Disaster Management and Response Plan	Council Council, Rural Fires Service Council	Short (2012 LEP) Ongoing Ongoing

Strategy	Action	Responsibility	Timeframe
Identify the flooding of land as a constraint to future development	• Continue to identify flood liable land as the 1% flood level identified in the Kinhill Flood Study 1991 • Develop a flood policy and development control provisions to guide future development upon flood liable lands • Ensure that localised flooding is taken into account when assessing DA's on sites affected by watercourses or have access over watercourses • Prepare a flood plain risk management plan to accord with the 2005 Floodplain Development Manual and NSW Flood Prone Land Policy and modify land use controls accordingly • Provide information on the Emergency Service Disaster Management and Response Plan	Council Council/Government Agencies	Ongoing Short (2012 LEP and DCP) Short to Medium as determined by progress of current flood mitigation works and resources
Avoid inappropriate development on areas of land contamination	• Manage the identification and development of contaminated land in accordance with the principles and requirements of State Environmental Planning Policy 55 Managing Land Contamination • Prepare a register of known contaminated sites and sites that are potentially contaminated due to past land use	Council and Government Agencies Council and DECC	Ongoing Ongoing
Ensure development has a minimal impact on the natural and modified scenic landscape of the Lithgow LGA	• Incorporate the preservation of landscape as an objective of land use zones and controls • Develop development control provisions to guide the siting and design of development and/or buildings on the rural landscape and interface with the urban centres • Undertake a landscape assessment study to identify the scenic protection areas and landscape values within the LGA • Ensure that all development that may have a significant impact on the landscape quality and values prepares a detailed cultural landscape assessment as part of the Statement of Environmental Effects	Council Council Council and proponents	Short (2012 LEP and DCP) Short to Medium as resources permit Ongoing

RECOMMENDATIONS OF THE LITHGOW LAND USE STRATEGY 2010-2030 HERITAGE PROTECTION AND MANAGEMENT

Strategy	Action	Responsibility	Timeframe
Ensure that items of heritage significance are identified and protected	• Implement the recommendations of the City of Lithgow Heritage Study (1996-2000) except as modified by the 2010 Heritage DCP Study • Implement the recommendations of the 2010 Heritage DCP Study • Provide planning controls to list items of individual heritage significance and a number of small heritage conservation areas as identified by the two aforementioned studies • Provide detailed development guidelines within a Development Control Plan to facilitate heritage management and development assessment	Council	Short (2012 LEP and DCP)
Identify and protect cultural landscapes	• Undertake a cultural landscape assessment study of the LGA	Council	Short to Medium as resources permit
Provide incentives to protect heritage values	• Continue to provide a Heritage Advisory Service and Local Heritage Fund	Council and DoP	Ongoing
Identify and protect the Aboriginal Heritage Significance of Lithgow LGA	• Undertake an Aboriginal Heritage Study and implement recommendations • Continue to identify items of Aboriginal Heritage significance through the use of the Aboriginal Heritage Information Management System and consultation with the local aboriginal groups as determined by Council's Aboriginal Consultation Policy	Council and DECC	Short to Medium as resources permit Ongoing
Provide appropriate resources to increase awareness and involvement in identifying, protecting and enhancing heritage values in the LGA	• Establish a Local Heritage Committee • Prepare fact sheets and handouts for community and interested groups • Promote local heritage through cultural tourism	Council in partnership with the community	Ongoing

CHAPTER 1 BACKGROUND

The Lithgow Local Government Area (LGA) was proclaimed on 26 May 2004 and incorporated parts of the former Rylstone and Evans Shires. The LGA covers an area of approximately 4,551 square kilometres.

As a result of the local government amalgamations the LGA is governed by two environmental planning instruments, both of which were gazetted in the early 1990s.

This Strategy represents the first strategic review of these instruments and land use planning in general since the early 1990s.

INTRODUCTION

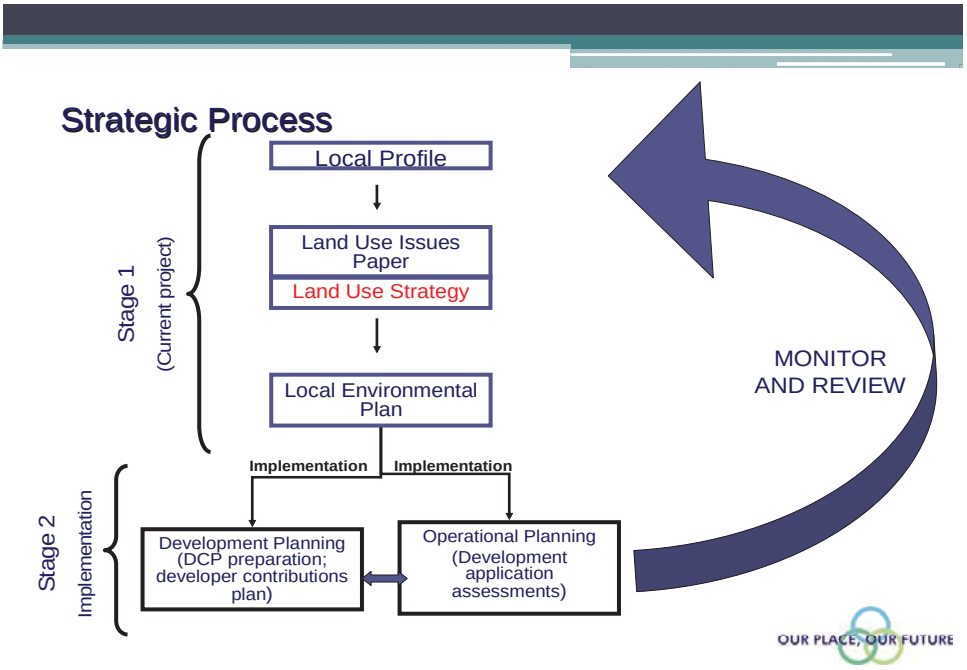
All local government authorities in NSW are required to prepare a new comprehensive local environmental plan (LEP) in accordance with the Standard Instrument Local Environmental Plan as introduced by State Government Planning Reforms in March 2006.

As part of the reforms, NSW Department of Planning provided funding through the Planning Reform Fund to assist with development of the comprehensive LEPs and any necessary strategic planning and studies required to inform the new LEPs. Lithgow City Council was successful in gaining considerable funding assistance under this fund and commenced the necessary strategic planning work in late 2005.

The Lithgow City Local Profile that provides a snapshot of the social, economic and environmental profile of Lithgow LGA was completed in 2007 and in part informed the 2007 Lithgow City Strategic Plan.

The Strategic Framework for the development of the new LEP is outlined in the Figure 1

Figure 1. Strategic Process



This Strategy, being the Lithgow Land Use Strategy 2010-2030, is a combined Land Use Issues Paper and Strategy. It explores the issues that currently face the Lithgow LGA and recommends a new planning approach to address these issues. The Strategy will be implemented through the planning system, primarily through a new Local Environmental Plan and Development Control Plan, as well as Council's other policy, regulatory and governance functions.

This Strategy is significant to Council and the community because it will set directions for the LGA's settlement and land use management for the next 20 years.

COMMUNITY VISION

The following overarching vision was developed in collaboration with the community and adopted by Council in October 2006:

"A centre of regional excellence that:

- *Encourages community growth and development*
- *Contributes to the effective and efficient management of the environment, community and economy for present and future generations"*

The following vision statements were developed to support the overarching vision statement:

Community	We retain, respect and strengthen both our overall sense of community, and the unique linked communities of groups, rural areas, villages and towns that make up the Lithgow LGA.
Transport	Providing a choice of effective public and private transport options for those who live, work and visit our community.
Employment	Developing and embracing diverse job opportunities for all ages and abilities.
Heritage	Celebrating, protecting and sustaining our unique industrial and natural heritage, its cultural landscapes and its built heritage.
Education	Progressing to a "learning city of excellence" with a broad range of formal and non-formal education services.

Health	Creating a healthy community providing opportunities and facilities for a healthy lifestyle.
Environment	Balancing, protecting and enhancing our diverse environmental elements, both natural and built, for the enjoyment and support of both current and future generations.
Arts and Culture	Supporting, celebrating and expanding a diversity of cultural and creative adventures that explore and discover the richness in our society.
Youth	Providing suitable entertainment and recreational facilities; education and employment opportunities and lifestyle choices for our valuable community of young people.
Growth	Providing for sustainable and planned growth, while enhancing the existing rural and village identity.

Source: Lithgow City Council Strategic Plan 2007

These visions underpin the recommended strategies and actions presented in this Strategy.

AIMS AND OBJECTIVES OF THE LAND USE STRATEGY

The aims and objectives of the Land Use Strategy include:

- A thorough consultative process to incorporate both community and government participation and involvement in the development of the Strategy in accordance with an agreed Consultation Program.
- Consideration of additional residential land supply and initiatives to satisfy the projected demand and its demographic profile.
- Consideration of additional commercial and industrial land supply and initiatives to reconcile the changing character of existing areas and specific actions or responses to encourage economic development in a sustainable manner.
- Consideration of a land supply to accommodate the infrastructure and institutional needs of the projected population.
- Consideration of the management of existing and future rural settlement that will accord with the rural planning principles of Part 2 & 3 of State Environmental Planning Policy (Rural Lands) 2008.
- Determination of a single or range of minimum lot sizes for subdivision of rural land for commercial agriculture with an attached dwelling entitlement that will accord with the rural planning principles of Part 2 & 3 of State Environmental Planning Policy (Rural Lands) 2008.
- Consideration of the protection of land used for all forms of primary production (agriculture, forestry, mining, extractive industries, wind energy generation etc).
- Consideration of the future management of environmentally sensitive lands and the protection of natural resources in both the rural and urban context.

- Consideration of the recreational land supply (both passive and active) to meet the needs of the projected population.
- Consideration and recommendations of the individual rezoning requests received by Council.
- Justification in broad strategic terms, using best practice, for any proposal to initiate land use change.

STRATEGY FORMAT

The strategy document is presented in four parts as follows:

PART 1 STRATEGIC OVERVIEW

This part seeks to provide:

- The background to the development of the strategy and its aims and objectives;
- The regional context of the LGA and the external factors that impact upon its future planning
- The legislative and policy framework that underpins the development of the strategy and planning tools to implement its recommendations

PART 2 STRATEGIC DIRECTION AND PRINCIPLES

This part seeks to identify strategic directions and actions as a response to consideration of issues that affect the following factors across the LGA:

- Growth Management and Structure
- Social and Economic
- Infrastructure
- Environmental Protection and Natural Resource Management
- Cultural and Built Heritage

PART 3 LAND USE DIRECTIONS AND PRINCIPLES

This part seeks to identify strategic principles and actions as a response to consideration of the issues that affect the following land uses in the LGA:

- Rural
- Large Lot Residential
- Residential
- Employment Lands
- Open Space and Recreation

PART 4 IMPLEMENTATION FRAMEWORK

This part seeks to bring together the findings of the Local Profile, Issues Analysis and recommendations of this Strategy for each of the planning precincts and their key settlement areas in the following way:

- A consolidated list of the recommended strategies and actions.
- Summary of the key characteristics of each precinct with a SWOT analysis.
- An implementation framework for each precinct presented spatially including.
- A plan showing the existing zoning of each planning precinct.
- An LEP direction plan for each planning precinct and key settlement areas within that indicates the proposed land use changes and directions to be implemented and/or further considered in the 2012 LEP.
- A strategic directions plan that indicates the directions of the strategy that are deferred beyond the 2012 LEP. This plan represents the desired future land use and structure of each planning precinct that may be achieved in incremental stages over the 20 year life of the Strategy.

APPENDICES

Appendix 1: Supply and Demand and Constraints Analysis

This appendix contains an analysis of supply and demand of all land use designations and the findings of a primary desktop constraints analysis.

All identified constrained lands have been removed from supply calculations to provide a more realistic supply scenario.

Appendix 2: Community Profile by Precinct

This appendix contains a demographic profile of each planning precinct containing data taken from Council's on-line Id community profile considered most relevant to land use planning.

Appendix 3: Heritage Listings

This appendix contains a consolidated list of proposed heritage items and conservation areas proposed to be listed in the 2012 LEP and a series of maps which spatially indicate the location of these conservation areas.

CONSULTATION

PUBLIC EXHIBITION PROCESS

The Draft Lithgow Land Use Strategy was placed on continuous exhibition from the 5th May 2011 until the 31st July, 2011.

In this period Council undertook an extensive public exhibition process and community and government authority consultation program as outlined below:

Table 1. Summary of Community and Government Authority Engagement Program

OPEN HOUSE SESSIONS		
Location	Date Held	Number of attendees
Lithgow	16 May 2011	9
Rydal	17 May 2011	27
Portland	18 May 2011	15
Capertee	19 May 2011	26
Lithgow - Valley Plaza - Fri	20 May 2011	28
Lithgow - Valley Plaza - Sat	21 May 2011	15
Wallerawang	24 May 2011	9
Lithgow - Evening	25 May 2011	8
Hartley	26 May 2011	20
TOTAL		157
*In addition to these sessions Council officers received a large number of phone and counter enquiries as well as meeting individually with many members of the public.		
STAKEHOLDER MEETINGS		
Location	Date Held	Number Invitations/Number of Attendees
Reserve Road Marrangaroo	6 June 2011	36/15
Real Estate Agents	7 June 2011	13/5

GOVERNMENT AUTHORITY FORUM/MEETINGS		
Location	Date Held	Number of Invitations/ Number of Attendees
Lithgow	27 May 2011	52/13
Dubbo (DoP and EOH)	23 August 2011	4/5
NOTIFICATION LETTERS		
To	Date Sent	Number
Government Authority/Agencies	2 May 2011	52
Persons who have registered an interest in process	3 May 2011	337
Progress Associations	3 May 2011	15
All Rural Ratepayers (as a response to community)	22 June 2011	2094
RESIDENT FEEDBACK REGISTER		
To	Date Sent	Number Sent/ Number Returned
Members of the Resident Feedback Register	29 April 2011	199/26

SUBMISSIONS RECEIVED

Council received an unprecedented number of submissions. Written submissions in the form of letters and emails were received as well as completed submission/feedback forms.

The table below summarises the number of written submissions received and their form:

Table 2 Summary of written submissions

FORM	NUMBER RECEIVED
Individual Letter/Email	332
Individual Public Submission Form	130
Business on behalf of Individual/s	33
Government Authority/Agencies	17
Anonymous	15
TOTAL	527

*Note: A small number of individuals submitted more than one submission. The total above reflects all submissions lodged and not the number of persons lodging submissions.

All written submissions received were placed on Council's website for public viewing with private information or information of a commercial in confidence nature removed.

The number of submissions received reflects not only the level of interest and concern within the community but also the relative success of Council's consultation program in engaging with the wider community and encouraging debate on the critical issue of local planning policy.

The overwhelming majority of submissions received were in relation to the proposed changes to rural land policy within the Local Government Area.

A detailed analysis of the 527 submissions received has been undertaken. The key themes and issues have been identified and these are commented upon in the following tables.

The key issue areas of the submissions received are summarised below along with a relevant response:

GENERAL ISSUES

Key Issue – What the submissions have said	Response
Consultation Program	
• Insufficient time to comment	The initial public exhibition period was a total of six weeks. At the end of this exhibition period Council responded to the community's request for an extension of the exhibition period by continuing the exhibition period for a further six weeks.
• Many people may still be unaware of the existence of the Draft Strategy and what it means. Council should have written to all landowners at the start of the exhibition period	The engagement program for the Draft Strategy was far in excess of any other community engagement program undertaken by Council. Despite all efforts to engage with the community Council became aware towards the end of the initial exhibition period that many in the community may still not have been aware of the existence of the Draft Strategy or what it involved. As the issue of most concern raised with Council was in relation to rural land policy Council resolved to write to all rural landowners at the beginning of the second six week exhibition period.
• Document was too large and difficult to read	The document was written as a planning document and as such involved extensive information, analysis and complex planning principles. A written summary document was prepared to assist with the community engagement program, along with displays, public open house meetings, individual meetings, press releases and radio interviews.
• Workshops should have been held with the community prior to the draft being finalised for full public exhibition	The planning process used to develop the Draft Land Use Strategy commenced in 2006 with the development of the 2007 Strategic Plan. This process involved an extensive community visioning process and identification and verification of planning issues facing the LGA. In addition a number of other strategic documents including the Economic Development Strategy and Social Plan for example were developed and now inform the Draft Land

	Use Strategy. These also involved considerable consultation with the community. These documents assisted with identifying land use issues and the strategies to address them which were combined in the Draft Land Use Strategy forming both an issues paper and strategy in one.
• Meetings arranged by the community were more useful than Council open house sessions or one on one discussion with staff	The community public meetings were successful in raising public awareness of the Draft Strategy recommendations.
Policy Decision Making	
• Community questioned Council's power to make the policy decisions presented in the Draft Strategy	Part 3 of the Environmental Planning and Assessment Act provides Council as a planning authority with the power to prepare or amend Local Environmental Plans subject to a legislated process. The development of a Land Use Strategy is a significant part of this process and seeks to provide planning direction for the longer timeframe. Similarly public and government agency consultation is also a significant component of this process. Council has the powers to make the policy decisions presented within the Strategy. Development standards in Local Environmental Plans can be reviewed and amended at any time within the legal and planning framework set by State legislation and policy.
• Legal recourse/class action muted should Council not review and amend the Draft Strategy recommendations	Council is acting in good faith and within the parameters of a strategic planning process endorsed by the NSW Department of Planning. The new Local Environmental Plan will be developed in accordance with the legislative process of the Environmental Planning and Assessment Act 1979. Legal advice provided to Council advises that there is no legal precedence for class action of this nature.
Growth Management Principles	
• Target growth rate of between 0.5 and 1% is too low	The target growth rate is just that a target. It is not a limitation on future growth. The Draft Land Use Strategy has identified strategic lands in each category to cater for growth in excess of the target rate.
• Cluster planning approach based on established/desired settlement hierarchy is flawed and perceived as social engineering. Council should not dictate where people choose to live	The identification of a desired settlement hierarchy is a sound planning principle designed to align population density with the ability of areas to provide essential and higher order services and facilities.
• Many see it as too late to "shut the gate" on dispersed rural living and that market forces should be allowed to dictate where dwellings and settlement occurs	It is recognised that the rural areas of the LGA are extremely fragmented, particularly in the south. However, further significant land fragmentation can still occur should the current minimum lot size of 40ha be retained across the LGA. The impact of this is a potential

	3,545 new dwellings in rural areas.
• Draft strategy rural planning recommendations will stifle growth and force people to relocate to neighbouring LGA's	The 40ha minimum lot size has been in place across the majority of the rural areas in the LGA since 1969. This has not resulted in the growth of the overall population in this time. The neighbouring LGAs experiencing growth all have proposed a MLS in excess of 40ha with the exception of the former Rylstone area in Mid Western Regional LGA. Growth in these areas is being achieved within the urban areas. For example Bathurst grew by 5.2%% between 2001 and 2006. The rural minimum lot size in the Bathurst LGA is 200ha and 100ha in the former Evans Shire LGA area. Enquiries with neighbouring LGAs have revealed that it is likely that the predominant rural minimum lot size in these LGAs will be 100ha.

RURAL ISSUES

Key Issue – What the submissions have said	Planning Comment/Response
Objection to removal or sun setting of current rural dwelling provisions	
• Interpreted as "unlawful" retrospective legislation	The right to lodge a development application for the erection of a dwelling (otherwise referred to as dwelling entitlements) on rural lands are governed by development standards contained within an LEP in relation to MLS or other performance criteria. These standards and provisions are reflective of planning policy at the commencement date of the LEP but can be subject to change at any given time in the future through alteration to that LEP. Although the sun setting of these provisions is lawful, it is recognised that the social and economic implications of such policy had not been given sufficient weight in the Draft Land Use Strategy. Please refer to Chapter 9 that details the recommended actions in respect of retaining dwelling provisions in the new LEP.
• Loss of land value	The value of land is driven by market forces and the Valuer General's review of market forces. With a change in land use policy, some land may loose its potential value, while other land may potentially gain value. For example a large oversupply on the market at any one time can significantly reduce market and land values, while controlled release of land may strengthen market and thus land value.

• Loss of investment	Investment in land for future positive return is speculative in nature and does not necessarily provide long term investment security. Market forces and the potential for planning law governing the use of that land to change may influence how well the investment achieves its returns.
• Does not allow for long term investment decisions made	See above comment
• Will stifle growth opportunities and not capitalise on the LGA's proximity to Sydney and the new government incentive of $7,000 regional relocation assistance	The current 40ha MLS has been in place across the rural areas of the LGA since 1969. This has not resulted in the growth of the overall population of the area in this time. It is not MLS in the rural areas that determines overall growth; as is evidenced by growth in areas such as Bathurst, that has a 100ha & 200ha MLS.
• Policy will lead to poor environmental outcomes such as low cost housing to secure entitlement; illegal dwellings; lack of investment in land management such as weed control, bushfire management, fencing	This report proposes that building entitlements on allotments currently approved by subdivision and existing holding entitlements be retained.
• Policy may cause a rush of development applications for dwellings and create a false demand scenario in the short term	This is a potential consequence of policy change that would need to be managed by Council and other authorities.
• Draft Strategy does not address provision for rural dual occupancy	The Draft Strategy is silent in relation to rural dual occupancy development. Currently dual occupancy is permitted in the rural areas. As demand is currently low it is intended to carry this through to the new LEP and monitor its take-up over time to inform future LEP reviews.
Objection to the proposed 400ha Minimum Rural Lot Size (MLS)	
• Proposed minimum lot size is too high	The 400ha rural minimum lot size (MLS) has been identified as the MLS that would reduce fragmentation of rural land, consolidate residential land around villages and towns and assist with the timely and sustainable provision of infrastructure and services in the LGA. The reasons as set out in the Draft LUS for the proposed increase in rural MLS remain valid. However, based upon community comment, it is apparent that the community will not accept this significant increase. Chapter 9 outlines further options for a rural MLS that seeks a balance between sound planning principle and community expectation. These options are discussed in further detail in Chapter 9.
• LGA has little agricultural land to conserve • Loss of land value • Loss of superannuation • Loss of investment • LGA is already extremely fragmented and not likely to return to larger lot sizes through consolidation	These issues have been addressed by the recommendation to amend the LUS with revised rural MLS options.
• Will prevent farm succession and entry of young farmers	The further fragmentation of land may, in itself, prevent viable farm succession and entry of young farmers unless it is intended that more intensive farm practices be adopted on smaller lots.
• Will stifle growth opportunities	The current 40ha MLS has been in place across the rural areas of the LGA since 1969. This has not resulted in

	the growth of the overall population of the area in this time. It is not MLS in the rural areas that determines overall growth. Growth in industry, investment and economic activity is the major driver for overall growth; as is evidenced by growth in areas such as Bathurst. Bathurst has a 100ha & 200ha MLS.
• Does not allow for new emerging "boutique" rural industries	The LUS has identified that an applicant can apply for a subdivision to create an allotment of any size for a purpose other than a dwelling. The current number of small lots throughout the LGA already provides significant choice.
• Will lead to poor environmental outcomes and land management as landowners struggle to deal with larger land holdings in marginal areas	The management of land, no matter what the size depends largely upon the capacity of the land owner to manage the land. This report recommends an amendment to the LUS with revised rural MLS options.
• A one size fits all approach is flawed. One zone and one MLS does not allow for varying factors across the LGA. A more robust analysis is required	The Draft recognises a range of options across the LGA.
• Merit based assessment should replace arbitrary MLS requirements	It is the role of the Land Use Strategy to identify issues and constraints that face the LGA whether they are environmental, economic or social in nature. Many issues and constraints go beyond property boundary and some even across LGA and regional boundaries. These constraints should be addressed at the highest level of planning and not deferred to a merit based assessment that has limited ability to deal with cumulative impact.
Provision of a range of more small rural lots	
• Current supply does not meet demand	The Supply and Demand Analysis that supports the LUS indicates that a sufficient supply of lots remains in the existing clustered large lot residential areas of the LGA to meet demand over the next 20yrs.
• Should be allowed in more locations	The allocation of existing clustered large lot residential areas is adequate to meet expected demand. The allocation of further new release areas for this type of land use will be dependant on a substantial change in demand for this type of allotment. Allowance has been made in the LUS for inclusion of new small clustered large lot residential areas adjoining the Tarana, Capertee and Rydal villages.
• Unwillingness of landowners to subdivide misrepresents supply numbers	A land monitor will be developed by Council to capture development data. This monitor will introduce a trigger point for reanalysis of supply areas based on demand. The willingness or otherwise of landowners to subdivide their land will be managed as part of this process.
• Council should consider reintroducing concessional small lots as an alternative to larger rural MLS	The concessional small lots were removed by the State Government in 2008 via the Rural Lands State Environmental Planning Policy (SEPP), and it is unlikely that this policy direction will be reintroduced.
• Request for Rural Residential Extension at South Bowenfels. Two areas have been identified being River let hilltop (291ha) and McKanes Falls (73ha). Both these areas would yield around 125 lots of varying sizes.	The allocation of existing clustered large lot residential areas is adequate to meet expected demand. The allocation of further new release areas for this type of land use will be dependant on a substantial change in demand for this type of allotment. A land monitor will be developed by Council to capture development data. This monitor will introduce a trigger

	point for reanalysis of supply areas based on demand and other factors that may influence demand such as major employment generating development.
• There are also some 28 requests for consideration of further areas for rural small lots received in 2006 predominantly around Portland.	The allocation of existing clustered large lot residential areas is adequate to meet expected demand. The allocation of further new release areas for this type of land use will be dependant on a substantial change in demand for this type of allotment. A land monitor will be developed by Council to capture development data. This monitor will introduce a trigger point for reanalysis of supply areas based on demand and other factors that may influence demand such as major employment generating development.
Rural land use conflict	
• Draft Strategy has misrepresented land use conflict	Land use conflict is of major concern to all planning authorities. One of the reasons why the process of land use planning is used is to minimise as far as possible the potential for conflict to occur. Issues of land use conflict have been raised in submissions received by Council to the LUS, validating the comments made regarding the land use conflicts that can occur between lifestyles and working farms; particularly in relation to farm equipment noise, control of weeds and domestic animals
• Draft Strategy does not recognise the valuable contribution to land conservation and community made by small rural landowners (lifestylers)	The importance of providing rural lifestyle options within the LGA is recognised by the LUS. The management of land, no matter the size (urban lot to large pastoral), depends largely upon the capacity of the land owner to manage the land.
• Too much emphasis on protection of mining interests	Council is bound by section 117 directions from the Minister for Planning to ensure that areas containing state significant resources are protected from encroaching development that may impact upon the ability of that resource to be won.
Blackmans Flat	
• Objection to the proposed heavy industrial zoning at Blackmans Flat. Suggests area should be zoned Village	This area has significant and unresolvable land use conflicts between residential and power generation, mine activities and infrastructure. The Blackmans Flat area containing houses on the smaller allotments has never been zoned village by an environmental planning instrument. A village zone in this area is not appropriate in this location due to the presence of state significant mineral resource and power generation activities and there are no higher level services to support the range of uses permitted within Village zone. While current approved rural lots will remain available for development, no further land subdivision for the purposes of a dwelling is being encouraged. The land designation of this area has been reviewed and is recommended to remain rural in the new LEP while being identified as a potential future area for heavy industrial land use in the future. This is discussed Chapter 12.
• Objection to proposed heavy industrial zoning over existing Rural Small Holdings 1(c) land. Will affect amenity of approved small lots and the ongoing operation of the Jannei Goat Dairy	
Provision of rural infrastructure	

• Rural residents are self sufficient	All ratepayers share the burden of Council's operational and governance costs. Location within the LGA does not change this fact. The dispersed nature of our rural settlement means that demand from residents for better roads, garbage services, community facilities and governance is increasing in the rural areas.
• Council provides little infrastructure and services to rural ratepayers	All ratepayers share the burden of Council's operational and governance costs. Location within the LGA does not change this fact. Whether all ratepayers chose to utilise Council services like libraries, recreational facilities, parks and reserves, community halls etc is a personal decision. However, it cannot be disputed that continuing the policy of dispersed rural settlement means that demand for better roads, garbage services, community facilities and governance will continue to increase with the cost burden born by all ratepayers.
• Rural roads need maintenance regardless of the increase in rural living	Our current rural roads maintenance program prioritises maintenance based on various factors. The more dwellings and usage on a rural road is likely to increase the demand for higher road standards and increased levels of maintenance. Council is unable to fund existing road maintenance with current rate revenue and relies on rates being supplemented from other sources of funding. This would not change with additional subdivision
• Increased rate revenue from rural subdivision should provide for any increased services required	Our current rural roads maintenance program prioritises maintenance based on various factors including number of complaints. The more dwellings and usage on a rural road is likely to increase the demand for higher road standards. Council is unable to fund existing road maintenance with current rate revenue and relies on rates being supplemented from other sources of funding. This would not change with additional subdivision
• Decrease in rural living opportunities will result in loss of rate revenue for all LGA infrastructure	Although the revised Rural MLS scenarios are proposing an increase in the MLS for a dwelling in some areas, the retention of existing dwelling entitlements on approved subdivided lots and entitlements for existing holdings, still allows for rural living opportunities for an additional 2125 dwellings and subsequent rate capture. This additional dwelling potential coupled with existing dwellings provides a plethora of choice for those seeking a rural lifestyle.
• Rural developers provide or make contribution towards rural roads	The initial capital cost of road improvements is in some instances met by developers through either road construction or via a Section 94 Roads contribution. However the whole of life cost of roads is paid for by all ratepayers.
Objections to 500m buffer areas around DECC estate and Forestry lands	
• Draft Strategy is not clear on the implications of this recommendation	Following the consultation process and advice from the Office of Environment and Heritage, it is proposed to remove this direction from the LUS and provide for management of these areas through the implementation of the new DCP and the use of overlays.
• Sufficient lands are held in DECC estate and Forestry without encroaching further on private land use	
• Draft Strategy provides no basis for 500m	
Objection to change of zoning for existing Rural Small Holding 1(c) lands	
• Residential zoning does not allow for hobby farm development	The LUS recognises that the primary purpose of our existing clustered rural residential areas (2ha average holdings), is to provide for a dwelling in a rural setting. Therefore the policy direction for these areas will retain this character by recognising the large lot residential

	nature of these areas. Hobby farm type uses are more aligned to properties of 20ha or larger
• Will prevent the keeping of farm animals	The LUS recognises that the primary purpose of our existing clustered rural residential areas (2ha average holdings), is to provide for a dwelling in a rural setting. The keeping of farm animals will not be prohibited in these areas, but all landowners will be required to comply with new DCP provisions in regards to keeping of animals and will need to be mindful of the carrying capacity of land.
• Will prevent the use of large farm machinery	It is likely that extensive agriculture will not be allowed in the large lot residential areas. However, existing farm operations will be able to continue under existing use rights.
• Will prevent "boutique" rural industries	The LUS has identified that a subdivision of any allotment size can occur in the rural area for purposes other than a dwelling. The proliferation of small lots currently would provide enormous choice in this regard.
• Suggest rural small holding is a more appropriate zone	The LUS recognises that the primary purpose of our existing clustered rural residential areas (2ha average holdings), is to provide for a dwelling in a rural setting. Therefore the policy direction for these areas will retain this character by recognising the large lot residential nature of these areas. The Rural Small Holding land use category is more aligned to properties of 20ha or larger that are looking to provide a broader range of uses than just a dwelling.

URBAN ISSUES

Key Issue - What the submissions have said	Planning Comment/Response
TOWNS (LITHGOW)	
COMMERCIAL – VALLEY PLAZA/POTTERY PLAZA AND SURROUNDS	
• Anomaly exists between the boundaries of the proposed Silcock St Heritage Conservation Area and the existing state Permanent Conservation Area boundary	Noted and will be further considered in the mapping of the final conservation areas in the new LEP
• Supports extension of business zone to the south of Valley Drive and a zoning change for the current business zoned land to the north east of the Valley Plaza off Silcock St	Noted
• Objection to Mixed Use Zone for Lithgow Valley Plaza as this zone would not permit shops or retail premises. Request that new zone protects the continued operation of the retail shopping centre	The standard LEP template mandates that commercial uses including shops and retail business are to be permissible in the mixed use zone.
• Suggests that a more appropriate FSR of 1 :1 be considered for the Lithgow Valley Plaza site	Noted. A further assessment of appropriate floor space ratio's (FSR's) will be carried out as part of the development of the LEP and will be considered in relation to proposed land use tables of the proposed new zones.
• Any future height controls for the Valley Plaza/ Pottery Plaza area should be suitable to accommodate bulky goods/retail use. Suggest 10-12 metres	Noted. A further assessment of appropriate height controls will be carried out as part of the development of the LEP.
• Supports differentiation through zoning of the Lithgow Main St business area and	Noted

Valley/Pottery Plaza area	
• Recommends expansion of the proposed mixed use area around the shopping plazas to adjacent precinct bounded by the Bowling Club, Mines Rescue Training Facility and childcare facility	Noted and is recommended as an amendment to the exhibited Draft Strategy. Refer to Chapter 12 for further detail.
• Recommends reconsideration of the FSR to 1.5:1 or even 2:1	Noted. A further assessment of appropriate floor space ratios (FSR's) will be carried out as part of the development of the LEP and will be considered in relation to proposed land use tables of the proposed new zones.
POTTERY ESTATE	
• Objection to back zoning of the Pottery Estate area from current residential and business zones to an environmental zone. The site is a strategic site in terms of its location and potential to contribute to achieving housing choice in close proximity to town services and facilities. Environmental hazards and constraints can be dealt with through the implementation of a robust development control plan and adherence to relevant legislation picked up by the development application assessment process.	Noted. Please refer to Chapter 12 for clarification of changes proposed to the LUS
• Anomalies in Draft Strategy Figures 3 and 7 Chapter 14 proposing back zoning over established commercial and residential land use.	Noted and will be corrected.
MARRANGAROO	
• Objection to the proposed recreational zoning on land in Oakey Forest Road. Back zoning of residential land will sterilise land; may lead to noisy recreational uses such as extension to Go Kart track or a new motocross track and lead to antisocial behaviour. • Objection to Golf Club being zoned recreational. Concern that if the Golf Club goes into financial distress that the land could be sold for land uses incompatible with residential.	The Marrangaroo Local and Environmental Study and Structure Plan have recommended that this area be recognised as a recreational area, commensurate with the use of the land by the Go Kart Club and the Lithgow Golf Club. Other private land in this area will retain existing use rights over an existing use that does not conform to the new zone and a range of other compatible permissible uses will be regulated via the LEP.
• Objection to the proposed recreational zoning on land in Oakey Forest Road. Land should either remain residential or would have a higher use for employment generation	The Marrangaroo Local Environmental Study and Structure Plan have recommended that this area be recognised as a recreational area, commensurate with the use of the land by the Go Kart Club and the Lithgow Golf Club. Other private land in this area will retain existing use rights over an existing use that does not conform to the new zone and a range of other compatible permissible uses will be regulated via the LEP.
• Objection to the proposed recreational zoning of the Lithgow Golf Club. This land should remain residential to enable future redevelopment of the golf course such as a retirement village within the golf course.	The Marrangaroo Local Environmental Study and Structure Plan have recommended that this area be recognised as a recreational area, commensurate with the use of the land by the Lithgow Golf Club. Council has also classified the land as "community" land, which forms the basis for the strategic management of this site as a significant community asset.
RESERVE ROAD	
• Objection to industrial employment lands on Reserve Road. Considers industrial zone will destroy the nature of local community. Considers there is other land available within or closer to Lithgow that can be developed.	The Marrangaroo Local Environmental Study and Structure Plan have recommended that this area be recognised as an area for industrial land use. The development of the land fronting the Great Western Highway for industrial uses and the location of earthmoving, truck depots, conveyor belt and mine support industries in this locality, suggests

	that it is already an area supportive of industrial land use. The location of the land in close proximity to major transport routes, accessible to infrastructure and the greenfields nature of this site, all add to its value for industrial land use. It is proposed to retain the industrial areas within the Lithgow township and also zone out areas in Portland and Wallerawang for industrial use, but these areas cannot sustain our anticipated demand for industrial land and it is imperative that the Marrangaroo location be pursued to become the main "go to" area for industrial land use in the Lithgow area
• Concerns that Reserve Road is not the appropriate area for employment lands due to the number of affected landowners. An area at Lidsdale owned in single ownership may provide a better alternative	The locational advantages of the Marrangaroo site make it ideal for an industrial park. The Mineral Processing Park at Lidsdale is also proposed to be designated for industrial land use
• Concerns regarding the potential affect rezoning of land in Reserve Road to industrial will have on land rates	The determinant of rate category is tied to current land use. It is anticipated that while the land use of the current properties remains unchanged (i.e. rural residential despite zoning change), that the rating category will remain unchanged. If the land owners were to pursue redevelopment of their sites under the new industrial zone, Council could alter the category for rating purposes to industrial which may have a substantial bearing on rate value.
• A concept plan would need to be developed to enable the proper development of the Reserve Road industrial lands. Council would need to assist with infrastructure provision.	The development of an overall concept plan for this site is required, including infrastructure and potential lot layout, to facilitate the orderly and economic development of the site. The input of a number of stakeholders would be required.
• Suggest that the employment lands along Reserve Road not be dissected as shown in Draft Strategy as this may preclude development of roads and infrastructure in the appropriate areas.	Comment noted. LUS amended accordingly. Sensitive areas of the site will be protected through the use of overlays and DCP provisions.
PORTLAND	
• Objection to the zoning out of Portland as this will alter the village character of the area and remove flexibility for future development	The character and identity of Portland will be recognised and protected through the application of land use categories. The use of the full range of land use zones helps to maintain the amenity of particular areas and affords a greater degree of certainty to existing residents regarding the compatibility of any new use.
• Objection to the industrial zoning in the former Boral Site. This site has a higher use as residential and the industrial zoning in close proximity to the town centre would be detrimental to a change in land use and character for the town. Industrial land should be located outside the village area.	It is proposed to zone out a small section of the Boral site for industrial use. This will allow the reuse and redevelopment of the area directly off Williewa St to the east of the site. Another small section of the site containing the remaining structures and the houses along Williewa St will be zoned mixed use; to encourage the adaptive reuse of this area. The remainder of the site will be held as environmental management until such time as further information is forthcoming from Boral in relation to the overall strategic direction for redevelopment of the site. The strategic direction for the site is however recognised as future urban land use, when the long term development issues are resolved.
• Objection to the back zoning of land to the north/east of Portland village to large lot	This area contains a subdivision that has already been approved by Council with lots down to 1000m^2.

residential as this area contains approved subdivision for lots of approximately 1000m².	However, due to difficulties in servicing this area, it is still proposed to categorise this area as large lot residential with a minimum allotment size of 4000 m² for new dwellings other than those on allotments created by a subdivision approved by Council
• Objection to the back zoning of land south of Purcell St to large lot residential with a 2ha minimum lot size. Land does not have significant remnant vegetation and has already been subdivided into lots of ranging sizes. Proposed zoning and lot size will diminish the future lot yield of an area that conforms to the general principles of larger allotments in close proximity to town centres	Comments noted. Ground truthing of constraints has found that very little remnant vegetation remains, and the issues of site contamination and other environmental constraints can be dealt with at the development assessment level. It is proposed to amend the LUS to retain this area as large lot residential but to modify the minimum allotment size to 4000 m².
WALLERAWANG	
• Request to have land (aprox 27acres) to the south of Hillview Estate Wallerawang zoned residential. This land has been identified since 1994 as Rural (Future Urban 1(d). Since the infrastructure has been provided to the Hillview Estate it is now timely to release this land. The land is not a viable farming holding	The supply and demand analysis prepared for the LUS, has identified that based on existing demand, Wallerawang has enough zoned residential land to provide 66yrs supply. This land has still been identified as a strategic site for residential development into the future, when and if required
• Area south of Brays Lane and extending to the existing coal loader should be considered for industrial land use	Noted. This land is already shown to be industrial in the LUS
VILLAGES	
RYDAL	
• Land to the west of the Railway line should be rezoned to allow growth of the village through the availability of land for large lot residential development. This would reflect the current land use pattern of the area	Noted. Changes reflected in the LEP Directions and Strategic Framework plans for Rydal are as follows • The area to the west of Charles St and the area to the north of Quarry St to be changed from rural to large lot residential with a minimum allotment size for the erection of a dwelling of 2ha • The area to the west of the railway line bounded by Charles St, Quarry St and Railway St, be changed from rural to large lot residential with a minimum allotment size for the erection of a dwelling of 4000m² • The existing southeast village area be changed from village to large lot residential with a minimum allotment size for the erection of a dwelling of 4000m² • The proposed extension to the village area to the north be changed to large lot residential with a minimum allotment size for the erection of a dwelling of 2ha • It is also noted that the LUS will be amended to reflect the minimum allotment size for the erection of a dwelling in the unsewered village area to be 4000m²
• The proposed extension of the Rydal village to the north should be limited to large lot residential use	
• An appropriate minimum lot size for development within the current village area should be defined to ensure appropriate sized development lots.	
CAPERTEE	
• Need to provide for growth opportunities for the Capertee Village. There is an need for lots of around 2ha in this area	Noted. Changes reflected in the Capertee New LEP Directions and Strategic Framework plan to show: • Part of the old southern village area as large lot residential with a minimum allotment size of 4000m² for the erection of a dwelling • The area behind the hotel to be changed from village to large lot residential with a minimum
• Objection to the back zoning of the village area to the south of Castlereagh Highway due to the existing development patterns and numbers of	

existing lots.	allotment size of 4000m² for the erection of a dwelling

GOVERNMENT AUTHORITY / AGENCY COMMENT

Strategy issues raised
Department of Planning and Infrastructure
• Congratulates Council and Council's planning team on their commitment to the strategic planning process
• Draft Strategy represents demonstrates a thorough assessment and consideration of the complexity of strategic planning issues facing the Lithgow LGA.
• Draft Strategy form a good basis for the strategic planning direction for Lithgow for the next 20 years
• Has provided comment on how to improve the document in terms of further explanation and presentation of information
Sydney Catchment Authority
• Highly supportive of the strategic planning directions and actions in the Strategy aimed at protecting water quality
• Recommendations to strengthen planning and development controls such as increased minimum lot sizes, more appropriate zoning provisions and the protection of environmentally sensitive areas and water quality are considered a major improvement compared to controls under the current Lithgow LEP 1994 and DCP's.
• Cluster planning approach and settlement hierarchy in the Strategy are supported, however the SCA has some concern with the 15km outer limit for further rural residential opportunity as these land are mostly unserviced and most in the drinking water catchment. Concern that this are may be interpreted as endorsement of any of these areas within that outer limit. SCA recommends a more detailed explanation of the intention.
• Ongoing concern for the SCA is the cumulative impact of inappropriate development on water quality and catchment health within unserviced areas of the catchment. The SCA strongly supports the proposed introduction of strengthened controls in the new LEP such as the use of environmentally sensitive overlays, increased lot sizes and environmental protection zoning
• SCA strongly supports the Strategy recommendation to require all new development within the urban core and urban core reservation areas to be connected to reticulated sewer
• SCA strongly supports the proposed minimum lot size for unserviced land in the village areas of 4000m².
• SCA supports the minimum lot size for large lot residential land of unserviced 2ha and 2000m² serviced.
• SCA supports the approach to target particular land for industrial uses. Generally supportive of the Marrangaroo industrial area, however recommends a stormwater management plan be prepared and adopted prior to rezoning of the site
• SCA has concerns with the targeted heavy industrial area at Blackmans Flat. Recommends applying the group industry term to encourage lesser impact uses within the drinking water catchment without tying it just heavy industry.
• SCA strongly recommends that the Strategy recommendations are incorporated in full in the new LEP and DCP.
Office Environment and Heritage
• OEH strongly supports the increase in the minimum lot size for rural lands from 40 – 400ha, the phasing out of existing dwelling entitlements below the new minimum and action to increase the minimum lot size for unsewered large lot residential areas and village areas
• Encourage council to further consider the site specific constraints applying the varying large lot residential areas in setting the final minimum lot sizes within the LEP.
• OEH supports the actions to direct settlement away from environmentally sensitive areas and how Council has applied the ESA mapping
• OEH supports action to limit land use conflict. Recommends using zoning in the first instance to implement buffers for incompatible land use.
• OEH supports the 500m buffer to OEH estate, however considers that this may need to be higher in some areas
• OEH strongly supports the preparation of a Biodiversity Strategy for the LGA.
• Concern that areas to the south of Portland still appears to enable a substantial number of lots in areas with mapped native vegetation. Urge Council to consider an environmental living zone with a further increase in minimum lot size.
• Encourage use of an environmental living zone over the current residential area adjoining Marrangaroo National Park

• Supports action to prepare a Cultural Landscape Study for selected areas and encourages Council to include the landscape surrounding Hartley Historic Village. Supports rural zoning surrounding this site.
• OEH notes it is ideal to prepare Aboriginal Heritage Study prior to LEP development, however acknowledges and supports action to prepare when resources permit.
• OEH considers it essential that Council carry out comprehensive flood studies and floodplain management studies to develop a floodplain risk management plan for all urban and rural residential areas.
Trade & Investment Regional Infrastructure and Services
Trade and Investment
• Concern that the proposed zoning of the Lithgow Minerals and Industry Park (LMIP) may be too restrictive. Suggest retaining either general rural or applying heavy industry zone
• Nature of likely activities targeted for the LMIP creates the need for a significant buffer (2.5km) to be placed around the Park. Therefore highly desirable no further residential development occur in that area
• Council may wish to consider increasing the land stock of industrial land "in town". A lack of "in town" industrial land may place Lithgow at a competitive disadvantage.
Agriculture
• Supports the intent of Council to increase the rural minimum lot size to control the ongoing inappropriate rural subdivision and scattered and poorly planned rural residential development. In addition the sunset provisions to deal with existing inappropriate rural allotments is also supported
• Significant that Council has considered climate change in relation to rural settlement and community servicing
Fisheries
• Inclusion of the ESA – Water Overlays in conjunction with controls for riparian buffers will assist in proactively protecting waterways from inappropriate development and will provide significant gains in the protection of sensitive habitats and consequent maintenance of fisheries productivity
Minerals
• DTIRIS – Minerals supports the Draft Strategy and commends the thorough approach taken by Council's planers in formulating the document. In particular the division supports Council's intention to increase the minimum lot size for rural lands which will improve planning in the region, and reduce land fragmentation and associated impacts on primary industry opportunities.
• Housing NSW notes and supports strategies including increasing the range of available housing types, density, lot sizes and encouraging seniors housing, affordable and adaptable housing.
• Supports the preparation of a Housing Strategy, Ageing Strategy, Community Strategic Plan and implementation of the Economic Development Strategy and offers support in the development of these plans
• Supports the proposed Eskbank St Conservation Area and requests that a conservation management plan be prepared to guide future maintenance, upgrade and rehabilitation of this area.
• Generally supports the aims and objectives of the Open Space and Recreational Needs Study.
• Forests NSW supports buffer to minimise conflicts between new dwelling developments and forestry activities. A buffer of 150m is considered appropriate for safety and amenity reasons.
• Forests NSW supports the identification of major log haulage routes in the Strategy when planning for future development. Strategies to focus residential development in key areas around existing townships assist Forests in planning haulage routes to minimise impacts on the community
• Forests NSW support the increase in the rural minimum lot size. Many of the forest activities are not considered compatible with rural lifestyle living adjacent to Forests.
Land and Property Management Authority (Crown Lands)
• No objection to Draft Strategy
• LPMA will review zonings and heritage items affecting crown land and will comment further at LEP stage
• Where Draft LEP includes new land for urban purpose that will result in increase use of Crown roads, LPMA will request that such roads be transferred to Council.
• Crown land must not be relied on to provide perimeter access roads and asset protection zones for bushfire management
• Crown land cannot be relied upon for infrastructure service requirements
• Crown lands are not Council public lands and cannot be classified as operational or community land. These lands are administered under the Crown Lands Act 1989.
State Emergency Services
• LCC should complete a Flood Study for the LGA. Ideally this should occur to inform the new LEP.
• Strategy should clearly define flood prone areas within the LGA and stipulate the uses of these areas to be in accordance with flood mitigation legislation and strategies. Council could develop a priority based system for the development of land to ensure that flood prone land is used last

• LCC should consider establishing a Flood Plain Management Committee to assist council with the use of flood prone lands.
Transport Roads and Traffic Authority
• There is currently neither State nor Federal government policy for the upgrade of the Bells Line of Road from Windsor to Lithgow or the extension of that road from Clarence to Marrangaroo. RTA suggest Council reconsider statements relating to this in the Strategy
• The prudency of ensuring planning measures to not conflict with the possibility of construction of the Bells Line Expressway in the long term is acknowledged.
• RTA supports the strategy to consolidate growth in the urban areas including the proposal that at least 50% of lands available for residential development are taken up before the areas identified for future development at Marrangaroo are zoned for release
• Council is urged to undertake a concept planning exercise to limit and consolidate access to both the Castlereagh Highway and Great Western Highway north of Wallerawang and Marrangaroo to ensure the Highway is maintained as a high speed through road.
• RTA requests that all re-zonings adjacent to the GWH and Castlereagh Highways be identified as urban release areas in new LEP.
Mine Subsidence Board
• No objection to Strategy
Rural Fires Service
• RFS notes that the Strategy identifies a strategic approach to bush fire protection measures
• Zoning should reflect the hazard/risk posed to new development. Exclusion of development in certain areas is an option where the risk from bush fire is high and environmental and access constraints cannot be easily overcome.
Education and Communities
• Acknowledge very low rate of population growth is projected for the LGA in the coming years. Committed to responsibly providing sustainable education infrastructure to ensure that the educational needs for the people who live in established parts of the LGA will be provided
• Department does not foresee any impacts on the local primary and secondary schools form the Draft Strategy
Department of Defence
• Industrial development is generally compatible with defence activities, whilst residential is not. Keen to ensure appropriate buffers are in place to reduce potential land use conflicts between proposed residential development and training areas
• Defence would not support any extension of the Bells Line of Road intersecting the Marrangaroo training area
Transgrid
• Seeks that appropriate development controls are attached to any future development within vicinity of Transgrid sites
• Council to consider the following in developing the LEP; Ensure all Transgrid electrical easements are zoned in accordance with the appropriate adjacent land Ensure that the development of electricity infrastructure is not prohibited in any zone.

COUNCIL CONSIDERATION AND RESOLUTION

Council at its meeting of 31st October, 2011 considered a planning report from the Strategic Land Use Planner relating to the Draft Land Use Strategy 2010-2030.

A copy of this report can be viewed at the following link:

http://www.council.lithgow.com/gen_businesspapers.html

Council resolved the following:

Min 11-422 RESOLVED

THAT:

1. Council amends the exhibited Draft Lithgow Land Use Strategy 2010-2030 to provide effect to the following:

Section A Urban Land Use

i. Retention of a primary production zone over the Blackmans Flat area in the new Local Environmental Plan and identification of the land as a strategic site for future industrial land use in the strategic framework.

ii. Inclusion of an action in the Land Use Strategy to provide specific provisions and controls within the comprehensive development control plan to manage future land use conflict in the Blackmans Flat area.

iii. Extension of the Lithgow mixed use business zone around Lithgow St, to encompass the land bounded by the Bowling Club, Mines Rescue Facility and Childcare Centre as shown in Figure 1 of the attached report.

iv. Alteration of the land use designation for the Pottery Estate Lithgow to identify lands of highest hazard and constraints within an environmental zone and retain the residential zoned land as shown in Figure 1 of the attached report.

v. Correction of the mapping anomalies over the existing commercial uses off Bent and Silcock St and existing residential development along Hassans Walls Road, Lithgow.

vi. Provision of a neighbourhood business area at South Bowenfels as identified in Figure 2 of the attached report.

vii. Correction of anomalies in the land use designations for the following areas as shown in Figure 3 of the attached report:

a. The slither of land between the railway line and the Great Western Highway, opposite the Reserve Rd intersection at Marrangaroo which is currently identified as rural to

remain rural in the Local Environmental Plan directions but be identified as a future urban land use in the strategic framework plans to signify that this land may have a higher use once commencement of the development of the Marrangaroo Release Area occurs.

b. The area along Cooerwull Rd, Lithgow, containing the existing caravan park, currently shown as environmental in the Local Environmental Plan directions to be shown as residential.

viii. Introduction of an environmental land use designation to that part of the former Boral Site, Portland, not proposed for mixed use or industrial land use as shown in the Figure 4 of the attached report.

ix. Application of a minimum lot size of 4000m² for the following areas:

a. area to the north of Roxburgh St and east of High St Portland
b. area to the south of Purcell St, Portland.

x. Alteration to the identified land use for the area to the west of Charles St, Rydal, and north of Quarry St, Rydal, from rural to large lot residential with a minimum allotment size for the erection of a dwelling of 2ha.

xi. Alteration to the identified land use for the area to the west of the railway line bounded by Charles St, Quarry St and Railway St, Rydal, from rural to large lot residential with a minimum allotment size for the erection of a dwelling of 4000m².

xii. Alteration to the existing southeast Rydal village zone from village to large lot residential with a minimum allotment size for the erection of a dwelling of 4000m².

xiii. Alteration to the proposed extension to the Rydal village area to the north to large lot residential with a minimum allotment size for the erection of a dwelling of 2ha.

xiv. Introduction of a minimum allotment size for the erection of a dwelling in the zoned Rydal Village area of 4000m².

xv. Modification of the existing village boundaries of Capertee and introduction of a large lot residential area as follows:

a. Extension of the village zone to the north over existing small lots
b. Provision of a large lot residential area to the north west of the existing village boundary and south of the Castlereagh Highway and rail line.

xvi. Application of a 4000m² minimum lot size to both the Capertee village and large lot residential areas.

Min 11-450 RESOLVED

THAT:

Section 1B Rural Land Use

Council adopts Option 3, "Status Quo" for rural planning directions for Council's Draft Land Use Strategy;

2. Council provides the General Manager with the delegation to make any minor amendments to the Draft Lithgow Land Use Strategy 2010-2030 that do not alter policy intent.

3. Council adopts the amended Lithgow Land Use Strategy 2010-2030.

4. Council refers the adopted Lithgow Land Use Strategy 2010-2030 to the NSW Department of Planning for final endorsement.

5. Council adopts in principle the recommendations of the Open Space and Recreational Needs Study and Heritage Development Control Plan Study to inform the development of the comprehensive Local Environmental Plan and other Council planning and management documents.

6. Councillors wishing to seek an exemption under Section 458 of the Local Government Act 1993 nominate their intent in relation to the preparation of the new comprehensive Local Environmental Plan with the General Manager by the 21 November 2011.

ABBREVIATIONS USED – QUICK REFERENCE

DCP	Development Control Plan
DECC	Department of Environment and Climate Change now Office of Environment and Heritage
DoP	NSW Department of Planning (now NSW Department of Planning and Infrastructure)
DSP	Development Servicing Plan
EP& A Act	Environmental Planning and Assessment Act, 1979
ESA	Environmentally Sensitive Areas
FSR	Floor Space Ratio
LCC	Lithgow City Council
LEP	Local Environmental Plan
LGA	Local Government Area
LUS	Land Use Strategy
MLS	Minimum lot size
NP & W	National Parks and Wildlife
OEH	Office of Environment and Heritage
RFS	Rural Fire Service
SCA	Sydney Catchment Authority
SEPP	State Environmental Planning Policy
SLAWCA	Strategic Land and Water Capability Assessment
SWOT	Strengths, Weakness, Opportunities, Threats

CHAPTER 2 REGIONAL CONTEXT

INTRODUCTION

The Lithgow Local Government Area (LGA) lies within the Central West Region of New South Wales. The LGA covers an area of 4,551 square kilometres and accommodates a resident population of 19,759 persons. The major urban centre is Lithgow which is supported by two smaller towns of Wallerawang and Portland and a number of rural villages and localities.

The LGA is located only 150km from the City of Sydney and sits on the western most fringe of the Blue Mountains and the eastern most fringe of the Central West Region. The junction of the two major highways to the central west occurs in the centre of Lithgow as well as the end of the electric rail system. This provides the LGA with a strategic locational advantage and opportunity to capitalise on an expanding Sydney Basin and gateway to the central west.

Figure 1. LGA Location within Region



EXTERNAL FACTORS INFLUENCING THE LGA

The LGA has a strong industrial heritage and still relies heavily on the employment base and economic spinoffs of the mining and power generation industries and is therefore subject to the vagaries of changes to the domestic and international coal markets and pricing of electricity.

A growing mining industry within the region could in the future compete with Lithgow for a skilled labour force and may result in out migration of skilled young persons.

The dominant regional centres of Bathurst and Penrith continue to provide higher order facilities and services and continue to capture retail expenditure from the LGA. These centres also compete with Lithgow in attracting development, investment and employment growth.

The LGA has a strong connection to the Oberon Shire through a shared bulk water supply from the Oberon Dam administered by the Fish River Water Supply Scheme. This supply has a small catchment and is subject to the vagaries of climate change and may impact upon the ability of the LGA to provide a secure and reliable water supply into the future.

Large areas of the LGA are not serviced by broadband technology or mobile telephone services.

CHAPTER 3 LEGISLATIVE AND POLICY FRAMEWORK

FEDERAL/COMMONWEALTH

There is a range of Federal/Commonwealth legislation that is applicable to the Lithgow Local Government Area. However, the most relevant legislation to this Strategy is set out below.

Environment Protection and Biodiversity Conservation Act 1999 (Cmth) ("EPBC Act")

The EPBC Act is a fundamental element of the Federal Government's environmental legislation. The EPBC Act aims to provide a legal framework to protect and manage issues of national environmental significance. This may include flora and fauna that is of significance at a national or international level, ecological communities, and heritage place. The EPBC Act aims to provide measures to conserve biodiversity, provide a streamlined environmental assessment and approvals process, protect world and national heritage, and promote ecologically sustainable development.

The EPBC Act is to be utilised when a proposal has the capability to have a significant impact on an area of national environmental importance. Proposals of this nature are to be referred to the Department of Sustainability, Environment, Water, Population and Communities (October 2010). The likely impacts of the proposal are assessed by the Minister or his delegate. Substantial penalties are applicable for action taken without approval.

STRATEGY RELEVANCE

A report generated by an Environment Protection and Biodiversity Act 1999 (EPBC) Protected Matters search (31/1/11) identified that the following matters of national environmental significance that may occur in, or may relate to the Lithgow Local Government Area:

World Heritage Property	The Greater Blue Mountains Area NSW
Natural Heritage Place	The Greater Blue Mountains Area NSW
Threatened Ecological Communities	Three communities being: White Box-Yellow Box-Blakeleys Red Gum Grassy Woodland and Derived Native Grassland - CRITICALLY ENDANGERED Grey Box (Eucalyptus macrocarpa) Grassy Woodlands and Derived Native Grassland of South-eastern Australia - ENDANGERED Temperate Highland Peat Swamps on Sandstone - ENDANGERED

Threatened Species	Fifty three species listed - (2 CRITICALLY ENDANGERED, 18 ENDANGERED and 33 VULNERABLE)
Migratory Species	Fourteen species listed

The report identified the following other matters protected by the EPBC Act:

Commonwealth Lands	Nine sites
Listed Marine Species	Twelve - (1 ENDANGERED)
Places on the National Estate Register	71 (33 Registered and 23 Indicative Place)
Regional Forest Agreement	1
State and Territory Reserves	10
Invasive species	18

The Lithgow Land Use Strategy and LEP will need to consider matters of national environmental significance and consider the potential for land use change or intensification to adversely impact upon them.

The recommended principles and actions of this Strategy are consistent with the objectives and provisions of this legislation.

This Strategy has both recognised and recommended a series of principles and actions to protect matters of environmental significance. In limiting opportunities for uncontrolled and sporadic rural living; the Strategy seeks to direct land use intensification away from environmentally sensitive areas. This approach increases the effectiveness of other environmental conservation measures undertaken by both private landholders and government agencies to achieve catchment biodiversity targets. It significantly increases the total area of the LGA protected from further fragmentation and impact upon biodiversity values from the current 7.58% to 53.75%.

The biodiversity values of the LGA have been identified in the Environmentally Sensitive Areas mapping. This Strategy has considered the Environmentally Sensitive Areas mapping as a primary constraint layer when analysing the impact of each recommended new planning approach. The use of this mapping will be further refined in the development of the principal LEP and DCP provisions.

This Strategy also recommends that items and places of heritage significance identified in the 2000 Heritage Study are recommended for protection through listing in the new LEP.

NEW SOUTH WALES

There is a range of State legislation, ministerial directives, and government policy that is applicable to the Lithgow LGA and this Strategy as set out below in alphabetical order.

LEGISLATION

Contaminated Lands Management Act (1997) as amended

The CLM Act establishes a legal framework which enables the New South Wales Environment Protection Authority (EPA) to regulate the assessment and remediation of contamination that poses, or is likely to pose, what the Act refers to as 'a significant risk of harm to human health or the environment'. In broad terms the Act specifies who is responsible for investigating and remediating the contamination, gives the EPA a range of duties and powers to ensure that the contamination is addressed and establishes a scheme to ensure that the public has appropriate information about it. The Act also enables the EPA to make or endorse guidelines for its own use, for example, in determining significant risk of harm and for the use of land owners, developers, site auditors, government departments and other stakeholders.

STRATEGY RELEVANCE

The Lithgow LGA has a strong industrial heritage resulting in contamination of previously developed/utilised industrial and other lands.

This Strategy should ensure that any land of either known or potential contamination is not recommended for a land use that would be incompatible with the known or potential contaminated state of the land.

This is particularly relevant for recommendations affecting the following sites:

- Pottery Estate, Lithgow
- The former Blue Circle Southern Cement Works (Boral Site), Portland
- The Thales site (former ADI site), Lithgow
- Former Gas Works Site, Lithgow
- Hermitage Site, Lithgow
- Former Oil Shale Refinery Site, Hartley Vale
- Marrangaroo Defence Lands

Identification and assessment of contaminated lands will be in accordance with State Environmental Planning Policy 55.

Development of specific provisions and processes to manage assessment of land contamination within the LGA will be a function of the LEP and DCP development.

Crown Lands Act 1989 (NSW) ("Crown Lands Act")

Crown land is land which is owned and administered by the State Government. Crown land accounts for over 50% of all land within NSW. It is important to note that Crown land is managed by the Land and Property Management Authority ("LPMA") and it should not be confused with other types of Crown or State land, including National Parks, State Forests and State Rail Property etc. The object of the Crown Lands Act is to guarantee that all Crown land is managed in order to be of benefit to the people of NSW as well as providing for:

(a) A proper assessment of Crown Land,
(b) The management of Crown land having regarding to the principles of Crown land management contained in this Act,
(c) The proper development and conservation of Crown land having regard to those principles,
(d) The regulation of the conditions under which Crown land is permitted to be occupied, used, sold, leased, licensed or otherwise dealt with,
(e) The reservation or dedication of Crown land for public purposes and the management and use of the reserved or dedicated land, and
(f) The collection, recording and dissemination of information in relation to Crown land.

STRATEGY RELEVANCE

There are significant amounts of Crown land within the Lithgow Local Government Area. Crown parcels for which Council is Trust Manager are identified each year through completion of the Crown Lands Reporting System.

The location, functional use and constraints of Crown land have been taken into consideration in determining recommended land use changes within the Strategy.

Further analysis will occur in the development of the LEP and DCP provisions following consultation with the LPMA.

Environmental Planning and Assessment Act 1979 ("EP&A Act") and associated Regulations

The EP&A Act is the primary piece of legislation in NSW that affects both the creation of environment and planning controls and the assessment of development. The EP&A Act is supported by the *Environmental Planning & Assessment Regulation 2000*.

The objectives of the EP&A Act encourage the proper management, development and conservation of resources, orderly development of land, co-ordination of services, the protection of the environment, and community participation in the planning and assessment process. All aspects of the EP&A Act are relevant to this Strategy.

Part 1 (Clause 5) sets out the objectives for the EP&A Act and these directly address key issues to be considered by the Strategy and the community involvement in the Strategy. Part 1 (Clause 5) sets out the following objectives to encourage:

(a)
- (i) The proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and settlements for the purpose of promoting the social and economic welfare of the community and a better environment,
- (ii) The promotion and co-ordination of the orderly and economic use and development of land,
- (iii) The protection, provision and co-ordination of communication and utility services,

(iv) The provision of land for public purposes,
(v) The provision and co-ordination of community services and facilities; and
(vi) The protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and
(vii) Ecologically sustainable development, and
(viii) The provision and maintenance of affordable housing, and

(b) to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and

(c) to provide increased opportunity for public involvement and participation in environmental planning and assessment

Part 3 of the EP&A Act sets out the process for the making of environmental planning instruments ("EPIs") including Local Environmental Plans ("LEPs") and will affect both the development of this Strategy and its role in informing the preparation of a new LEP for the Lithgow LGA.

It is important to note that significant amendments have been made to the EP&A Act in 2008 and 2009 that have changed the system for the creation of new planning instruments (Part 3) and other provisions. The new LEP Gateway provisions will apply to the Lithgow LGA.

STRATEGY RELEVANCE

The principal purpose of the Land Use Strategy is to inform the development of the new LEP and DCP which are the implementation tools of the Strategy. It must therefore be developed having regard to the objectives and provisions of the EP & A Act.

The Growth Management and Sustainability Principles of this Strategy as presented in Chapter 4 are consistent with the objectives of the EP & A Act. The principle of sustainable development is an underlying principle for the development of all strategic planning directions and actions recommended by this Strategy.

This Strategy also has been developed having regard to the relevant planning directions and provisions of State and Regional Environmental Planning Policies. These are identified and further discussed later in this chapter.

Extensive community and government authority and agency consultation will occur to ensure that this Strategy has considered all relevant matters.

Fisheries Management Act 1994 ("FM Act")

The general objects of the FM Act are to conserve, develop and share the fishery resources of the State for the benefit of present and future generations. The particular objects of the Act that are relevant to Lithgow LGA include:

- To conserve fish stocks and key fish habitats.
- To conserve threatened species, populations and ecological communities of fish and marine vegetation.
- To promote ecologically sustainable development, including the conservation of biological diversity.

- To promote viable commercial fishing and aquaculture industries.
- To promote quality recreational fishing opportunities.
- To appropriately share fisheries resources between the users of those resources; and
- To provide social and economic benefits for the wider community of New South Wales.

Similar to the *Threatened Species Conservation Act* (see below), the FM Act provides for the protection and conservation of threatened fish and marine vegetation species. The objects of the FM Act relating to threatened species are:

- To conserve biological diversity of fish and marine vegetation and promote ecologically sustainable development and activities.
- To prevent the extinction and promote the recovery of threatened species, populations and ecological communities that are endangered.
- To eliminate or manage certain processes that threatens the survival or evolutionary development of threatened species, populations and ecological communities of fish and marine vegetation.
- To ensure that the impact of any action affecting threatened species, populations and ecological communities of fish and marine vegetation is properly assessed; and
- To encourage the conservation of threatened species, populations and ecological communities of fish and marine vegetation by the adoption of measures involving cooperative management.

STRATEGY RELEVANCE

The Environmentally Sensitive Area mapping has identified sensitive water resources throughout the LGA including key fish habitats.

This mapping has been used as a primary constraints layer in determining recommended land use changes and provisions. This Strategy makes significant recommendations designed to direct settlement and land use intensification away from identified Environmentally Sensitive Areas, thereby allowing measures to protect key fish habitats to take effect.

The protection of vulnerable and sensitive riparian areas and waterways will be further refined in the development of LEP and DCP provisions.

Heritage Act 1977 ("Heritage Act")

The Heritage Act is concerned with the conservation of items of heritage significance to prevent harm being done to an item that is of heritage significance or that has a heritage listing. The Heritage Act is applicable to Lithgow City in its entirety as the Strategy proposes both Heritage Conservation Areas and Heritage Listed Items within the LGA.

STRATEGY RELEVANCE

There are 23 items listed under the Heritage Act within the Lithgow LGA. This Strategy proposes no additions to the number of items listed under the Heritage Act at this time.

This Strategy does however propose to move forward with the recommendations of the 2000 Heritage Study as revised by the 2010 Heritage DCP Study through individual listing of a significantly increased number of heritage

items and introducing conservation areas within the new principal LEP to manage and conserve the LGA's environmental heritage. Please refer to Chapter 8 of this Strategy for further detail.

This Strategy recommends that further heritage controls be included in a Development Control Plan. Such controls are outlined in the Heritage DCP Study which is adopted within this Strategy.

The Strategy recommendations will not be inconsistent with the continued conservation and management of significant environmental heritage.

Housing Act 2001 ("Housing Act")

The overall objective of the Housing Act is to facilitate the provision of affordable housing to all sectors of the community, whilst at the same time ensuring that housing is viable and reflects the overall housing standards of the community.

STRATEGY RELEVANCE

Public housing in 2006 represented 5.6% of all housing in the Lithgow LGA, compared to 4.4% for the rest of NSW.

There is a high concentration of social housing in the Bowenfels North Estate and Landa Street Estate area of Lithgow and to a lesser extent in the township of Wallerawang.

Careful consideration will need to be given to any new provisions that may remove the flexibility of the NSW Department of Housing to respond to changing social housing needs, in particular the ability to increase the proportion of one and two bedroom dwellings.

This Strategy does propose the introduction of a range of residential zones and minimum lots sizes for the urban areas from 400 – 800m^2, increasing with the distance away from the central shopping and transport nodes.

The determination of land use zones and permissible land uses along with development standards and controls for residential development beyond that of a single dwelling will be a function of the LEP and DCP process.

This Strategy recommends provisions that encourage an increase in development densities commensurate with the ability to provide and access essential infrastructure and is therefore not inconsistent with the objectives of the Housing Act.

Local Government Act 1993 ("LG Act")

The LG Act provides the legal framework for the local government system in NSW and the participation of local communities in the affairs of local government. Lithgow City Council has a responsibility under the LG Act to provide suitable services to the community, plan for the needs of its community, protect and enhance the environment, and engage with the community.

STRATEGY RELEVANCE

This Strategy will need to be consistent with the objectives and provisions of the Local Government Act.

This Strategy advocates and implements sustainable development principles, effective and efficient provision of local services and facilities, management of public lands and appropriate consultation with the community.

This Strategy has recommended a review of the classifications of the public land to identify if any lands require reclassification under the new LEP.

Extensive community and government authority and agency consultation will occur to ensure that this Strategy has considered all relevant matters.

Mining Act 1992 ("Mining Act")

The Mining Act regulates the exploration and identification of mineral resources across NSW and the mining of those resources. Lithgow City has been identified by the Department of Industry & Investment (former DPI) as an area exhibiting significant current and potential areas for a number of mineral resources.

STRATEGY RELEVANCE

The Lithgow LGA contains significant mineral resources and its economy is highly dependent upon the ability of these resources to be won. In developing this Strategy, Council has had regard to the DII Draft Mineral Resource Audit for the LGA and makes recommendations for the future management of rural lands in and around identified resources to direct settlement away from these areas and reduce land use conflict.

The recommended planning approach for rural (primary production) lands seeks to achieve a balance of social, economic and environmental objectives for the LGA.

National Parks and Wildlife Act 1974 (NSW) ("NP&W Act")

The NP&W Act and associated regulations broadly seek to protect and enhance natural areas and biodiversity. The Act sets up the National Parks & Wildlife Service (part of the Department of Environment, Climate Change and Water ("DECCW") and include management of national parks, historic sites, state conservation areas, regional parks, karst conservation reserves nature reserves and aboriginal areas.

STRATEGY RELEVANCE

The Lithgow LGA contains significant tracts of national parks and state conservation areas within the LGA, covering 33.5% of the LGA land area. The LGA also contains one declared Aboriginal Place known as Blackfellows Hands.

The recommended principles, directions and actions of this Strategy seek to direct development pressures away from areas of high environmental and biodiversity value and achieve a sustainable social, economic and environmental balance.

This Strategy has identified the following as key data gaps that require to be filled to further inform land use planning and management of lands governed by the NP & W Act:

- Biodiversity Strategy
- Aboriginal Heritage Study.

Protection of the Environment Operations Act 1997 ("POEO Act")

The main objectives of the POEO Act are to (Clause 3):

(a) To protect, restore and enhance the quality of the environment in New South Wales, having regarding to the need to maintain ecologically sustainable development.
(b) To provide increased opportunities for public involvement and participation in environment protection.
(c) To ensure that the community has access to relevant and meaningful information about pollution.
(d) To reduce risks to human health and prevent the degradation of the environment.

The POEO Act is enforced by the Environment Protection Authority ("EPA") which sits within the Department of Environment and Climate Change and Water ("DECCW"). The primary features of the POEO Act are:

- Protection of the environmental policies (PEPs).
- Environment protection licences for scheduled development work and activities.
- Environment protection notices including Tier 1 offences, water pollution, air pollution, noise pollution, land pollution and waste, littering, and motor vehicles.
- Environmental audits and investigations.
- Criminal and other proceedings.
- Noise control; and
- Tradeable emissions schemes.

STRATEGY RELEVANCE

There are several premises and sites within the Lithgow LGA licensed under the POEO Act.

This Strategy has had consideration of existing uses and potential for future land use conflict in determining areas for land use change or change of land use controls.

This Act is particularly relevant in the assessment and enforcement stages of the planning process.

Rural Fires Act 1997 ("RF Act")

Under the RF Act and the EP&A Act certain land can be identified as "bushfire prone land". Development on bushfire prone land is restricted and certain approvals are required for it to proceed.

Development is also required to comply with "bushfire environmental assessment codes" prepared under the RF Act. In this case, an updated guideline, *Planning for Bushfire Protection 2006* (as amended), came into effect on 1 March 2007 and was recently updated in May 2010 with Appendix 3 (relating to Australian Standard 3959-2009).

STRATEGY RELEVANCE

The Lithgow LGA contains significant areas of bushfire prone lands. Avoidance of all bushfire prone lands for intensified land use and settlement is not either achievable or practical.

This Strategy seeks measures other than avoidance to manage bushfire risk. The Strategy recommends the following measures to facilitate the minimisation of bushfire cause and risk to life and property:

- Cluster the majority of settlement in defined urban centres
- Minimise the potential for isolated and dispersed rural lifestyle development in rural areas
- Minimise the fragmentation of rural lands
- Avoid encroachment of development on areas of steep slope and dense vegetation
- Restrict the following high risk developments such as sawmills, junkyards, liquid fuel depots, offensive or hazardous industries, chemical industries, service stations, ammunition storage/dumps and pyrotechnics manufacture and storage in bushfire prone areas.

The development of the LEP and DCP will have regard to the Planning for Bushfire Protection legislation and best practice guidelines.

Threatened Species Conservation Act 1995 ("TSC Act")

The TSC Act seeks to protect threatened species, populations and ecological communities through protection of critical habitat and appropriate assessment and management of any relevant threatening processes or impacts. The Act is administered by the Department of Environment and Climate Change.

If a development is assessed as having a significant impact then the applicant may be required to prepare a Species Impact Statement to assist in the assessment process. Alternatively, certification that states that a particular development will not have a significant impact can occur through an environmental planning instrument such as an LEP.

STRATEGY RELEVANCE

A significant number of threatened species, including a high percentage of endangered species of both flora and fauna found in the Lithgow LGA are listed in the TSC Act.

Many of these species are found in areas identified by the Environmentally Sensitive Areas mapping which has been used as a primary constraint in the development of new planning approaches.

This Strategy seeks to direct development pressures away from identified Environmentally Sensitive Areas.

A biodiversity strategy has been identified as a key data gap that is required to be filled to enhance land use planning and management provisions into the future.

The new LEP and DCP will identify improved planning controls and processes to facilitate assessment and mitigation of impact of development upon threatened species within the LGA.

Waste Avoidance and Resource Recover Act 2001 ("WARR Act")

The WARR Act seeks to create an integrated waste and resource management system to adopt the waste hierarchy that seeks to minimise the production of waste and promote resource recovery through recycling and re-use of waste products and meet the objectives of the POEO Act.

STRATEGY RELEVANCE

The Lithgow LGA is proposing to develop a centralised Waste Management Facility at Blackmans Flat that will incorporate both landfill and recycling station.

This Strategy seeks to limit the potential for dispersed rural lifestyle development that would lead to demands for waste collection services to be extended throughout the LGA.

Rural Settlement in areas not serviced by collection services may experience an increase in illegal dumping or burial of waste. An extensive education program will be required to prepare the community for changes in the way we collect and dispose of waste.

Development standards for waste management will be developed as part of the new DCP.

Water Management Act 2000 ("WM Act")

The WM Act is the main piece of legislation ensuring water is provided for the environment and more secure access for water users and administered by the NSW Office of Water ("NOW")(Formerly DWE). The objectives of the WM Act include provision for the sustainable and integrated management of the water sources of the State for the benefit of present and future generations and to provide for the orderly, efficient and equitable sharing of water from water sources.

Under the Water Management Act, basic land holder rights allow rural landowners to access water without the need to obtain a licence for domestic stock use, harvestable rights for dams (10% of average regional rainwater runoff) and for native title rights.

In addition, under the WM Act, "controlled activities" include the erection of a building or the carrying out of a work or the removal or deposition of material and approval is required where the work is carried out in, on or over the bed if any river, lake or estuary. This may result in some development becoming "integrated development" under the EP&A Act.

STRATEGY RELEVANCE

The Fish River Water Supply Scheme that operates within the Lithgow LGA exercises water supply functions under the Water Management Act 2000.

Lithgow City Council by virtue of Section 64 of the Local Government Act also exercises some functions under the Water Management Act in the same way as a Water Supply Authority in relation to developer contributions to the construction of works.

This Strategy has considered the difficulties and threats to the provision of a bulk water supply to the urban areas of the LGA and has made land use planning recommendations that reflect the delicate state of bulk water in the LGA in times of drought.

ENVIRONMENTAL PLANNING INSTRUMENTS

State Environmental Planning Policies ("SEPPs")

SEPPs are a set of State level policies that are included within the term "environmental planning instruments". Environmental planning instruments include SEPPs and Local Environmental Plans ("LEPs") and are legal documents that regulate land use and development. SEPPs are generally limited to state or regional wide issues and can also set the framework for local policies, instruments and controls. The key relevant SEPPs to this Strategy is summarised in Table 1.

Table 1. Key Relevant State Environmental Planning Policies

Name	Relevance for this Strategy and the New Local Environmental Plan
Standard Instrument (LEP) Order 2006	This SEPP provides the template for the all new Local Environmental Plans in NSW and forms the basis for the new Lithgow Local Environmental Plan and associated zoning categories. – Strategy recommendations are not inconsistent.
Drinking Water Catchments Regional Environmental Plan N01	This Plan from the 1 July 2009 is taken to be a State Environmental Planning Policy. This plan aims to create health water catchments that will deliver high quality water while sustaining diverse and prosperous communities; to provide statutory components in sustaining the catchment to support non-statutory components; to achieve water quality management goals of improving water quality in degraded areas and critical locations where water quality is not suitable for the relevant environmental values; and of maintaining or improving water quality where it is currently suitable for the relevant environmental values. This Policy applies to 18.44 % of the LGA within the Sydney Drinking Water Catchment. This Policy requires Strategic Land and Water Capability Assessments (SLAWCA) to be carried out and considered in the preparation of the Land Use Strategy and LEP. This Strategy has considered the SLAWCA prepared by the Sydney Catchment Authority as a primary constraint in analysing land supply and areas proposed for land use change. SLAWCA will be further used to develop the land use matrix required for the new LEP. Strategy is not inconsistent.
SEPP No 15 – Rural Land-Sharing Communities	This Policy makes rural land-sharing communities permissible within rural and non-urban zones. With Council consent, people can collectively own and manage a single lot of land and use it as their principal residence. Development must be environmentally sensitive and sustainable. The recommendations of this Strategy are not inconsistent with this Policy – Strategy is not inconsistent.
SEPP No 21 – Caravan Parks	This SEPP provides controls for the retention, use, design and facilities for caravan parks and will apply to those caravan parks in the Lithgow LGA of which there are only two. Its primary application will occur in main park in the Town of Lithgow. There are limited issues relevant to this Strategy but they will need to integrate with the proposed new LEP/DCP. Strategy is mot inconsistent.
SEPP No 22 – Shops and Commercial Premises	This SEPP allows the change in use of specified commercial/retail uses to other prohibited commercial/retail with development consent. At present the primary application of this Policy is in the Town of Lithgow. Should the recommendations of this Strategy be implemented in the new LEP the Policy will then have application in the CDB areas of Wallerawang and Portland where the business zones apply. There are limited issues relevant to this Strategy but it will need to integrate with the proposed new LEP/DCP. Strategy is not inconsistent.

Name	Relevance for this Strategy and the New Local Environmental Plan
SEPP No 30 – Intensive Agriculture	The Policy requires development consent for cattle feedlots of 50 or more head of cattle and piggeries with 200 or more pigs or 20 or more breeding sows; requires that applications for cattle feedlots and piggeries provide information on measures to prevent water and air pollution, soil degradation and ensure animal welfare; requires that application for cattle feedlots and piggeries are advertised to allow public participation. These are not Strategy issues identified but will need consideration in determining land use tables within the LEP. Strategy is not inconsistent.
SEPP No 32 – Urban Consolidation	This SEPP applies to urban land only and seeks to promote the principles of urban consolidation and integration of land uses to reduce use of land at the fringe of urban development. In particular, this Strategy seeks to avoid unnecessary expansion of urban boundaries unless supported by strong growth/demand and limited supply. The Town of Lithgow is the primary centre considering increased housing densities. Strategy is not inconsistent
SEPP No 33 – Hazardous and Offensive Development	This SEPP defines hazardous and offensive industries and determines some aspects of how and when these land uses can be approved. There are limited issues relevant to this Strategy but will need to be integrated with the proposed new LEP/DCP. Strategy is not inconsistent.
SEPP No 36 – Manufactured Home Estates (MHEs)	This SEPP applies to manufactured home estates. This Strategy does not seek to be inconsistent with either this Policy or Section 117 Direction 3.2. The identification of suitable zones/ locations where caravan parks and hence MHEs are permissible will be a function of the LEP. Strategy is not inconsistent.
SEEP No 44 – Koala Habitat Protection	This SEPP applies to development sites in the Lithgow LGA greater than 1 ha in area where there is potential koala habitat and requires plans of management before development of these lands can proceed. Council must assess whether the land is a core koala habitat. As many of the area of the LGA are covered by significant native or remnant vegetation this SEPP will have widespread application for assessment. There may be opportunity for Council to clarify the application of this SEPP to development applications and limit assessment where there is no significant vegetation through a DCP provision. Strategy is not inconsistent.
SEPP No 55 – Remediation of Land	This SEPP sets out the policy and guidelines to be applied to land that may be contaminated and the process for remediation to be considered for any rezoning or further development. This Strategy considers known contaminated sites in each of the settlements but relies on the application of this SEPP for development assessments of sites not identified in this Strategy. Strategy is non inconsistent.
SEPP No 60 – Exempt and Complying Development	Specifies development that is exempt from consent and development that can be considered as complying development to which a more streamlined development approval process applies. This SEPP is to be phased out and replaced completely by the Exempt and Complying Development Codes SEPP 2008 as amended in September 2011. Strategy is not inconsistent.
SEPP No 64 – Advertising and Signage	This SEPP applies to all public signage that is not exempt and sets controls to minimise impacts and regulate the type, size and design of signage. This will be relevant to most signage in Lithgow LGA, particularly in urban areas. The proposed new LEP/DCP will need to be consistent with this SEPP and provide additional development controls for advertising and signage. Strategy is not inconsistent.
SEPP No 65 – Design Quality of Residential Flat Development	This SEPP sets out a range of development principles (supported by the Residential Design Code) for residential flat buildings. Whilst these buildings may currently be rare in Lithgow LGA there may be increased use of higher density housing in the future, particularly in the Town of Lithgow. Strategy is not inconsistent.
SEPP (Building Sustainability Index: BASIX) 2004	This SEPP applies to all new applications and major alterations and additions to dwellings in the State and seeks to ensure dwellings and designed to reduce water and energy usage and promote sustainable development. Council requires BASIX to be addressed as part of all relevant development applications and the proposed LEP/DCP cannot be inconsistent with this SEPP or make higher standards of water and/or energy efficiency mandatory. However, Council may consider creating advisory controls to improve water and energy efficiency. Strategy is not inconsistent.

Name	Relevance for this Strategy and the New Local Environmental Plan
SEPP (Exempt and Complying Development Codes) 2008	This SEPP applies to all development in Lithgow LGA that is defined in the supporting codes as either exempt (not requiring approval) or complying (requiring a simpler approval process) development. Therefore, the proposed LEP/DCP will need to be integrated/consistent with the SEPP and its associated Codes. Significant changes to this SEPP are proposed to commence in February 2011 that further extends the application of the SEPP within the Lithgow LGA. Strategy is not inconsistent.
SEPP (Housing for Seniors or People with a Disability) 2004	This SEPP permits development for housing for seniors or people with a disability (even in zones where a local plan prohibits this development) as long as it conforms to the controls in the SEPP. The Strategy supports housing for seniors or people with a disability where it addresses the SEPP and will seek to supplement this with permissibility in appropriate urban zones in key settlements. Council will also review the new LEP to include controls addressing Seniors Living. Strategy is not inconsistent.
SEPP (Infrastructure) 2007	This SEPP applies to infrastructure and provision of service facilities; disposal of surplus government lands; site compatibility certificates; consultation processes; and traffic generating development. It also has impacts on the appropriate zones to be applied to infrastructure and community land under the proposed new LEP. The SEPP overrides the Standard Instrument and makes certain land uses permissible in a wide range of zones without inclusion in the proposed new LEP zoning tables. The Strategy and proposed zones/structure plans have taken into account the operation of this SEPP and land use permissibility. This will be addressed further in the development of the land use matrix for the new LEP. Strategy is not inconsistent.
SEPP (Major Projects) 2005	This SEPP defines "major projects" that will be approved by the Minister for Planning instead of the local Council which includes but is not limited to intensive agriculture, processing, mining and some industries. This also relates to the new Part 3A Major Infrastructure and Other Projects under the EP & A Act. Strategy is not inconsistent.
SEPP (Mining, Petroleum Production and Extractive Industries) 2007	This SEPP overrules planning controls in LEPs for mining, petroleum production and extractive industries and determines exempt and complying development. This is particularly relevant to mining activities in the Lithgow Local Government Area. Strategy is not inconsistent.
SEPP (Rural Lands) 2008	This SEPP aims to facilitate the orderly and economic use and development of rural lands for rural and related purposes; it identifies Rural Planning Principles and Rural Subdivision Principles so as to assist in the proper management, development and protection of rural lands for the purpose of promoting the social, economic and environmental welfare of the State; implements measures designed to reduce land use conflicts; to identity state significant agricultural land for the purpose of ensuring the ongoing viability of agriculture on that land having regard to sustainability considerations; amends provisions of LEP's to relating to concessional lots in rural subdivisions. This SEPP has major implications for this Strategy. The matters raised by this SEPP have led to the recommendations of the Strategy affecting rural land management in particular a recommendation for a variable and increased rural minimum lot size for the erection of a dwelling. It has also influenced the recommendations in relation to the Growth Management and Sustainability Principles and the recommended Settlement Hierarchy. Please refer to Chapter 9 and 10 for detailed discussion of the issues and recommended new rural planning approaches. The recommendations of the Strategy have been assessed against these principles to determine their consistency. Details of this assessment are provided below:

Name	Relevance for this Strategy and the New Local Environmental Plan
	RURAL PLANNING PRINCIPLES (a) The promotion and protection of opportunities for current and potential productive and sustainable economic activities in rural areas The rural areas of the Lithgow LGA support a number of economic activities such as mining (coal and sand), agriculture, (predominantly grazing), extractive industry, forestry and tourism. This Strategy recognises that all these activities are important to the future sustainability of the LGA. Significantly, however, mining contributes 27% of the gross regional product of the LGA and represents 12% of the share of employment. Coal and sand mining resources occur predominantly in the rural north planning precinct. In terms of land use planning one of the largest threats to the these activities in the rural areas is land use conflict and land fragmentation arising from the dispersed and unplanned proliferation of rural lifestyle development on a range of lot sizes. Such development can effect the normal operations of these activities and may place in jeopardy future planned expansions and lead to resource sterilisation. As shown in Figure 1 Chapter 9, land holdings in the LGA are extremely fragmented with 84% of rural holdings being below 100ha in size. The rural south precinct exhibits more fragmentation than the rural north precinct. Despite this level of existing fragmentation there remains a significant area of rural land (75%) that can be protected from further fragmentation particularly in the rural north precinct where mineral resources are concentrated. This Strategy seeks to protect the natural resource base and economic activities of the LGA through limiting the opportunity for rural lifestyle development in the wider rural areas through implementation of a number of robust and inter-related planning strategies including: • Adoption of a set of growth management and sustainability principles to underpin all future planning decisions • Adoption of a settlement hierarchy and clustered planning approach to direct future settlement growth limiting additional rural lifestyle development to the existing planned and clustered areas located within a 15km radius of the district town centre of Lithgow • Introducing a variable minimum lot size across the LGA using both 40ha and 100ha in the Lithgow City Standard Instrument LEP. The increased minimum lot size of 100ha will be applied to areas of highest sensitivity and those areas that are held in larger holdings. Many of these sectors involve resource lands. • Limiting industrial development to suitable zoned lands located within the outer urban 15km radius of the district town centre of Lithgow. The Strategy is considered to be consistent with this principle. (b) Recognition of the importance of rural lands and agriculture and the changing nature of agriculture and of trends, demands and issues in agriculture in the area, region or State The agricultural industry in the Lithgow LGA contributes approximately $14 million dollars annually to the economy (2007 Local Profile). Only 64% of the land within the current rural area is capable of some form of agriculture. Grazing is the predominant activity of which beef and sheep production are the most significant enterprises. This activity is of minor significance in regional and state terms contributing 0.12% to the State economy and 1.31% to the central west regional economy. Agriculture in the Lithgow LGA is typical of the state wide trend where it is supported by second off-farm income. Ivey ATP (2006) found that in order for agricultural enterprises to be self sufficient, a holding of 1000ha would be required, with very few holdings of this size remaining in

Name	Relevance for this Strategy and the New Local Environmental Plan
	the LGA. The largest threat to agriculturally capable lands within the LGA is continued fragmentation for rural lifestyle development. This Strategy seeks to limit the opportunity for dispersed and unplanned rural lifestyle development directing this form of development back into a clustered form within a serviceable distance from the district town centre of Lithgow and areas that are currently highly fragmented. This Strategy over time may lead to an increased use of rural lands for agricultural pursuits as rural land values revert back from inflated residential value. It will also minimise land use conflict that stems from differing expectations of land use. This Strategy also recognises the legitimacy of Clause 9 of the Rural lands SEPP to enable rural subdivision for agricultural purposes of any size without a dwelling. This reflects the trend towards non-contiguous holdings. Due to the number of fragmented rural allotments already supporting a rural dwelling within the LGA, it is considered that sufficient opportunity exists for genuine primary producers to reside in close proximity to land that may be used for this purpose. The combined land use planning actions of this Strategy may contribute to an increased uptake of this trend within the LGA into the future. The Strategy is considered to be consistent with this principle. (c) Recognition of the significance of rural land uses to the State and rural communities, including the social and economic benefits of rural land use and development Rural lands provide a range of key functions and uses ranging from primary production to forms of settlement and community focus and environmental conservation. The management and planning of these areas is critical to the long term sustainability of the significant primary and natural resources and conservation values present. Mining and power generation are two significant land uses that occur in the rural areas. These uses are also of State significance. These will remain the mainstay of employment and economic drivers in the Lithgow LGA throughout the life of the Strategy. A key Strategy focus is to limit inappropriate development pressure away from rural resource lands to maximise the social, economic and environmental benefits to the LGA, region and state. This will minimise the potential for land use conflict and impediment to future operations. It will also open up opportunities for economic activity based on tourism. This Strategy recommends that the most appropriate planning tool to achieve this is through a more appropriate minimum rural lot size for the erection of a dwelling proposing a variable minimum lot size across the LGA. Areas of highest sensitivity (44.16% of rural lands) and areas that due to holding pattern would benefit from an increased minimum lot size (38.58% of rural lands) are proposed to have an increased minimum lot size of 100ha. This recommendation will reduce the number of potential new lot and dwellings in the rural areas by 1420 when compared to the existing potential. This Strategy also seeks to maintain the community structure of the rural villages to provide support services and a community focal point, whilst building critical mass within the three town centres for higher order services. This is proposed through the adoption of a settlement hierarchy to direct future growth opportunities for residential development in a clustered form around the town centres. Existing villages have also been reviewed and where appropriate further land has been identified for future growth. This has occurred in Capertee and Rydal. The Strategy is considered to be consistent with this principle.

Name	Relevance for this Strategy and the New Local Environmental Plan
	(d) In planning for rural lands, to balance the social, economic and environmental interests of the community This Strategy recommends a set of Growth Management and Sustainability Principles (Chapter 4) that when implemented will provide for the efficient and sustainable development and management of land. These principles seek to balance the social, economic and environmental interests of the community. This Strategy recognises the current unplanned and dispersed nature of rural lifestyle development and the flexibility of land use zoning as a key threat to balancing the interests of the community across all four sustainability areas. The Strategy recognises rural housing as a legitimate land use but only when appropriately located and considered in terms of a defined settlement hierarchy. The Strategy also recommends limiting industrial development to defined industrial zones to provide for security of investment and management of land use conflict. As with any changes to land use planning provisions there will be winners and losers. As a local government authority Council needs to balance the interests of all within the community. The reduction of opportunities for rural lifestyle development in the rural areas affords protection and security of investment to significant primary production, economic and environmental interests that are static in their location. The Strategy does seek to provide transitional arrangements to lessen the impact of the new change in policy with respect to subdivision and associated dwelling entitlements that have been created through the implementation of current planning controls. These arrangements include the introduction of a new existing holding savings clause in the new LEP to retain dwelling entitlement for all existing holdings between 40ha and 100ha. . The Strategy is considered to be consistent with this principle. (e) The identification and protection of natural resources , having regard to maintaining biodiversity, the protection of native vegetation, the importance of water resources and avoiding constrained land In July 2008 , a collaborative regional effort by three natural resource management agencies: the Department of Water and Energy (DWE), Department of Environment and Climate Change(DECC) and Department of Primary Industries –(Fisheries) supported by Catchment Management Authorities provided Council with a data set to identify the location, extent and diversity of environmentally sensitive areas within the Lithgow LGA. Large areas of the Lithgow LGAs rural lands have been identified as containing sensitive land, water, biodiversity or combination of one or more resources. These areas are shown in Figures 1-6 Chapter 7. This mapping has been incorporated into the Strategy as a primary constraint layer and has informed the planning strategies recommended to direct development pressure away from environmentally sensitive areas. The potential to achieve natural resource outcomes is maximised when land fragmentation and land use conflict is reduced. This Strategy proposes to achieve this through implementation of a number of robust and inter-related planning strategies directed at limiting the potential for unplanned and dispersed rural lifestyle development. Central to this Strategy is the recommendation to increase the rural minimum lots size In the majority or rural lands to 100ha. This is demonstrated by the % of rural lands afforded further protection from further land fragmentation and development pressure of 79.74%. The mapping will also be used to trigger further environmental assessment for new development

Name	Relevance for this Strategy and the New Local Environmental Plan
	that will remain permissible within the rural areas. The Strategy is considered to be consistent with this principle. (f) The provision of opportunities for rural lifestyle, settlement and housing that contribute to the social and economic welfare of rural communities An analysis of historic development application data has indicated a trend towards dispersed rural lifestyle development with 32.7% (415) of all dwelling applications between 1996 -2009 being within the General Rural area. This is higher than 30% in the Lithgow urban area. As outlined in Table 13 and Figure 8 of Chapter 9 the current planning provisions will create a hanging supply of a maximum of 3545 new allotments to be created in the Lithgow LGA rural area. The majority of these would be within the rural north precinct. This trend, if continued, will be unsustainable leading to a loss of critical mass in the urban centres to maintain current services and facilities, undue pressure for uneconomic extension of critical infrastructure and services, potential social disadvantage and loss of resource and environmental land values. To reverse this trend, this Strategy has proposed the adoption of a settlement hierarchy underpinned by the cluster planning approach for a range of rural lifestyle, settlement and housing opportunities within the LGA. The Strategy recommends a combination of planning tools such as zoning and minimum lot size to support this hierarchy. The Strategy recommends the retention of the existing rural small holdings areas with some minor additions to provide for rural lifestyle development within the LGA (refer to Chapter 10 for details). These generally conform to the recommended settlement hierarchy being located within 15km of the Lithgow district town centre. These areas provide the opportunity for a further 1149 large lot residential holdings to be created that should comfortably meet projected demand levels for the life of the Strategy. To assist with directing rural lifestyle development back towards these areas the Strategy has recommended a variable minimum lot size using both 40ha and an increased 100ha minimum lot size in the majority of the LGA. This option will reduce the potential number of new dwellings in the rural areas by 40% (1420) when compared to the potential under the existing LEPs The strategy recommends retention of all existing dwellings entitlements. This will provide a further 898 dwellings in the rural areas without the need for further subdivision. This cluster planning approach is considered necessary to provide for the social and economic welfare of communities within the Lithgow LGA. The Strategy is considered to be consistent with this principle. (g)The consideration of impacts on services and infrastructure and appropriate location when providing for rural housing As stated above the trend towards unplanned dispersed rural housing has and will continue to create an uneconomic demand for services and infrastructure if not reversed. This demand increases as the residents original lifestyle expectations and motivations change over time towards seeking a higher level of infrastructure and service provision more akin to urban areas. The Strategy identifies (Chapter 6) that the Lithgow LGA has limited ability to extend its level of service provision beyond those catchments currently provided unless significant changes occur that would increase the ability of council to source and generate income. It is therefore imperative that future growth opportunities be appropriately located to build critical mass and to take advantage of existing infrastructure provision before moving further into unserviced rural lands. This Strategy recommends a settlement hierarchy to guide growth opportunities and related service provision. The Strategy recommends a combination of planning tools such as zoning and

Name	Relevance for this Strategy and the New Local Environmental Plan
	minimum lot size to implement and support this hierarchy. The Strategy is considered to be consistent with this principle. (g) Ensuring consistency with any applicable regional strategy of the Department of Planning or any applicable local strategy endorsed by the Director-General There is currently no regional strategy of the Department of Planning applicable to the Lithgow LGA. This Strategy will form the local strategy to be endorsed by the Director-General. RURAL SUBDIVISION PRINCIPLES The rural subdivision principles contained in Clause 8 of the Rural Lands 2008 SEPP are required to be considered when a planning authority seeks to review rural minimum lots sizes(s) in rural areas. The Strategy recommendations have been reviewed against these principles as outlined below. (a) The minimisation of rural land fragmentation As shown in Figure 1 Chapter 9, land holdings in the LGA are extremely fragmented with 84% of rural holdings being below 100ha in size. The rural south precinct exhibits more fragmentation than the rural north precinct. As outlined in Table 13 and Figure 8 of Chapter 9 the current 40 ha rural minimum lots size will create a hanging supply of a maximum of 3545 new dwellings in the Lithgow LGA rural area with 2873 of these being on new allotments to be created These are widely dispersed however the majority would be within the rural north precinct. Table 8 of Chapter 9 shows the average holding size of properties above 40 ha in the Lithgow LGA rural areas is 182ha. This data shows that the current minimum lot size of 40 ha is inconsistent with the size of average holdings, meaning that, should the minimum lot size remain unchanged, that the potential for further significant land fragmentation may occur. The table shows that the variance between the average holding size and minimum lot size would not substantially reduce until subdivision below 200ha was removed. The Strategy has recognised that rural land fragmentation is a key threat to the protection and continued viability of primary production lands and environmental conservation. It also recognises that unplanned dispersed rural lifestyle development is a key driver of land fragmentation in the Lithgow LGA. The Strategy seeks to minimise further rural land fragmentation through limiting the opportunity for rural lifestyle development in the wider rural areas. This will be achieved through implementation of a number of robust and inter-related planning strategies including: • Adoption of a set of growth management and sustainability principles to underpin all future planning decisions • Adoption of a settlement hierarchy and clustered planning approach to direct future settlement growth limiting additional rural lifestyle development to the existing planned and clustered areas located within a 15km radius of the district town centre of Lithgow • Introducing a variable minimum lot size across the LGA using both 40ha and 100ha in the Lithgow City Standard Instrument LEP. The increased minimum lot size of 100ha will be applied to areas of highest sensitivity and those areas that are held in larger holdings. This will reduce the potential of new fragmentation from 2873 to 1227 allotments. • Limiting industrial development to suitable zoned lands located within the outer urban 15km radius of the district town centre of Lithgow.

Name	Relevance for this Strategy and the New Local Environmental Plan

The Strategy is considered to be consistent with this principle.

(b) The minimisation of rural land use conflicts, particularly between residential land uses and other rural land uses

The Strategy has recognised that unplanned and dispersed rural lifestyle and the flexibility of the current rural zones are the key contributors to rural land use conflict within the Lithgow LGA.

Whilst the current 40ha minimum lot size can be argued to be sufficient to separate incompatible land use on any one development site, it does not address the cumulative impact of these land uses that create widespread land use conflict. It is this widespread conflict that may hinder primary production and natural resource management outcomes in rural areas.

The larger the minimum lot size in rural areas the greater the potential to reduce land use conflict and achieve rural land zone objectives. Put simply the increased minimum lot size from 40ha to 100ha in the areas identified in rural planning option 1 of this Strategy reduces the potential for rural lifestyle development and associated conflict by 40%.

The Strategy also recommends a change in the minimum lot size of the current rural small holdings zone areas. These areas will attract a large lot residential zoning that through zone objectives indicates the primary use of the land as residential. The Strategy recommends a 2ha minimum lot size for these areas. Land use conflict in these areas will be managed through appropriate land use designation within the land use zone.

The Strategy also recommends the use of appropriate buffer mechanisms to control land use conflict through land separation. This particularly relevant around existing forestry and DECC estate lands and is better implemented as a strategic land use planning tool rather than a development control tool on a site by site basis.

The Strategy is considered to be consistent with this principle.

(c) The consideration of the nature of existing agricultural holdings and the existing and planned future supply of rural residential land when considering lot sizes for rural lands

The Strategy has extensively analysed the existing rural holding patterns and location of existing dwellings within the LGA to identify the impact of a range of minimum lot scenarios expressed in terms of maximum number of lots to be created and projected population. The results of this analysis are provided in Tables 11,12 and 13 Figures 6, 7 and 8 in Chapter 9 are summarised below:

Lot Size Option	Dwellings without subdivision	New Lots	Population @ 2.6 per dwelling
1 Variable 40ha and 100ha	898	1227	5525
2 Variable 40ha and 100ha	822	1707	6575
40ha	672	2873	9217

Whilst the LGA is extremely fragmented large areas of land (76% above 100ha and 46% above 40ha) remain in larger holdings that would benefit from protection from further fragmentation.

The majority of agricultural lands in the LGA are used for grazing. Agriculture in the Lithgow LGA is typical of the state wide trend where it is supported by second off-farm income. Ivey ATP (2006) found that in order for agricultural enterprises to be self sufficient, a holding of 1000ha would be required, with very few holdings of this size remaining in the LGA. The average holding size of allotment s above 40ha is 181ha whilst above 400ha this is 832ha. The largest threat to agriculturally capable lands within the LGA is continued fragmentation for rural lifestyle development.

Name	Relevance for this Strategy and the New Local Environmental Plan
	The variance between the average holding size and minimum lot size would not substantially reduce until subdivision below 200ha was removed. The Strategy has recommended that an increased minimum lot size of 100ha to apply to the majority of rural lands across the LGA would be required to maximise the potential for sustainable primary production lands. The Strategy has also considered supply and demand for rural residential development. Within the LGA, the trend has been towards rural lifestyle development in the wider rural areas over and above that within both the clustered rural small holdings areas and urban areas. This trend is not sustainable. The Strategy recommends that rural lifestyle development be directed back into clustered areas in and around the town centres in accordance with a recommended settlement hierarchy. These areas will provide for an estimated further 1149 dwellings providing ample opportunity for rural residential land for the life of this Strategy. The Strategy has sought to balance the demand for rural residential lands against the nature of primary production lands within the LGA. The Strategy is considered to be consistent with this principle. (d) The consideration of natural and physical constraints and opportunities of land (e) Ensuring that planning for dwelling opportunities takes account of those constraints There are a diverse range of natural and physical constraints which exist in the Lithgow LGA. The Strategy has identified and mapped these constraints to inform land use decision making. In terms of rural subdivision these constraints have been considered in the development and analysis of the lot size scenarios. The Strategy has determined that the development assessment process would be ill-equipped to address these constraints on a site by site basis and are best dealt with at the strategic planning level. A combination of land use zoning and minimum lot size is recommended to address the capability of rural lands to sustain development. It is proposed to apply a 100ha minimum lot size to those areas of the LGA identified as being of the highest sensitivity. This will apply to 44. 16% of all rural lands and are predominantly areas on the escarpment fringes of the LGA characterised by varying degrees of steep slopes and dense native vegetation. Areas providing important biodiversity corridors have also been identified. The strategy also recommends the use of environmental overlays to trigger more rigorous assessment criteria to be identified in the new LEP.
SEPP (Temporary Structures and Places of Public Entertainment) 2007	This SEPP states that certain temporary structures and places of public entertainment can be considered exempt and/or complying development as sets out additional controls for these structures/places. Whilst this is not dealt with specifically in this Strategy, the proposed LEP/DCP will need to take this into account. Strategy is not inconsistent.
SEPP (Affordable Rental Housing) 2009	This SEPP is designed to increase the amount and diversity of affordable housing in NSW. The policy aims to better encourage home owners, social housing providers and developers to invest and create new affordable rental housing to meet the needs of our growing population and existing residents. The new policy: • Encourages partnerships between private and not-for-profit housing providers. • Assists in the provision of housing closer to major employment areas.

Name	Relevance for this Strategy and the New Local Environmental Plan
	• Mitigates against the loss of any existing affordable housing. • Supports innovative affordable housing styles, including granny flats and new style boarding houses. • Seeks to deliver good urban design outcomes. For example, Secondary Dwellings (commonly known as "granny flats") will be permissible under all residential zones of the new LEP (with a focus on the Town of Lithgow). The provision of affordable housing is an important issue to the Lithgow LGA and this will generally be provided in settlements. The new LEP/DCP will need to be consistent with this SEPP. Strategy is not inconsistent.

Standard Instrument – Principal Local Environmental Plan

The Standard Instrument (Local Environmental Plans) Order 2006 and the Standard Instrument – Principal Environmental Plan ("Standard Instrument) set out the format and zones for the Standard LEP Template for all new LEPs in NSW. All Councils are expected to utilise the Standard Instrument to create their new LEPs from 2006 onwards.

The NSW Department of Planning has provided a large number of Planning Circulars and Practice Notes to explain the application of the Standard Instrument/Template. These state that in preparing new LEPs in accordance with the Standard Instrument, councils can:

- Prepare limited additional local provisions that address local planning issues and which reflect the outcomes of local and regional strategies.
- Add limited local objectives to the core zone objectives.
- Add limited additional permitted or prohibited land use for each zone in the land use table.
- Decide whether or not to include optional provisions in their LEP such as "sunset" provisions for the subdivision and development of rural land.
- Specify what will be permitted as exempt and complying development.
- Insert limited local criteria or standards into certain mandatory clauses.
- Prepare maps that specify the lot sizes, building heights and floor space ratios appropriate for their local area.
- Define terms within a local provision in certain circumstances.

However, councils can not:

- Add new zones or create subzones in the LEP.
- Prohibit uses that are mandated as permissible in a zone.
- Permit uses that are mandated as prohibited in a zone.
- Add local provisions that are inconsistent with the mandatory provisions.
- Change the standard dictionary by altering or adding to the standard definitions.
- Change the standard clause numbering.
- Change the format.
- Change the wording of the provisions.

The Standard Instrument sets out 34 standard zones for Councils to use in their ne LEPs that may replace the existing zoning categories in the Lithgow Local Environmental Plan 1998. Councils may select zones as

appropriate to the needs of their local areas, taking into account any relevant State or regional planning guidance. Councils may not add or create new zones or subzones or change the names of standard zones.

For each zone, the Standard Instrument sets out core objectives for development in the zone. Councils may prepare additional local objectives to supplement core objectives where appropriate as long as they are not inconsistent with the core objectives and mandated land uses and do not conflict with State or regional planning guidance.

The land use table in the Standard Instrument mandates certain permitted uses (as defined in the dictionary).
A full draft matrix of existing and proposed zones; existing, core and proposed local objectives; and existing, core and proposed permissible land uses (with or without consent) will be prepared by Council and provided to the Department of Planning prior to preparation of the Draft LEP.

Section 117 Ministerial Directions

Table 2 sets out the Directions issued to Councils under Section 117(2) of the EP&A Act (as of late 2009) that are relevant to the Strategy and new LEP. These directions guide the outcomes in environmental planning instrument as well as the strategies that support these instruments. They are mandatory (not optional). Further detailed consideration of these Directions and justification for inconsistencies will be undertaken in the development of the new LEP. The comments provided here are in broad terms to ensure that Strategy recommendations can be moved forward for implementation through the LEP and are not in direct contravention of these Directions.

Table 2. Key Relevant Section 117 Directions

Section 117 Direction	Strategy Consistency
1.1 Business and Industrial Zones (Issued 1 July 2009) Objectives • Encourage employment growth in suitable locations • Protect employment land in business and industrial zones, and' • Support the viability of identified strategic centres Section 4 states that: A planning proposal shall: a) Give effect to the objectives of this direction. b) Retain the areas and locations of existing business and industrial zones. c) Not reduce the total potential floor space area for employment uses and related public services in business zones. d) Not reduce the total potential floor space area for industrial uses in industrial zones; and e) Ensure that proposed new employment areas are in accordance with a strategy that is approved by the Director-General of the Department of Planning.	These matters are discussed in detail in Chapter 12 of this Strategy. This Strategy recommends: • minor changes to the business and industrial zones within Lithgow; • the creation of new business and industrial zones in the town centre of Wallerawang and Portland the creation of new industrial zones at Marrangaroo, Minerals Processing Park, Wallerawang. The Strategy recommendations are well supported by the findings of the 2010 Business and Retail Strategy and past industrial studies and investigations. The minor changes to the areas and locations of existing business and industrial zones are justified in order to maintain the viability of the town centres Main St CBD's and to provide opportunity for re-development of areas consistent with their location and development capacity. The new Greenfield industrial sites are required to provide opportunities for industrial growth and diversification and improve the LGA's employment self containment. The Strategy does propose to introduce floor space ratios to business zones in Lithgow to limit the expansion of the out of centre plaza developments. Further consideration to these

Section 117 Direction	Strategy Consistency
	provisions will be undertaken in the preparation of the new LEP. This Strategy will be extensively consulted upon with both the community and government authorities and will be required to be endorsed by the NSW Department of Planning. **Strategy is consistent.**
1.2 Rural Zones (Issued 1 July 2009) Objective To protect agricultural production value of rural land. Section 4 states that: A planning proposal shall: a) Not rezone land from a rural zone to a residential, business, industrial, village or tourist zone. b) (N/A) Section 5 states that a Draft LEP may be inconsistent with this direction only if it satisfies the Director-General that the inconsistencies are justified by a strategy or study or is in accordance with a regional strategy or of minor significance.	Rural land management is discussed in detail in Chapter 9 and 10 of this Strategy. The Strategy does recommend land use changes to lands that are currently zoned Rural. **The Strategy recommendations are therefore inconsistent with Section 4(a) of this Direction.** No rural lands proposed for land use change are identified as having high agricultural value. Justification for each land use change is provided within this Strategy and Council will be seeking the endorsement of the NSW Department of Planning for this inconsistency.
1.3 Mining, Petroleum Production and Extractive Industries (Issued 1 July 2009) Objective To ensure that the future extraction of State or regionally significant reserves of coal, other minerals, petroleum and extractive minerals are not compromised by inappropriate development. Section 4 states that in the preparation of a planning proposal affected by this direction, the Council shall: a) Consult the Director-General of the Department of Primary Industries (DPI) to identify any: (i) Resources of coal, other minerals, petroleum or extractive material that are of either State or regional significance; and (ii) Existing mines, petroleum production operations or extractive industries occurring in the area subject to the Draft LEP; and b) Seek advice from the Director-General of DPI on the development potential of resources indentified under (4)(a)(i), and c) Identify and take into consideration issues likely to lead to land use conflict between other land uses; and	These matters are discussed in detail in Chapter 6 and 9 of this Strategy. This Strategy has had regard to the Draft Mineral Resource Audit provided to Council by NSW Department Of Industry and Investment (Primary Industries) (DII) Further consultation will be undertaken with DII in the development of the LEP. **The recommendations of the Strategy are consistent with the objectives and provisions of this Direction.**

Section 117 Direction	Strategy Consistency
(i) Development of resources identified under (4)(a)(i), or (ii) Existing development identified under (4) (a) (ii).	
1.5 Rural Lands (Issued July 2009) Objective To protect the agricultural production value of rural land and facilitate the orderly and economic development of rural lands for rural and related purposes. Sections 4 and 5 state that: (4) A planning proposal must be consistent with the Rural Planning Principles listed in State Environmental Planning Policy (Rural Lands 2008) (5) A planning proposal must be consistent with the Rural Subdivision Principles listed in State Environmental Planning Policy (Rural Lands 2008).	These matters are discussed in detail in Chapters 9 and 10 of this Strategy. This Strategy does affect land within existing rural zones and proposes to change the rural minimum lot sizes. In developing the new rural planning approach the Strategy has had regard to the provisions and principles of State Environmental Planning Policy (Rural Lands 2008). The Strategy recommendations are demonstratively consistent with both the Rural Planning Principles and Rural Subdivision Principles of State Environmental Planning Policy (Rural Lands 2008).
2.1 Environmental Protection Zones (Issued 1 July 2009) Objective To conserve and protect and conserve environmentally sensitive areas. Sections 4 states that: (4) A planning proposal shall include provisions that facilitate the protection and conservation of environmentally sensitive areas. (5) A planning proposal that applies to land within an environment protection zone or land otherwise identified for environment protection purposes in LEP shall not reduce the environmental protection standards that apply to the land (including by modifying development standards that apply to the land). This requirement does not apply to a change to a development standard for minimum lot size for a dwelling in accordance with clause (5) of Direction 1.5 "Rural Lands".	These matters are discussed in detail in Chapter 6 of this Strategy. The Strategy has had regard due regard to areas identified as environmentally sensitive areas and the new recommended planning approaches seek to direct development pressures away from these areas. Appropriate zoning and land use provisions will be included in the Draft LEP to protect and conserve ESAs. The Strategy recommendations are consistent with this Direction
2.3 Heritage Conservation (Issued 1 July 2009) Objective To conserve items, areas, objects and places of environmental heritage significance and indigenous	These matters are discussed in Chapter 8 of this Strategy. This Strategy recommends the implementation of the 2000 Lithgow Heritage Study as modified by the 2010 Heritage DCP

Section 117 Direction	Strategy Consistency
heritage significance. Section 4 states that: (4) A planning proposal shall contain provisions that facilitate the conservation of: a) Items, places, building works, relics, moveable objects or precincts of environmental heritage significance to an area, in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item, area, object or place, identified in a study of the environmental heritage of the area. b) Aboriginal objects or Aboriginal places that are protected under the National Parks and Wildlife Act 1974, and c) Aboriginal areas, Aboriginal objects, Aboriginal place or landscapes identified by an Aboriginal heritage survey prepared by or on behalf of an Aboriginal Land Council, Aboriginal body or public authority and provided to the council, which identifies the area, object, place or landscape as being of heritage significance to Aboriginal culture and people.	Study. The Strategy recommends a combination of both individual listing and conservation areas to protect and conserve the LGA's significant environmental heritage. The recommendations of the Strategy are consistent with this Direction.
2.4 Recreation Vehicle Areas Objective To protect sensitive land or land with significant conservation values from adverse impacts from recreation vehicles. Section 4 states that: (4) A planning proposal must not enable land to be developed for the purpose of a recreation vehicle area where • The land is within an environmental protection zone. • The land comprises a beach or dune adjacent to or adjoining a beach • Where land not mentioned above unless the planning authority has taken into consideration the provisions of the guidelines titled • *Guidelines for selection, establishment*	There are no designated recreation vehicle areas in the Lithgow LGA and this Strategy does not propose to identify lands for this purpose. Direction is not applicable

Section 117 Direction	Strategy Consistency
and maintenance of recreation vehicle areas, Soil Conservation Service of NSW,1985 • *Recreation Vehicles Act 1983, Guidelines for Selection, Design and Operation of Recreation Vehicles Areas, State Pollution Control Commission, 1985.*	
3.1 Residential Zones (Issued July 2009) Objective • To encourage a variety and choice of housing types to provide for existing and future housing needs; • To make efficient use of existing infrastructure and services and ensure that new housing has appropriate access to infrastructure and services; and • To minimise the impact of residential development on the environment and resource lands. Sections 4 states that: (4) A planning proposal shall include provisions that encourage the provision of housing that will: • broaden the choice of building types and locations available in the housing market; and • make more efficient use of existing infrastructure and services; and • reduce the consumption of land for housing and associated urban development on the urban fringe; and • be of good design. (5) A planning proposal shall, in relation to land to which this direction applies: a) Contain a requirement that residential development is not permitted until and is adequately serviced (or arrangements satisfactory to the council, or other appropriate authority, have been made to service it), b) And not contain provisions which will reduce the permissible residential density of land.	These matters are discussed in Chapter 11 of this Strategy. This Strategy has reviewed the supply of residential land in relation to existing infrastructure and service capacity and has made recommendations consistent with this direction to ensure that the land can be adequately serviced. The Strategy does make recommendations that will reduce the permissible density of some residential lands and is therefore inconsistent with Section 5 (b). This inconsistency is considered to be justifiable in terms of the objectives of this Direction and the growth management and sustainability principles recommended within this Strategy.
3.2 Caravan Parks and Manufactured Home Estates (Issued July 2009) Objective	This matter will be further considered in the development of the land use matrix as a function of the LEP process. This Strategy does not make any recommendation

Section 117 Direction	Strategy Consistency
To provide for a variety of housing types and opportunities for caravan parks and manufactured home estates. Sections 4 & 5 that: (4) In identifying suitable zones, locations and provisions for caravan parks in a planning proposal (Draft LEP), council shall: a) Retain provisions that permit development for the purposes of a caravan park to be carried out on land, and b) Retain the zonings of existing caravan parks, or in the case of a new principal LEP zone the land in accordance with an appropriate zone under the Standard Instrument (Local Environmental Plans) Order 2006 that would facilitate the retention of the existing caravan park. (5) In identifying suitable zones, locations and provisions for manufactured home estates (MHEs) in a planning proposal, council shall: a) Take into account the categories of land set out in Schedule 2 of SEPP 36 as to where MHEs should not be located. b) Take in account the principles listed in clause 9 of SEPP 36 (which councils are required to consider when assessing and determining the development and subdivision proposals), and c) Include provisions that the subdivision of MHEs by long term tease of up to 20 years or under the Community Land Development Act 1989 be permissible with consent.	inconsistent with this Direction.
3.3 Home Occupations (Issued July 2009) Objective The objective of this direction is to encourage the carrying out of low-impact small businesses in dwelling houses stating: (4) Planning Proposals shall permit home occupations to be carried out in dwelling houses without the need for development consent.	This matter will be further considered in the development of the land use matrix as a function of the LEP process. The recommendations of this Strategy are not inconsistent with this Direction.
3.4 Integrating Land Use and Transport (Issued July 2009) Objective To ensure that urban structures, building forms, land	The objectives of this Direction are reflected in the recommended growth management and sustainability principles that underpin this Strategy. The Strategy makes recommendations for an adopted settlement hierarchy based on cluster planning principles to achieve critical

Section 117 Direction	Strategy Consistency
use locations, development designs, subdivision and street layouts achieve the following planning objectives: • Improving access to housing, jobs, and services by walking, cycling and public transport; and • Increasing the choice of available transport and reducing dependence on cars, and • Reducing travel demand including the number of trips generated by development and the distances travelled, especially by car, and • Supporting the efficient and viable operation of public transport services; and • Providing for the efficient movement of freight. Section 4 states that: (4) A planning proposal shall locate zones for urban purposes and include provisions that give effect to and are consistent with the aims, objectives and principles of: a) *Improving Transport Choice – Guidelines for planning and development (DUAP 2001), and* b) *The Right Place for Business and Services – Planning Policy (DUAP 2001).*	mass of the town centres and greater use of walking, cycling and transport as set out in the identified guidelines. The Strategy has identified a comprehensive transport strategy as a key data gap and has made recommendation for Council to undertake this additional Strategy to inform the 2016 LEP review. The recommendations of the Strategy are consistent with this Direction.
4.2 Mine Subsidence and Unstable Land (Issued July 2009) Objective To prevent damage to life, property and the environment on land identified as unstable or potentially subject to mine subsidence. (2) This direction applies to land that: a) is within a Mine Subsidence District proclaimed pursuant to section 15 of the Mine Subsidence Compensation Act 1961, or b) has been identified as unstable land. Section 4 states: When preparing a planning proposal a planning authority must: (a) Consult the Mine Subsidence Board to ascertain: • If the Board has any objection, and • The scale, density and type of development that is appropriate for the potential level of	A large area of the Lithgow Township is identified as a Mine Subsidence District. Mine Subsidence in most cases within the Lithgow Mine Subsidence District is seen as a controllable risk through appropriate building design, scale and density. Council will consult with the Mine Subsidence Board in the development of the LEP and DCP provisions. The Strategy recommendations are not inconsistent with this Direction.

Section 117 Direction	Strategy Consistency
subsidence (b) Incorporate provisions onto the Draft LEP that are consistent with the recommended scale, density and type of development recommended in 4(a)(ii).	
4.3 Flood Prone Land (Issued July 2009) Objective To ensure that development of flood prone land is consistent with the NSW Government's Flood Prone Land Policy and the principles of the *Floodplain Development Manual 2005;* and To ensure that the provisions of an LEP on flood prone land is commensurate with flood hazard and includes consideration of the potential flood impacts both on and off the subject land. Sections 4 to 8 state that: (4) A planning proposal shall include provisions that give effect to and are consistent with the NSW Flood Prone Land Policy and the principles of the Floodplain Development Manual 2005 (including the Guidelines on Development Controls on Low Flood Risk Areas). (5) A planning proposal shall not rezone land within the flood planning areas from Special Use, Special Purpose, Recreation, Rural or Environmental Protection Zones to a Residential, Business, Industrial, Special Use or Special Purpose Zone. (6) A planning proposal shall not contain provisions that apply to the flood planning areas which: a) permit development in floodway areas, b) permit development that will result in significant flood impacts to other properties. c) Permit a significant increase in the development of that land. d) Are likely to result in a substantially increased requirement for government spending on flood mitigation measures, infrastructure or services; or e) Permit development to be carried out without development consent except for the purposes of agriculture (not including dams, drainage canals, levees, buildings or	There are significant areas of flood prone land within the town centre of Lithgow along Farmers Creek. These areas have been identified by a Floodplain Management Study completed in 1991. Council has not developed a Floodplain Risk Management Plan in accordance with the 2005 Floodplain Development Manual. The Strategy therefore cannot demonstrate consistency with this Direction. The preparation of the Floodplain Risk Management Plan has been identified in this Strategy as a key data gap. It is considered that Council can justify inconsistency with this Direction based on the following: • Comprehensive data included in 1991 Flood Study; • Current flood mitigation works would need to be completed to enable a new Flood Study to take account of the changed conditions; • No significant land use intensification is proposed upon the flood prone lands. .

Section 117 Direction	Strategy Consistency
structures in flood ways or high hazard areas), roads or exempt development. (7) A planning proposal must not impose flood related development controls above the residential flood planning level for residential development on land, unless a council provides adequate justification for those controls to the satisfaction of the Director-General (or an officer of the Department nominated by the Director-General). (8) For the purposes of a planning proposal, a council must not determine a flood planning level that is inconsistent with the Floodplain Development Manual 2005 (including the Guideline on Development Controls on Low Flood Risk Areas) unless a council provides adequate justification for the proposed departure from that Manual to the satisfaction of the Director-General (or an officer of the Department nominated by the Director-General).	
4.4 Planning for Bushfire Protection (Issued July 2009) Objective • To protect life, property and the environment from bush fire hazards, by discouraging the establishment of incompatible land uses in bush fire prone areas, and • To encourage sound management of bush fire prone areas. Sections 4 to 6 state that: (4) In the preparation of a planning proposal LEP a Council shall consult with the Commissioner of the NSW Rural Fire Service following receipt of a gateway determination under Section 56 of the Act, and prior to undertaking community consultation in satisfaction of Section 57 of the Act, and take into account any comments so made; (5) A planning proposal must: a) Have regard to Planning for Bushfire Protection 2006, b) Introduce controls that avoid placing inappropriate developments in hazardous areas, and c) Ensure that bushfire hazard reduction is not	The LGA is significantly affected by Bush Fire Prone Land. The objectives of this Direction are met by recommended strategies and principles to direct settlement and land use intensification away from bush fire prone areas. Council will consult with the Rural Fires Service in relation to both this Strategy and development of the Planning Proposal for the principal LEP. The recommendations of this Strategy are consistent with this Direction.

Section 117 Direction	Strategy Consistency
prohibited within the APZ. (6) A planning proposal shall, where development is proposed, comply with the following provisions, as appropriate: a) Provide an Asset Protection Zone (APZ) incorporating at a minimum; b) An Inner Protection Area bounded by a perimeter road or reserve which circumscribes the hazard side of the land intended for development and has a building line consistent with the incorporation of an APZ, within the property; and c) An Outer Protection Area managed for hazard reduction and located on the bushland side of the perimeter road, d) For infill development (that is development within an already subdivided area), where an appropriate APZ cannot be achieved, provide for an appropriate performance standard, in consultation with the NSW Rural Fire Service. If the provisions of the Draft LEP permit Special Fire Protection Purposes (as defined under section 100B of the Rural Fires Act 1997), the APZ provisions must be complied with, e) Contain provisions for two-way access roads which links to perimeter roads and/or to fire trail networks. f) Contain provisions for adequate water supply for fire-fighting purposes. g) Minimise the perimeter of the area of land interfacing the hazard which may be developed. h) Introduce controls on the placement of combustible materials in the Inner Protection Area.	
5.2 Sydney Drinking Water Catchments (Issued July 2009) Objective To protect water quality in the hydrological catchment. Sections 4 and 5 state: (4) A planning proposal must be prepared in accordance with the general principle that water quality within the hydrological catchment must be protected, and in accordance with the following specific principles: (a) New development within the hydrological catchment must have a neutral or beneficial effect on water quality; and (b) New development within the hydrological catchment must not compromise the achievement of the water quality objectives set out in the Drinking Water Catchments Regional Plan No 1; and	A large percentage (18.44%) of the Lithgow LGA is within the Sydney Drinking Water Catchment. The SCA has prepared a strategic land and water capability assessment of land within the catchment in the Lithgow LGA. This assessment has been applied as a primary constraint in determining the recommended principles and actions of this Strategy. Council will continue to consult closely with the SCA in relation to the finalisation of this Strategy and the preparation of the principal LEP. The Strategy recommendations are not inconsistent with this Direction.

Section 117 Direction	Strategy Consistency
(c) Future use of the hydrological catchment should be matched to land and water capability, and (d) The ecological values of land within a Special Area that is: Reserved as national park, nature reserve or state recreation area under the National Parks and Wildlife Act1974, or Declared as a wilderness area under the Wilderness Act 1987, or Owned or under the care control and management of the Sydney Catchment Authority, should be maintained. (5) When preparing a planning proposal that applies to land within the hydrological catchment , the planning authority must: (a) include provisions which will achieve or give effect to the principles in 4 and (b) give consideration to the outcomes of any strategic land and water capability assessment prepared by the SCA, or if such an assessment has not yet been prepared may give consideration to: (i) the outcomes of an assessment, prepared in consultation with the Sydney Catchment Authority, which is equivalent to a strategic land and water capability assessment, or (ii) a site-specific assessment prepared in consultation with the Sydney Catchment Authority which into account the likely impact of rezoning on water quality, or (iii) a current settlement strategy or rural residential strategy that has been approved by the Director-General of the Department of Planning, and (c) zone land with the Special Areas owned or under the care control and management of the Sydney Catchment Authority generally in accordance with Table (Refer to Direction): (d) consult with the SCA, describing the means by which the planning proposal gives effect to the water quality protection principles set out in paragraph 4 of this direction, and (e) include a copy of any information received from the SCA as a result of the consultation process, in its planning proposal prior to the issuing of a gateway determination under Section 56 of the Act.	

Section 117 Direction	Strategy Consistency
6.1 Approval and Referral Requirements (Issued July 2009) Objective The objective of this direction is to ensure that LEP provisions encourage the efficient and appropriate assessment of development. Section 4 states: (4) A planning proposal must: (a) minimise the inclusion of provisions that require concurrence, consultation or referral of development applications to a Minister or public authority, and (b) not contain provisions requiring concurrence, consultation or referral of a Minister or public authority unless the relevant planning authority has obtained approval of both the appropriate Minister, public authority and the Director-General of the Department of Planning prior to undertaking community consultation in satisfaction of Section 57 of the Act, and (c) not identify development as designated development unless: (i) can satisfy the Director- General Department of Planning that the class of development is likely to have a significant impact on the environment, and (ii) has obtained the approval of the Director-General nominated by the DG prior to undertaking community consultation in satisfaction of Section 57 of the Act.	Any likely concurrence or referral provisions of identification of any additional designated developments will be considered as a function of the LEP process. This Strategy has not dealt with these matters to date and may be further explored in the consultation phase with government authorities.
6.2 Reserving Land for Public Purposes (Issued July 2009) Objective To facilitate the provision of public services and facilities by reserving land for public purposes, and To facilitate the removal of reservations of land for public purposes where the land is no longer required for acquisition. (1) A planning proposal shall not create, alter or reduce existing zonings or reservations of land for	Council is currently reviewing lands reserved for public purposes and in particular reviewing open space and recreational lands through the Open Space and Recreational Needs Study that supports and informs this Strategy. Council will also be consulting with government authorities regarding land either reserved of identified for acquisition within the Lithgow LGA. The Strategy at this stage is consistent with the Direction.

Section 117 Direction	Strategy Consistency
public purposes without the approval of the relevant public authority and the Director-General of the Department of Planning (or an officer of the Department nominated by the Director-General). (2) When a Minister or public authority requests a council to reserve land for a public purpose in a planning proposal and the land would be required to be acquired under Division 3 of Part 2 of the Land Acquisition (Just Terms Compensation) Act 1991, the council shall: (a) Reserve the land in accordance with the request; and (b) Include the land in a zone appropriate to its intended future use or a zone advised by the Director-General of the Department of Planning (or an officer of the Department nominated by the Director-General), and (3) When a Minister or public authority requests a council to include provisions in a planning proposal relating to the use of any land reserved for a public purpose before that land is acquired, the council shall: (a) Include the requested provisions, or (b) Take such other action as advised by the Director-General of the Department of Planning (or an officer of the Department nominated by the Director-General) with respect to the use of the land before it is acquired. (4) When a Minister or public authority requests a council to include provisions in a planning proposal to rezone and/or remove a reservation of any land that is reserved for public purposes because the land is no longer designated by that public authority for acquisition, the council shall rezone and/or remove the relevant reservation in accordance with the request.	
6.3 Site Specific Provisions Objective To discourage unnecessarily restrictive site specific planning controls. It applies to a planning proposal that will allow a particular development to be carried out.	The Strategy has not given any consideration to a particular development on specific sites. The Strategy is to inform a principal LEP, not an amending LEP. Direction is not applicable.

CHAPTER 4 GROWTH MANAGEMENT STRUCTURE

STRATEGIC PLANNING DIRECTIONS

The following directions and actions to inform the Land Use Strategy and Local Environmental Plan fall out of the analysis of growth management structures of the LGA:

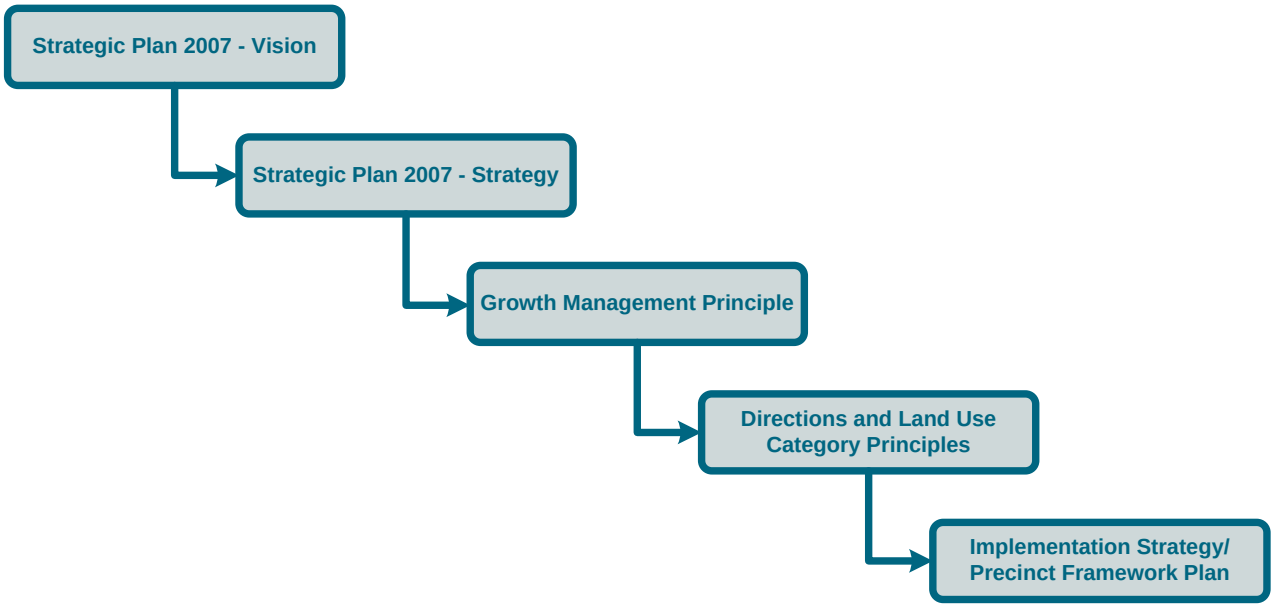
- Adopt and apply Growth Management and Sustainability Principles to all land use planning decisions.
- Adopt and apply a defined settlement hierarchy for the Lithgow LGA as outlined in Table 5 and Figure 4.
- Apply a clustered planning approach to future growth in the Lithgow LGA aligned with the adopted settlement hierarchy.
- Recognise and strengthen the role of each town, village, hamlet and rural area commensurate with its place in the adopted settlement hierarchy.

GROWTH MANAGEMENT AND SUSTAINABILITY PRINCIPLES

This section sets a series of planning principles which, when implemented through this strategy and future planning instruments and policies, will provide for efficient and sustainable development of land. These growth management principles build upon and refine the visions and strategies identified in the 2007 Lithgow City Council Strategic Plan.

These principles will in turn be further refined into more specific land use category principles in Chapters 7-13. The relationship of these principles to other strategic processes is indicated in the following diagram:

Figure 1. Relationship of principles to strategic processes



Source: LCC

Table 1. Growth Management and Sustainability Principles

STRATEGIC PLAN REFERENCE	PRINCIPLE TITLE	GUIDING PRINCIPLE
G1 Planning for an annual growth rate of 1 to 2% for the LGA. G2 Planning growth in the towns and villages followed by rural residential areas. G4 Providing residential land to cater for future growth	GMP 1. THRESHOLDS TO GROWTH	• Future development should strengthen the desired settlement hierarchy, support and maintain strong commercial centres, minimise urban sprawl and environmental footprints and maximise infrastructure and service efficiencies. • Future development should be planned to create communities within the hierarchy of settlement. Consideration should be given to the ultimate geographical extent and population target for each community and the staging/timing by which it is proposed to reach that position. • Future development should be strategically planned by providing a timely release of adequate and appropriately located land based on an analysis of the economic,

STRATEGIC PLAN REFERENCE	PRINCIPLE TITLE	GUIDING PRINCIPLE
		social and environmental carrying capacity of settlements and genuine demand.
G3 Facilitating the sustainable planning of land through assessment criteria E2 Identifying and protecting the Department of Environment and Climate Changes Estates E3 Protecting and enhancing biodiversity through consultation and development of partnerships E/I13 Protecting the economic assets	GMP 2. LAND USE SUITABILITY AND CAPABILITY	• Future development should be located on land that is suitable for the development and capable of supporting the proposed uses. • Future development should avoid areas of environmental significance, significant natural and/or economic resource, potential hazard, high landscape or cultural heritage value, or potential increased risk associated with impacts of climate change. • Future development adjoining land with the above values should incorporate buffers as necessary to help protect those values and to avoid future land use conflict. • Future development, particularly at the residential/primary production and the residential/industrial interfaces, should be planned for and managed so any potential conflict is minimised in relation to adjoining or adjacent land uses.
G6 Providing infrastructure for growth T1 Providing road infrastructure which meets the needs of residents T3 Promoting equitable access to public transport T5 Improving and expanding the pedestrian and bicycle network E8Securing the community access to water	GMP 3. INFRASTRUCTURE PROVISION	• Future development should only be permitted where it can be provided with adequate, cost effective physical and social infrastructure to match the expected population of each settlement area. In rural areas this may require the development being able to provide stand alone services. • Future development should not create the demand for the uneconomic provision of infrastructure. • Future development should ensure that it does not place an unacceptable pressure on infrastructure capacity to supply water or reduce environmental flows. • Settlement growth should aim to improve the viability of higher order infrastructure and services through the creation of critical mass and not overburden existing services elsewhere. • Future development should be designed and located to minimise the need to travel; to maximise opportunity for efficient public transport and pedestrian access options; and to encourage energy and resource efficiency. • Future development should be designed and located to have well connected and accessible urban areas increasing the opportunity for public transport, cycling and walking for residents and visitors. • Future development should not contribute to ribbon/strip development nor impact the safety and efficiency of the Great Western and Castlereagh Highways or Bells Line of Road. • Future development should provide sufficient buffering distances and /or technological solutions between proposed development and existing or proposed major infrastructure, including road and rail corridors, sewage treatment plants and waste facilities. • Future development should be designed and located to maximise total water cycle management and minimise impacts on the environment.
G2 Planning growth in the towns and villages followed	GMP 4. DIVERSITY OF LIFESTYLE	• Future development should provide for a mix of houses, jobs and recreational and open space opportunities.

STRATEGIC PLAN REFERENCE	PRINCIPLE TITLE	GUIDING PRINCIPLE
by the rural residential areas G5 Providing for rural living in an appropriate development form that will minimise its impact and maximise the concentration of population of population in around existing town centres and villages C9 Providing a range of housing opportunities to meet the diverse needs of the community		• Future residential development should provide for a variety of dwelling types and a choice in location, form and affordability. • Future development should enable mixed uses and home-based employment opportunities in residential and village zones. • Future rural residential development should be planned to strengthen the desired settlement hierarchy. It should be located close to existing centres and away from areas that may in the future have values for urban expansion. • Future rural residential development should be clustered to encourage a sense of community and for the efficient provision of services. Further fragmented development over the landscape should be discouraged. • Future rural residential development should provide a limited alternative to urban growth in urban centres and not be provided so as to detract from such growth.
C2 Protecting and enhancing areas of unique qualities and character C4 Determining and prioritising the recreational needs of the community and explore funding options C7 Ensuring adequate open space is provided throughout the towns and villages HR1 Identifying preserving, improving and promoting the LGA's indigenous and non indigenous built and natural heritage	GMP 5. CHARACTER, IDENTITY AND URBAN DESIGN	• Future development should recognise, protect and be compatible with any unique topographic, natural or built cultural features essential to visual setting, character, identity or heritage significance of the area or settlement that is to be located in. • Future development should retain and enhance the rural character of local areas and not lead to a blurring of urban settlement and the surrounding rural hinterland. • Future development should support the role of each of the settlement areas within the desired hierarchy and not detract from the current village and rural character of the smaller centres. • Aboriginal cultural and community values should be considered in planning for future development. • Future development should be designed to ensure there is public access to an adequate supply and appropriately located public open space and recreation areas to provide for a range of recreational uses and visual amenity.
E/I1 Planning for a diversified economy which supports local employment E/I2 Encouraging local employment opportunities for the community E/I14 Providing employment generation lands E/I15 Providing retailing opportunities in the LGA E/I16 Developing our natural and cultural assets for the tourism market	GMP 6. ECONOMIC GROWTH	• Industrial land should be made available in a variety of locations to encourage new opportunities and employment diversity. However, location and availability should recognise the linkages between employment land and: settlement areas; markets; transport and access; environmental constraints; and cost effective provision of necessary services and infrastructure. • Commercial land, should be located so that it can be conveniently serviced, is accessible to, and is consistent in scale with the settlement it serves or is planned to serve. New commercial land should not undermine existing centres. • Future tourism development should not negatively impact on the natural, economic of social fabric of the area it is to be located in. • Future investment in and growth of tourism products and services should not occur at the expense of local environmental and social values.
C3 Encouraging equitable	GMP 7.	• Future services and facilities should be provided in

STRATEGIC PLAN REFERENCE	PRINCIPLE TITLE	GUIDING PRINCIPLE
access to services and facilities which meet the needs of the community	ACCESS AND EQUITY OF SERVICES	settlement areas commensurate with the role of that area within the desired settlement hierarchy and the identified needs of the community.

EXISTING SETTLEMENT PATTERN

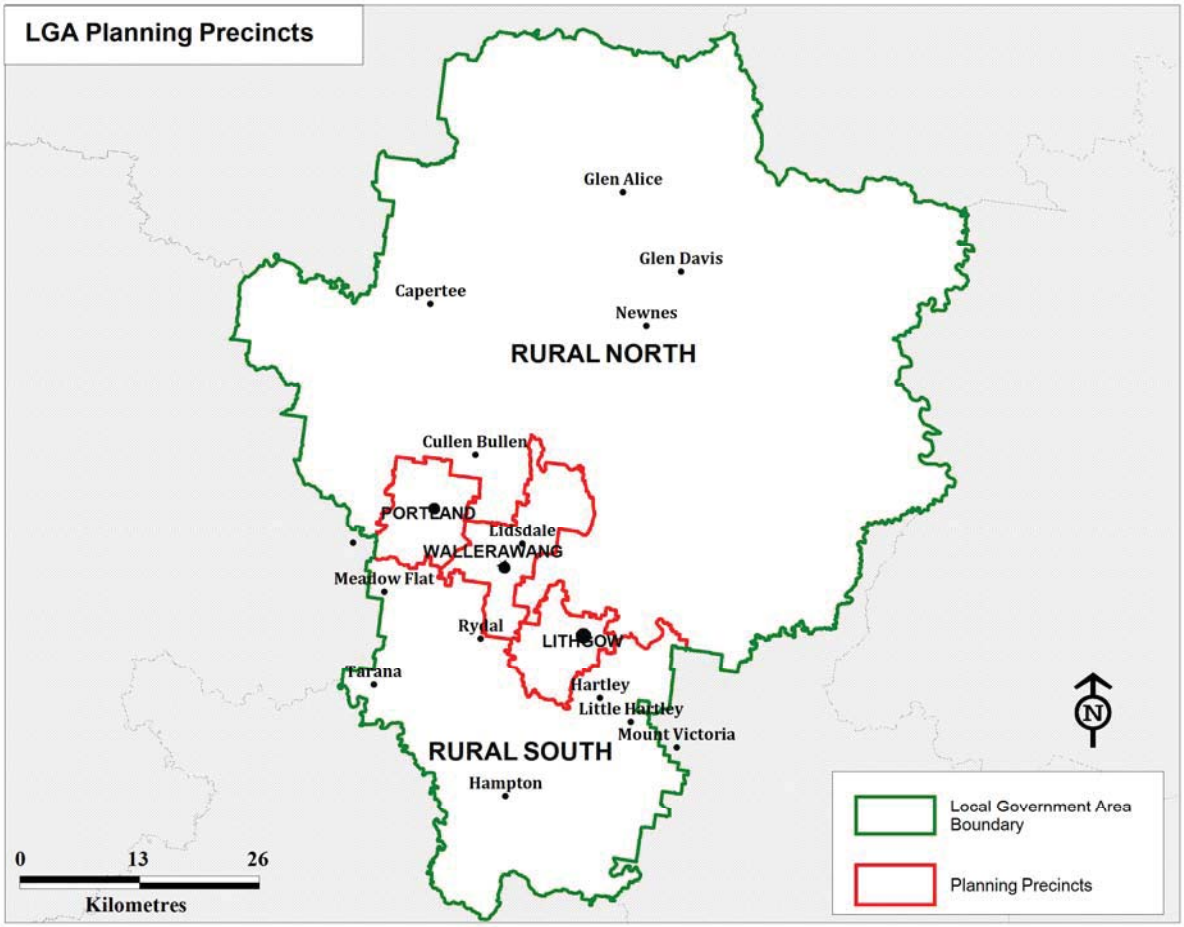
The pattern of settlement in the Lithgow LGA, like many other regional LGAs has been defined by its industrial heritage and the introduction of rail and rail infrastructure corridors.

Settlement of the Lithgow LGA is concentrated around the three town centres of Lithgow, Wallerawang and Portland with several smaller villages and hamlets supporting the wider rural areas.

Internal town layouts have been defined by the location of historic industry bases and transport such as the coal mines, iron works, pottery and defence installations in Lithgow, the Cement Works in Portland and the Rail corridor in Wallerawang.

This settlement pattern is consistent with a defined settlement hierarchy and enables the LGA to be split into five planning precincts. The demographic profile of these precincts is provided in Appendix 2.

Figure 2. LGA Planning Precincts



EXISTING SETTLEMENT TRENDS

An analysis of development activity over the period 1996-2009 has indicated that existing settlement pattern and defined settlement hierarchy is being threatened by a sustained increase in housing development in the rural areas.

The supply and demand analysis in Appendix 1 has indicated that in the period 1996-2009 55.1% (699) of all dwelling approvals occurred within the rural areas. Based on the average household size of 2.4 this number of dwellings has the potential to place a further 1678 persons dispersed throughout the rural areas.

This trend is not sustainable and will be required to be reversed and in time halted to ensure that the main town centres remain viable and that infrastructure and services are provided in an economic and efficient manner.

DEFINING THE SETTLEMENT HIERARCHY

BUILDING A SETTLEMENT HIERARCHY

A settlement hierarchy is a way of arranging settlements into a hierarchy based upon their population or some other criteria such as level of services. It is not an indication of how important an area is.

The establishment of a settlement hierarchy is important to identify the role of each settlement area, the capacity for each area to absorb growth and the level of services that are and should reasonably be provided.

A basic settlement hierarchy showing indicative population levels and sustainability rating based on consideration of factors in Table 2 is illustrated in the Figure 3:

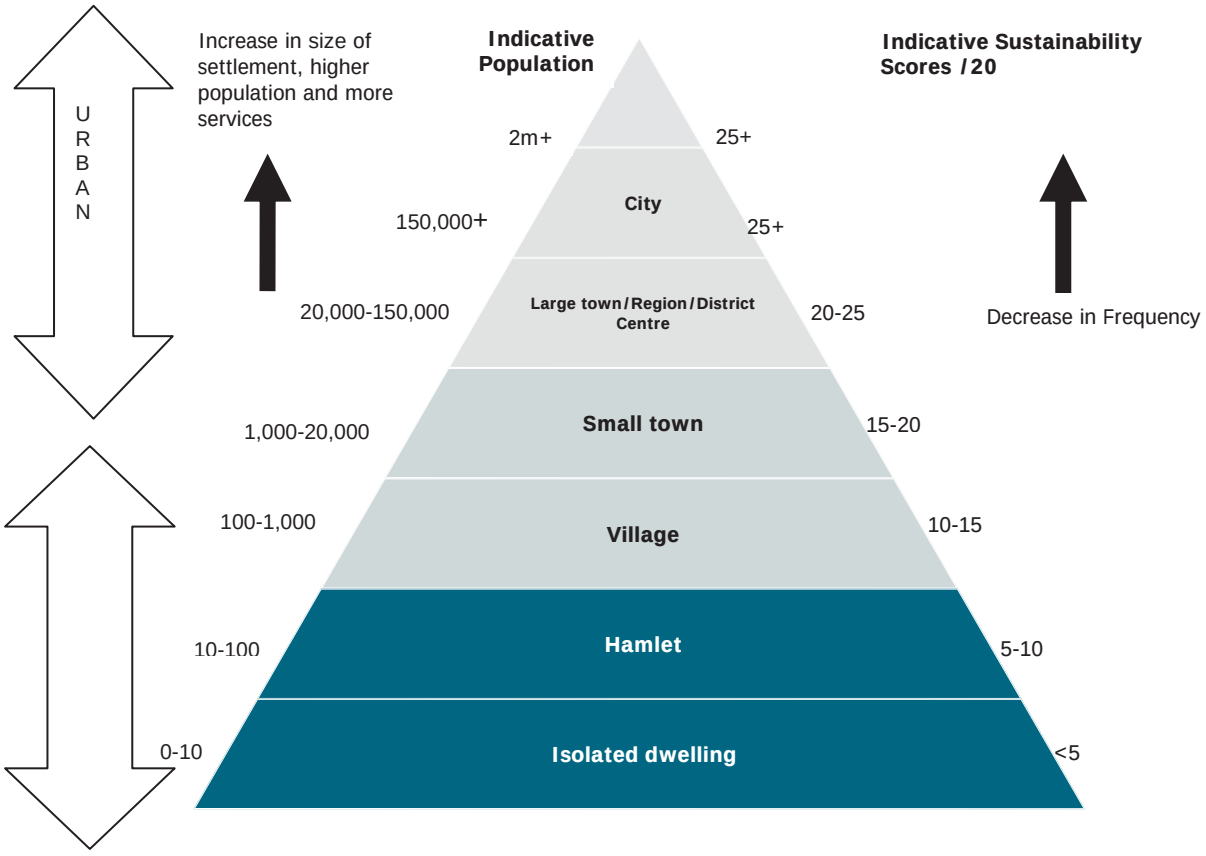
Table 2 outlines the range of factors that may be considered when determining where a settlement should be placed within a settlement hierarchy:

Table 2. Factors determining settlement hierarchy

Factor	Criteria for Consideration
Existing and Projected Population Growth	• How many dwellings are there in the settlement area? • What has been the demand for growth in these areas? • What is the projected level of growth? • What is the timing of this growth?
Access to Utilities	• Access to a range of facilities such as: ▪ Water ▪ Sewer ▪ Gas ▪ Electricity ▪ Telecommunications ▪ Waste disposal
Access to Transport	• Transport options including road, rail, public transport (bus/taxi), cycle ways
Access to Services	• Health services • Law Enforcement • Education and Allied services • Retail options including:

Factor	Criteria for Consideration
	▪ Convenience Shopping ▪ Weekly Shopping ▪ Comparison Shopping • Business services • Social services • Governance services • Aged Care Services
Access to Facilities	• Access to a range of community, cultural, entertainment and open space and recreational facilities
Access to Employment	• Proximity to employment options • Extent of employment-self containment
Access to range of housing forms	• Access to a range of housing forms including ▪ Single dwellings ▪ Residential Units or Flats ▪ Social housing ▪ Seniors housing
Location Relative Higher Order Centres	• Proximity to higher order centres to provide additional services and facilities
Character, Identity and Community Spirit	• Unique character of area that may result in additional social, environmental and economic benefits

Figure 3. Typical Settlement Hierarchy



DEFINING LITHGOW LGA SETTLEMENT HIERARCHY AND SUSTAINABILITY FACTORS

The following matrix sets out a summary of how settlement areas within the Lithgow LGA perform against the key factors for determining their position within a settlement hierarchy. The 2007 Local profile provides more detail of the level of services and character of these areas.

Table 3. Sustainability factors for Determining Settlement Hierarchy

Settlement	Existing (Base) Pop	Est. Pop Growth	Closest Higher order centre	Transport and Access	Utilities	Services and Facilities	Employment	Range of Housing Forms	TOTAL	Current Position in Lithgow Hierarchy	New Position in Lithgow LGA Settlement Hierarchy
Lithgow/Marrangaroo			Bathurst -	4	4	4	4	4	20	Small Town	Small Town/District Centre
Wallerawang/Lidsdale			Lithgow	3	3	2.5	3	2	13.5	Village	Small Town
Portland			Lithgow	3	3	3	3	2	14	Village	Small Town
Cullen Bullen			Portland	1.5	2	2	1	1	8	Village	Village
Capertee			Portland	1.5	2	2.5	1	1	8.5	Village	Village
Rydal			Wallerawang	1.5	1	1	1	1	5.5	Village	Village
Tarana			Lithgow	1.5	1	0	1	1	4.5	Village	Hamlet
Hartley			Lithgow	1.5	1	0	1	1	4.5	Hamlet	Hamlet
Clarence			Mt Victoria Lithgow	1.5	1	0	1	1	4.5	Hamlet	Hamlet
Dargan			Mt Victoria Lithgow	1.5	1	0	1	1	4.5	Hamlet	Hamlet
Rural North Localities Glen Davis, Ben Bullen. Glen Alice. Bogee	Total Rural North (incl villages)		Kandos Capertee	1	1	0	1	1	4	Hamlet	Hamlet
Rural South Localities, Hampton, Sodwalls, Lowther, Good Forest	Total Rural South (incl Hartley)		Lithgow	1.5	1	0	1	1	4.5	Hamlet	Hamlet
Wider Rural Areas			Variable	1	1	1	1	1	5	Isolated Dwelling	Isolated Dwellings

Source: LCC, Scores - 0-5 where O is no ability to meet sustainability criteria – Isolated Dwelling, 5 meets full range of sustainability criteria – Large Town

"In many circumstances rural residential development has undermined this structure by allowing people to live in dispersed locations with little regard for direct access to higher order centres." (DUAP, Guidelines on Rural Settlement on the North Coast of NSW, 1995, p7).

The Lithgow LGA has a large percentage of dispersed rural living allotments throughout the LGA. It is also evident in the creation of the large rural small holdings zones in Hartley, Clarence and Dargan. These areas have grown in population size to fit in a hierarchy as a village however have negligible services to support that function.

Clarence and Dargan have negligible ability to grow beyond the current subdivision pattern. These areas therefore remain as hamlets.

The Hartley rural residential area is the most significant anomaly to the standard settlement hierarchy structure. This area under current planning provisions has significant growth potential in excess of 100% upon the existing number of dwellings. Careful consideration will need to be given to this area within this strategy in determining its future hierarchy placement beyond the short term.

Currently Wallerawang and Portland could be considered to be at the higher end of the Village order, but considering the potential for positive growth in these areas and their functionality these centres should move into the small town order as part of this strategy.

SETTLEMENT GROWTH AND SETTLEMENT HIERARCHY

This strategy will seek to address the competing interests that Council must consider when determining the appropriate land use (or density) for settlement opportunities. The analysis of historical dwelling and subdivision demand has highlighted the dispersed nature of settlement growth within the LGA, with significant development pressures in the rural areas. When this analysis is evaluated against the form of the traditional settlement hierarchy the comparison identifies a settlement growth that is disproportionate. The projected dwelling demand extends this unsustainable pattern as indicated in Table 4.

Table 4. Supply and demand

Zone/Precinct	Yearly Demand 1996-2009	Dwelling Demand 2031(20yrs)	Pop Increase based on Dwelling Demand
Lithgow			
2a	29	580	-
1a	4	80	-
1c	2	40	-
1d	-	-	-
2v	-	-	-
Precinct Total	35	700	1680
Wallerawang			
2a	-	-	-
1a	2	40	-

1c	2	40	-
1d	-	-	-
2v	6	120	-
Zone/Precinct	Yearly Demand 1996-2009	Dwelling Demand 2031(20yrs)	Pop Increase based on Dwelling Demand
Precinct Total	10	200	480
Portland			
2a	-	-	
1a	2	40	
1c	5	100	
1d			
2v	6	120	
Precinct Total	13	260	624
Rural Nth			
2a			
1a	8	160	
1c	2	40	
1d			
2v	0.5	10	
Precinct Total	10.5	210	504
Rural Sth			
2a			
1a	17	340	
1c	11	220	
1d			
2v	2	40	
Precinct Total	30	600	1440
Total	98.5	1970	4728

Source: Lithgow Approvals Monitor. Note: the years 1996 – 2009 include data from the Greater Lithgow City Council area only

The need to redirect projected dwelling demand (and its relationship with land supply) into a more sustainable pattern is only achievable by addressing the competing interests of demand for rural lifestyle allotments versus urban growth.

Should the dispersed settlement pattern continue there would be substantial and compounding negative impacts on the LGA including but not limited to:

- Increase in land use conflicts with key economic and primary production industries and a potential reduction in their viability.
- Increased bushfire risk with fragmented rural settlement.
- Impacts of development upon environmentally sensitive lands.
- Cumulative impact of on-site effluent disposal systems, in particular areas in the Sydney Catchment.
- Loss of rural landscape and areas of scenic quality.
- Increased infrastructure and servicing costs.
- Land use conflicts particularly in the transitional areas from urban to rural lands.
- Social isolation and limited community engagement.

The need for a clear settlement hierarchy is subsequently a critical measure in providing a clear strategic direction for settlement patterns into the future and the subsequent links to:

- Infrastructure requirements – planning and provision of key infrastructure including water, sewer, road network and telecommunications.

- Social and community facilities and services – planning and provision of a range of social requirements including medical, education, community infrastructure, recreation and cultural facilities.

- Commercial and retail roles and functions – linkage of a settlements role in the provision of commercial and retail facilities and services as both an employment generator and as a direct provision of goods and services to meet the neighbourhood, local, sub-regional and regional needs.

The redirection of projected dwelling demand into a more sustainable form also requires identification of land suitable for urban development in a more compact form. Intrinsic to the adoption of a settlement hierarchy is the identification of land considered suitable for closer settlement growth based on a hierarchical association with existing settled areas. The cluster planning approach underpins the establishment of a settlement hierarchy by identification of land required to be utilised for higher order development densities. To achieve this objective, development pressures for rural and rural lifestyle development and incompatible land uses on the periphery of existing settled areas and identified economic drivers (e.g. key primary production areas) needs to be resisted.

In determining a strategic direction for settlement the following directions for future settlement growth are proposed to support the Growth Management and Sustainability Principles as outlined in Table 1.

SUPPORTING A SETTLEMENT HIERARCHY – WHAT IT MEANS

- The establishment of a settlement hierarchy requires that the Council resists the development of lands - particularly rural lands - for low density residential uses, which fail to make appropriate and best use of developable land. Such development types are inconsistent with the principles of sustainability and they detract from the ability to provide appropriate and proportionate services to a community which has become spatially dispersed.
- In supporting a settlement hierarchy, the Council will recognise that rural lifestyle and rural settlement growth opportunities should be provided as a very limited alternative to urban growth within urban centres – not as an alternative to urban growth altogether.
- Settlement growth should aim to assist in improving the viability of higher order infrastructure and services through the creation of critical mass.
- In supporting the settlement hierarchy, the Council will apportion new development opportunities within settlements commensurate with the role of each settlement within the hierarchy.

CLUSTER PLANNING – WHAT IT REQUIRES

- Encourages an increase in the proportion of residential development in residential zoned lands through an appropriate level of supply and opportunities for increased densities whilst limiting both rural and rural lifestyle development through a review of minimum lot sizes and amount of zoned land.

- Maximises development opportunities in areas closer to existing settlements.
- Where possible, reduces the amount of supply to a manageable level correlating to the planned life span of the LEP and 20 year lifespan of the LUS.
- Constrained land and/ or areas that have a demonstrated over-supply of rural lifestyle development need to be reconsidered and rezoned or decreased in density (through an increased minimum lot size).
- Land identified for future settlement growth beyond the life of the new comprehensive LEP and not required at this stage, is recommended for future preservation. Introduction of incompatible land uses (including sub-division) which would compromise the development potential of this land for residential purposes are intended to be regulated through the LEP process. Development of this land will be dependent on future unmet demand within the identified settlement areas and maximisation of the land's carrying capacity.

DETERMINING SETTLEMENT OPPORTUNITIES WITHIN THE SETTLEMENT HIERARCHY

To assist in defining a limit to growth based on the cluster concept and settlement hierarchy, the following hierarchical layers are proposed:

Table 5. Hierarchical Layers

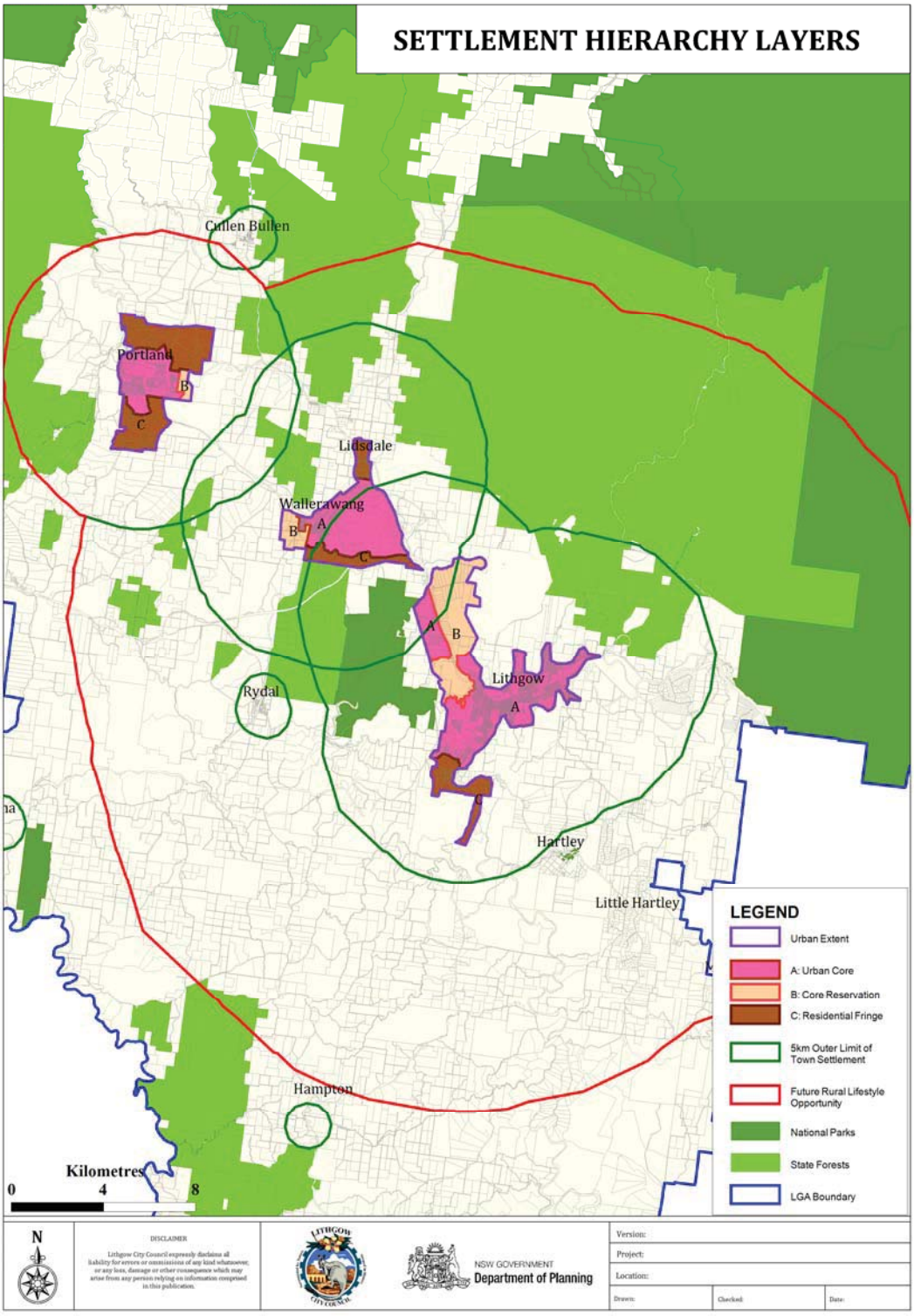
Hierarchical Layer	Description	How Defined	Typical Residential Land Use Density
Layer 1	Urban Extent	See Figure 4	
Layer 1 A	Urban Core		Standard Residential
Layer 1B	Urban Core Reservation	See Figure 4	General Residential/Large Lot Residential
Layer 1C	Residential Fringe/Transition	See Figure 4	Large Lot Residential
Layer 2	5km Outer Limit Town Settlement and 1km Outer limit Village Settlement	See Figure 4	Large Lot Residential Rural Lifestyle
Layer 3	15km Maximum Outer Limit – Settlement	See Figure 4	Large Lot Residential Rural Lifestyle

Layer 2 representing a 5km radius around the three town centres is designed to indicate an outer limit for urban growth opportunities including large lot residential development in the clustered form.

Layer 3 representing a 15km radius from the Lithgow town centre, as modified to include the 5km area around Portland ,is designed to indicate the preferred location for rural small holdings if an when further supply of these allotments is required.

These layers spatially indicate where future development should be encouraged to conform to a clustered planning approach to settlement in the Lithgow LGA.

Figure 4. Cluster planning approach as applied to the Lithgow LGA planning precincts



FUTURE OPPORTUNITY AREAS WITHIN THE RECOMMENDED SETTLEMENT HIERARCHY

Using these layers, opportunity areas for clustered settlement growth within each of the planning precincts will be explored through a constraints and demand analysis and evaluation against the adopted Growth Management and Sustainability Principles. The outcomes will be presented as a planning framework for each of the planning precincts in Chapter 14.

LONG TERM FUTURE GROWTH OPPORTUNITY AREAS

Figure 5 indicates opportunity areas for future development growth outside the urban cores of the three main town centres. These areas have been identified by applying the key hard strategic constraints and identifying areas that are free of such constraints.

This figure shows that ample areas in both Layer 2 and 3 are available for the LGA to sustain growth into the future should demand grow beyond that predicted within this Strategy.

These areas are not recommended for further investigation within this Strategy. For these areas to be further considered a significant change would need to occur in the drivers of demand for additional settlement lands beyond those indicated in this Strategy.

To bring forward these areas for consideration, further extensive site specific investigation would be required, including, but not limited to:

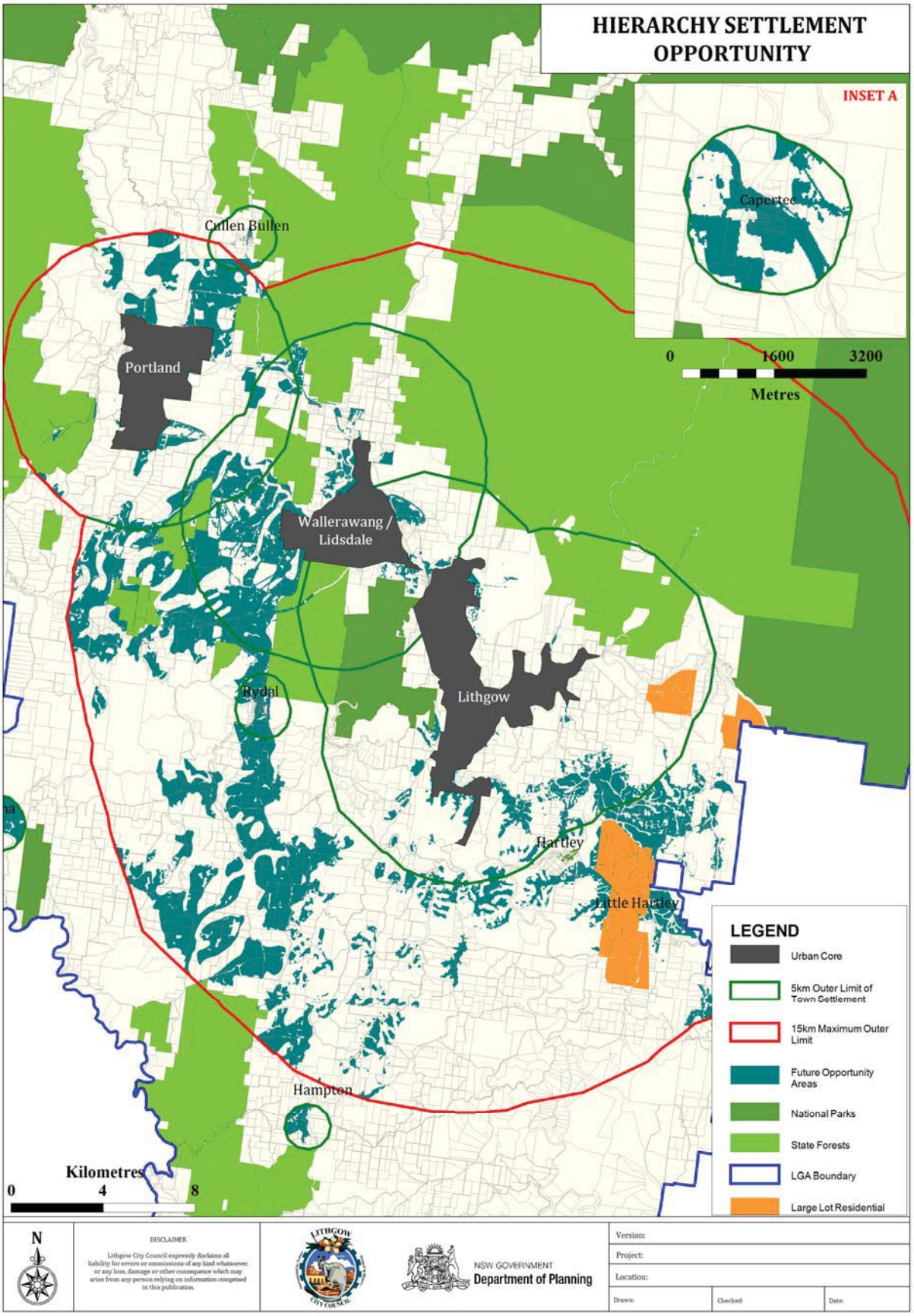
- An analysis of how the proposal fits with local, regional and state strategic planning policies and objectives.
- The relationship of the proposal to this Strategy and recommendations for future urban growth and its location.
- Local housing analysis including:
    - Demographic trends, changes in household structure and composition
    - Housing market trends including dwelling type
    - Projected population and household increases over a 10 year period
    - Number and types of additional houses required.
- An assessment of the following strategic factors:
    - How the area relates, or is supported by, existing urban development
    - The land's capability for agricultural use and how the proposal will impact upon the long term continuation of agriculture in the area
    - The locality's natural resources and the measures proposed to protect these resources
    - The locality's mineral and extractive resources and the measures proposed to protect these resources
    - The locality's environmental features and biodiversity and how these could be protected and enhanced
    - The locality's landscape and heritage values and how these could be protected
    - The proposal's social and physical infrastructure requirements and the community cost of providing those services

- The proposal's compatibility or impact on the surrounding land uses
- The land's servicing capability.

Having identified and addressed the above strategic factors, further site specific analysis will be required to be undertaken.

- Detailed site and context analysis including:
    - Topography of the land (including ridgelines, landscape, geography, slope gradients and erosion areas)
    - Soil capability
    - Vegetation (ecological vegetation class), quality (habitat hectare assessment) and location
    - Any significant environmental features including habitat corridors, threatened species, wetlands, watercourses, fire or flood prone and saline areas
    - Drainage lines and dams
    - Land liable to inundation by floodwaters
    - Weather conditions including wind patterns
    - Views
    - Road access
    - Available infrastructure including power, water and telecommunications
    - Existing buildings and works
    - Adjoining land uses and neighbouring buildings and works
    - Any other matter relevant to the site and its environment.

Figure 5. Settlement Hierarchy Future Opportunity Areas



SUMMARY OF KEY ACTIONS

Action 4.1

- Consider and apply the principles of Sustainable Development to all land use planning decisions

Action 4.2

- Adopt the growth management and sustainability principles outlined in Table 1 Chapter 4 and apply to underpin all future land use planning decisions

Action 4.3

- Adopt the planning principles outlined in this Strategy and apply to all future land use planning decisions

Action 4.4

- Adopt a target population growth rate of between 0.5% and 1%

Action 4.5

- Adopt and apply the settlement hierarchy as detailed in Table and Figure 3 Chapter 4 and outlined below:

Large Town/Regional Centres
Bathurst/Penrith
Small Town/LGA District Centre
Lithgow
Small Towns
Wallerawang and Portland
Villages
Cullen Bullen, Capertee, Rydal
Hamlets
Tarana, Hartley, Clarence, Dargan, Glen Davis, Glen Alice, Ben Bullen, Bogee, Hampton, Sodwalls, Lowther, Good Forest, Hartley Vale
Isolated Dwellings
Wider Rural Areas of North and South precincts

Action 4.6

- Adopt and apply a clustered planning approach to future growth in the Lithgow LGA aligned with the adopted settlement hierarchy as indicated in Table 5, Figure 4 Chapter 4

Action 4.7

- Control the growth of settlements and rural areas by using zoning, rural minimum lot sizes and sunset clauses to phase out current unsustainable rural planning provisions.

Action 4.8

- Minimise further rural lifestyle development opportunities outside of the defined 15km maximum outer limit, layer 3 as outlined in Chapter 4.

Action 4.9

- Identify future urban growth areas within the defined urban core as indicated in Figure 4 Chapter 4.

Action 4.10

- Prepare a suite of land use zones for the towns of Wallerawang and Portland

Action 4.11

- Implement the recommendations of the 2010-2014 Economic Development Strategy

Action 4.12

- Implement the recommendations of the 2010 Business and Retail Strategy

Action 4.13

- Protect the primary and natural resources upon which the LGA economy relies

Action 4.14

- Provide for an appropriate mix of housing opportunities and form in both urban and rural settings

Action 4.15

- Provide sufficient land allocation for population growth over time

Action 4.16

- Prepare and implement a LGA Housing Strategy

Action 4.17

- Prepare and implement a LGA Ageing Strategy

Action 4.18

- Integrate the findings of the Community Strategic Plan 2021 into land use planning documents and decisions.

Action 4.19

- Implement the adopted Lithgow Cultural Precincts Study

Action 4.20

- Prepare a land monitor to track demand and take-up of all land use zones

Action 4.21

- Prepare a land release program to guide the future release of urban lands

CHAPTER 5 SOCIAL AND ECONOMIC ANALYSIS

STRATEGIC PLANNING DIRECTIONS

The following directions and actions to inform the development of the Land Use Strategy and Local Environmental Plan fall out of the analysis of the socio-economic profile of the LGA:

- Ensure that sufficient residential lands are available to provide for a varied range of housing forms and density.
- Ensure that planning policy and regulation facilitates and encourages the provision of a varied range of seniors housing including both self-catered and residential care facilities.
- Ensure the planning policy and regulation facilitates and encourages the provision of affordable and adaptable housing.
- Ensure that core business areas remain vibrant and capable of adapting to compensate for varying degrees of vacancy rates in retail shop fronts.
- Ensure that sufficient suitable and serviced employment lands are available to cater for a diverse range of employment opportunities.
- Ensure that planning policy and regulation improves the liveability and community cohesion of the LGA through sound urban design principles.

CONTEXT

Council has many data sources that seek to portray the socio economic profile and characteristics of the Lithgow LGA with varying currency of data. The 2007 Local Profile included a Social and Community Atlas in (Section 3) that was based on the available 2001 Census data. This data was updated in a detailed demographic analysis based on the 2006 Australian Bureau of Statistics (ABS) Census that is contained in Appendix 2 and in the future to be provided as a 2010 Addendum to the 2007 Lithgow Local Profile.

Please also refer to the further purpose specific demographic analysis in the Lithgow City Council Social Plan 2006-2011 (Revised 2008) and the Lithgow Economic Development Strategy 2010-2014.

Council also has an online community profile and social atlas that can be accessed on Council's website at www.lithgow.nsw.gov.au.

The following is a snapshot of key data taken from the id profile that influences land use planning decisions.

SUMMARY OF ISSUES

Table 1. Key Demographic Issues

DEMOGRAPHIC ISSUES FOR THE LITHGOW LGA	WHY IS IT AN ISSUE?
Static to Declining Population – Projected population stagnation to decline to 2031	Population decline and/or stagnation impacts heavily upon the use and viability of commercial areas, community facilities, recreational activities and day to day services. This in turn impacts on the LGA's liveability, aesthetic appearance of the urban environment and overall sense of place. Local Policy will need to respond to changes in the urban fabric as a result of diminished or changing demand to facilitate and encourage adaptable re-use of facilities and shop fronts. A declining population also impacts the confidence with which Council can plan for future land allocation and infrastructure. Target growth rates and land release programs therefore need to be approached with caution to ensure that land and infrastructure are not provided too far in advance of demand, but can reasonably absorb shifts in demand over the life of this Strategy.
Smaller Household Sizes – LGA trend to smaller household size	Smaller household sizes with fewer people living in each house will have an impact on the supply and demand of dwellings. As a result of the declining household sizes, it is likely that more dwellings will be required to house the population.
Increase in Ageing Population – LGA rapidly ageing and percentages of persons over 55 significantly increasing	• Increased need for State and Local Policy to: • Facilitate inclusive balanced communities • Ensure people can shift to more suitable housing within their existing community • Provide for sufficient levels of adaptable and accessible housing • Provide for retirement villages • Provide and retain residential care facilities

DEMOGRAPHIC ISSUES FOR THE LITHGOW LGA	WHY IS IT AN ISSUE?
Static to Declining Population – Projected population stagnation to decline to 2031	Population decline and/or stagnation impacts heavily upon the use and viability of commercial areas, community facilities, recreational activities and day to day services. This in turn impacts on the LGA's liveability, aesthetic appearance of the urban environment and overall sense of place. Local Policy will need to respond to changes in the urban fabric as a result of diminished or changing demand to facilitate and encourage adaptable re-use of facilities and shop fronts. A declining population also impacts the confidence with which Council can plan for future land allocation and infrastructure. Target growth rates and land release programs therefore need to be approached with caution to ensure that land and infrastructure are not provided too far in advance of demand, but can reasonably absorb shifts in demand over the life of this Strategy.
	• Provide for sufficient levels of affordable housing • Provide for increased focus on planning and design to promote active ageing/walk ability and range of open space and recreational facilities to meet the changing needs of the community • Provide for increased focus to Crime Prevention through Environmental Design (CPTED) • Provide for public transport options • Provide for commercial support services such as medical facilities, aids etc.
Increased Need for Diverse Housing – Current low percentage of medium and high density living opportunity	With the increase in lone person households and households with couples without children, their will be an increasing need for a more diverse housing structure to be provided. Currently there is a significant disproportion of detached dwellings. Into the future this will impact upon housing affordability. Land use planning policies will need to facilitate and encourage more medium and high density living opportunities close to core infrastructure and services. A detailed housing strategy is required to better inform the LGA's response to this issue.
Industry Profile – High proportion of employment in mining and retail	The LGA is highly dependant upon mining and retail as the two highest employment providers. These employment sectors are inextricably linked as a reduction in mining employment significantly affects the LGA's disposable income and demand for retail services. The diversification of the employment base will require the identification of land to cater for modern industrial land use in area that enable clustering of like uses. Local Policy will need to address the need for adaptive reuse of commercial areas when high vacancy rates occur to stabilise and strengthen the core retail precinct.

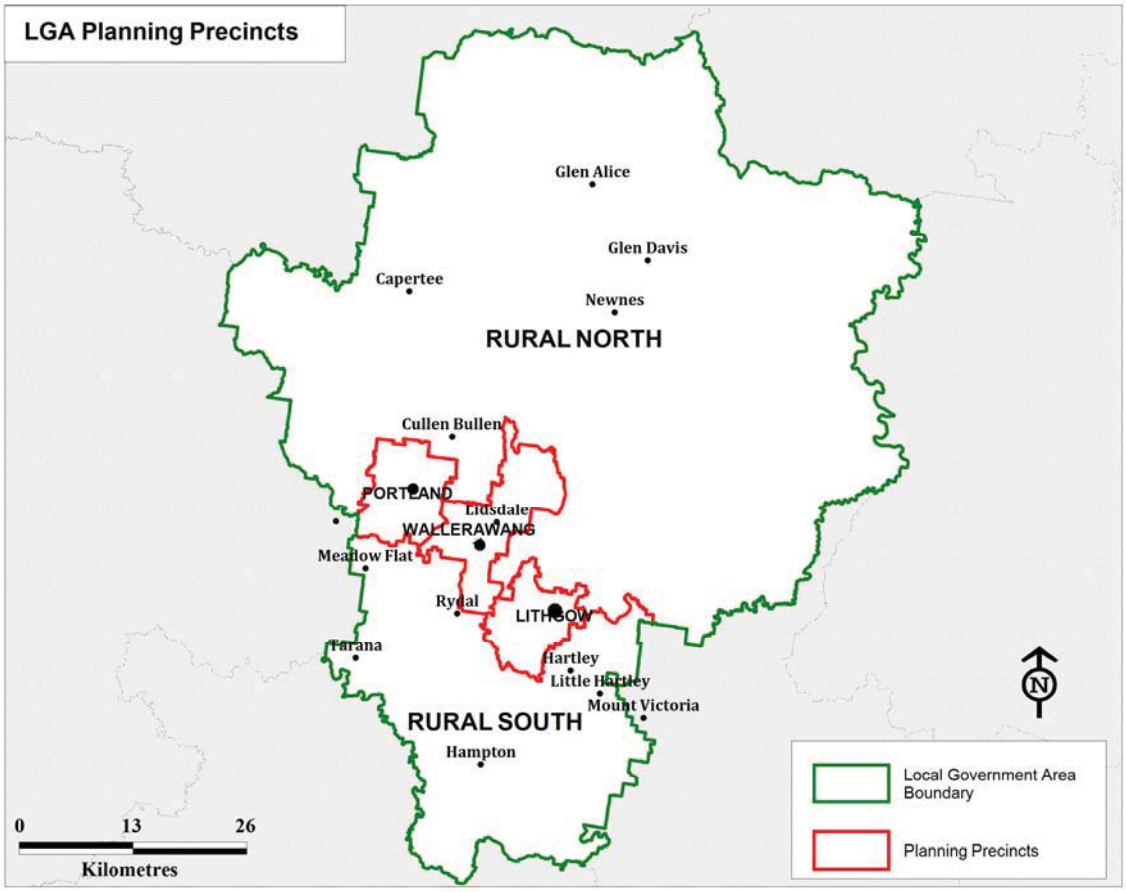
DISCUSSION OF ISSUES

EXISTING POPULATION

For the purposes of statistical analysis of the existing population and its distribution, the Local Government Area (LGA) has been split into planning precincts as shown in the following figure. These precincts correspond to the small areas available on Council's online community profile located

http://profile.id.com.au/Default.aspx?id=364&pg=101&gid=10&type=uresID Community Profile .

Figure 1. Local Government Area Planning Precincts



The Lithgow City Local Government Area's existing population is shown in the following table.

Table 2. Lithgow City Local Government Area Existing Population

Statistical Type	2001	2006	Change 2001-2006
Place of Usual Residence	19254	19759	+ 505
Estimated Resident Population	20568	20553	-15

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, and 2001.
Source: Australian Bureau of Statistics, Cat. No. 3235.0 - Population by Age and Sex, Regions of Australia, 2007
NOTE: Table totals may not equate with other similar tables due to randomisation of small numbers.

GEOGRAPHICAL DISTRIBUTION OF THE POPULATION

The distribution of this population and the average household size using the planning precincts is shown in the following table.

Table 3. Population Distribution and Average Household Size

Planning/Statistical Precinct	2001	2006	Change 2001-2006
Lithgow Urban Area	11224	11204	-20
Average Household Size	2.4	2.32	⇩
Wallerawang	2155	2142	-12
Average Household Size	2.81	2.63	⇩
Portland	2213	2131	82
Average Household Size	2.56	2.45	⇩
Rural North	1931	2142	211
Average Household Size	2.68	2.59	⇩
Rural South	1814	2058	245
Average Household Size	2.71	2.67	⇩

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, and 2001
NOTE: Table totals may not equate with other similar tables due to randomisation of small numbers.

The above table shows clearly the trends of population distribution towards the rural precincts of the LGA.

POPULATION PROJECTIONS

There are several available sources of population projections for the Lithgow Local Government Area. All data sources vary due to methodology and context, however all represent a similar projection for a static to declining population projection into the future.

Table 4. Key Available Projections

Data Source	2011	2016	2021	2031
Department of Planning (2010)	20600	20600	20500	19900
Local Government Shires Association (2007)	20265	19799	19212	N/A
NSW Health (2009)	20616	20714	20654	20194
Department of Health and Ageing (Series B 2008)	20778	20839	20741	N/A
Centroc Western Research Institute Scenario B (2008)	20991	21459	21766	21556

Source: LCC from published data sources listed

As can be seen in the above table population projections can vary depending on assumptions involving fertility and migrations rates and historical data.

Population projections reported here represent a view of future populations based on demographic modelling.

Notwithstanding the population projections, the 2007 Strategic Plan adopted a target annual growth rate of between 1% and 2% for planning purposes.

The population targets to be adopted by Lithgow City Council are just that – and represent the aim that Council has set itself and the community, which is coupled with deliberate policy actions to assist in meeting the target.

The variation between the lowest population projections (Department of Planning 2010) and Council's 2007 target is shown in the table below.

Table 5. Projected Population Growth

Projected Population Growth					
Scenarios					
	2011	2016	2021	2026	2031
DoP Pop Projections	20600	20600	20500	20300	19900
Population Based on Dwelling Demand(1.1%pa)		21776	22952	24128	25304
Medium Growth Scenario(1%pa)		21651	22755	23916	25136
High Growth Scenarios(2%pa)		22744	25111	27725	30611

Source: Lithgow Approvals Monitor. Note: the years 1996 – 2009 include data from the Greater Lithgow City Council area only; Lithgow City Council Strategic Plan 2006; DoP NSW Statistical Local Area Population Projections 2006-2036

AGE PROJECTIONS

The NSW Population Ageing Project in 2004 developed provisional projections for the Lithgow Local Government Area. These showed the Lithgow Local Government Area as the 88th oldest Local Government Area out of the 154 in NSW. The report used projections to predict that the Lithgow Local Government Area would be the 46th oldest Local Government Area in NSW by 2022. Projections for ageing in the report indicated that "premature ageing" caused by migration related loss of young people and/or migration gain in older age groups, combined with general population ageing, would mean that the Lithgow Local Government Area will age at a significantly higher rate than the populations of NSW, Greater Sydney and the balance of NSW. (Lithgow Economic Development Strategy 2010-2014).

The Department of Planning also projects that the Lithgow population will further age in the period to 2031. Using their figures, the percentage of 0-14 year olds will fall from 21.7% of the population in 2001 to 13.2% in 2031. The percentage of people aged 65 years and over will increase from 13.2% in 2001 to 31.6% in 2031. The median age in 2031 will be 51, up from 37 in 2001. (Lithgow Economic Development Strategy 2010-2014).

SELECTED DEMOGRAPHIC CHARACTERISTICS OF THE LGA AT A GLANCE

The following table presents the key demographic characteristics of the LGA taken from Council's online Community Profile.

SOCIAL INDICATORS

Table 6. Key social indicators

Profile Census	LGA FACTS	
Population	Total	%
Total Population 2009	20,980 (ERP)	
Total Population 2006	19,759	
Total Population 2001	19,254	
Age of Population		
Profile Census	LGA FACTS	
Infants 0-4 years	1,136	5.7
Children 5-17 years	3,586	18.1
Adults 18-64 years	11,988	60.7
Mature adults 65-84 years	2,732	13.8
Senior Citizens 85 years and over	318	1.6
Families		
Couples without child	2,073	39.9
Couples with child	2,162	41.6
One parent family	883	17.0
Total families	5,198	100.0
Education		
Attending pre-school or primary school	1,989	33.0
Attending secondary school	1,335	22.1
Attending a tertiary institution	807	13.4
Total persons attending an education institute	6,031	100.0
Housing Tenure		
Owned	3207	41.4
Purchasing	2150	27.8
Renting	1,883	24.3
Total Dwellings (OPDs)	7,747	100.0
Dwelling Structure		
Separate House	7,052	77.5
Medium Density	586	6.4
High Density	18	0.2
Caravans, Cabins, Houseboats	45	0.5
Other	34	0.4
Not stated	10	0.1
Occupied private dwellings	7,744	85.1
Unoccupied dwellings	1,355	14.9
Total dwellings	9,099	100.0
Qualifications		
Bachelor or higher degree	999	6.4
Advanced diploma or diploma	726	4.7
Vocational	3,329	21.5
No qualifications	8,135	52.5
Not stated	2,319	15.0
Total	15,508	100.0
Highest Secondary Levels		
Year 8 or below	1,491	9.6
Year 9 or equivalent	1,941	12.5
Year 10 or equivalent	5,714	36.8
Year 11 or equivalent	1,023	6.6
Year 12 or equivalent	3,491	22.5
Did not go to school	69	0.4
Not stated	15,519	100.0

ECONOMIC INDICATORS

Table 7. Key economic indicators

Profile Census	LGA FACTS	
Labour Force		
Employed	7,718	91.5
Unemployed	716	8.5
Total Labour Force	8,434	100.0
Profile Census	LGA FACTS	
Occupations		
Managers	825	10.8
Professionals	887	11.6
Technicians and Trade Workers	1,354	17.7
Community and Personal Service Workers	826	10.8
Clerical and Administrative Workers	989	13.0
Sales Workers	682	8.9
Machinery Operators and Drivers	1,002	13.1
Labourers	942	12.3
Inadequately described or Not stated	126	1.7
Industries		
Agriculture, Forestry & Fishing	263	3.4
Mining	774	10.1
Manufacturing	622	8.1
Electricity, Gas, Water and Waste Services	388	5.1
Construction	457	6.0
Retail Trade	865	11.3
Wholesale Trade	149	2.0
Accommodation and Food Services	647	8.5
Transport, Postal and Warehousing	408	5.3
Information, Media and Telecommunications	59	0.8
Financial and Insurance Services	144	1.9
Rental, Hiring and Real Estate Services	88	1.2
Professional, Scientific and Technical Services	221	2.9
Administrative and Support Services	239	3.1
Public Administration and Safety	613	8.0
Education and Training	460	6.0
Health Care and Social Assistance	748	9.8
Arts and Recreation Services	75	1.0
Other Services	265	3.5
Inadequately described or Not stated	148	1.9
Total	7,633	100.0
Weekly Household Income		
Less than $350	1,627	21.9
$350 to $999	2,373	31.9
$1,000 and over	2,682	36.1
Total Households	7,437	100.0
Where do Workers come from		
Live and Work within the City	5,824	85.0
Live outside, but work within the City	1,027	15.0
Total Workers in Lithgow	6,851	100.0
Where do Residents Work		
Within the City	5,824	75.5
Outside the City	1,373	17.8
Work location unknown or not stated	519	6.7

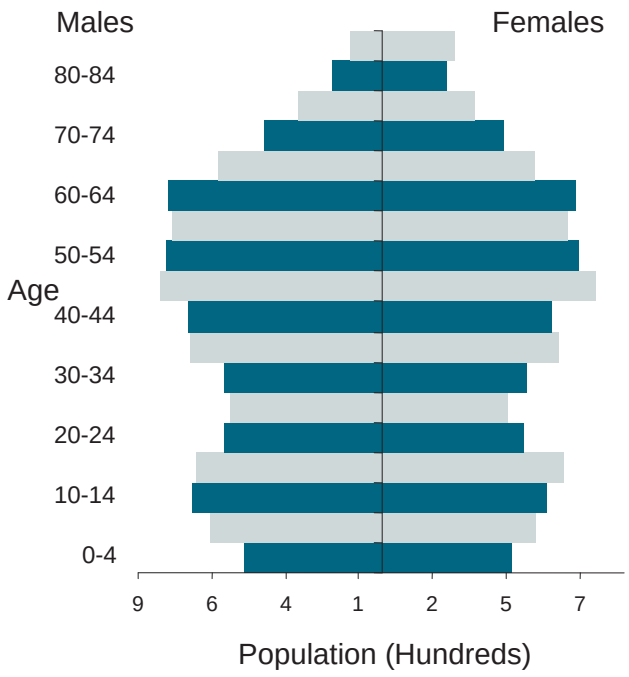
Source: Lithgow City Council Id Community Profile

Lithgow LGA residents at the time of the 2006 Census:

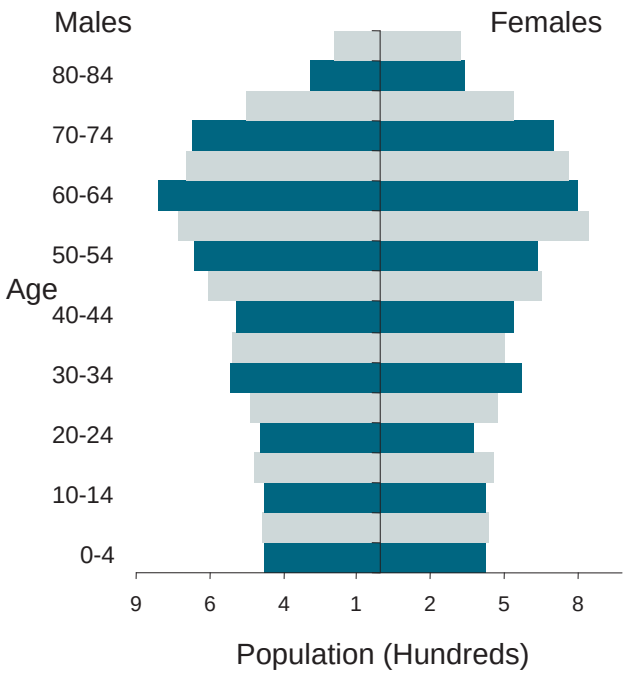
- Are relatively older, with a median age of 40, and 42.3% aged between 35 and 64 years, compared with a median age of 38 years for the Central West SD and 22.8% of people aged between 15 and 34 years. Since 1996 the median age has risen from 34 years. Over the same time period, the median age within NSW increased to a lesser extent, from 34 years to 37 years. Median age varies across the LGA, with some areas showing particular concentrations of older people, with a median age of 53 years in Bogee. Since 2001, the share of population aged 25 years to 54 years has decreased. Households consisting of older people, particularly those of retirement age, generally have lower disposable incomes, thus leading to a lesser demand for retailing.
- Are less likely to be participating in the labour force, with a participation rate of 53.0%, compared to 58.2% for Central West SD. Lithgow LGA also had a higher rate of unemployment with 8.5% of the population unemployed in 2006, compared to 3.5% in NSW as a whole. House holds incomes are strongly related to labour force participation rates, thus lower rates of labour force participation are often associated with lower incomes and relatively less demand for retailing.
- Are less likely to be employed in full-time and part-time work, (30.3% and 15.1% of the population respectively). This is compared to the Central West SD, which has 34.8% of the population employed in full-time work, and 16.1% in part-time work. This reflects the older population and has also implications for household income.
- Have a lower median individual income of $353 per week, compared to $389 per week in the Central West SD. Lithgow LGA also has a lower median household income of $738 per week, compared to $808 per week in the Central West SD. Generally, Marrangaroo, Hartley, Kanimbla and Rydal suburbs are more affluent, with relatively higher median individual and household incomes in 2006. Household income has significant implications for local retail in terms of the total expenditure available locally.
- Are less likely to have a non-school qualification, with only 0.7% of the population having completed a postgraduate degree and 4.9% having a bachelor degree. In the Central West SD 1.2% of the population have completed a postgraduate degree, and 7.2% have a bachelor degree. As noted above, post school qualifications influence the occupation profile, which in turn influence income, and available expenditure.
- Are most likely to have been born in Australia (9.3% of the population born overseas, which is slightly higher than 6.9% for the Central West SD). Ethnicity within an area may be indicative of the type of mix of businesses, particularly in relation to food and dining out.
- Are more likely to own their own home, with 42.8% owning their own homes, and a further 28.7% purchasing their homes. Approximately a quarter of the population (24.9%) is renting. In the Central West SD, 39.9% and 30.1% own their own home and are purchasing their own home respectively. In Lithgow LGA, a high proportion of households owning their own home is likely to reflect a range of factors, including relatively affordable property prices and an older population. A relatively high proportion of households owning their home outright may, in turn, mean that households have higher disposable incomes.
- Are slightly less likely to own a vehicle, with 12.3% of households having no car, compared to 9.4% of households across the Central West SD. This highlights the need to support alternative means of transport, for example through provision of bicycle parking or community transport for older people.

This rapid ageing is illustrated in the Figure 2.

Figure 2. Lithgow Age Structure



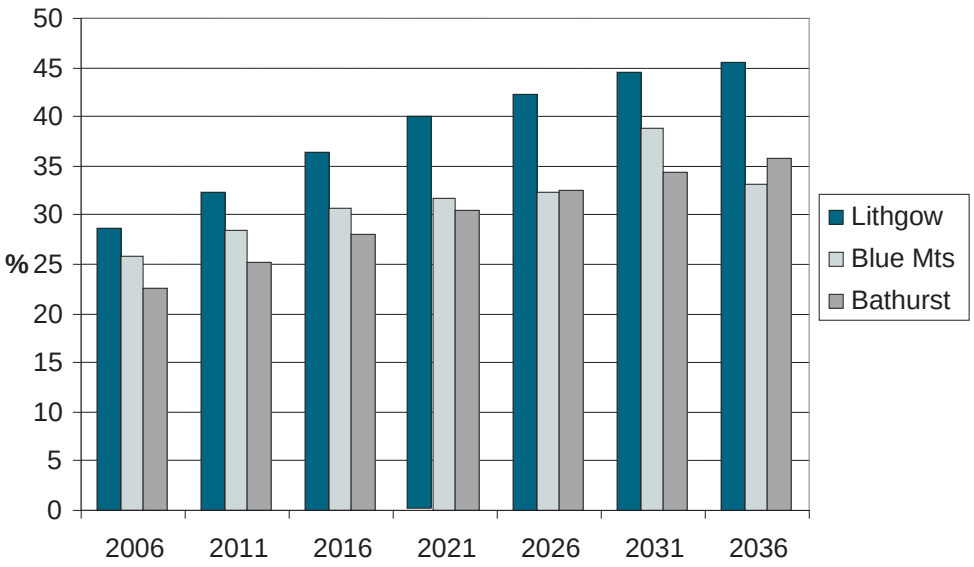
2010 Lithgow Age Structure LGSA RAPP



2021 Lithgow Age Structure LGSA RAPP

The comparison between neighbouring LGAs is shown in the Figure 3. As can be seen in this figure the Lithgow LGA will age more rapidly and at a higher increasing rate than its neighbouring LGAs.

Figure 3. Population Projections – Percentage of People Aged 55+



Source: NSW Department of Planning NSW SLA Population Projections 2006-2036

SOCIAL –ECONOMIC INDICES FOR AREAS (SIEFA) INDEX OF SOCIAL ADVANTAGE/DISADVANTAGE

In March 2004 The Ignatius Centre for Social Policy and Research published Community Adversity and Resilience publishes a report by Tony Vinson[1] which included a comprehensive index of social disadvantage for postcodes in NSW and Victoria. The purpose of the report was to help to establish priorities for areas needing long term special assistance, and to target assistance for particular social groups within these areas.

One of the postcodes in the Lithgow Local Government Area, postcode 2846 with a population of 241, was found to be in the first quintile of disadvantage in NSW, ie. in the top 5% of disadvantaged postcodes. Postcode 2846 covers the localities of Ben Bullen, Blackmans Flat, Capertee, Glen Davis, Newnes, Round Swamp.

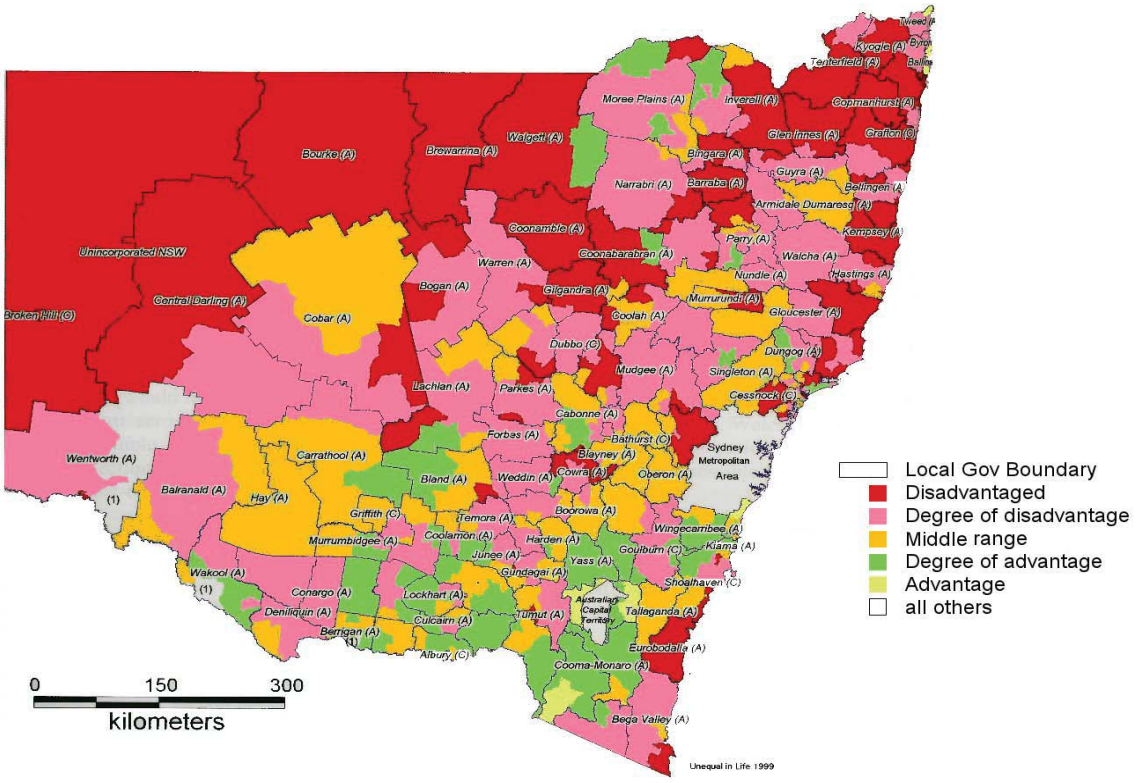
Postcodes 2790 (population of 14 088) and 2847 (population of 2 229) in the Lithgow Local Government Area were found to lie in the 3rd quintile of disadvantage ie. Between the 10 and 15 percent most disadvantaged postcodes in NSW.

- Postcode 2790 covers the localities of Lithgow, Bowenfels, Cobar Park, Corney Town, Cullen Bullen, Dargan, Doctors Gap, Ganbenang, Hampton, Hartley, Hartley Vale, Hassans Walls, Hermitage Flat, Kanimbla, Little Hartley, Littleton, Lowther, Marrangaroo, McKellars Paddock, Morts Estate, Oakey Park, Old Bowenfels, Pottery Estate, Rydal, Sheedys Gully, South Bowenfels, South Littleton, Springvale, State Mine Gully, Vale Of Clwydd, WoLocal Government Arean Valley, Wollangambe, Bell, Clarence.

- Postcode 2847 includes the localities of Portland, Meadow Flat and Mount Lambie.

In summary, the Lithgow Local Government Area's position of relative disadvantage according to the index is shown in Figure 4 as being 'disadvantaged'. Areas depicted in red such as the Lithgow Local Government Area are the most disadvantaged in NSW according to the study.

Figure 4. NSW Map showing areas of relative advantage and disadvantage from the Community Adversity and Resilience Report.



Source: Community Adversity and Resilience: Distribution of social disadvantage in Victoria and NSW, Ignatius Centre for Policy and Research 2004.

ABS also produces indices of social advantage and disadvantage based on 2006 Census data. SEIFA uses a broad definition of relative socioeconomic disadvantage in terms of people's access to material and social resources, and their ability to participate in society.

The following is a summary of the SEIFA ABS results for the Lithgow LGA. Further detail can be found in the Lithgow Economic Development Strategy 2010-2014 Pgs 46-48.

- Overall the Lithgow Local Government Area is ranked 35th out of the 153 NSW Local Government Areas in the Index of Relative Socio-Economic Advantage and Disadvantage meaning that there were only 34 areas in a worse position.

- More specifically in the Index of Relative Socio-Economic Disadvantage which focuses on variables such as low income, low educational attainment, unemployment, and dwellings without motor vehicles, placed the Lithgow Local Government Area amongst the 10 - 20% most socio-disadvantaged areas in NSW - ranked 28th out of the 153 NSW Local Government Areas for most disadvantaged areas in NSW.

- The SEIFA Index of Economic Resources which focuses on variables such as income, housing expenditure and actual household assets placed Lithgow in the 2nd decile of this index - ranked 28th out of 153 compared to other NSW Local Government Areas.

- The SEIFA Index of Education and Occupation which focuses on variables such as the proportion of people with a higher qualification or those employed in a skilled occupation, placed Lithgow amongst the lowest 10%

of all NSW Local Government Areas. Lithgow's ranking is 5th, meaning there are only 4 other areas in NSW with a lower ranking in the Education and Occupation index.

DISCUSSION OF NEW PLANNING APPROACH

ESTABLISHING TARGET POPULATION GROWTH RATE

The 2007 Strategic Plan set a target annual growth rate of 1-2%. Over the 20 year life of this Strategy such a target rate would translate into the 2031 population level of 22,383 – 32,417 (1-2% respectively). Such targets were adopted under the assumption that the rate of dwelling construction (1.2% per annum would translate into an equal rate of population growth. Such assumption was too simplistic by nature and did not take into account factors such as migration rates, the rate of unoccupied dwellings (a high 14.9%), the impact of ageing upon household size (decreasing), just to name a few, meaning that more houses will be needed to house less people into the future.

Between 2001-2006 the number of private dwellings in the LGA increased by 391 whilst the population increased only by 505 persons, being significantly less (433) than an estimated increase of 938 as projected by the calculation of 2.4 persons per dwelling.

Both the 2006-2011 Social Plan and the 2010-2014 Economic Strategy highlighted that caution must be taken with such a high population target having regard to the range of social and economic factors in particular the ageing population, employment and industry structure as well as infrastructure capacities. Measures to address these factors will not keep pace with the rate at which these factors are expected to impact upon the existing population and workforce.

It is considered that Council should revise down the population targets of the 2007 Strategic Plan to a more achievable target rate of between 0.5 and 1% annual growth rate. Table 8 indicates the target growth rates projected for each year until 2031.

Table 8. Projected Population to the year 2031 for 0.5% and 1%

YEAR	CENSUS		ERP	
	0.50%	1.00%	0.50%	1.00%
2006	19,759		20,553	
2007	19,858	19,957	20,656	20,759
2008	19,957	20,156	20,759	20,966
2009	20,057	20,358	20,863	21,176
2010	20,157	20,561	20,967	21,388
2011	20,258	20,767	21,072	21,601
2012	20,359	20,975	21,177	21,817
2013	20,461	21,184	21,283	22,036
2014	20,563	21,396	21,390	22,256
2015	20,666	21,610	21,497	22,479
2016	20,769	21,826	21,604	22,703
2017	20,873	22,044	21,712	22,930
2018	20,978	22,265	21,821	23,160

YEAR	CENSUS		ERP	
	0.50%	1.00%	0.50%	1.00%
2019	21,083	22,488	21,930	23,391
2020	21,188	22,712	22,039	23,625
2021	21,294	22,940	22,150	23,861
2022	21,400	23,169	22,260	24,100
2023	21,507	23,401	22,372	24,341
2024	21,615	23,635	22,484	24,584
2025	21,723	23,871	22,596	24,830
2026	21,832	24,110	22,709	25,079
2027	21,941	24,351	22,822	25,329
2028	22,050	24,594	22,937	25,583
2029	22,161	24,840	23,051	25,838
2030	22,272	25,089	23,167	26,097
2031	22,383	25,340	23,282	26,358

Source: LCC

Such a target will be kept under continual review and modified accordingly should key drivers such as employment generating development, improved road and rail infrastructure to the Central West, and change in government policy to encourage further decentralisation, occur.

KEY ECONOMIC DEVELOPMENT STRATEGIES

The Economic Development Strategy identifies the following drivers of economic development for the Lithgow Local Government Area:

- Leadership and Communication
- Population stabilisation and sustainable growth
- Infrastructure and Land Availability
- Business and Industry development
- Business support services
- Employment and Skills Development

The following six priority actions are identified as being of significant importance to the implementation of the Lithgow EDS 2010-14.

1. Secure water supply and sewerage supply
2. Land Availability
3. Marketing and Branding
4. Liveability
5. Business and Industry Development
6. Skills Development

Further explanation of these can be found in Section 5 of the Lithgow Economic and Development Strategy 2010-2014 Economic Development Strategy 2010-2014.pdf.

SUMMARY OF KEY ACTIONS

Action 4.1

- Adopt a target population growth rate of between 0.5% and 1% to guide future land use allocation and infrastructure provision.

Action 4.2

- Prepare and implement and housing strategy.

Action 4.3

- Prepare and implement an ageing strategy.

Action 4.4

- Implement the 2010-2014 Economic Development Strategy.

Action 4.5

- Integrate the findings of the Community Strategic Plan 2021 into land use planning documents and decisions.

CHAPTER 6 INFRASTRUCTURE

STRATEGIC PLANNING DIRECTIONS

The following directions and actions to inform the development of the Land Use Strategy and Local Environmental Plan fall out of the infrastructure analysis of the LGA:

- Adopt a growth rate of between 0.5% and 1% to align future urban growth with both social and physical infrastructure capacity.
- Ensure development does not occur at a rate, or within locations, that would be to the detriment of the existing community.
- Ensure all new urban development within Layers A and B, Figure 4 Chapter 4 are connected to reticulated water and sewer.
- Continue to investigate a reliable and secure bulk water supply for the Lithgow LGA to reduce dependency on the Fish River Water Supply Scheme, including but not limited to the Clarence Water Transfer Scheme.
- Ensure all new development incorporates water sensitive urban design principles.
- Align the supply of urban lands within the town of Portland to the capacity of the Sewage Treatment Plant and the planned timeframes (beyond 2017) for upgrade.
- Align the release of subdivision certificates within the South Bowenfels Study Area to the provision of water and sewer infrastructure augmentation works.

CONTEXT

This chapter relates to the levels of infrastructure and services for the Lithgow LGA. The 2007 Local Profile substantially outlined the base data regarding services and infrastructure within the Lithgow LGA including but not limited to:

- Water supply infrastructure
- Sewerage infrastructure
- Stormwater infrastructure
- Waste disposal
- Utilities
- Fire service infrastructure
- Cemeteries
- Road Network
- Rail network
- Bus services.

This chapter, where necessary, will identify and update the key infrastructure facts, issues and implications for land use planning. The planning and provision of key infrastructure must be intrinsically linked to sustainable land use planning and the staged release of urban lands.

PLANNING AND LEGISLATIVE FRAMEWORK

Infrastructure provision within the Lithgow LGA is currently governed by the following key state and federal planning and regulatory framework:

Instrument Name
KEY ACTS
Environmental Planning and Assessment Act 1979
Local Government Act 1993
Water Management Act 2000
Roads Act 1993
KEY MINISTERIAL DIRECTIONS (Section 117)
Directions 1.1 Business and Industrial Zones
Direction 3.1 Residential Zones
Direction 5.2 Sydney Drinking Water Catchments
Direction 6.2 Reserving Land for Public Purposes
KEY STATE ENVIRONMENTAL PLANNING POLCIES
Drinking Water Catchments Regional Environmental Plan No 1 (Deemed SEPP)
Infrastructure SEPP (2007)

Please refer to Chapter 3 for more detail.

KEY INFRASTRUCTURE

WATER

1. Farmers Creek Dam (operated by LCC). The catchment is relatively small however the supply is supplemented by Clarence Colliery Water Transfer Scheme (CCWTS) by up to 5M/L day, enabling the Farmers Creek Dam to be maintained at sufficient capacities during drought. This supply goes to Oakey Park Water Treatment Plant which in turn supplies Lithgow and Marrangaroo. This is supplemented by the

Fish River Water Supply Scheme (FRWSS). The identified residual capacity is 3,380 households, or a population increase of 8,451.

The Oakey Park Water Treatment Plant has an operating capacity of 15ML per day but due to system constraints is limited to 12ML per day.

The current average daily demand from this Plant is 4.5 ML and the peak demand is 13.1 ML*
*It is likely that the value for the peak day demand occurred during bushfire fighting operations and may under normal circumstances be lower.

2. Fish River Water Supply Scheme (operated by State Water). The source of this supply is Oberon Dam. Areas supplied from Fish River are via the Duckmaloi Water Clarification Plant which supplies water to Wallerawang, Portland, Lidsdale, Rydal, Cullen Bullen, Glen Davis, Marrangaroo and can supply Lithgow if required. The capacity of this supply is restricted in times of drought and the capacity to supply further development may be limited. The identified residual capacity for the Fish River Water Supply Scheme (treated water) is an upper limit of 3,042 households or a population of 7,605. Low water levels in Oberon Dam, has at times, affected water quality via discolouration. It is understood that testing has identified that there is no health risk however discolouration makes the water undesirable to consumers. Sydney Catchment Authority has not taken water from Fish River since November 2008 and Delta Electricity has scaled back its use of the water.

   The current average daily demand from this supply is 2.4 ML and the peak demand is 7.3ML.

Both catchments for these supplies are relatively small. The Farmers Creek Dam relies on a catchment of only 12 km² and has a storage capacity of 450ML and the Oberon Dam a catchment size of 50 km² and has a storage capacity of 4500ML.

It is considered that the current water treatment infrastructure at Oakey Park will meet the population growth forecasts of 0.5% to 1% per annum for the Lithgow urban area. The higher growth scenario of 2% growth per annum is beyond the planned capacity of this infrastructure with such being reached at 2024.

SEWERAGE

In terms of sewerage the LGA is serviced by three sewage treatment plants:

1. Lithgow Sewage Treatment Plant. The Lithgow plant has a current capacity of 23,000 equivalent persons (EP). The current use is approximately 18,000 EP leaving a residual of 5,000 EP. This is within the potential population growth scenarios for lands currently zoned in the Lithgow and Marrangaroo urban areas. The inclusion of the new lands including those currently reserved for future urban use and Marrangaroo Investigation Areas are beyond the current capacity of the plant. This Sewage Treatment Plant is undergoing upgrades to improve sewage water quality.

2. Wallerawang Sewage Treatment Plant has a capacity of 2,200 EP with a current loading capacity of 2000 EP, leaving a residual capacity of 200EP. This STP is currently undergoing upgrades to improve water quality and power supply and will increase capacity to 3,300 EP.

3. Portland Sewage Treatment Plant has a capacity of 2,200 EP. This plant has no residual capacity and is operating at full loading. It also requires upgrades however the NSW Minister for Water has advised that it is

not possible for the Portland Plant to be included in the current round of Country Towns Water and Sewerage funding and a new round will not occur until after 2017. The Department of Public Works will investigate on Council's behalf options for improvements pending a plant upgrade.

4. Trade Waste. Lithgow City Council provides a Trade Waste service to connected customers within the occurred areas. Restrictions on discharges are subject to individual licences that follow the Trade Waste Policy requirements.

STORMWATER

Stormwater management is very limited within the LGA. At present, Lithgow urban area has the basis for a substantial stormwater management system whilst both Wallerawang and Portland have existing systems that are limited in capacity and quality.

The stormwater system in Lithgow is comprised of a series of concrete pipes and open channels which empty into Farmers Creek. The system does not have any stormwater management structures or controls. The Wallerawang stormwater is comprised or clay or concrete pipes, and flows into the Coxs River. The Portland stormwater system is comprised of a series of clay and concrete pipes which flows into Limestone Creek.

WASTE FACILITIES

Council currently operates one major waste disposal facility at Lithgow and six other smaller unsupervised landfill sites at Portland, Wallerawang, Cullen Bullen, Angus Place, Capertee and Glen Davis. In addition to this Council operates three transfer stations at Hampton, Meadow Flat and Tarana.

All existing landfill sites have limited estimated lifetimes ranging from 0- 4years.

Council has development consent for a new landfill at Blackmans Flat which is situated approximately 16km north of Lithgow. The proposed development includes:

- Establishment of the Waste Management Facility (WMF) including preparation of the mine void for land filling, and construction of a waste transfer station and recycling facility, weighbridge, road access, and associated developments.

- Land filling of solid and inert waste with a "dry tomb" in the order of 35,000 to 40,000 tonnes per annum for a period of approximately 15 years.

- Storage and transfer of recyclable waste including scrap metal, glass and plastics, paper and cardboard, green waste and other recoverable materials.

Council is planning on decommissioning its old waste management facilities in order to undertake waste disposal at its new site in Blackmans Flat. The construction of the Blackmans Flat facility is in the current management plan for completion in the 2009/2010 financial year. However, it is more likely that commissioning of the landfill will be delayed pending final results of the possible life extension of the Lithgow solid waste facility.

Council will be activating the Blackmans Flat consent by carrying out works to satisfy substantial commencement and prevent lapsing of the development consent by December 2011.

Until the facility is commissioned there is capacity at the Lithgow landfill that should adequately cater for waste until commissioning of the new facility. There are varying life spans for rural landfills that may be required to be closed prior to the commissioning of the Blackman's Flat facility.

Council has resolved to investigate an extension of the life to the Lithgow solid waste facility. Council has engaged Consultants to investigate options with a view to applying to Department Environment Climate Change & Water for a variation to the Landfill Environmental Management Plan.

The management of the old sites as contaminated sites is to be considered as is the viability of transfer stations to service one central facility.

ONSITE EFFLUENT DISPOSAL AND WATER SUPPLY

Settlement not serviced by reticulated water and sewer rely on on-site effluent disposal systems and on-site water storage tanks. The capacity of these systems is addressed on a site by site basis.

ROADS/TRANSPORT

Major highways and the main western railway are the two major transport systems

Major Highways and roads include Great Western Highway, Castlereagh Highway, Jenolan Caves Road and Bells Line of Road.

The Bells Line of Road provides an alternate route to the Great Western Highway across the Blue Mountains and into the north western sector of Sydney.

The road network through and within the LGA comprises a number of significant arterial roads that connect major towns within the area to each other and surrounding major regional centres.

Both Victoria Pass and the Zig Zag Railway were major feats of engineering and planning in their day and are transport heritage of state significance.

A large proportion of the north eastern section of the LGA is covered by the Wollemi, Blue Mountains, Gardens of Stone National Parks, Capertee National Parks and Marrangaroo National Parks. The size and rugged nature of the National Parks and State Forests prohibits general road access to many areas of the overall LGA.

There is a significant volume of heavy vehicles using the road network within the LGA. However, B double truck access over the Blue Mountains to Sydney is still restricted.

Council's urban road network includes 192.5km of urban sealed roads, 23.9km of urban unsealed road and 43.8km of arterial road which are all sealed.

Council's rural road network consists of 411.8km of unsealed rural roads and 201.6km of sealed rural roads.

SUMMARY OF ISSUES

Table 1. Summary of key infrastructure issues

INFRASTRUCTURE ISSUES	WHY IS IT AN ISSUE?
Secure and reliable bulk water supply	• The provision of a bulk water supply is fundamentally critical to sustain any urban community. It also influences key investment decisions for prospective business and industry. • The LGA water supply is available through two sources, Famers Creek and Fish River Water Supply Scheme. Lithgow City Council is the authority for only the Farmers Creek supply. This creates issues surrounding water sharing, water allocations and pricing, agreements and responsibility for water quality and delivery of service. It also creates a disparity between service levels between Lithgow and the town centres of Portland and Wallerawang, villages and rural users. • The bulk water supply for the Lithgow LGA has been challenged in recent times through the effects of drought, a situation that may become more prevalent over time due to the vagaries of climate change. • In periods of sustained drought it would become necessary for Lithgow City Council to back supply water to the towns and villages through the Farmers Creek supply. This supply will not meet the peak daily demand of the existing serviced population base without extensive augmentation to the Clarence Water Transfer system. • Council along with its regional counterparts will need to investigate an alternative bulk water supply scheme, if the Lithgow and Oberon LGA's are to increase their population and industry base into the future.
Capacity of infrastructure head works to service new development	• All major Sewage Treatment Plants (STP) require augmentation to cater for future growth. The Lithgow STP upgrade is currently under construction and will provide for an additional 5,000 equivalent persons (EP) meaning that the potential growth scenarios for the existing urban zoned lands may be accommodated, however the future urban areas identified by this Strategy are beyond the capacity of this plant. • The Wallerawang STP upgrade has commenced and will provide an additional 1100 EP. Such will be sufficient to meet the demands of potential growth scenario of for the existing urban zoned lands; however the future urban areas identified by this Strategy may be beyond the capacity of this plant. • The Portland STP is currently at capacity and will not be upgraded prior to 2017. Growth in each of these town centres will be restricted to the capacities of these plants. Portland is not capable of absorbing any growth in real terms in the serviced areas until the STP is upgraded. This will require land allocation within this area to be restricted. • The Oakey Park Water Treatment Plant has a current operating capacity of 12ML per day. In order to totally remove reliance on the Fish River Water Supply Scheme and to supply water to all services areas of the LGA this plant will require upgrading.
Aligning development to infrastructure provision	• Past practice in new release areas such as South Bowenfels of enabling developers to only provide infrastructure to connect development sites to services without due regard to the impact on the downstream trunk systems or key head works has led to a shortfall of infrastructure which now must be met by Council. • The timing of the provision of this infrastructure may lead to the development of some areas being delayed and continuing operating deficiencies for existing areas. • The lack of an adopted infrastructure strategy for South Bowenfels and the lack of a detailed development servicing plan will create a significant cost burden for Council and

INFRASTRUCTURE ISSUES	WHY IS IT AN ISSUE?
	delays for further development in this area.
Dependence upon key state and regional road infrastructure	• Industry and business development is highly dependent upon a fast and efficient road network for freight movement and visitor traffic. Upgrades to the state and regional road networks are critical to the future growth potential of the LGA and diversification of its industry base. • Upgraded road links to the Sydney Basin will encourage further residential growth in the LGA as commuting time to employment and cultural /recreational facilities will be reduced, making the LGA a very attractive and affordable alternative to city living.
Provision and Maintenance of Local Road Network	• The current dispersed population particularly in the rural areas impacts upon Council's financial and physical resources to provide and maintain an effective local road network. • The demand being placed on Council's resources from rural areas are disproportionate to the rate base of these areas.
Waste Management	• All current land fill sites are at or nearing their end life capacity. Council is planning to develop a new centralised waste management facility at Blackmans Flat. • The effectiveness of a centralised facility will be challenged by the continued dispersed growth in rural living opportunities for the collection and appropriate disposal of waste. • Closure and rehabilitation of existing landfills and their future land use and compatibility with adjoining lands requires careful consideration.

Source: LCC

DISCUSSION OF ISSUES

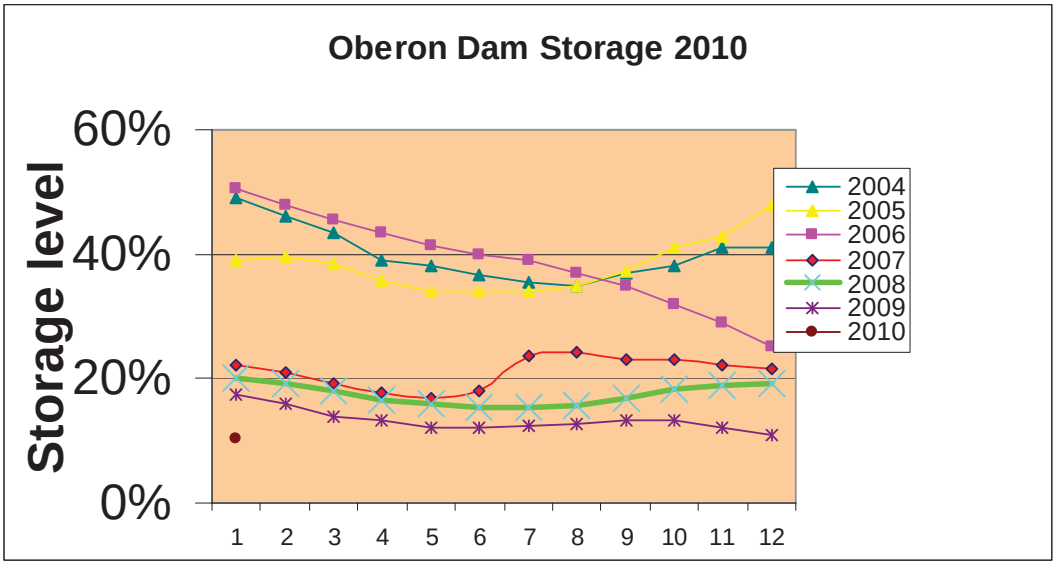
PROVIDING A SECURE AND RELIABLE WATER SUPPLY

As has been critically evidenced in recent times, bulk water supply to those areas serviced by reticulated water in the Lithgow LGA is affected by the vagaries of varying climatic and operating conditions. This is particularly so in relation to those areas serviced by the Fish River Water Supply Scheme (FRWSS).

The Oberon Dam supplies the FRWSS. The extended drought lowered this dam to a critical level and raised serious concerns regarding the ongoing capacity of the FRWSS to meet current and future water needs of the Lithgow LGA. This was due to a number of inter-related factors:

- In September 07 (81months) the then drought became the longest (lowest cumulative inflow) on record (State Water). At this time the Oberon dam level was 23.7%. This situation worsened through to March 2010 when the dam reached its lowest level of 10%. Figure 1 shows the levels of Oberon Dam over the period 2004 - Jan 2010.

Figure 1. Oberon Dam Storage 2010



- Dam levels may not recover as quickly nor sustain yield for as long due to theoretical relationship between dam inflows and rainfall not matching due to more than those two factors.

- Reduction in demand patterns does not reflect the model behaviour.

- The influence of climate change has not been accurately modelled.

- The catchment of Oberon Dam is only 50km² and as such is potentially more prone to drought.

- The FRWSS services the Oberon township, Lithgow LGA, Delta Electricity and feeds into the Sydney Catchment. The diversity of users impacts on the viability of the supply with particular reference to a desire for each LGA to increase its population levels.

In 2008 State Water Corporation revised a Drought Management Strategy to address the bulk supply of water through the FRWSS. This Strategy sets out dam trigger levels and associated levels of water restrictions to be applied. It also triggers the establishment of a drought management committee when the Oberon Dam falls to 60% to meet at regular 6 week intervals or once the storage level is 30% or below at intervals determined by each 5% drop.

Through this Committee a series of options to address the falling levels of the Oberon Dam have been investigated and have resulted in the following actions:

- Introduction of trigger points for introduction of water restriction levels for both (FRWSS and Farmers Creek) supplies.

- Back feeding of water from the Farmers Creek Supply to service the Marrangaroo urban areas.

- Commencement of a drought relief project funded by NSW State Government to provide the required infrastructure to back feed water from the Farmers Creek supply to the Fish River infrastructure to service the towns of Wallerawang and Portland and villages on the FRWSS to alleviate pressure of the FRWSS.

- Peer review of the FRWSS Water Supply Drought Management Strategy.

- A feasibility/options report for the Clarence Water Transfer Scheme with the objective of transferring additional water from the Clarence Colliery to Council's water supply system.

- Investigation of a number of alternative options to source a sustainable water supply including recommissioning of old disused reservoirs as such as Middle River Weir, Farmers Creek Dam No 1 and further mine dewatering projects.

- Recommissioning of the Duckmaloi Weir;

- Installation of submersible pumps to enable deep water recovery from Oberon Dam should the dam level reach 5%.

The relative self sufficiency of Lithgow LGA to supply water to its current and future settlements is highly dependent on the successful upgrading of the Clarence Water Transfer Scheme to enable its continued operation following closure or disrupted operation of the Clarence Colliery.

To this end, Council has considered a feasibility and option report and has adopted a preferred option that involves the augmentation of the existing Clarence Colliery Water Transfer System to increase the delivery from 5.5 ML/day (current) to 14 ML/day. This will be achieved by;

- Upgrading of Clarence Colliery's main dam pump station, which may involve supplementing the existing pumps with a new pump, or, depending on their condition replacing the existing pumps with two new pumps.

- Duplication or increase in size of Clarence Colliery's existing 225mm nominal diameter 1.3 km steel pipeline from the main dam to the header tank.

- Upgrade of the LCC pump station, replacing the existing pumps with two new pumps and the upgrade of electrical equipment.

- Duplication or increase in size of the existing rising main from LCC's pump station to a location which discharges directly to the Farmers Creek Dam.

Council has entered into a funding agreement with the Commonwealth Government. However, more recently Council has been advised that the Department of Environment and Climate Change will not permit the discharge of flows from the upgraded system into the surrounding tributaries involving a swamp and this has resulted in a re-scoping of the project to include a pipeline around the swamp. This has added an estimated $1.5 million to the cost of the project. At the time of writing this Strategy, Council was awaiting the results of representation made to both State and Federal Government to meet this funding shortfall.

It should also be noted that sole reliance could not be placed on bulk water supply from the Farmers Creek Dam supplemented by the proposed augmented Clarence Transfer system due to restriction of the Oakey Park Water Filtration Plant only having a operational capacity of 12 -13 ML/d. Council would still need to maintain its relationship with State Water and the FRWSS to ensure water is available during sustained periods of high demand.

The implications of the above would suggest that Council should approach with caution any desire for significantly higher growth rates until such time as the issue of bulk water supply and upgraded treatment capacities within the LGA is addressed.

Should the timeframes for the augmentation of the Clarence Water Transfer System extend beyond the short term (0-3 years), this Strategy must consider options to limit the release of urban lands through the Local Environmental Plan or other alternative planning tools such as a staged release plan for identified undeveloped or new urban lands within a Development Control Plan.

INTEGRATED WATER CYCLE MANAGEMENT (IWCM)

Council is currently undertaking an Integrated Water Cycle Management (IWCM) Evaluation. The ICWM will identify urban water service targets and issues relating to regulatory compliance and service delivery for the next 30 years.

The ICWM offers the opportunity to examine urban water supply, wastewater and stormwater management in a single planning framework in a whole of catchment context. With population growth and its accompanying urban footprint council is becoming increasingly aware that conventional water system management does not facilitate consideration of the “big picture”.

Considering all water sources and uses in a single framework creates opportunities for increasing the efficiency of water use and improving management of the water cycle.

Should any issues be identified in the IWCM evaluation that cannot be addressed by existing and formally adopted actions, an IWCM strategy will be developed to address them.

This evaluation will address the issues of a secure and reliable water supply and should be available in the timeframe to further inform the development of the LEP.

LINKING WATER AND SEWERAGE INFRASTRUCTURE TO DEVELOPMENT AREAS

It is imperative that Council’s infrastructure planning correlates with the planned urban development locations and demands.

Currently within the LGA there are areas where infrastructure provision and planning have not kept pace with development demand or identified zoned areas for development and as such infrastructure capacities are under pressure. The two key areas where this has occurred are South Bowenfels and Portland.

SOUTH BOWENFELS

In 2003/4 Council rezoned a major land release at South Bowenfels for standard residential development. South Bowenfels has been the primary growth area within the LGA for the past decade and is planned to continue to be so for the following decade.

This urban release was not supported by a strategic infrastructure strategy and as such individual developments have been approved and constructed without regard for the overall catchment infrastructure needs. Development has also occurred outside of infrastructure sequencing with resultant impacts on an increased number of downstream trunk assets.

In terms of water supply development of this area required a new 2 ML water reservoir that is currently under construction. In preliminary planning this reservoir was only to provide additional storage by linking with the existing reservoir on the opposite side of the Great Western Highway. However as this area has experienced some supply issues, planning is currently underway to provide reticulation from this new reservoir to service the new urban release areas on the western side of the Great Western Highway.

In the short term (0-3) years the existing water supply system is considered sufficient to meet the demand from the new developments under construction. Development of lands not already approved may be required to be delayed until the water infrastructure is finalised for this area.

In terms of sewerage infrastructure at South Bowenfels, it has been identified that continuation of the present sewage transfer mode will require significant augmentation of almost all existing downstream pumping stations back to the central sewage treatment plant. Council is currently investigating options to reduce the number of Sewage Pumping stations to transfer the load from the catchment back to the Lithgow Sewage Treatment Plant.

This may affect the ability of Council to issue Certificates in the short to medium term to enable connection to Council's sewerage network under the Water Management Act, and therefore the timing of development of all new subdivisions including those over which current development approvals have been issued.

This Strategy will therefore need to consider options to provide a staged release of lands within the South Bowenfels Release area through either LEP/DCP provisions as well as the introduction of a Development Servicing Plan.

PORTLAND

The key issue facing development of the Portland urban areas is the capacity of the Sewage Treatment Plant. This plant has reached its capacity and it is not likely that an upgrade will occur prior to 2017 due to the lack of available funding.

The supply and demand analysis has identified that there are currently a potential lot yield of 801 allotments that may contribute to standard residential supply in the Portland precinct under current zoning arrangements. As this amount of supply will not be able to be serviced in the short term, this Strategy should consider back zoning some of these lands to reduce pressure on infrastructure in the 2012 LEP.

UPGRADING OF KEY ROAD INFRASTRUCTURE AND ROUTES

As reported in the Lithgow Strategic Plan 2007, transport access to the LGA and central west is a key consideration for the community and is important to the regions social and economic development.

The proposed upgrades of the Great Western Highway and Bells Line of Road are both considered necessary to achieve growth within the LGA and Central West Region.

The Australian Government commissioned the Central West Transport Needs Study (CWTNS), to evaluate the appropriateness of existing land transport networks in meeting the short and long term needs of the Central West. This report can be located on-line at Central West Transport Needs Study.

The key findings of the Study in relation to the Lithgow LGA are summarised below:

- No capacity problems were identified; existing size of network (road and rail) would be adequate for future needs for at least 25 years.

- Safety and network enhancements may be warranted in relation to the Great Western Highway, Main Western Rail line and inter-modal facilities at Parkes.

- There is a need to continue with the current policy of maintaining and investing in safety and overtaking land improvement programs including the Great Western Highway improvement in the short (2009-2015 period).

- Based on the current growth in demand, an improved Bells Line of Road (to 4 lanes and 80-100km/hr design speed) would not be needed and would be justified only after 2033.

- Need to assess rail investment policy and its impact on the Main West Line (Mount Victoria to Parkes).

- Public transport in the Central West should be improved in stages, in line with passenger demand as assessed by NSW Government.

- Detailed investigation to assess level of economic investment in the Main West line is required to achieve productivity benefits and its economic justification to assess the staged improvements of additional bus and rail services and regionally based rail passenger improvement options.

- Viability of the Central West economy is dependent on access to ports; access and capacity of Port Botany (up to 2021) can be maintained; beyond 2021 growth in freight traffic could be partially diverted to Newcastle; access to Port Kembla for coal traffic can be maintained in the short term, outer region upgrades required in the longer term; freight access from the region to non NSW ports would be facilitated by the proposed North South Inland rail facilities and potential connection at Parkes.

The Study also recognised the need for further investigation of the longer term needs. The key areas for Lithgow LGA are as follows:

- A full review of the long term (beyond 2033) need for additional transport capacity across the Blue Mountains. This would include:

    - Further investment in the Main West Rail line; and
    - Consideration of the need for additional road capacity generally along the Bells Line of Road, including investigation of the need to reserve a corridor.

- Consideration be given to a trial of a new Bathurst–Sydney rail passenger service.

- Continuation of the Great Western Highway west of Lithgow which would include a review of rural road capacity warrants.

GREAT WESTERN HIGHWAY UPGRADE MT VICTORIA TO LITHGOW

In 2008 the Australian and NSW Governments announced the Mount Victoria to Lithgow Great Western Highway upgrade project to improve accessibility for communities in the Blue Mountains and Central West.

The objectives of the project are to:

- Improve road safety
- Improve road freight efficiency
- Cater for a mix of through, local and tourist traffic
- Be sensitive to the area's natural environment, heritage and local communities.

A preferred route for the GWH upgrade was announced in May 2010 and is shown in Figures 2-5.

Figure 2. Preferred route River Lett North

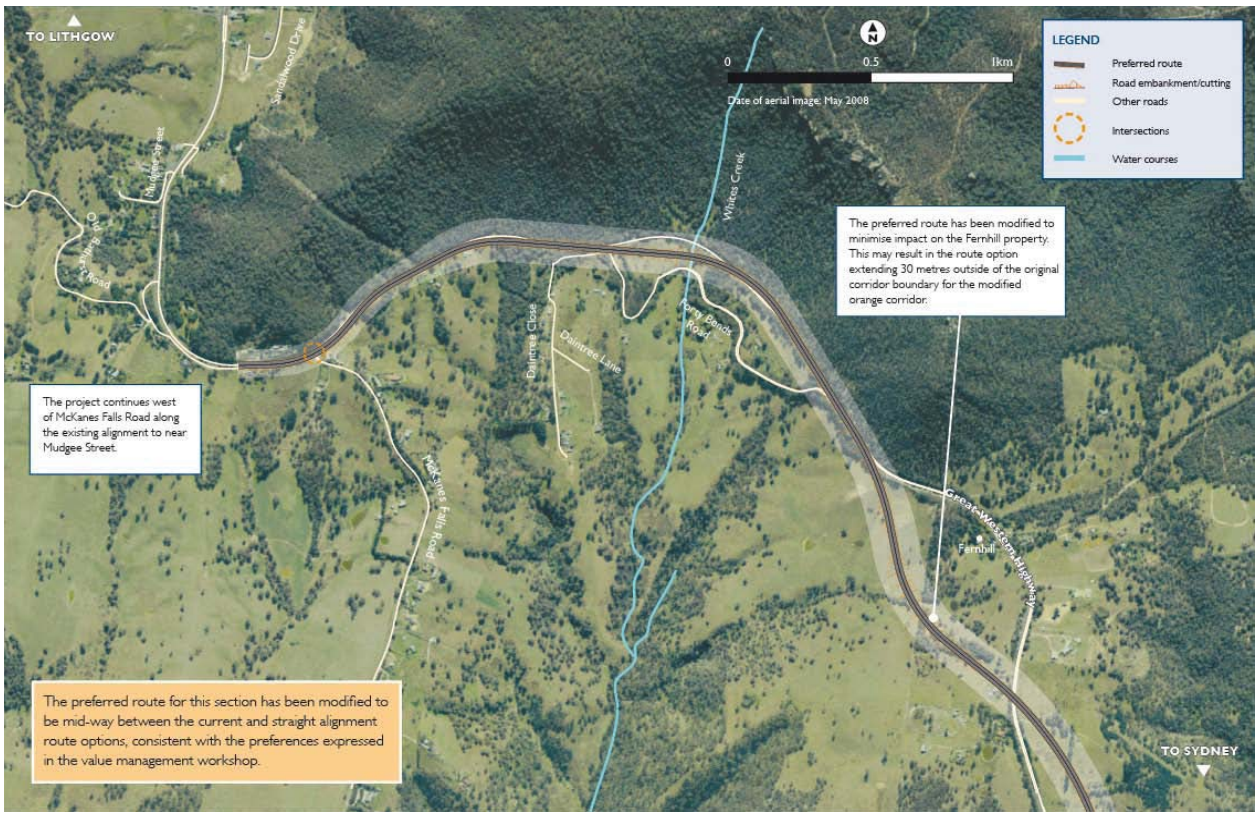


Figure 3. Preferred route River Lett South

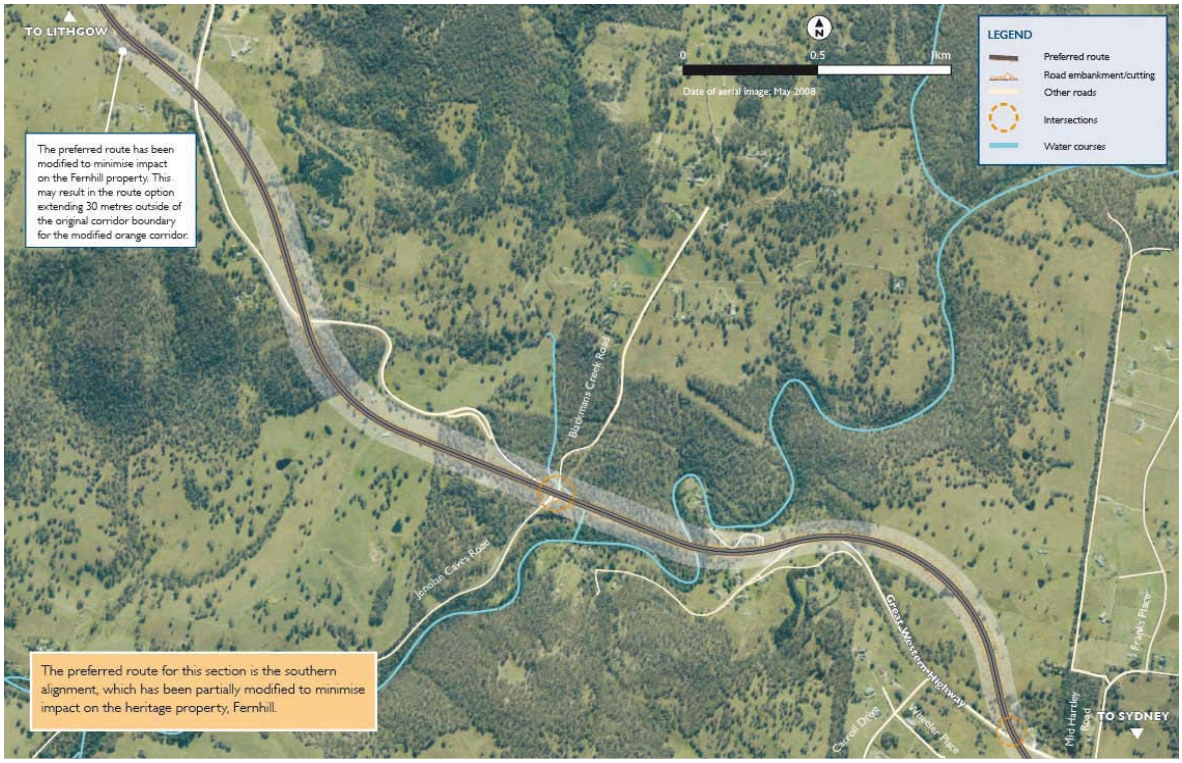


Figure 4. Preferred route at Little Hartley

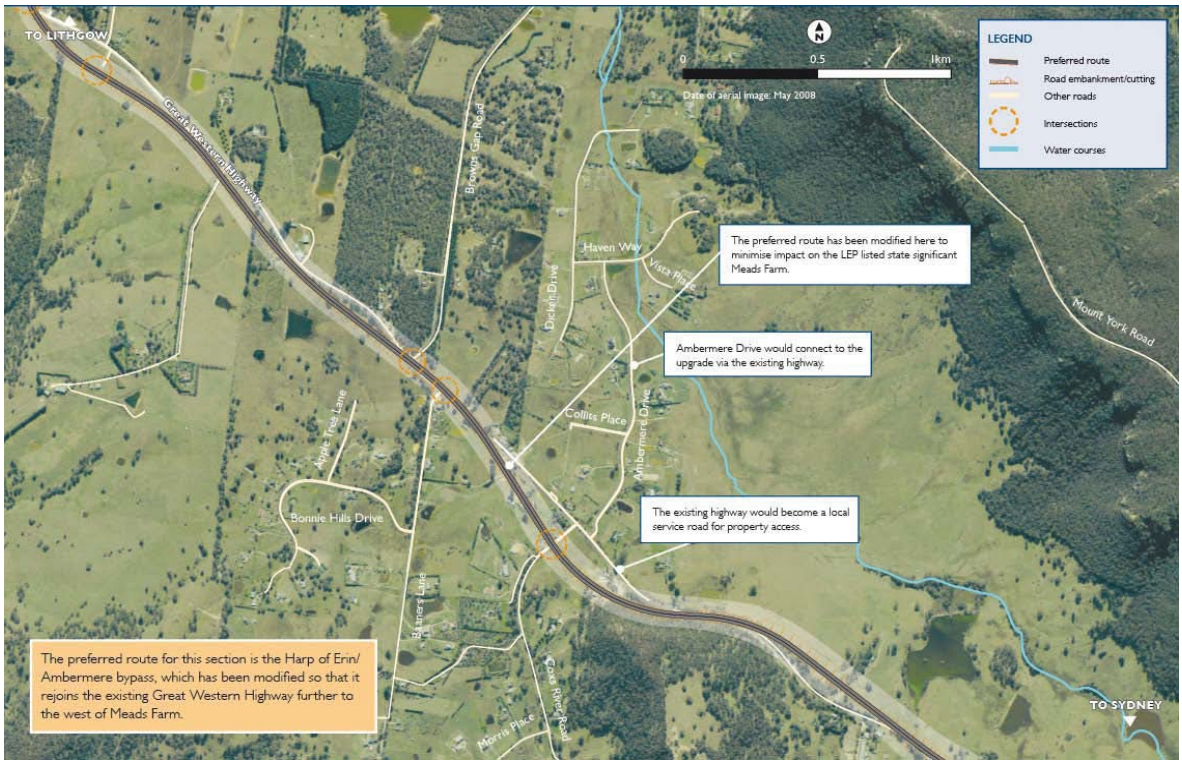
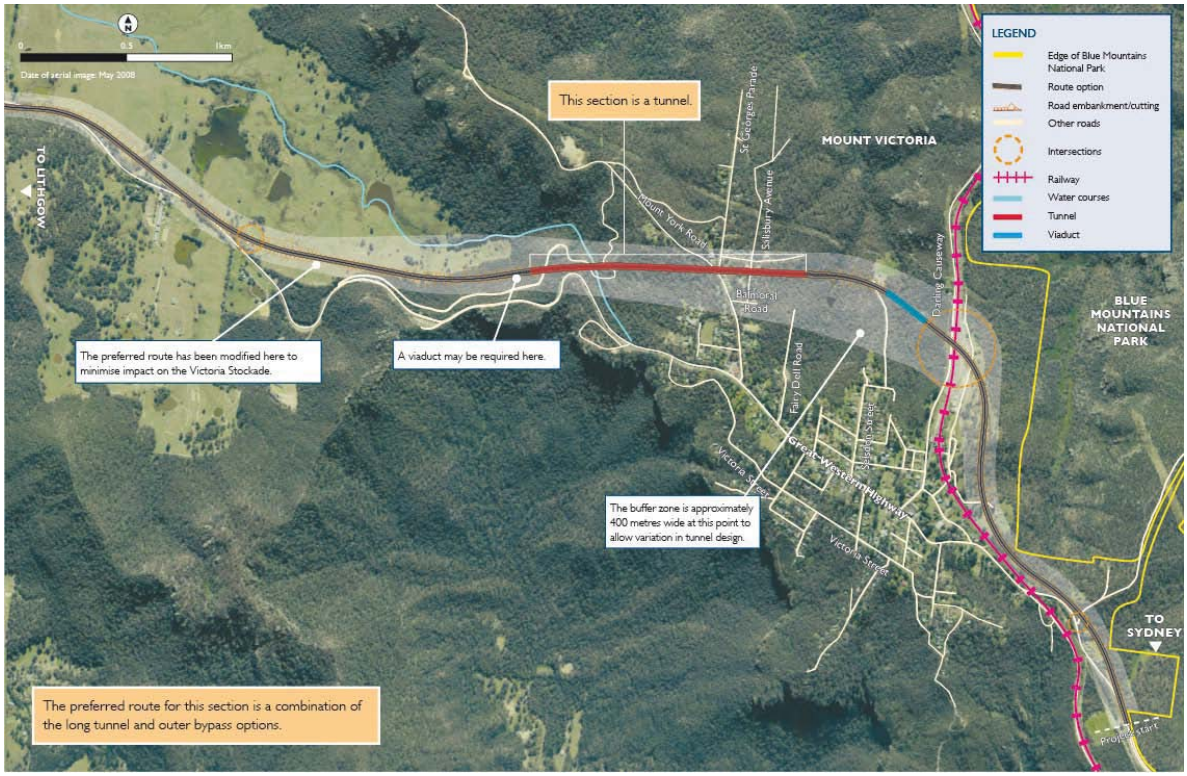


Figure 5. Preferred route that bypasses the main village of Mount Victoria



Within the Lithgow LGA this preferred route generally follows the existing corridor of the Great Western Highway and therefore has minimal impact upon the existing land uses. The area of greatest change is the deviation of the Highway to the south of the existing corridor at Little Hartley. This deviation provides an opportunity for a community "village" area to be developed to strengthen social and economic connections for the Hartley community.

Until this preferred route is finalised in detailed concept and design any future land use change of intensification in development in this area should be resisted.

BELLS LINE EXPRESSWAY

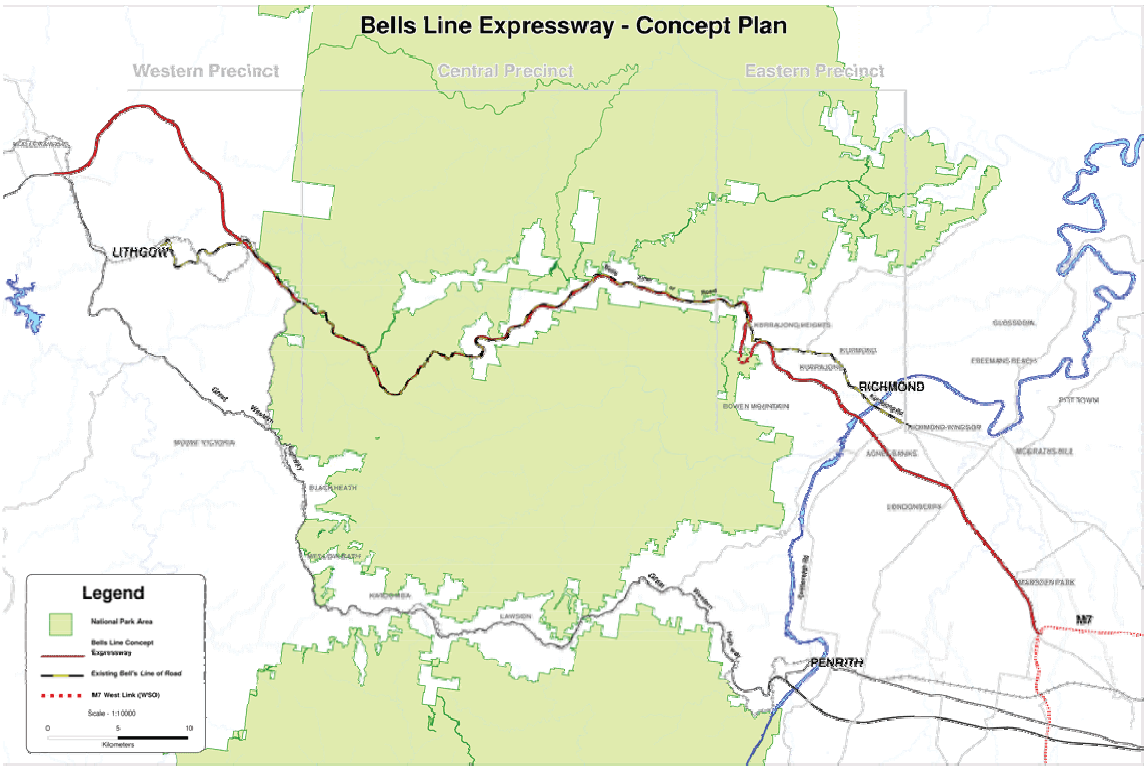
The concept route for the Bells Line Expressway is shown in Figure 6. This plan shows the termination of the Road on the Castlereagh Highway just north of the Marrangaroo Investigation area.

The Expressway proposal would extend from Windsor to Lithgow and if constructed would reduce travel time each way by 35 minutes for cars and 20 minutes for trucks (SKM, 2004) opening up the gateway to Western Sydney.

It is expected that an expressway over the mountains could induce growth in Gross Regional Product of 4.5% and employment of 3.9% after five years. (WRI, 1995).

Lithgow is strategically placed to benefit significantly in terms of potential for industry growth, tourism development, population migration and economic integration. The expressway would provide immediate opportunities for industry expansion in transport and distribution.

Figure 6. Bells Line Expressway – Concept Plan



Despite identifying this project as a long term need, the NSW Government is proceeding with the identification and reservation of a preferred corridor.

The proposed location of the Expressway termination point north of Marrangaroo provides clear justification for the location of new employment lands in this vicinity. The identification of these lands will be a function of the Strategy and LEP.

SUMMARY OF KEY ACTIONS

Action 6.1

- Prepare an infrastructure strategy for the Marrangaroo Urban Release Area and the Minerals Processing Park.

Action 6.2

- Prepare a LGA transport strategy to consider existing and future transport needs including, regional and local roads, pedestrian and cycling and public transport needs.

Action 6.3

- Prepare a Development Servicing Plan for the provision of water, sewer and stormwater infrastructure

Action 6.4

- Prepare a Development Contributions Plan that includes provision of urban and rural roads, pedestrian and cycling transport infrastructure.

Action 6.5

- Continue to lobby State and Federal Governments for the upgrade of the Great Western Highway and Bells Line Expressway.

Action 6.6

- Determine an appropriate land use separation distance (buffer) to be implemented through the Local Environmental Plan from all sewage treatment plants, sewage pumping stations, water treatment plants and landfill sites.

Action 6.7

- Complete the 2010 Waste and Recycling Strategy to transition to a centralised waste disposal facility at Blackmans Flat including closure of existing landfills, establishment of rural transfer stations and an appropriate community education program to minimise disposal of waste.

Action 6.8

- Further investigate suitable areas for the supply and reuse of recycled water and stormwater.

Action 6.9

- Prepare and implement a Land Monitor to monitor and review the take up of urban areas against infrastructure capacity.

Action 6.10

- Identify and protect the catchment of the Farmers Creek Dam from land degradation and inappropriate land use through LEP provisions.

CHAPTER 7 ENVIRONMENTAL PROTECTION AND NATURAL RESOURCE MANAGEMENT

STRATEGIC PLANNING DIRECTIONS

The environment and natural resource management directions to inform the development of the Land Use Strategy and Local Environmental Plan are as follows:

- Direct settlement areas away from identified environmentally sensitive areas
- Ensure that environmentally sensitive areas are protected from development that would create an adverse impact
- Recognise and protect primary resource lands including agricultural, forestry, and mineral and extractive resources
- Minimise the risk of bushfire threat to settlement areas and areas of environmentally sensitivity
- Ensure development does not have an adverse impact upon water or air quality
- Restrict development in areas identified as Flood Liable
- Ensure that view lines and areas of visual prominence are protected from development that may obscure or compromise scenic and landscape values. Development in prominent locations should be avoided and development should respond to natural topography as far as practicable
- Determine an appropriate minimum lot size for development relying upon on-site effluent disposal systems
- Continue to integrate environmentally sensitive areas overlays into mainstream land-use planning and development assessment processes

PLANNING CONTEXT

A detailed environmental analysis of the Lithgow LGA can be found in Section 6 the 2007 Local Profile. Updated information and data sets that have become available since the production of this document are discussed in this chapter and will in the future be provided in the 2010 Addendum to the 2007 Local Profile.

Natural Resource Management (NRM) involves the sustainable management of our natural resources (land, water, marine and biological systems) to ensure our ongoing social, economic and environmental wellbeing.

No one agency, Council, organisation or piece of legislation looks after natural resource management in its entirety. It is a shared responsibility.

The management of natural resources, in balance with social and economic factors is the first object of the Environmental Planning & Assessment Act:

The proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purposes of promoting social and economic welfare of the community and a better environment.

Other relevant objects of the Act encourage the protection of the environment and promotion of ecological sustainable development. (NSW Department of Planning – Draft LEP Practice Note – Natural Resource Management and the Standard Instrument).

The NSW State Plan 2010 sets the overall policy by which agencies carry out their business and of importance to NRM is Chapter 5 Green State. This sets State-wide targets for natural resource management to improve biodiversity and native vegetation, sensitive riverine and coastal ecosystems, soil condition and socio-economic wellbeing.

Local Government is responsible for undertaking, managing, supporting and regulating a wide range of activities that may impact upon NRM.

The principal functions of Local Government in relation to NRM include:

- Land use planning (Local Environmental Plans, Zoning)
- Management of community lands and open space (playing fields, parks and reserves, bushland)
- Vegetation management (roadside vegetation, noxious weeds)
- Biodiversity and landscape management (threatened species conservation, rehabilitation of degraded sites)
- Flood mitigation and floodplain management
- Estuary and coastal management
- Development and building controls (Development Control Plans, compliance in regard to soil erosion, on-site stormwater management, use of chemicals, etc)
- Pollution control and environmental management of land, water and air (including public health issues)
- Construction and maintenance of infrastructure (roads, drainage systems, recreation/leisure facilities
- Water supply and wastewater (sewerage) management (in country regions)
- On-site wastewater management (inspection, licensing of systems etc)

Further information in relation to integrating natural resource management into NSW Local Government operations can be found in the document of the same name at the Local Government & Shires Association of NSW Natural Resource Management into NSW Local Government Operations website.

NATURAL RESOURCE LEGISLATION

Natural resource legislation establishes a primary level of control over development and activities that may harm the environment. Local Environmental Plans and the strategic planning strategies that precedes them, should ensure that they do not duplicate or conflict with this legislation, but may compliment or enhance the objects of this legislation. This may be achieved by considering NRM values, controlling the permissibility of particular land uses, the selection and distribution of zones, principal development standards or including additional provisions.

To this extent, Council and the community should consider the following when preparing this Strategy and the Standard LEP:

- Protect native vegetation of high conservation value (Native Vegetation Conservation Act 2003)
- Protect, enhance and restore water sources, their associate ecological function, biodiversity and water quality (Water Management Act 2000)
- Conserve biodiversity, prevent extinction and promote the recovery of threatened species (Threatened Species and Conservation Act 1995), and
- Protect key fish habitats and threatened species of fauna and marine vegetation (Fisheries Management Act 1994).

In July 2007, the NSW Department of Planning introduced Local Planning Direction 2.1 Environmental Protection Zones, issued under Section 117 (2) of the EP & A Act. This direction clearly indicates to Council's and the community that Environmentally Sensitive Areas (ESAs) must be identified and protected in LEPs.

NEW DATA SETS

ENVIRONMENTALLY SENSITIVE AREAS MAPPING

In July 2008, a collaborative regional effort by three natural resource management agencies; the Department of Water and Energy (DWE), Department of Environment and Climate Change (DECC), and Department of Primary Industries – Fisheries Ecosystems (DPI Fisheries) supported by Catchment Management Authorities provided Council with a data set to identify the location, extent and diversity of environmentally sensitive areas within the Lithgow LGA. Environmentally Sensitive Areas have been grouped in the following three categories:

- Sensitive land resources
- Sensitive water resources
- Sensitive biodiversity resources

These maps are provided in Figures 1-6:

- Areas coloured on the maps are constrained and/or have significant environmental value.

- Areas not coloured are less likely to be constrained by environmental issues, but, because of the scale of the mapping and potential inaccuracies, need to be investigated on the ground with individual development proposals before environmental constraints can be ruled out definitely. It should be noted that areas that are not coloured are generally the more productive agricultural land and may warrant some form of protection from some forms of development to protection the LGA's agricultural production capacity.

The practice note accompanying the data set provided the following directions for use of the Environmentally Sensitive Areas mapping:

At the broad strategic level, the maps can be used to identify areas that are most likely to be free from significant land, water or biodiversity constraints, and therefore more suited to development.

- As a first priority, strategies should be implemented to guide intensification of land use and settlement away from the identified Environmentally Sensitive Areas to less constrained lands.

- Secondly, strategies should define assessment and development control provisions for those instances where development or settlement intensification are likely to occur within identified Environmentally Sensitive Areas.

- In all areas outside mapped Environmentally Sensitive Areas, assessment is still required to confirm their suitability for intensification.

Figure 1. Environmentally Sensitive Areas – Land Overlay

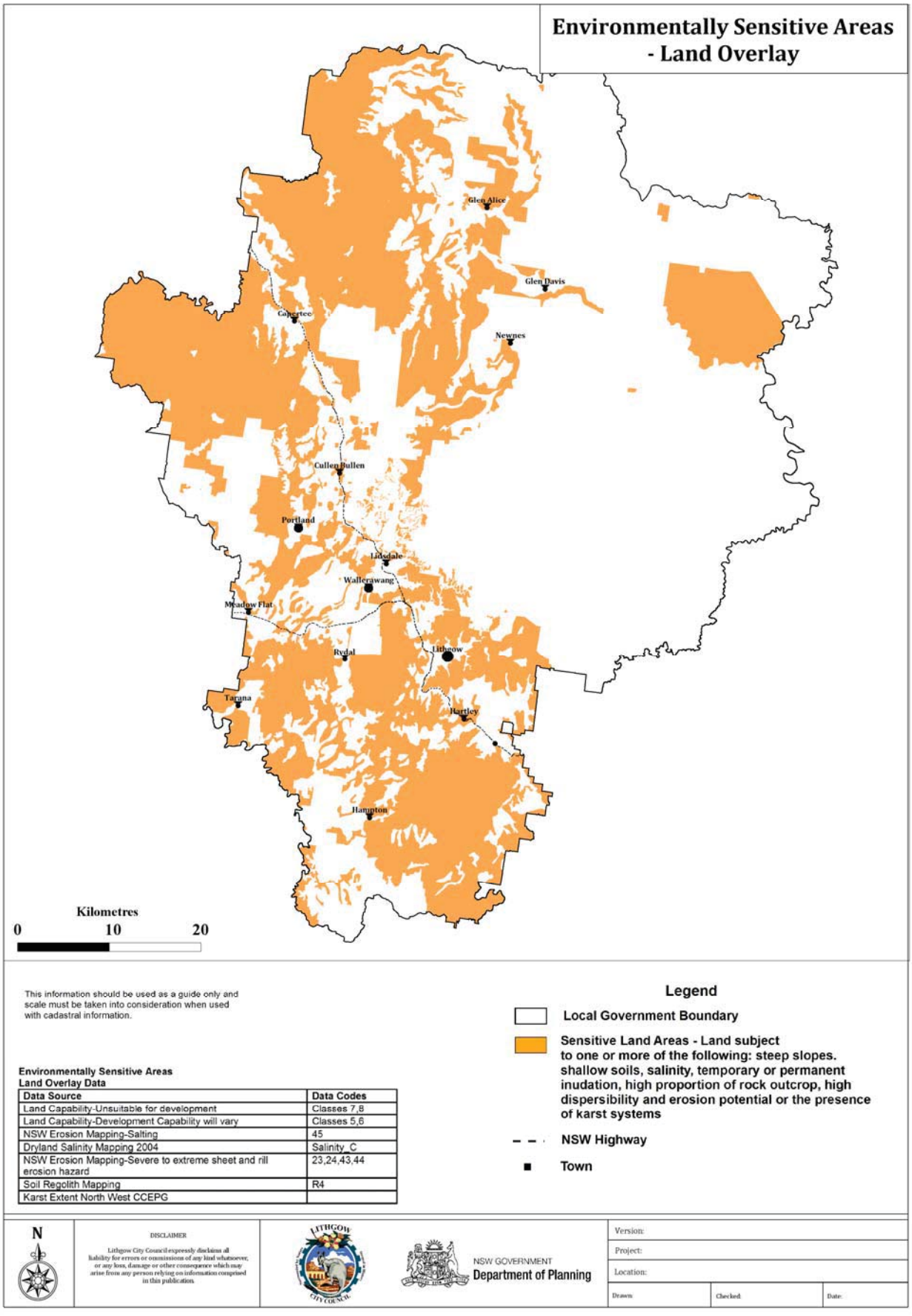


Figure 2. Environmentally Sensitive Areas – Sensitive Land Resource

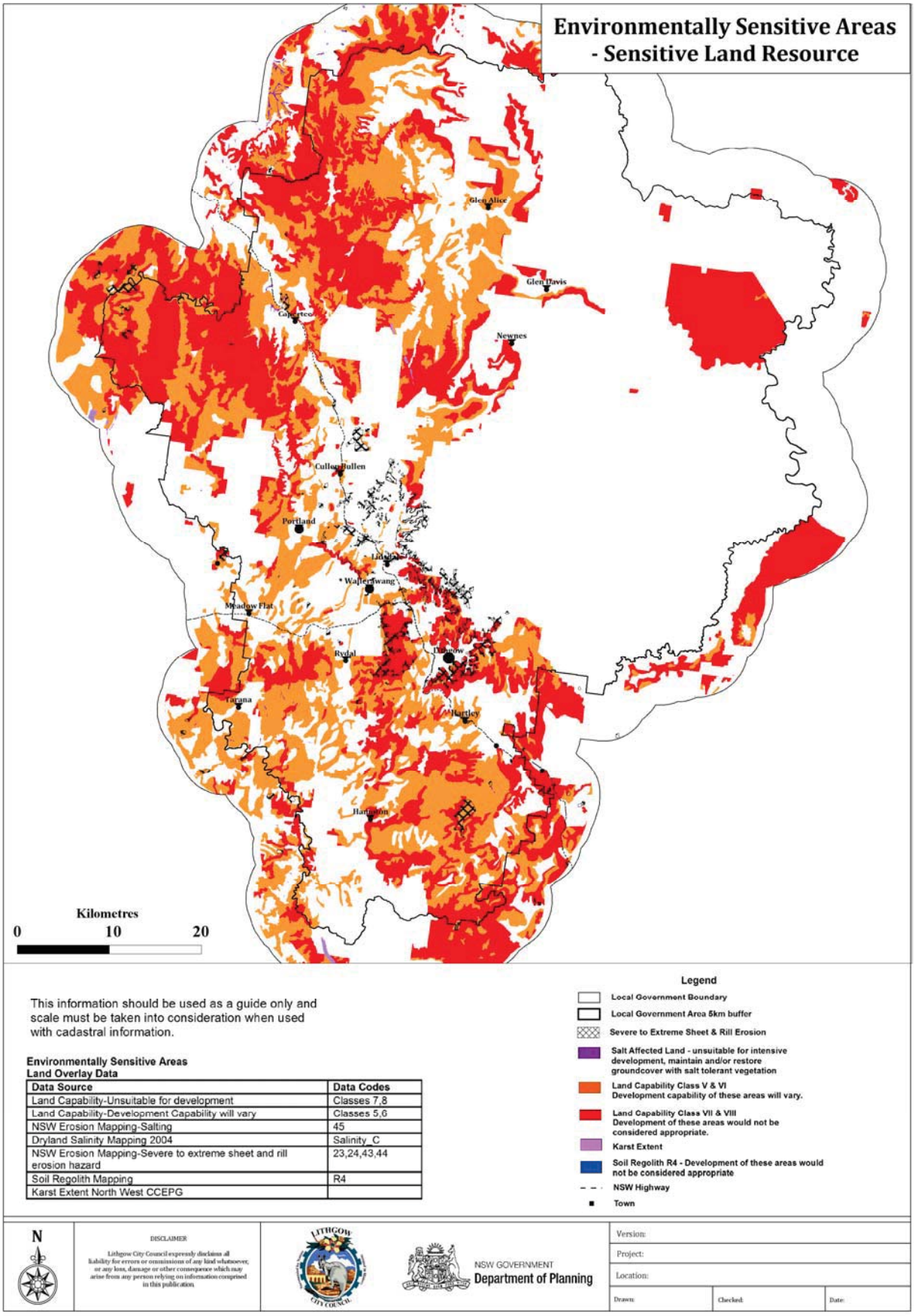


Figure 3. Environmentally Sensitive Areas – Water Overlay

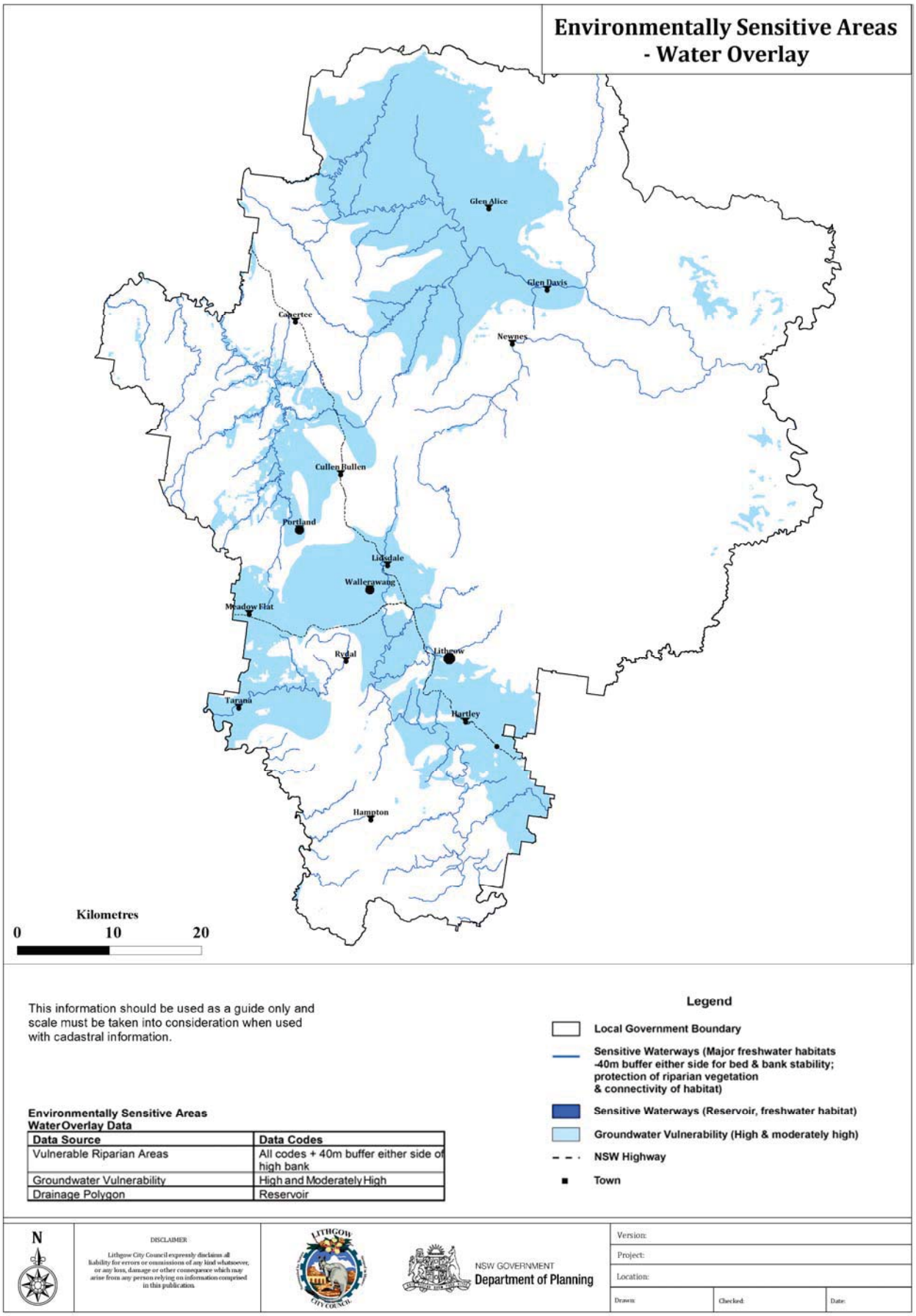


Figure 4. Environmentally Sensitive Areas – Sensitive Water Resource

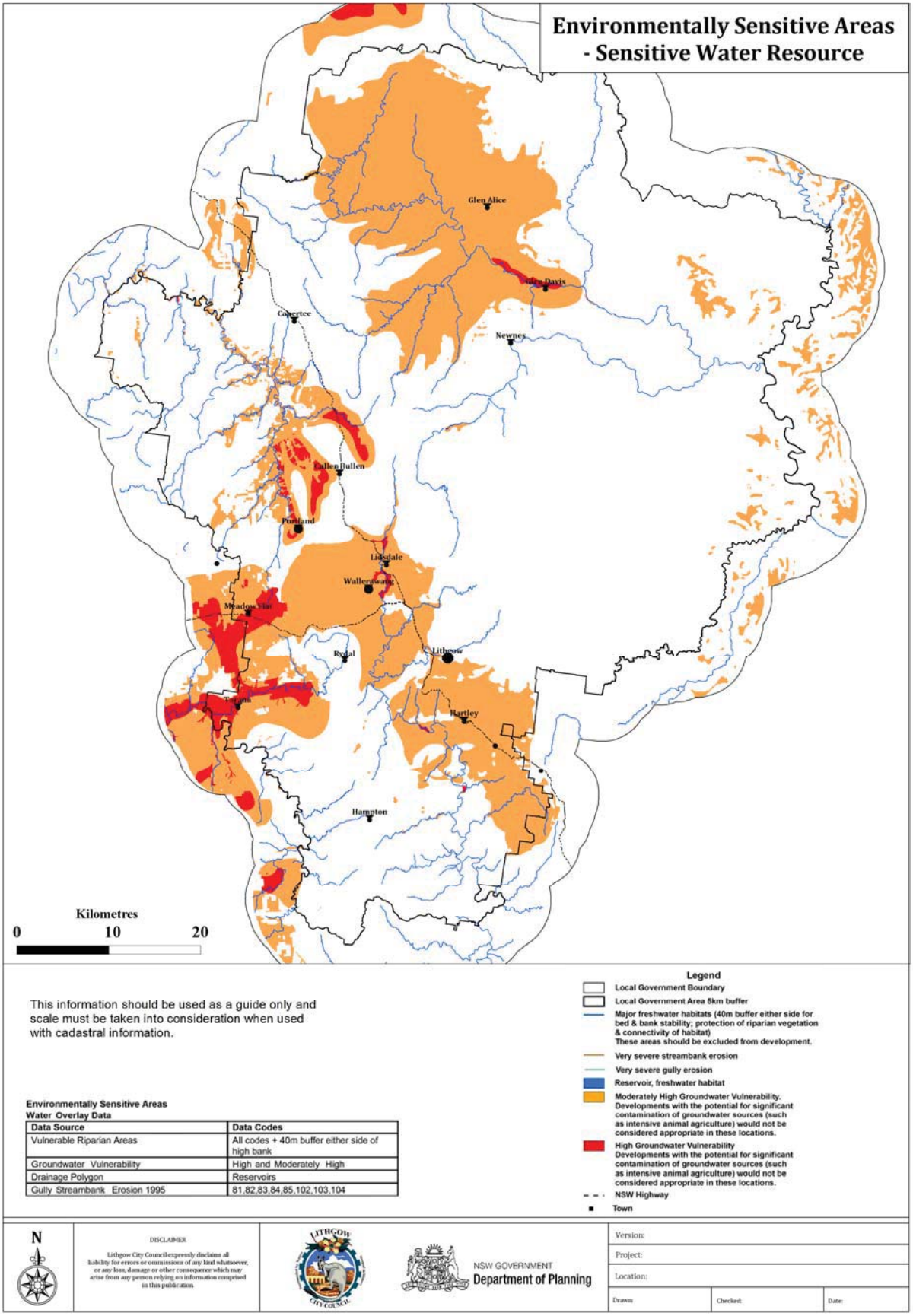


Figure 5. Environmentally Sensitive Areas – Biodiversity Overlay

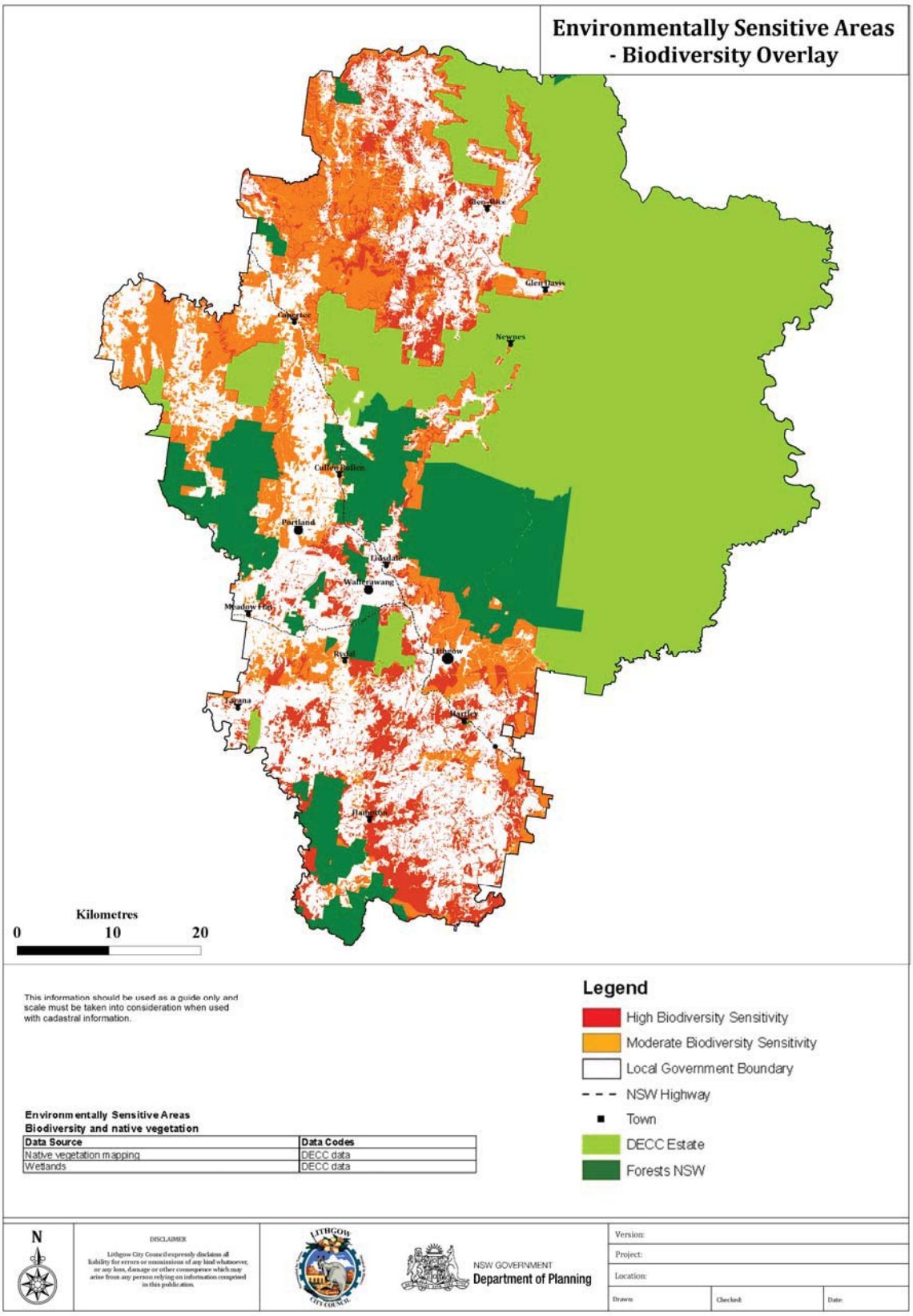
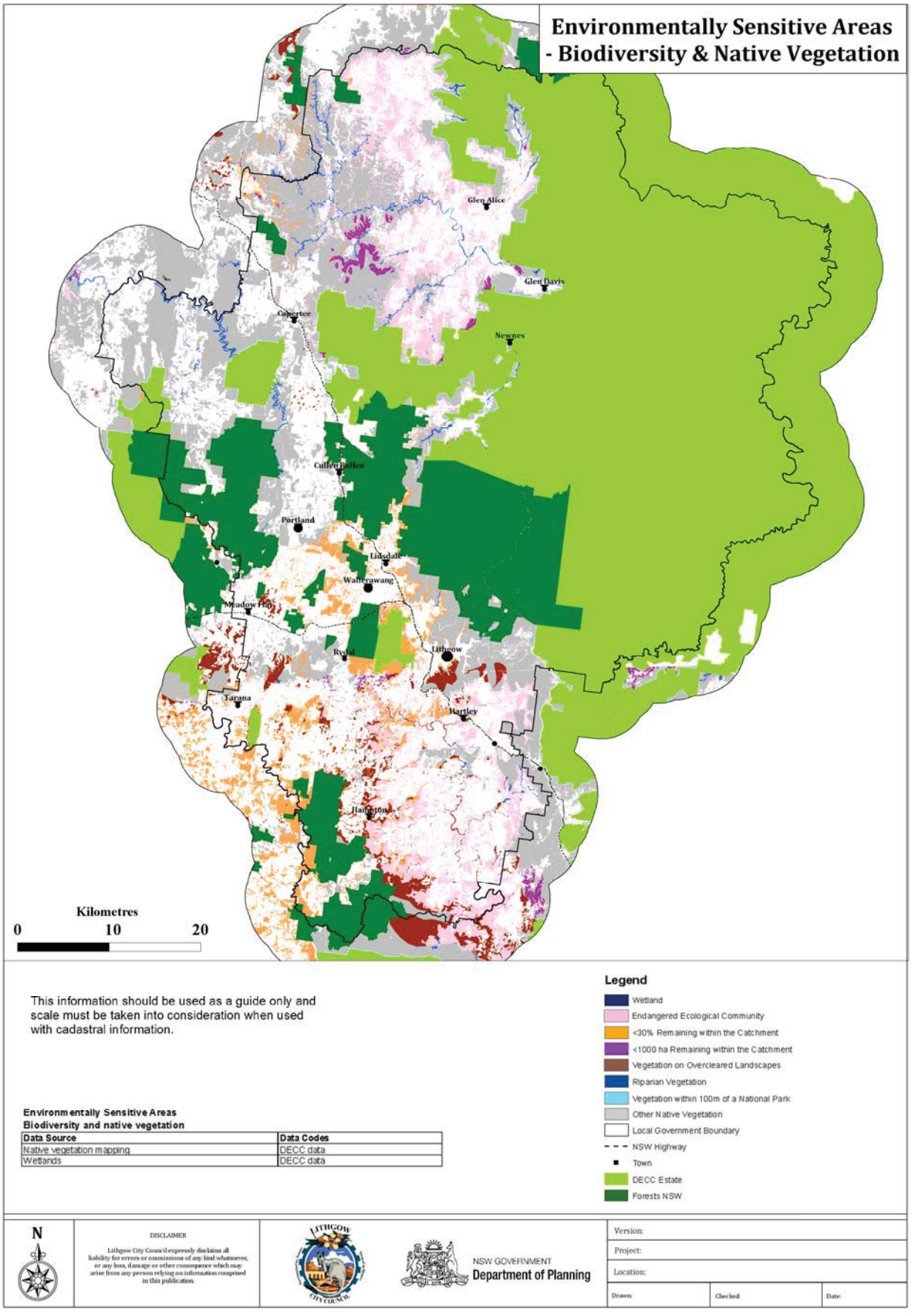


Figure 6. Environmentally Sensitive Areas – Biodiversity & Native Vegetation



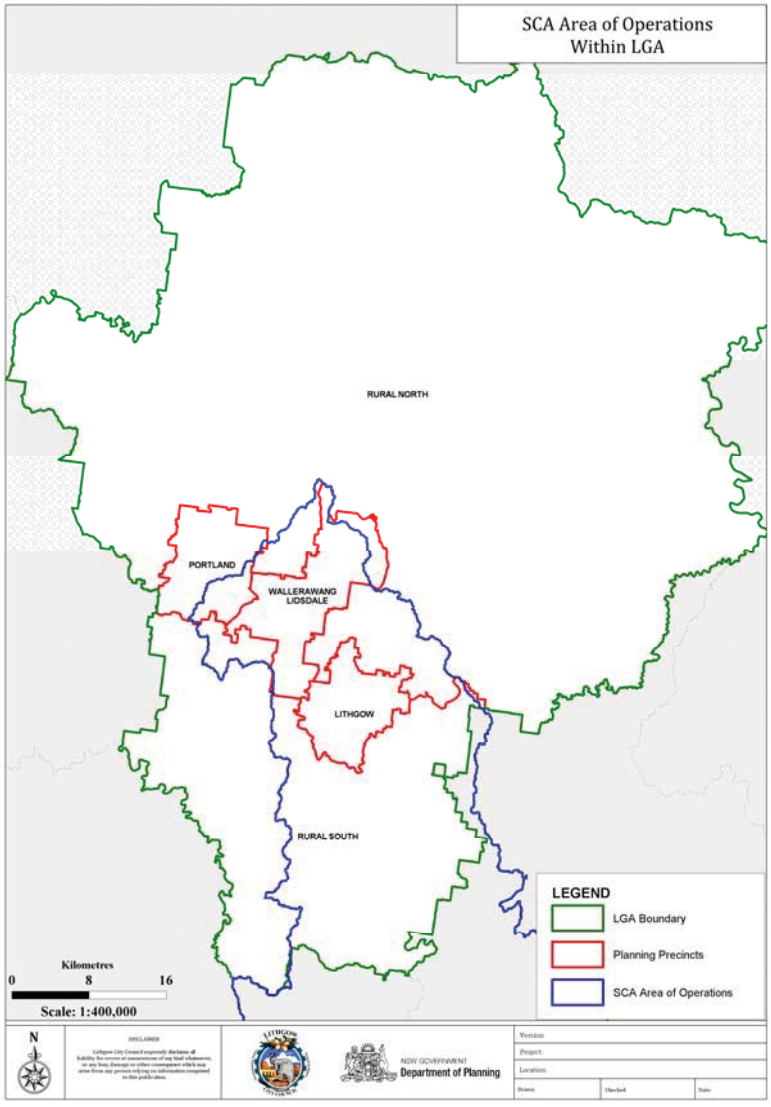
STRATEGIC LAND AND WATER CAPABILITY ASSESSMENTS (SLWCA)

A significant percentage (18.44%) of the Lithgow LGA is within the Sydney Drinking Water Catchment managed by the Sydney Catchment Authority (SCA) and Drinking Water Catchments Regional Environmental Plan No 1. (REP) This area is shown in Figure 7.

Strategic land and water capability assessments are a requirement of the Drinking Water Catchments Regional Environmental Plan No 1 (REP). A strategic land and capability assessment involves assessing the physical capability of natural features of land and waterways to identify appropriate types and intensities of land use that will not have an adverse impact on water quality and catchment health.

The REP requires Council's to consider strategic land and water capability assessments when preparing local environmental plans and strategies that precede them. The Lithgow Strategic Land and Water Capability Assessments was prepared by the Sydney Catchment Authority and was provided in late 2009.

Figure 7. SCA Area of Operations within LGA



The REP also applies to the development assessment stage of planning and requires each development proposal within the Sydney Drinking Water Catchment to achieve a neutral or beneficial effect on water quality.

In developing the assessments the SCA selected specific soil and landscape criteria and thresholds as a basis for determining risk to water quality, and other land use constraints. Landscape criteria and related thresholds used includes slope, erodibility, permeability, soil depth, vegetation cover and distance to watercourses. This information is used to assess the capability of land to sustain different land uses according to a particular land use zone.

Stage 2 of this dataset provides a series of land use capability maps using a four tier classification of very low, low, moderate and high capability ratings for the following land use categories:

- Rural
    - Intensive Livestock agriculture
    - Intensive plant agriculture
    - Extensive agriculture
    - Forestry
- Residential
    - Unsewered lots under 2000m²
    - Unsewered lots 2000m² - 2 hectares
    - Sewered lots
- Industrial/Commercial
    - Retail/Commercial
    - Light Industrial
    - Hazardous/Heavy Industrial

This information can be used to inform:

- Constraint mapping
- Environmental overlays and LEP provisions such as minimum lot size
- Zone selection and verification

MINERAL RESOURCE AUDIT

Section 117(2) Local Planning Direction 1.3 Mining, Petroleum Production and Extractive Industries applies to the Lithgow LGA. The purpose of this Direction is to prevent the unnecessary loss of access to important mineral, petroleum and extractive resources due to inappropriate zoning.

The Direction requires Council to consult with NSW Department of Industry and Investment (DII) if proposed LEPs are likely to prohibit or restrict the development of coal, petroleum, mineral and extractive resources. The Direction requires NSW DII to notify local government agencies of the locations of current operations and resources of state of regional significance.

To assist with land use planning, the Department of Primary Industries (NSW DII) as part of an ongoing mineral resource mapping program, prepared a Mineral Resource Audit for the Lithgow LGA. This data set was provided to Council in Draft form in 2010.

In this data set DII have undertaken an assessment of known mineral and extractive resources and potential resources to identify important resources that need to be considered in land use planning within the Lithgow LGA. The following information regarding this data set has been provided by DII.

The sites identified are classified as either identified resources or potential resources. Identified resources comprise significant operating or proposed quarries or mines and undeveloped defined resources. In the case of operating and proposed mines subject to mining titles, the mining leases are used to define the boundaries of the resource.

Potential resources areas comprise either deposits whose potential has not yet been fully assessed or areas that high potential for the discovery of mineral resources, based upon current knowledge. These sites have been defined using geological boundaries or, where appropriate, cadastral boundaries to facilitate definition on the ground.

It is important to note that mineral potential is not restricted to areas identified and that such potential may change over time as geological knowledge improves and new concepts and exploration techniques are developed.

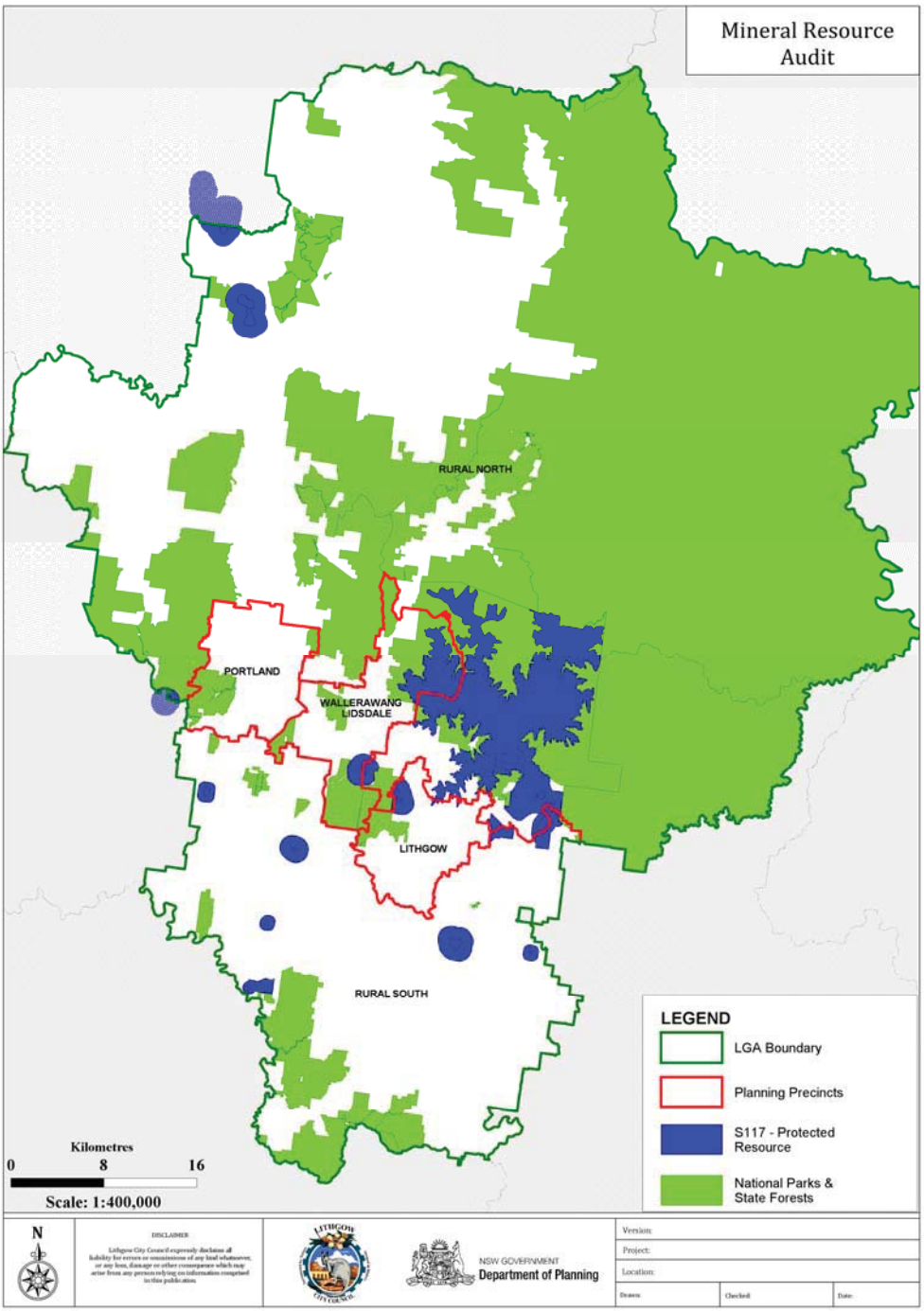
For operating and proposed quarries and mines, an adjacent area ("buffer zone") where development may conflict with current or future mining or quarrying operations is also generally identified. These buffer zones are indicative of the areas that may be subject to significant impacts from mining or quarrying operations. They are based upon criteria previously developed by the (then) Environmental Protection Authority as a guide to buffer zone requirements, where data on operational impacts needed to determine a site specific buffer zone is not available.

Buffer zone widths are 100m for sites where blasting is, or would be used, and 500m for sites where blasting is not required. These distances may be reduced to take account of factors such as existing land uses (eg built up areas, industrial areas, or national parks) and the physical characteristics of individual sites. Buffer zones have generally not been identified for potential resources as these areas are usually sufficiently large to include lands that could be subject to impacts from any future mines or quarries that may be developed within them.

The identification of resources and buffer zones by the NSW DII does not alter the existing zoning of the land in question, or the range of uses permitted under current zoning. Nor does it negate the rights of landowners. The purpose of the advice is simply to identify areas where proposed developments and land use changes may impact upon mineral and extractive operations and resources. These areas must be taken in consideration by Council when preparing LEPs or assessing development applications.

Figure 8 shows the spatial relationship of identified and potential resources requiring protection.

Figure 8. Mineral Resource Audit



The mineral resource audit data does not include coal and petroleum resources. The coal resources are indicated in Figure 9 showing the coal bearing areas and Figure 10 showing the coal title areas within the LGA. The coal title areas have been included as a primary constraint to inform land use planning decisions.

Figure 9. LGA Coal Bearing Areas

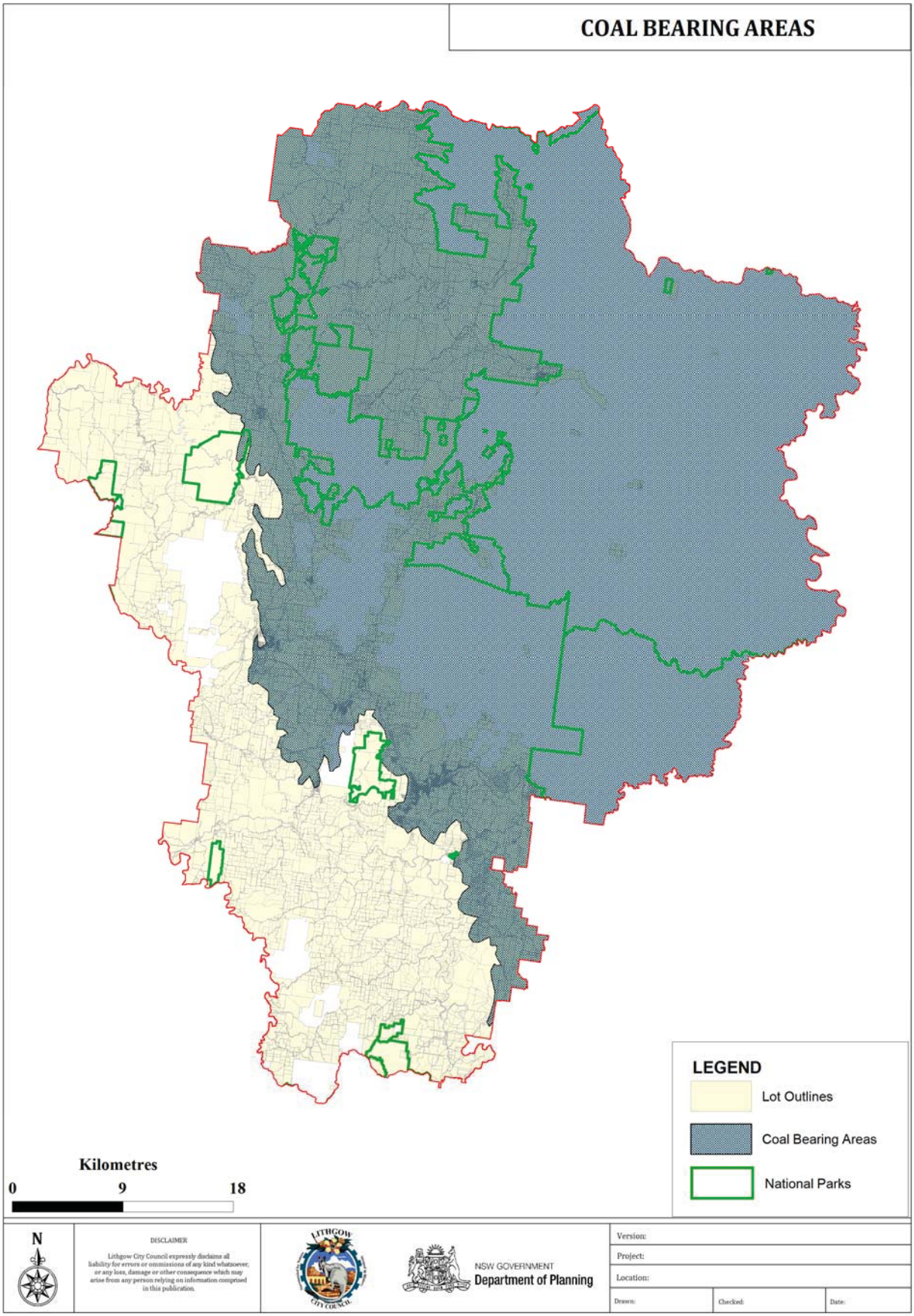
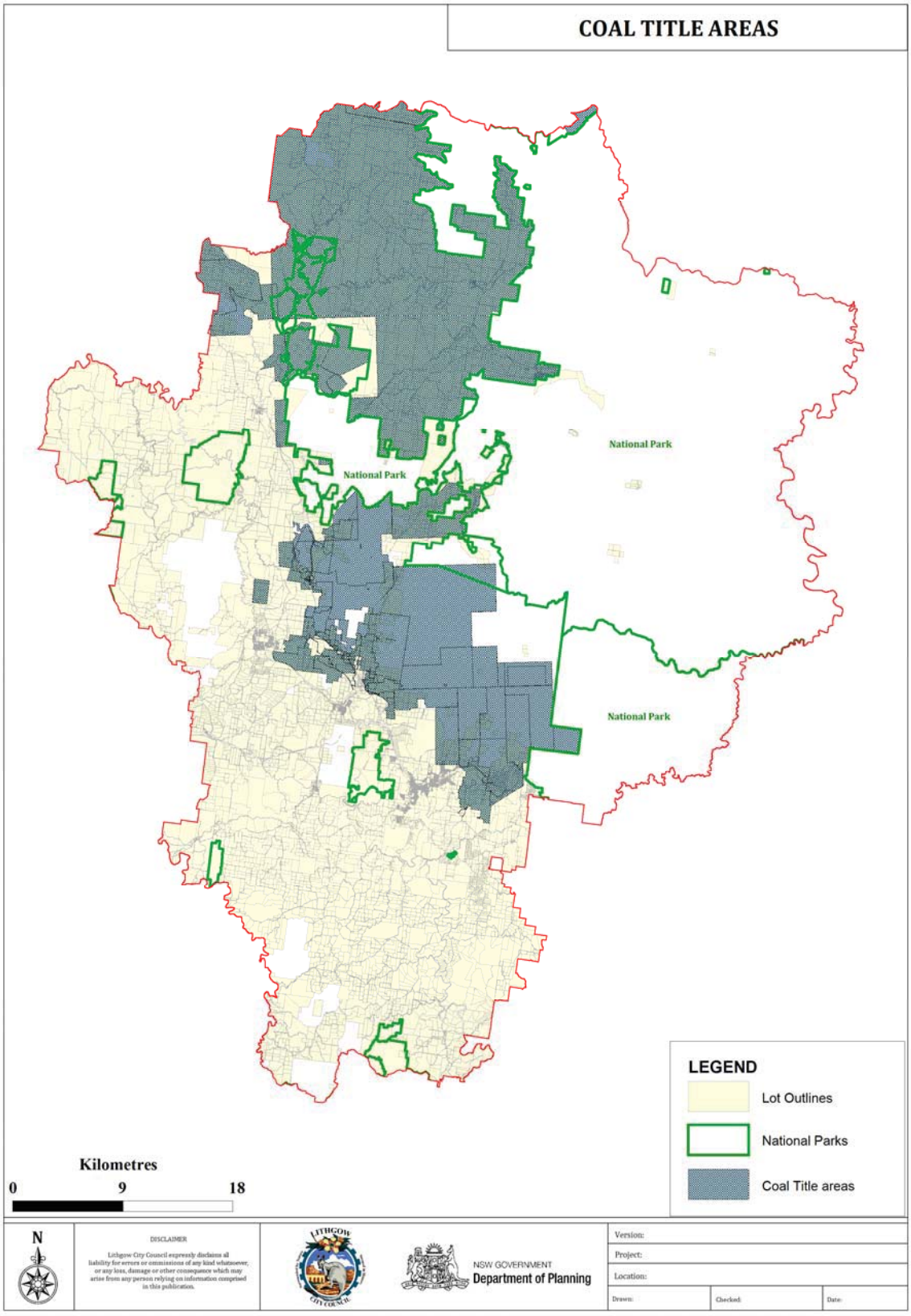


Figure 10. LGA Coal Title Areas



SUMMARY OF ISSUES

ENVIRONMENTAL PROTECTION AND NATURAL RESOURCE ISSUES	WHY IS IT AN ISSUE?
Management of land within the Sydney Drinking Water Catchment	• A significant percentage (18.44%) of the LGA is within the Sydney Drinking Water Catchment Area. Therefore development in this area is subject to increased criteria for development to establish a neutral or beneficial effect upon water quality before such development can obtain development approval. • Impacts upon the strategic planning process include consideration of Strategic Land and Water Capability Assessments to determine land use zones, permissibility and density. Such consideration may limit or restrict development from areas where such uses are currently permissible.
Cumulative impact of on-site effluent disposal	• On-site effluent disposal has the ability to impact upon both surface water and ground water quality. Not all areas of the LGA area suitable for on-site effluent disposal. • Continued uncontrolled dispersed rural settlement places pressure on the land to effectively dispose of effluent and may lead to adverse environmental impact. • An audit and inspection of existing on-site systems has revealed a high percentage of systems that are failing required performance standards. • Current minimum lot sizes for the disposal of effluent in the current unserviced village areas is not effective and will need to be increased in line with current best practice. • The Cullen Bullen village is currently experiencing adverse impacts from on-site effluent disposal systems.
Management of bushfire threat to settlement and areas of high biodiversity	• A large percentage of the LGA is bushfire prone land. Total avoidance of these areas for settlement is unachievable or practical • The largest risk to increased bushfire threat is continued dispersed rural living. Fragmentation of rural lands within bush fire prone areas and intensification of development limits the ability of effective bushfire management. • A clustered planning approach and appropriate planning for high risk developments is required to minimise bush fire threat to the LGA.
Impact of flooding upon settlement areas	• Impact of flooding particularly along Farmers Creek Lithgow will impact upon the planning of future land use in this area. • Council does not have a Floodplain Risk Management Plan to identify the different levels of planning for the area.
Loss or reduction of environmentally sensitive land, water and biodiversity resources	• A large percentage of the LGA has been identified as Environmentally Sensitive Areas. The largest threat to these areas is the continued increase of dispersed rural settlement. • Fragmentation of rural land for residential purposes increases the impact of land use conflict and limits the ability to achieve natural resource management outcomes.
Encroachment of Development on the scenic quality of landscapes	• The largest threat to the scenic quality of landscapes within the LGA is from the inappropriate sighting of rural and urban fringe dwellings. This development frequently interrupts the landscape and often is associated with vegetation loss and scaring due to clearing of building sites and access roads. • A future threat to landscape quality is the potential for increased alternative energy development such as wind and solar farms.

ENVIRONMENTAL PROTECTION AND NATURAL RESOURCE ISSUES	WHY IS IT AN ISSUE?
Management of Contaminated Lands	• Lithgow LGA has a strong industrial heritage that had the potential to contaminate lands. • Documentation of the history of these sites is not readily available and therefore cannot be effectively dealt with at the strategic planning level. This places additional burden on land developers to address this matter on a site by site basis. • Council does not currently have a contaminated lands policy or effective development control provisions to guide identification and assessment of potential contaminated lands. Council does rely solely on State Environmental Planning Policy 55 for management of contaminated lands.

DISCUSSION OF ISSUES

MANAGEMENT OF BUSHFIRE THREAT TO SETTLEMENT AREAS AND AREAS OF HIGH BIODIVERSITY

Bushfires represent an ever present risk to life, property and the environment in rural and urban interface areas (NSW Rural Fires Service 2001). Bushfire hazard maps have been produced for the LGA under Section 146 of the Environmental Planning & Assessment Act, 1979 based on vegetation and slope classes by the Rural Fire Service. Refer to Figure 11.

The categorisations are in line with NSW Rural Fire Service 'Guidelines for Bushfire Prone Land Mapping'. Category 1 areas consist of forests, woodlands, heaths and wetlands that are greater than 1 hectare and require a 100m planning buffer to each area. A buffer of 30m is required for areas of category 2 which consist of scrubland, open woodlands, mallee and grasslands. As depicted in Figure 11 the Lithgow LGA has extensive bushfire prone lands.

Planning for bushfire protection is therefore a key consideration in the current and future planning of residential, rural residential and urban areas when development sites are likely to be affected by bushfire events.

This matter is subject of Direction 4.4 under Section 117(2) of the EP & A Act the objectives of which are:

(a) to protect life, property and the environment from bush fire hazards, by discouraging the establishment of incompatible land uses in bush fire prone areas, and

(b) to encourage sound management of bush fire prone areas.

This Direction requires consultation with the NSW Rural Fires Service in the development of LEPs and calls up the Planning for Bushfire Protection 2006 as the primary planning legislation.

In 2010, a Bush Fire Risk Management Plan was prepared for the Lithgow LGA by the Lithgow Bush Fire Committee pursuant to Part 3 Division 4 of the Rural Fires Act 1997.

The aim of this plan is to minimise the risk of adverse impact of bush fires on life, property and the environment. The objectives are to:

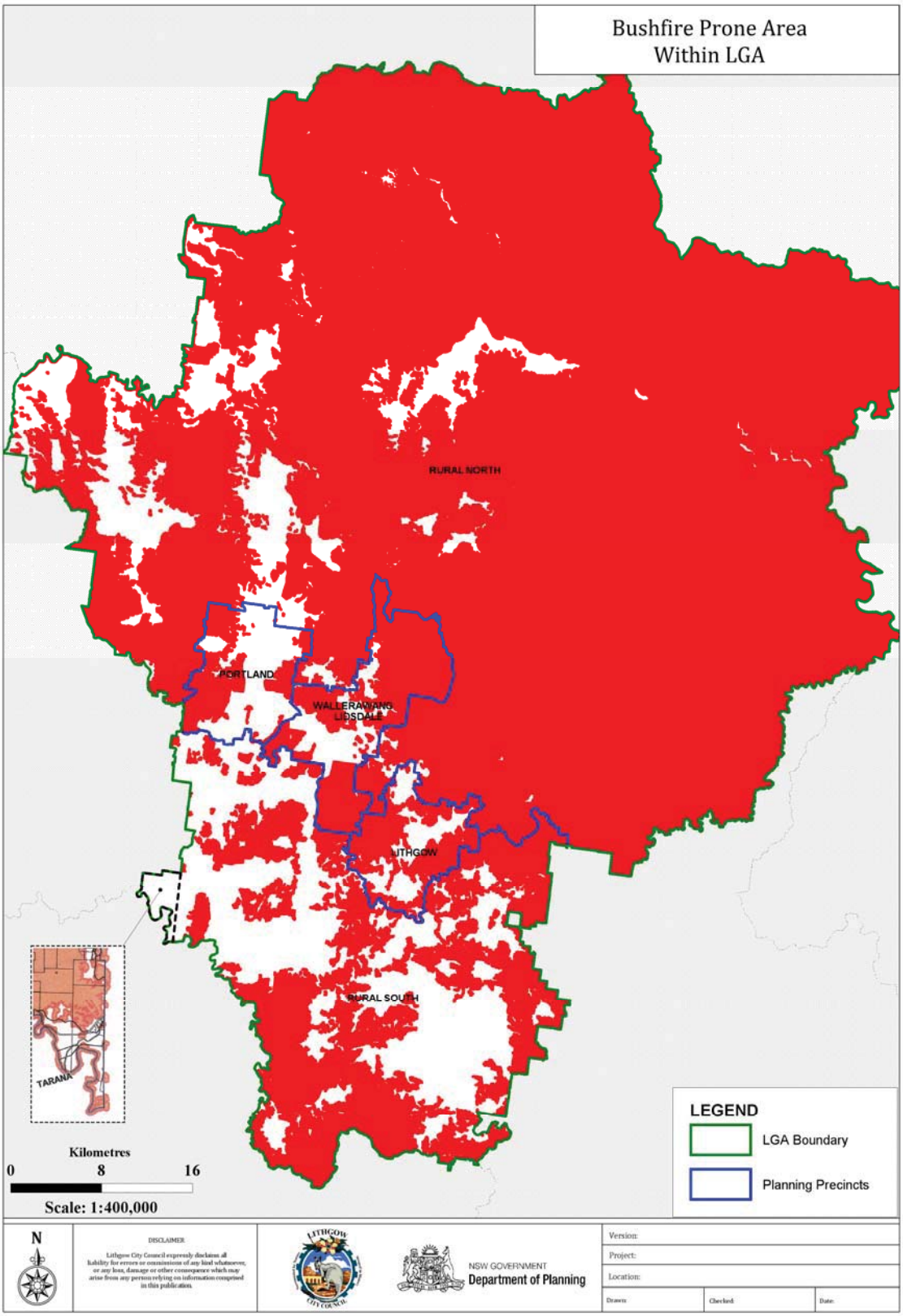
- Reduce the number of human-induced bush fire ignitions that cause damage to property and the environment;
- Manage fuel to reduce the rate of spread and intensity of bush fires, while minimising environmental/ecological impacts;
- Reduce the community's vulnerability to bush fires by improving its preparedness; and
- Effectively contain fires with a potential to cause damage to life, property and the environment.

Conventional wisdom would dictate that in order to fully minimise the risk of bushfire threat that all settlement should be located outside of bush fire prone areas. Given the Australian physical environment and in particular the percentage of vegetated areas within the Lithgow LGA this is simply not either achievable or practical.

Land use planning must therefore look to other means other than avoidance to manage bushfire risk. At the strategic level the following strategies and actions can facilitate the minimisation of bushfire cause and risk to life and property:

- Cluster the majority of settlement in defined urban centres.
- Minimise the potential for isolated and dispersed rural lifestyle development in rural areas.
- Minimise the fragmentation of rural lands.
- Avoid encroachment of development on areas of steep slope and dense vegetation.
- Restrict the following high risk developments such as sawmills, junkyards, liquid fuel depots, offensive or hazardous industries, chemical industries, service stations, ammunition storage/dumps and pyrotechnics manufacture and storage.

Figure 11. Bushfire Prone Area within LGA



IMPACT OF FLOODING UPON SETTLEMENT AREAS

NATURE AND EXTENT OF FLOODING

Little information is available across the Lithgow LGA to determine the full extent of flooding and localised drainage issues, except for areas of Lithgow between Good Luck Hollow and Ida Falls Creek, which are flooded as a result of rising waters from Farmers Creek, State Mine Creek, Vale of Clwydd Creek, and Oakey Park Creek.

There have been major floods in Lithgow in 1928, 1963, 1964, 1978, 1981, 1986 and 1990 (most of which have occurred between January and March and between June and August). These floods caused inundation of properties and widespread damage.

The flood of March 1978 was the biggest flood in Lithgow in recent times. The flood of August 1986 was only slightly smaller. However, statistically these floods have only been rated as 1 in 20 year floods. In living memory, Lithgow has not experienced a 1 in 100 year flood.

Anecdotal evidence of historic localised flooding suggests the following areas, are particularly susceptible to localised flooding:

- Cox's River drainage system- South Lidsdale to the east of the Castlereagh Highway and extending north from Main Street Wallerawang to Duncan Street and Maddox Lane.

- Saville Park Portland and areas to the south and east along the drainage courses including vacant land in Hazel Street (this area may have improved since the draining of the Wallerawang Road Dam)

- Area along Marrangaroo Creek in between the Correctional Centre and Great Western Highway

"The most significant area of flooding occurs along Farmers Creek. In Lithgow about 230 houses and 12 businesses would be flooded above floor level in a 1 in 100 year flood. In Hermitage Flat it is estimated that 130 dwellings (or about 80%of the dwellings in the suburb) would be flooded above floor level in a 1 in 100 year flood. This represents more than half of the flood-prone houses in Lithgow. In a 1 in 20 year flood in Hermitage Flat, about 110 houses would be flooded above floor level and even in a 1 in 5 year flood, nearly 90 houses would be affected.

Problems occur in Lithgow from flooding of low-lying areas of the town from Farmers Creek. Flood warning times are about 1 -2 hours at most.

A 1 in 100 year flow would be 3-6 times the amount of water the existing concrete channel can hold. In addition, the depth and velocity of floodwaters in Farmers Creek poses safety and bed and bank erosion problems. Flow velocities are high during floods, up to about 3.7-4.2m/s between the main banks of the creek through Hermitage Flat.

To put these flow velocities into context, the 2001 Floodplain Management Manual suggests that "at velocities in excess of 2m/s, the stability of foundations and pylons can be affected by scour (and) grass and earth surfaces begin to scour and can become rough and unstable". Also, able bodied adults would have difficulty wading if flow velocities were greater than 2m/s, regardless of depth. The presence of hydraulic jumps and/or standing

waves cause the floodwaters within Farmers Creek to be swirling and turbulent, adding to safety and bank erosion problems (Hermitage Flat Flood Mitigation Works Environmental Documentation- Bewsher Consulting Pty Ltd Oct 2003)".

PLANNING AND LEGISLATIVE FRAMEWORK

The 1994, Lithgow City Local Environmental Plan identified the land included in Figure 12 as flood liable land. An interim policy for flood liable land was developed by Council in 1992. This policy remains in place today but is not a formally adopted Council policy, forming a guideline to development only.

In 2005, the NSW Government introduced the Floodplain Development Manual as the NSW Government's manual relating to the management of flood liable land in accordance with Section 733 of the Local Government Act, 1993. This Manual is called up by Local Planning Direction No under S117(2) of the EP & A Act that has the following objective:

- To ensure that development of flood prone land is consistent with NSW Government's Flood Prone Land Policy and the principles of the Floodplain Development Manual, 2005.
- To ensure the provisions of an LEP on flood prone land is commensurate with flood hazard and includes consideration of the potential flood impacts both on and off the subject land.

Figure 12. Flood Liable Land within LGA



FLOODPLAIN MANAGEMENT STUDY

In 1991, Council commissioned the preparation of Floodplain Management Study for the Farmers Creek area. This Study has not been fully updated since this time.

This Study adopted the 1% annual exceedance probability flood event as the flood standard. The Study provided a floodplain management plan that identified several floodplain management options for further consideration. These included voluntary purchase of flood-prone properties, large scale channel works, levees, general channel clearing and maintenance, flood storage areas, flood warning and the implementation of a flood evacuation plan. Although these works protect all houses from flooding in the 1 in a 100 year flood Council believed that they may not be the most environmentally, economic or socially acceptable solution.

Since the Lithgow Floodplain management study was completed in 1991, a number of channel widening proposals have been investigated with the aim of reducing flood levels through the area and hence reducing flood risk. These channel widening proposals have been evolved through a number of studies and a preferred option adopted by Council in November 2000.

At this time Council and the relevant government authority (DLWC) acknowledged that the preferred option adopted by Council may not provide flood protection for all houses in Hermitage Flat up to a level of the 100 year flood. The preferred option represented the best possible solution within a determined “constraints corridor” and had the aim of protecting as many houses as possible in Hermitage Flat from above-floor flooding in at least a 20 year flood.

CURRENT FLOOD MITIGATION WORKS

The current flood mitigation works involve removal of about 1,200 m of the existing concrete channel, replacing it with a larger channel 20-27m wide at the base with side retaining walls 1.2m-4.6m and almost vertical walls. The base and walls of the channel would be designed to withstand the expected high velocity flood flows.

Stage 1of these works are nearing completion at the time of writing of this Strategy.

IDENTIFIED DATA GAPS

Council has not developed a Floodplain Risk Management Plan in accordance with the 2005 Floodplain Development Manual.

It is not proposed to prepare this plan until such times as the current flood mitigation works are complete to enable such a plan to be informed by a new Flood Study that takes into account the changed conditions.

Flood liable land for the purposes of the LEP will continue to be identified by the existing flood liable map. Council will continue to adopt the 1% flood level as the identified flood planning level and require all development to provide a 0.5m freeboard above.

This Strategy does not identify any proposed land use intensification on lands identified as flood liable.

In the interim period it will be necessary for Council to develop a detailed Flood Planning Policy and detailed provisions to be included in any development control plan developed to support the LEP.

LOSS OR REDUCTION OF ENVIRONMENTALLY SENSITIVE LAND, WATER AND BIODIVERSITY RESOURCES

The current Local Environmental Plans are ineffective to manage natural resource issues. This is due to the flexible nature of zoning and permissible uses and the lack of appropriate development control provisions to trigger more detailed assessment in areas of identified sensitivity.

Only minimal areas around the town of Lithgow have been identified as environmentally sensitive lands for the purposes of the Lithgow City Local Environmental Plan and have only minimal related provisions to trigger more detailed assessment.

These issues cannot be dealt with purely through land use zone objectives on a site by site basis. These issues are inherently catchment based.

The Environmentally Sensitive Areas mapping combined with the Strategic Land and Water Capability Assessments clearly identifies and demonstrates the significant level of environmental sensitivity in the LGA.

These datasets have been combined with other strategic primary constraints to form constraints mapping that has been used to inform an analysis of both existing and future urban development areas and to formulate land use planning provisions such as minimum lot sizes.

The most significant threat to the Environmentally Sensitive Areas of the LGA is the continued trend towards isolated and dispersed rural lifestyle development and further fragmentation of rural lands. To a lesser extent the lateral growth of the urban areas in lieu of urban consolidation has also placed pressure on environmentally sensitive land, water and biodiversity resources. These issues and recommended options to address them have been discussed in more detail in the Land use chapters of this Strategy in Part 3.

This Strategy will identify planning options to minimise the loss of these lands and values such as:

- recommended settlement hierarchy to cluster urban development
- restrict incompatible land use upon and surrounding these lands through a combination of LEP provisions such as use zones/permissible uses and overlay provisions
- identification of planning provisions such as minimum lot sizes and separation/buffer areas in the LEP and DCP.

The findings of this constraint analysis are included in the Supply and Demand Analysis, Appendix 1 and the precinct framework plans in Chapter 14.

CUMULATIVE IMPACT OF ON-SITE EFFLUENT DISPOSAL

In the protection of the identified environmentally sensitive areas consideration needs to be given to residential development on lands which rely on on-site effluent management. Whilst the majority of residents within the LGA have access to a reticulated sewerage system this represents only a small area of the LGA. The remainder of residents living outside the sewered areas use on-site sewage management systems.

Further to this, the SCA has developed an on-site sewage management grants program to assist councils develop and implement inspection and assessment programs for on-site sewage systems in the drinking water catchments. Where failing systems are identified, councils work with property owners to improve systems to avoid impacts on water quality, public health and the environment. Under the *Local Government Act 1993* and the Local Government (General) Regulation 2005, councils must issue an 'Approval to Operate a System of Sewage Management' to property owners who have an on-site sewage system. This requirement was introduced to help councils better regulate on-site sewage systems and to reduce the impact these systems can have on water quality, public health and the environment. The SCA began pilot grants with councils in 2002/03, and launched the on-site sewerage management grants program in July 2005. Lithgow City Council is part of this program. The initial assessment data indicates that in excess of 50% of systems inspected have not fully met prescribed performance and operational objectives.

The Lithgow LGA has large areas where on-site effluent management is undertaken including land within some villages. .The current minimum lot size for on-site effluent disposal in village settlements is 2000m^2. An EPA model has been developed for estimating land requirements for effluent irrigation, based on eliminating impacts on soils, waters, and public health (NSW Environment Protection Authority 1995). Assessments with the model in many areas of the State have shown that new subdivisions for residential development involving on-site sewage management require a minimum of 4,000 – 5,000 sqm total area per household to reduce impacts in the medium to long term (Environment and Health Protection Guidelines – On Site Sewage management for Single Households January 1998).

The village of Cullen Bullen experiences serious constraints to the effective and sustainable operation of effluent disposal systems. Until this area can be serviced by a centralised sewerage system, this area has no further growth potential.

Within the Sydney Drinking Water Catchment the Strategic Land and Water Capability Assessments identify the capability of the lands to sustain unsewered residential development. These assessments have been used within this Strategy to inform the constraints analysis of existing settlement lands and areas proposed for urban extension.

These assessments will be further applied to the development of the LEP to identify appropriate zones, permissible land uses and minimum lot sizes.

ENCROACHMENT OF DEVELOPMENT ON THE SCENIC LANDSCAPE

Lithgow is characterised by its rugged landscape of steeply vegetated hills, valleys, watercourses, sandstone escarpments and intermittent settlement. Significantly, approximately 50% of the LGA is land zoned and used as reserves, national parks and forestry. The predominant scenic qualities viewed from the many roads that traverse the ridges and valleys are the strong rural (grazing) open space and tighter environmental landscape attributes.

As previous noted a large portion of the LGA has identified land, water and bio-diverse environmentally sensitive areas. Of concern is the existing and potential encroachment of development into these areas. The environmental sensitivity maps clearly identifies areas of concern particularly in the northern portion of the LGA as well as extending along the interface with the National Parks and State Forests in the eastern portion of the LGA.

The encroachment on environmentally sensitive areas has the capacity to:

- Reduce the biodiversity of the LGA through land clearing.
- Reduce the scenic and rural landscape of the LGA.
- Reduce the environmentally based tourism opportunities for the LGA.

Many of the LGA towns and villages are surrounded by steep vegetated areas.

The scenic landscape is a recognised attribute to the area and an existing and future economic driver for the LGA. The economic benefits and limitations of the scenic landscape are further detailed within the employment lands chapter 12.

MANAGEMENT OF CONTAMINATED LANDS

Lithgow has an industrial heritage resulting in contamination of previously developed / utilised industrial lands. The NSW EPA maintains a database of identified contamination sites. A review of the Local Profile and EPA listing has identified the following sites:

1. The Blue Circle Southern Cement Site, Portland
2. The Australian Defence Industry small armaments site, Lithgow
3. The Hartley Vale former Oil Shale refinery, Hartley Vale.
4. Former gas work site, Lithgow

There are other sites likely to be affected by contamination identified through local knowledge including but not limited to:

- Pottery Estate
- Hermitage site
- Marrangaroo Defence Lands

The past history and type of use will assist in determining/triggering the need for further site specific contamination investigations. Contamination can limit land use potential or increase costs for developers and councils. Their investigation and clean-up is important to protect human health and the environment. Although contaminated sites may occur anywhere, they are typically clustered in areas which have been used for heavy industry or chemically intensive agriculture. They may also include residential properties, for example, from flaking of lead-based paints or excessive pesticide use. Additional sites throughout the LGA will need to be identified and assessed. The former waste disposal facilities for example would be contaminated sites and require remediation.

Council should consider maintaining a register of potentially contaminated lands as identified through historic land use. Such a register will assist in future planning of these areas and the development assessment process.

SUMMARY OF KEY ACTIONS

Action 7.1

- Direct settlement and rural living opportunities away from identified environmentally sensitive areas

Action 7.2

- Consider applying environmental management/conservation zoning or overlays to the significant environmentally sensitive areas of the LGA as identified in the ESA mapping to control land use

Action 7.3

- Limit land use permissibility in areas of environmental sensitivity to minimise loss or reduction in value

Action 7.4

- Apply the appropriate environmental conservation zone to all National Parks, State Conservation Parks and Nature Reserves within the LGA

Action 7.5

- Prepare a biodiversity strategy for areas identified by Environmentally Sensitive Areas mapping as moderate to high biodiversity

Action 7.6

- Implement the actions of the relevant Recovery Actions Plans that apply within the LGA that list Lithgow City Council as the responsible body

Action 7.7

- Prepare fact sheets identifying the LGA's biodiversity to be included in development application kits

Action 7.8

- Prepare development control provisions to assist the community to prepare Assessments of Significance as required by the Threatened Species Conservation Management Act

Action 7.9

- Ensure new development is located so it does not have a detrimental impact upon nearby watercourses and incorporates measures to protect the riparian areas

Action 7.10

- All development is to utilise best practice for soil and water management to minimise impact both on and off the development site

Action 7.11

- Development within the Sydney Drinking Water Catchment is to achieve a neutral or beneficial effect on water quality

Action 7.12

- Ensure domestic and other forms of effluent disposal does not have an adverse impact upon water quality and is in accordance with the NSW Environment and Health Protection Guidelines for On- site Sewage Management for Single Households

Action 7.13

- Limit the intensification of settlement and rural living opportunities in bush fire prone areas

Action 7.14

- Ensure that all future development adheres to the principles and requirements of Planning for Bushfire legislation

Action 7.15

- Ensure the community is aware of the bushfire risk of the LGA

Action 7.16

- Provide information on the Emergency Services Disaster Management and Response Plan

Action 7.17

- Continue to identify flood liable land as the 1% flood level identified in the Kinhill Flood Study 1991

Action 7.18

- Develop a flood policy and development control provisions to guide future development upon flood liable lands

Action 7.19

- Ensure that localised flooding is taken into account when assessing DA's on sites affected by watercourses or have access over watercourses

Action 7.20

- Prepare a flood plain risk management plan to accord with the 2005 Floodplain Development Manual and NSW Flood Prone Land Policy and modify land use controls accordingly

Action 7.21

- Provide information on the Emergency Service Disaster Management and Response Plan

Action 7.22

- Manage the identification and development of contaminated land in accordance with the principles and requirements of State Environmental Planning Policy 55 Managing Land Contamination

Action 7.23

- Prepare a register of known contaminated sites and sites that are potentially contaminated due to past land use

Action 7.24

- Incorporate the preservation of landscape as an objective of land use zones and controls

Action 7.25

- Develop development control provisions to guide the sighting and design of development and/or buildings on the rural landscape and interface with the urban centres

Action 7.26

- Undertake a landscape assessment study to identify the scenic protection areas and landscape values within the LGA

Action 7.27

- Ensure that all development that may have a significant impact on the landscape quality and values prepares a detailed cultural landscape assessment as part of the Statement of Environmental Effects

CHAPTER 8 CULTURAL AND BUILT HERITAGE

STRATEGIC PLANNING DIRECTIONS

The following directions inform the development of the Land Use Strategy and Local Environmental Plan fall out of an analysis of cultural and built heritage within the LGA:

- Ensure that items of heritage significance are identified and protected
- Identify and protect cultural landscapes
- Provide incentives to protect heritage values
- Identify and protect the Aboriginal Heritage Significance of Lithgow LGA
- Provide appropriate resources to increase awareness and involvement in identifying, protecting and enhancing heritage values in the LGA

MANAGEMENT OF CULTURAL AND BUILT HERITAGE

Heritage is all the things that make up Australia's identity - our spirit and ingenuity, our historic buildings, and our unique, living landscapes. Our heritage is a legacy from our past, a living, integral part of life today, and the stories and places we pass on to future generations.

Lithgow and its region has a rich diversity of history which includes the period in Australia from the early 19th Century explorers and pioneers crossing of the Blue Mountains to the early 20th Century industrial, oil and mining phase in the history of Lithgow. The cultural heritage in the region is regarded by many as outstanding and provides a comprehensive heritage resource illustrating the unique history and development of the area. While the picturesque qualities of the area's dramatic natural, pastoral and agricultural landscapes are well recognised there are also landmark industrial sites that are important in the development of NSW. Its Aboriginal history is also a component of the cultural heritage of the region today and there are a number of key sites managed by National Parks & Wildlife Service in the region. The natural heritage of the Lithgow area is increasingly a major resource and attraction for visitors. The World Heritage status of the Greater Blue Mountains and its wilderness areas will provide valuable opportunities for the Council and its communities to bring together and showcase the broader cultural heritage values of the region.

PAST STUDIES AND CONSULTATION

Council has undertaken a number of key studies and reports in the past 20 years that refer to and identify significant historic places. The heritage study relating to the currently listed items in the Lithgow City LEP 1994 was not available for reference; however the following studies and reports are important reference documents for Council:

- A Survey of Historical Sites, Lithgow Area, Aedeen Cremin (ed), Sydney 1987
- Cox's Way: Historical and Archaeological Study of Cox's Road and Early Crossings of the Blue Mountains, Grace Karskens, Lands Department, Sydney1988
- Lithgow Main Street Study, Travis & Partners Pty Ltd, Sydney 1990
- City of Lithgow Heritage Study, R. Ian Jack for University of Sydney, 2000
- NSW Heritage Office Survey of Potential SHR Nominations, Central West 2002
- Survey of WWI and WWII Sites in NSW, Robertson & Hindmarsh for NSW Heritage Office, Sydney 2004-06
- National Trust of Australia (NSW), Classification Inventory Sheets for Lithgow LGA, various dates
- Lithgow Heritage Review, Christo Aitken & Associates for Lithgow City Council, 2008
- 1986 Evans Shire Council Heritage Study
- 2003 Rylstone Draft Community-Based Heritage Study

CITY OF LITHGOW HERITAGE STUDY (1996-2000)

It should be noted that this Study was prepared prior to Local Government amalgamations and therefore does not address heritage within the areas inherited from the former Rylstone and Evans Shire Councils.

The key study relevant to heritage is the *City of Lithgow Heritage Study* commissioned by Council in 1996 and completed in 2000. The study provided a balanced selection of evidence representing the history of development of the Lithgow LGA and its historical associations with events and peoples. The recommendations of the study are yet to be formally adopted by Council. The study provided a historical context report, extensive field and survey work, analysis and detailed inventories for the heritage places identified and finally, the consultants developed a range of planning and management recommendations. The study followed the standard methodology recommended by NSW Heritage Office at the time and its findings have provided Council with a sound basis from which to develop and implement appropriate heritage strategies into the foreseeable future.

While the study provided the historical context and heritage management recommendations its core area was the investigation, research and preparation of inventory sheets for the historic places located across the Lithgow region in towns, villages and rural areas. These inventory sheets provide a systematic framework for understanding the history and significance for places and have since been transferred by Council onto the Heritage Branch's standard digital database used by Councils throughout NSW (State Heritage Inventory).

The degree of detail available for historic places identified in the study varies. The consultants noted that '*most*' inventory sheets had sufficient documentation but acknowledged that others would require '*further research'*. The study recommendations included the suggestion for Council to establish '*Potential Listings'* where further research may be needed noting that this would "*provide a means of alerting the community to items which need to be assessed in further detail before changes occur which will affect the item*". This process will be ongoing and as information comes available Council will add content to the inventory sheets which will clarify the significance of places. This ongoing commitment to research and investigation is a normal process in heritage management.

CONSULTATION

Since commencing the City of Lithgow Heritage Study in 1996 Council has undertaken intermittent consultation with the community and individual stakeholders with a predominant focus on consultation with landholders of items identified within the Study to be listed as heritage items.

The following briefly summarises the major consultation steps to date:

- October 2000 Correspondence to owners of potential heritage items
- October 2000 public meetings (Rydal, Hartley, Portland and Lithgow)
- December 2000 Heritage Study advertised publicly
- February 2001 Correspondence to concerned owners

- May 2003 Council resolution to prepare new LEP and incorporate 2000 Schedule of Heritage Items
- December 2004 Council resolution re LEP to the 2000 Schedule of Heritage Items
- November 2005 extensive mail out to owners of potential heritage items to check information and to seek concurrence to proceed with local listing

- August 2008 heritage advisor contact with those landowners who objected to their property being listed.
- September 2008 mail out of Heritage Question & Answer sheet to concerned owners.

While there has been extensive community consultation regarding the findings and recommendations of the 2000 City of Lithgow Heritage Study the slow progress of adoption of the Study has resulted in some confusion within the community.

The level of objection/concern within the community to local listing of identified heritage items is minimal and in many cases is a result of lack of information about what it means for a property to be listed in the local environmental plan as a heritage item.

Further community consultation and information dissemination is required and will be conducted as part of the Land Use Strategy and Local Environmental Plan strategic process.

LEGISLATIVE AND POLICY FRAMEWORK

FEDERAL

The protection of Australia's heritage items is managed under the Environment Protection and Biodiversity and Conservation Act (EPBC Act).

- The EPBC Act enhances the management and protection of Australia's heritage places, including World Heritage properties. It provides for the listing of natural, historic or Indigenous places that are of outstanding national heritage value to the Australian nation as well as heritage places on Commonwealth lands and waters or under Australian Government control.
- A declared World Heritage property is an area that has been included in the World Heritage List or declared by the Minister to be a World Heritage property.
- The National Heritage List includes natural, historic and Indigenous places of outstanding heritage value.
- The Commonwealth Heritage List comprises natural, Indigenous and historic heritage places on Commonwealth lands and waters or under Australian Government control.
- Once a heritage place is listed under the EPBC Act, special requirements come into force to ensure that the values of the place will be protected and conserved for future generations. The EPBC Act provides for the preparation of management plans which set out the significant heritage aspects of the place and how the values of the site will be managed.

The Greater Blue Mountains is listed on both the World Heritage List and National Heritage List. No items in the LGA have been listed on the Commonwealth Heritage List.

A total of 46 items have been listed on the Register of National Estate and four heritage sites of indigenous significance have been listed in the EPBC protected matters report.

STATE AND LOCAL

Local government responsibility for heritage management is enshrined within two acts - the *Heritage Act* 1977 and the *Environmental Planning and Assessment Act* (EP&A) 1979. Together, they establish the legislative framework for heritage management in New South Wales and ensure that heritage forms an integral part of the planning system. Following the adoption of amendments to the Heritage Act in 1999, heritage management in NSW became a two-tiered system where:

- Items of local heritage significance are listed and managed by local councils; and
- Items of State heritage significance are listed on the State Heritage Register by the Minister for Planning and managed by the Heritage Council.

The principal tools that guide local government management decisions are the Heritage Study and the Local Environmental Plan.

A heritage study identifies and assesses heritage items in accordance with the key historical themes for an area. It also makes recommendations on policies the local council should adopt to protect and conserve the identified heritage items.

The LEP translates the recommendations of the Heritage Study into a legal document that provides a broad framework for future management of the area's heritage. The LEP is prepared in accordance with the Standard Instrument – Principal LEP and includes compulsory provisions as set out in Clause 5.10 of that document.

Council may also support the LEP by local approvals policies under the Local Government Act 1993 or Development Control Plans under the Environmental Planning and Assessment Act 1979 to provide more detailed guidance to developers and owners in specific localities such as heritage conservation areas.

The current Lithgow City Local Environmental Plan identifies 96 heritage items within Schedule 1 comprising individual buildings and groups of buildings. These items do not adequately reflect the breadth of history and heritage of the Lithgow Local Government Area.

The 2000 Heritage Study recommends local listing of approximately 500-600 heritage items, including those already listed. Council is currently reviewing all potential items to be listed to ensure adequate information is available to assess heritage significance and identify the location of items.

SUMMARY OF ISSUES

HERITAGE ISSUES	WHY IS IT AN ISSUE?
Many items or places of heritage within the LGA remain unprotected by any statutory framework	• The 2000 Heritage Study recommended local listing of some 500-600 items. Only 96 items are currently listed in the Lithgow 1994 LEP. The identification of items in a community Heritage Study does not provide the necessary framework for managing the alteration, modification or demolition of these items through the force of law. • Without statutory protection Council and the community may be powerless to stop the diminishing or loss of heritage values and significance embodied in such items and places.
How best to manage a significant increase in listed heritage items	• The individual listing of up to 600 heritage items and places will significantly increase the resources required by both Council and the community to manage the future development of these items and properties in their vicinity. • Council will need to explore the use of conservation areas to more effectively manage heritage assessment.
Protection of Aboriginal Heritage	• Council does not have an Aboriginal Heritage Study to guide planning of future settlement and land use intensification away from sensitive areas. • This will defer consideration of these matters to the development assessment stage with greater potential for some matters to be unknowingly missed.

DISCUSSION OF HERITAGE ISSUES

LOCAL HERITAGE LISTINGS

Despite the recommendations of a Heritage Study completed in 2000 many items or places of heritage significance within the Lithgow LGA remain unprotected by any statutory framework. This raises the issue of how best to protect such items/places both in the short and longer terms.

Identifying and listing items of heritage significance are only the first steps in protecting and managing those places and objects that we as a community want to keep. The force of law is necessary to provide a framework for managing the approval of major changes so that heritage significance is retained and not diminished.

The current LEP heritage schedule does not adequately reflect the breadth of history and heritage of the Lithgow Local Government Area and therefore many items remain unprotected. The 2000 City of Lithgow Heritage Study and the Rylstone and Evans Heritage Studies are authoritative studies that provide Council with a comprehensive assessment of the history and heritage of the region and the basic framework for continuing research and survey.

HERITAGE CONSERVATION AREAS

The relevant heritage studies did not research or make any specific recommendations for conservation areas. However the 2000 Lithgow Heritage Study did indirectly reference conservation areas in its management recommendations to prepare locality-based Development Control Plans for significant rural localities and significant urban areas. For significant urban areas the Study noted that the heritage objectives and guidelines should aim to retain historic, aesthetic, research and social values implicit in the localities and their interaction with the surrounding urban and rural landscapes, in particular:

- Streetscapes: their scale, character and continuity;
- Subdivision patterns;
- Contributory elements: their integrity and significance;
- Interpretative aspects; the ability of a locality to demonstrate for example the architectural, technological, landscape or planning principles underlying the statement of significance.

The study 'tools' such as thematic history, historical maps and inventory records provide the framework for further research and survey of potential conservation areas. The standard LEP makes specific provisions for conservation areas as distinct from heritage items.

2010 HERITAGE DCP STUDY

In August 2010 Council commissioned a Heritage DCP Study to:

- Review the Draft Lithgow Heritage Study (DLHS) 2000 recommendations and update where necessary due to changes in legislation and management practices
- Identify any gaps in the scope of the DLHS 2002 that become evident following review.
- Review and assessment of proposed conservation areas
- Establish a heritage framework and recommend provisions for the new LEP and DCP.

This Study will be exhibited along with this Strategy and will be used to inform the development of the LEP and supporting DCP.

The major reasons for investigating conservation areas in contrast to only having heritage items are:

- Most buildings within the proposed areas have heritage value but often not at a level that would justify individual heritage listing. It is the overall heritage value of a conservation area that is most important.
- Conservation areas are identified for their heritage value, but this is understood mainly in relation to their visual streetscape form. The main concern is conserving streetscapes and what can be seen from the public realm.
- Conservation area controls (DCP controls) are less onerous on owners than an individual listing. Where conservation area controls are adequate to conserve heritage values it is preferable to use those controls rather than create a specific property listing.
- Many of the conservation area controls that are proposed are aimed at keeping the overall heritage character of the precinct, while this may mean that the street front sections of buildings are required to be retained, it provides a broad scope for other works that may not be envisaged in individual listing.
- Conservation area controls are aimed at ensuring that new development 'fits' into the existing character.

The review of the proposed heritage listings was undertaken to identify gaps, omissions or over-emphasis on particular site types. The Study found the following:

Table 1. Heritage Listings Study

Heritage Type	Percentage of Proposed 2000 Listings	Comment
Archaeology, ruins, cemeteries	19%	These are grouped as they are fixed, inert sites that require very little in terms of council heritage management
Transport	5%	These are largely railway and bridge sites and not within the control of council
Civic sites including churches, schools and council owned buildings	12%	These sites do not require regular input from council in terms of management or applications
Miscellaneous sites such as memorials and artefacts	3%	These sites do not require regular input from council in terms of management or applications
Commercial sites and hotels	7%	Commercial sites are under-represented given the

Heritage Type	Percentage of Proposed 2000 Listings	Comment
		large number of very fine commercial heritage properties in the area, however hotels are well covered in listings
Rural houses and farm sites	15%	These are well represented and have few applications to council
Individual Houses in towns or suburbs	14% (90 listings)	This group is reasonably well represented and would provide a manageable workload to council in terms of management and applications.
Group house listings	20% (125 separate properties as 22 listings	This group is difficult to manage due to the need to list each individual property where a number of the buildings are not of item status. Managing this group could be difficult for council.
Industrial	5%	This group is under-represented given the industrial history of Lithgow.

Source: LCC Heritage DCP Study

The Study recommends deleting all of the group housing listings and the creation of generally small conservation areas as this will achieve the level of control that Council requires without placing onerous requirements on owners.

The creation of conservation areas will also allow a small number of other properties to be removed from the potential heritage list (where they are of minor significance and within a conservation area) and importantly will provide a level of protection for the commercial buildings that are currently not covered in the heritage study. Removing the group listings would reduce the total number of places proposed for heritage listing from 650 to around 525 sites of which 170 are ruins, archaeology, cemeteries, artefacts, memorials or transport sites.

The study recommends the following conservation areas:

Lithgow commercial

- Main St/ Railway Parade
- Station Street
- Mort St commercial precinct

Lithgow residential

- Inch Street (heritage item group)
- Whitton Street (heritage item group)
- Cook Street (heritage item group)
- Eskbank Street (heritage item group)
- Hassans Walls Road (partial heritage item group)
- Silcock Street (heritage item group)

Towns

- Wallerawang

- Portland
- Rydal
- Capertee
- Little Hartley
- Hartley Vale

The study has set out recommended controls for each proposed conservation area to provide certainty for owners about why the conservation area has been created and what council are looking for in applications for future work. The controls are based on the visual value of each area, particularly as viewed from the street. Where commercial buildings are included in conservation areas there are also controls about retaining original shopfronts and encouragement for owners to retain good original commercial interiors as these can add value to the business. Often the controls provide greater flexibility than is found in general controls reflecting the character of a particular area, for example, in many early housing areas, side setbacks are minimal and the controls provide for retention of these reduced setbacks to assist achieving reasonable development opportunities.

The study has also provided a set of general DCP controls for the older housing areas in Lithgow, recognising that they vary dramatically from new development on new sub-divisions. Again these controls provide flexibility in working towards good solutions for owners but also require that the essential character of the area is retained in both new development and alterations and additions. Overall this enhances the amenity and visual value of Lithgow.

PLANNING CONTROLS FOR INDIVIDUAL HERITAGE ITEMS

Of importance in considering the broader heritage of Lithgow is how individual heritage items are considered, particularly when they are in isolation. The new LEP will contain standard provisions that must be considered in relation to heritage items. These are being applied across NSW to provide consistency of approach. The basis of these controls is to:

- understand why the place is significant
- provide to undertake works that retain the identified significance

In making applications for work to Council, owners will be required to submit a heritage impact statement that sets out how the heritage values of the place have been retained in the proposal. It would be helpful if Council could provide a pro-forma or sample statement to applicants to assist in preparing applications.

The proposed approach to heritage is a balanced and pragmatic one that seeks to retain core heritage values and places and provide a sound framework for new buildings and alterations and additions to take place that meet reasonable contemporary expectations. The heritage of the Lithgow area is an important aspect of future growth and development and is a distinguishing element for many small towns and areas that gives them an edge. The long-term protection of that heritage will allow Lithgow to take full advantage of its fine history and its excellent built heritage.

A consolidated list of the proposed individual heritage items and conservations areas (including maps) is included in Appendix 3.

CULTURAL LANDSCAPES

The 2000 Lithgow Heritage Study made reference to Cultural landscapes through a recommendation to create a new environmental protection zone for rural cultural landscapes such as:

- Hartley Valley Landscape Conservation Area (listed by the National Trust of Australia (NSW)) and,
- Wolgan Valley Landscape Conservation Area (listed by the National Trust of Australia (NSW) and the Australian Heritage Commission).
- Little Hartley
- Hartley Vale
- Palmer Oakey
- Sodwalls
- Bowenfels

The Study noted that further work would need to be undertaken to establish boundaries and "more fully document the heritage attributes of these areas".

Cultural landscapes can also be identified as individual heritage items if required.

This Strategy identifies a Cultural Landscape Study as an identified data gap that will not be filled prior to the development of the 2012 LEP.

DEVELOPMENT ASSESSMENT FRAMEWORK

Currently there is no framework for decision making that supports the statutory listing of heritage items and standard provisions within the LEP. There are no development control plans, policies or guidelines to provide more detailed provisions to inform decision making.

Options to address these include:

- Development Control Plans
- Council Policy
- Conservation Management Plans
- Adaptive Reuse Incentives

COMMUNITY UNDERSTANDING OF HERITAGE PROTECTION

There is a lack of educative resources and understanding within our community (both private and public) signifying the importance of heritage items as historical records and tangible expressions of our identity and experience.

Council does not currently have in place an educative resource or consultative mechanism to assist with the identification and understanding of heritage significance and management within our wider community.

Council in partnership with the Heritage Office of the Department of Planning does provide a free Heritage Advisory Service and administers a Local Heritage Fund to assist with assessment of development applications and other works likely to impact on heritage items of places of significance.

Options to address these include:

- Establishment of Local Heritage Committee
- Dedicated Web Page
- Workshops/Handouts
- Promotion of Cultural Tourism

INDIGENOUS CULTURAL HERITAGE

No aboriginal heritage study has been undertaken within the Lithgow LGA. This is an identified data gap. This raises the issue of how best to protect the LGA's Aboriginal heritage in the interim period.

Aboriginal Heritage is protected by several forms of legislation at both state and federal levels.

At the local level the dual protection of areas of high biodiversity and national parks indirectly protects the majority of Aboriginal sites/places.

It is the community appreciation and understanding of Aboriginal heritage that requires facilitation through the land use process.

Options to address this issue include:

- Preparation of an Aboriginal Consultation Strategy
- Preparation of an Aboriginal Heritage Study

Council has adopted an Aboriginal Consultation Policy.

Council will continue in the first instance to identify potential areas of aboriginal heritage through reference to the Aboriginal Heritage Information Management System (AHIMS) and secondly through consultation with relevant bodies as determined by Council's policy.

This Strategy identifies the Aboriginal Heritage Study as a data gap that unfortunately will not be filled prior to development of the 2012 LEP.

SUMMARY OF KEY ACTIONS

Action 8.1

- Implement the recommendations of the City of Lithgow Heritage Study (1996-2000) except as modified by the 2010 Heritage DCP Study

Action 8.2

- Implement the recommendations of the 2010 Heritage DCP Study

Action 8.3

- Provide planning controls to list items of individual heritage significance and a number of small heritage conservation areas as identified by the two aforementioned studies

Action 8.4

- Provide detailed development guidelines within a Development Control Plan to facilitate heritage management and development assessment

Action 8.5

- Undertake a cultural landscape assessment study of the LGA

Action 8.6

- Continue to provide a Heritage Advisory Service and Local Heritage Fund

Action 8.7

- Undertake an Aboriginal Heritage Study and implement recommendations

Action 8.8

- Continue to identify items of Aboriginal Heritage significance through the use of the Aboriginal Heritage Information Management System and consultation with the local aboriginal groups as determined by Council's Aboriginal Consultation Policy

Action 8.9

- Establish a Local Heritage Committee

Action 8.10

- Prepare fact sheets and handouts for community and interested groups

Action 8.11

- Promote local heritage through cultural tourism

CHAPTER 9 RURAL LAND USE

STRATEGIC RURAL PLANNING PRINCIPLES

The Planning principles to be used to guide the development of this Strategy and to inform the future management and development of rural lands in the Lithgow LGA are as follows:

- Rural planning principles of the Rural Lands 2008 SEPP.
- Recognise and protect mining, extractive industries, forestry and agriculture (predominantly extensive grazing) as key primary production land uses and significant economic contributors in the Lithgow LGA.
- Protect primary production lands and their interface from further land fragmentation and land use conflict.
- Protect environmental conservation areas and their interface from further land fragmentation and land use conflict.
- Recognise and protect natural and cultural resources and features of the Lithgow LGA.
- Recognise tourism as an emerging industry for the Lithgow LGA and provide for opportunities.
- Consider the environmental capacity of the rural land and ensure that any development within rural areas is within the capability of, and is suitable for, the land having regard to constraints and opportunities analysis and mapping.
- Provide for the development of intensive agricultural land use activities in appropriate areas.
- Recognise the capability of the Lithgow LGA to contribute to renewable energy development.
- Provide for heavy industry in the rural areas in appropriate location subject to land capability and suitability.
- Remove general and light industry land use and activity from rural areas into designated zones.
- Reinforce the recommended settlement hierarchy by minimising further rural lifestyle development opportunities outside of nominated areas and ensure that rural settlement is ancillary to primary production.
- Determine an appropriate minimum lot size for the erection of a dwelling in rural areas having regard to the recommended growth management and sustainability principles, the principles contained within the Rural Lands SEPP and the principles outlined in this section.
- Determine a management framework to address existing inconsistent living opportunities through the sunsetting of entitlements.

PLANNING CONTEXT

Rural lands provide a range of key functions and uses ranging from primary production to forms of settlement and environmental conservation. The management and planning of the rural lands of the LGA is critical to long term sustainability of the significant primary and natural resources and conservation values present.

The three largest zones by land area within the Lithgow LGA are the Rural (General), Rural (Forestry) and National Park, which collectively cover over 97% of the LGA land area.

The Rural (General) zone covers 46.66% and due to the flexibility of the zone is used for a number of land uses other than agriculture such as mining, power generation, industry, private forests, rural lifestyle and tourism developments. Agricultural land use equates to 28.87% of the LGA land area with the majority of this area (28.79%) being used for grazing.

Table 5.2 and Figure 5.2 of the Local Profile shows the distribution of land use classes as defined by Department of Natural Resources in the LGA.

One of the largest threats to rural lands is the continuing fragmentation of lands driven by unplanned rural lifestyle development.

This Strategy will seek to balance the competing pressures of urban and rural settlement growth against the protection and conservation of primary resources and environmentally sensitive lands.

PAST STUDIES AND CONSULTATION

LOCAL

In the 1980s several planning studies were carried out preceding the development of the current Lithgow City 1994 Local Environmental Plan. These included the following:

Table 1. Summary of past planning studies

Planning Study/Report	Key Findings
Greater Lithgow Local Environmental Study – Kinhill Pty Ltd – March 1981	To examine new development areas to manage predicted population increase to 35,000 by 2001 as a result of new coal and power generation developments. Predominantly concerned with residential expansion in urban areas with rural issues only briefly examined. It suggested that additional rural residential land in limited quantities be appropriately located in western areas, possibly near Portland.
City of Greater Lithgow Rural Environmental Study – Latona Masterman and Associates – April 1983	To define conservation areas; identifying recreation resources, maintain amenity of existing communities whilst providing for population growth and to identify and conserve agricultural and natural resources. The study made recommendations for rural "living opportunities " in the following localities; Cox's River Rd,

Planning Study/Report	Key Findings
	Hartley Valley near Brown's Gap, Bowenfels- Farmers Creek, Rydal, Mt Lambie, Sunny Corner, together with one-off rural home site opportunities as a concessional lot per 100ha of rural holding. It also recommended the balance of the rural areas to have a MLS of 200ha.
Lithgow Rural Strategy – JTCW Planning – August 1985	To review previous planning reports particularly in relation to approach to rural subdivision and the provision of rural residential opportunities. This study recommended a flexible planning approach advocating a large area (concentrated along existing roads and related to settlement) for rural small holdings with no MLS and subject to merit based assessment; maintenance of status quo in general rural area allowing limited small subdivisions subject to merit controls and Section 94 framework.

Source: LCC

It would appear from these studies that the Lithgow City 1994 LEP contained an eclectic combination of the recommendations of all three studies. Rural planning has not been significantly reviewed since 1994.

Key facts and findings in relation to Lithgow LGA rural lands are summarised in Table 2

Table 2. Summary Rural Agricultural Key Facts and Findings

RURAL LANDS TOPIC	KEY FACTS AND FINDINGS
AGRICULTURAL RESOURCE	• Less than 33% of land within the LGA is classed as suitable for agricultural production. • Of the land zoned Rural General (210,357ha) only 64% (134,563ha) is capable of sustaining agricultural production. • Of the land suited to agriculture only 1.4% (2,945ha) is capable of sustaining regular cultivation. This fact explains the bias towards grazing within the LGA. • Approximately (37,300ha) of land classed as being agriculturally capable is being used for non-agricultural purposes such as tree and shrub cover and urban and conservation land uses. However it is also evident that 20,784 ha of grazing is occurring outside land that is classed as agriculturally capable. • Only 16% of holdings in the Rural General zone of the LGA are greater than 100ha. • Significantly whilst there is a large total area of large holdings (76% greater than 100ha and 46% above 400ha) the LGA is clearly fragmented by smaller holdings. • The 129,224ha within the Rural General zone likely to be capable of agricultural production is significantly less than both the area zoned (210,357ha) and that classed as being capable of cultivation and/or grazing (145,586). • Total value of agricultural production to the LGA is low. • Major agricultural enterprise for the LGA is beef cattle production (84% of ag holdings), followed by sheep production (39% of ag holdings) • Average value of agriculture within the agriculturally capable land in the LGA in 2006 was calculated at $135 per hectare. This suggests that many agricultural enterprises are reliant on off-farm income

Source: LCC 2007 Local Profile and 2010 Addendum; Draft LCC Land Use Strategy Appendix 1 Supply and Demand Analysis

COMMUNITY CONSULTATION

Community consultation carried out in conjunction with the 2007 Local Profile and Strategic Plan identified the following key issue areas for rural lands:

- Land use conflict as a result of rural lifestyle development
- Impact of rural lifestyle development on normal operations of a rural holding in particular weed control, bush fire hazard reduction, control of feral animals, fencing etc
- Protection of resources and maximising opportunities for growth of employment lands
- Diversification of the economic base
- A desire to provide for a legitimate demand for rural lifestyle development but subject to a more planned approach, in closer proximity to town centres
- Planning system removing the "right to subdivide" and its impact upon maintenance of sustainable rural enterprises
- Developing tourism potential
- Conservation of environmentally sensitive areas
- Protection of rural landscape and character

A summary of government authority consultation also carried out in conjunction with the 2007 Local Profile is included in Section 9 of Local Profile.

REGIONAL

In February 2007, the Minister for Planning established the Central West Rural Lands Inquiry, appointing an Independent Review Panel (IRP) to investigate report and make recommendations on land use planning in the Central West Region of NSW. The IRP were asked to give particular regard to balancing the protection of agricultural lands with other competing interests including, but not limited to, subdivision and rural residential development.

A key finding of the Central West Rural Lands Inquiry was that adherence to the Department of Primary Industry (Agriculture) methodology for determining rural minimum lot size for subdivision was flawed and that, in particular, the issue of minimum lot size for agricultural activity should be separated from the issue of rural/residential/rural lifestyle development.

The key outcome of the Inquiry was the introduction of a new State Environmental Planning Policy to apply to the State that supports a more strategic approach to rural planning issues. State Environmental Planning Policy (Rural Lands) released in May 2008, effectively implements the following recommendations of the IRP:

- Retaining existing minimum lot sizes, which may be varied by councils, but only if the decision is based on appropriate criteria.
- Retaining existing rights to build new homes on rural land on subdivisions that have already been approved.
- Preparation of a new State Environmental Planning Policy (SEPP) to support a strategic approach to rural planning across councils and to manage land-use conflicts.
- Removal of concessional lot provisions on rural land – which have been misused in the past – through a SEPP.
- Establishment of an Independent Hearing and Assessment Panel to advise councils on development applications that fall outside of normal planning controls but may be subject to exceptional circumstances within appropriate criteria.

- Requiring new local environmental plans (LEPs) to recognise the changing face of agriculture, such as smaller farms, share farming, leasing or farms that may consist of a number of separate holdings.

The specific provisions of the Rural Lands SEPP and its implications are discussed further later in this chapter.

POLICY AND LEGISLATIVE FRAMEWORK

The key state and federal policy and legislation governing rural land use within the Lithgow LGA is summarised as follows:

Table 3. Summary of Legislation

Instrument Name
KEY ACTS
Environmental Planning and Assessment Act
Local Government Act
National Parks and Wildlife Act 1974
Environment Protection and Biodiversity Conservation Act 1999 (EPBC)
Threatened Species and Conservation Act 1995 (TSC)
Protection of the Environment Operations Act 1997 (POEO)
Rural Fires Act 1997
Mining Act 1992
Crown Land Act 1989
KEY MINISTERIAL DIRECTIONS (Section 117)
Direction 1.1 Business and Industrial Zones
Direction 1.2 Rural Zones
Direction 1.3 Mining, Petroleum and Extractive Industries
Direction 1.4 Rural Lands
Direction 2.1 Environmental Protection Zones
Direction 2.3 Heritage Conservation
Direction 4.4 Planning for Bushfire Protection
Direction 5.2 Sydney Drinking Water Catchments
KEY STATE ENVIRONMENTAL PLANNING POLCIES
Standard Instrument (LEP) Order 2006
Drinking Water Catchments Regional Environmental Plan No 1 (Deemed SEPP)
Mining Petroleum Production and Extractive Industries 2007
Rural Lands 2008
Infrastructure SEPP (2007)

Please refer to Chapter 3 for more detail.

LOCAL PLANNING PROVISIONS

SUBDIVISION OF LAND IN LITHGOW LGA

Current subdivision standards within the two operating LEPs in the Lithgow LGA are summarised in the following Table 4.

Table 4. Subdivision Standards

Local Environmental Plan	Provision
Lithgow City Local Environmental Plan 1994	Clause 12 Subdivision of Land in Zone 1(a) General Restriction (1) Land may only be subdivided in accordance with (2) if it does not comprise the whole or in part of an allotment or portion of land previously subdivided in accordance with a consent granted after the commencement of this Plan. Creation of 40 ha allotments (2) Each allotment to be created has an area of not less than 40 ha Exceptions for subdivisions to allow agriculture • For the purposes of agriculture, an allotment of any size provided that Council is satisfied the agricultural production will be viable on any land less than 40ha. Clause 12A Subdivision of Land in Zone 1(e) Each allotment to be created has an area of not less than 100ha Clause 13 Subdivision for other purposes in Zone 1(a) or 1(e) (1) for other purposes other than agriculture or a dwelling is the land (a) is not prime crop and pasture land (b) the area of each allotment is appropriate having regard to the purpose for which it is created (2) Despite (1) an allotment may be created if it is satisfied that (a) the proposed lot will be used for the purpose of supplying goods and services for which there is a demand (b) no other land in the locality could reasonably be used for that purpose, and (c) the level of demand for the goods and services and the extent of the use justifies the creation of the lot regardless of its agricultural value.
Rlystone Local Environmental Plan 1996	Clause 12 Subdivision for the purpose of agriculture in Zone 1(a) An allotment of any size for the purposes of agriculture Clause 13 Subdivision for the purposes of dwellings within Zone 1(a) (1) (a) Each allotment created has an areas of not less than 40 hectares (b) Is unlikely to affect the existing and potential capability of the land adjacent land to produce food or fibre or to be used for other agricultural purposes, and (c) Does not comprise prime crop and pasture land. Clause 14 Subdivision for other purposes within Zone 1(a) (1) for purposes other than agriculture and dwellings if (a) none of the land is prime crop and pasture land (b) the area of each lot to be created is appropriate having regard to the purpose for which it is being created (3) Despite (1) an allotment may be created if it is satisfied that (a) the proposed lot will be used for the purpose of supplying goods and services for which there is a demand (b) no other land in the locality could reasonably be used for that purpose, and (c) the level of demand for the goods and services and the extent of the use justifies the creation of the lot regardless of its agricultural value.

Source: Lithgow City Local Environmental Plan 1994 and Rylstone Local Environmental Plan 1996

The standards in Table 4 only applied from May 2008 with the introduction of the Rural Lands SEPP. The Rural Lands SEPP removed all concessional allotment provisions from the LEP but retained dwelling entitlement for any lot already created under such provisions.

CONCESSIONAL ALLOTMENTS

For the purposes of discussing and providing context to rural land fragmentation in the Lithgow LGA we must also look to the subdivision standards that applied prior to their removal in 2008. The repealed provisions are outlined in the following table:

Table 5. Repealed Provisions of Subdivision Standards (Pre May 2008)

Local Environmental Plan	Provision
Lithgow City Local Environmental Plan 1994	Clause 12 (3) Excision of dwelling allotment from smaller holdings Excision of one allotment from an existing holding within Zone 1(a), being an existing holding that has a total area of not less than 50ha and not more than 80ha if: (a) the Council is satisfied the allotment will be used for the purpose of a dwelling, and (b) the allotment does not comprise prime crop and pasture land, and (c) the allotment will have an area of not less than 2 and not more than 10ha, and (d) the residue of the existing holding is consolidated into one allotment, and (e) the Council is satisfied that effective disposal of domestic waste water within the boundaries of the allotment is achievable, and (f) the excision of the allotment is, in the opinion of the Council, unlikely to have a significant adverse effect on the existing capability and use, for agricultural purposes, of the residue land and adjacent land. Clause 12(4) Excision of allotments from larger holdings Excision of one allotment from an existing holding within Zone 1(a), being an existing holding for every 80 ha of that existing holding if; (a) the Council is satisfied the allotment will be used for the purpose of a dwelling, and (b) the allotment does not comprise prime crop and pasture land, and (c) the allotment will have an area of not less than 2 and not more than 10ha, and (d) the residue of the existing holding is consolidated into one allotment, and (e) the Council is satisfied that effective disposal of domestic waste water within the boundaries of the allotment is achievable, and (f) the excision of the allotment is, in the opinion of the Council, unlikely to have a significant adverse effect on the existing capability and use, for agricultural purposes, of the residue land and adjacent land.
	Clause 12(5) Exception for family allotments Council may consent to the excision of an allotment within Zone 1(a) if the Council is satisfied that the allotment will be used for the purpose of a dwelling-house, but only if: (a) The allotment Is required for the erection or use of a

Local Environmental Plan	Provision
	dwelling the Council is satisfied will be occupied by the person who owned the land on 24th April 1969 (…) or by a brother, sister, son, daughter, grandson, or granddaughter of that owner, and (b) Only one such allotment is excised for each 10 ha of a parcel of contiguous land, with a maximum of three(3) allotments permitted including all allotments created for relatives under Interim Development Order No 1 – Shire of Blaxland and any consented to in accordance with subclause 3, and (c) The Council is satisfied that effective disposal of domestic waste water within the boundaries of each allotment is achievable, and (d) The allotment does not comprise prime crop and pasture land.
Rylstone Local Environmental Plan 1996	Clause 13(1) Subdivision for the purpose of dwelling Zone 1(a) Council may consent to the subdivision of land within Zone 1(a) if Council is satisfied that each of the allotments to be created is intended to be used for the purposes of a dwelling, but only if each allotment, (a) has an area of not less than 40 hectares, provided that one concessional allotment of less than 4 hectares but not less than 0.4ha may be created for a relative of the owner of for the owner, (b) is unlikely to affect the existing and potential capability of the land and adjacent land to produce food or fibre or to be used for other agricultural purposes, and (c)does not comprise prime crop and pasture land 13 (2) Notwithstanding any other provision of this plan, the Council may consent to the subdivision of land within Zone 1(a) resulting in the creation of one but one more than one allotment on which a dwelling stands from an existing holding of that dwelling was lawfully erected on that land on or before the appointed day.

Source: Lithgow City Local Environmental Plan 1994 and Rylstone Local Environmental Plan 1996 (Pre May 2008).

APPROPRIATENESS OF EXISTING LEPS

Both of the current LEPs were structured on a flexible planning approach enabling a wide and varied range of land uses within each zone. In the General Rural and Outer Rural zones this flexibility, instead of encouraging diversified development has, in some cases hindered it due to lack of investment certainty.

The current General Rural and Outer Rural zones permit a range of uses from a dwelling house to offensive and hazardous industry increasing significantly the potential for land use conflict.

The LEPs are also not supported by detailed development control plans. This has resulted in land use decisions being based solely on a site by site merit assessment basis where cumulative impact cannot be properly addressed.

SUMMARY OF ISSUES

Table 6. Summary Key Rural Planning Issues

ISSUE	WHY IS IT AN ISSUE?
Unplanned dispersed settlement Increased risk of social isolation	• Past and current planning provisions have retained a range of provisions to enable the subdivision of rural land and the erection of a dwelling with limited to no consideration of natural and primary production resource management and protection. • What was initially intended to be an alternative to urban living has grown significantly in that the population now living in the urban areas has fallen from 95% in 2001 to 80% in 2006. Due to the unplanned and dispersed nature of this form of settlement growth it has not led to the sustainability of rural villages. • Increased land fragmentation • Encroachment of development into more marginal lands without regard to the carrying capacity of the land. This places onus on the development assessment process to control impacts on a site-by-site basis and this has limited potential to address cumulative impact. • Increased potential for land use conflict leading to primary production lands being limited in their capacity to operate without restriction. • Increasing infrastructure and service costs particularly in relation to provision and maintenance of rural roads and garbage services, but also in social and governance services. • Loss of critical mass in urban areas to maintain and improve services and higher order infrastructure.
	• Increased risk of social isolation due to lack of community structure and the impacts of ageing of the population in rural areas.
Increased environmental footprint of development and impact upon environmentally sensitive lands and rural landscape.	• Reduced ability to achieve natural resource management objectives due to increased stakeholders with smaller parcels of land and different expectations. • Increased potential for negative impact upon natural resources such as water, soils, vegetation and biodiversity. • Increased threat of bushfire hazard. • Loss of rural landscape and rural character.
Land use conflict impact on primary production resources (ag land, forestry, resource lands, mining, extractive industries) impact on environmental conservation	• Proliferation of rural lifestyle development in primary production areas impacts upon the ability for these lands to maximise their potential in terms of the natural and primary resource. Specific examples of this conflict occurs in locations such as Blackmans Flat (impact on mining and power generating developments), Clarence (impact upon underground mining), Baal Bone Colliery (impact upon underground mining and surface works), Megalong and Kanimbla Valleys (impact on agricultural management). • Reduction in security of investment for both those seeking rural lifestyle and primary producers. • Rural lifestyle development introduces matters of land stewardship in relation to weed control, bush fire hazard reduction, introduction of domestic animals, maintenance of water quality and quantity and soil management. • Conflict occurs at the interface of DECC and forestry lands and impedes the production and management regimes of these lands.
Fragmentation and conversion of primary production lands	• Conversion of lands from primary production inflates land values beyond primary production value, making it difficult for entry of rural producers and resource industries to buy in. • Land once converted in many cases will never revert back to primary production use. • Land parcel isolation. Rural land interspersed with rural lifestyle development is often cut off from other major land holdings making consolidation of land possible for farm management.

DISCUSSION OF ISSUES

Issues relating to the planning and management of rural lands are complex and varied. All issues are inter-related with the cumulative impact being greater than that of any one issue in isolation. This is the reason why these issues require a more strategic approach in the development of LEPs and supporting planning strategies and policies. It also requires an alignment and recognition of the myriad of legislative and policy frameworks across all three levels of government and the forging of successful community partnerships to achieve better planning outcomes.

The key rural planning issues for the Lithgow LGA are discussed in detail below.

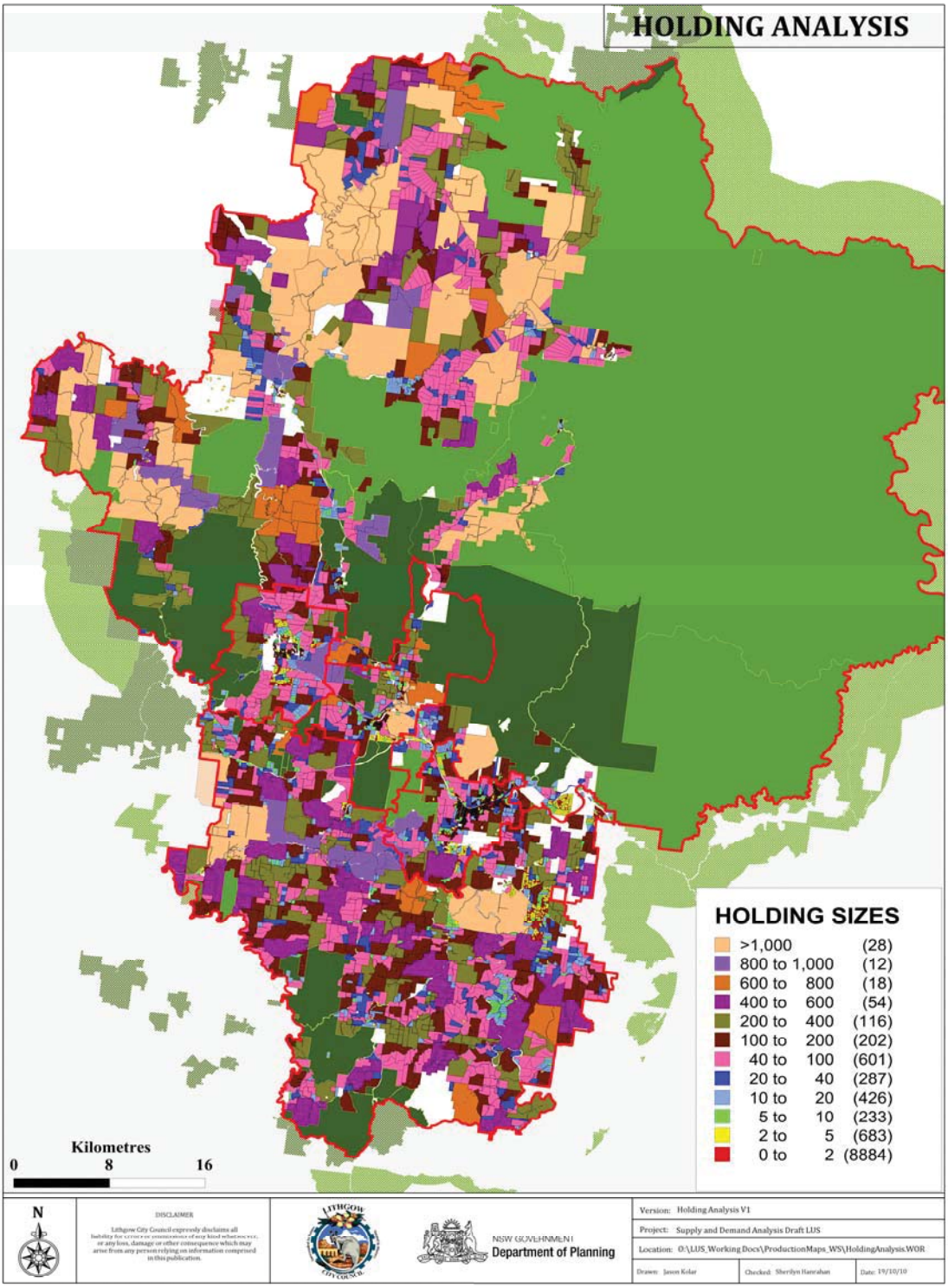
FRAGMENTATION OF RURAL LAND

The fragmentation and potential loss of rural lands has been identified as a major issue for the Lithgow LGA in that it has the ability to impact significantly on the following areas:

- primary production such as mining and extractive industries, forestry and agriculture
- environmental values and environmentally sensitive lands
- sustainability of rural village and urban centres
- rural landscape and character.

Figure 1 clearly demonstrates the distribution of existing fragmentation within the wider rural areas of the LGA.

Figure 1. LGA Holding Analysis



NOTE: There may be slight discrepancies between Figure 1 and Table 6 due to the date of their production. The manner in which land holdings are held is a continually changing factor. Within Council this data is updated on a monthly basis.

Table 7. Holding analysis of rural lands within the General and Outer Rural zones

Holding Size	Number of Holdings	Average Holding Size(ha)	% of Total Holdings	Area (ha)	% of Area
≥ 1000 ha	27	1626.59037	1.03%	43917.94	22.12%
400-1000 ha	84	574.6072619	3.20%	48267.01	24.31%
200-400 ha	112	277.7236607	4.27%	31105.05	15.67%
100-200 ha	195	143.0297949	7.43%	27890.81	14.05%
40-100 ha	590	54.79410169	22.49%	32328.52	16.28%
10-40 ha	612	20.76727124	23.33%	12709.57	6.40%
5-10 ha	164	7.952378049	6.25%	1304.19	0.66%
1-5 ha	328	2.68347561	12.50%	880.18	0.44%
0.1-1 ha	324	0.380185185	12.35%	123.18	0.06%
0.01-0.1 ha	185	0.054594595	7.05%	10.1	0.01%
≤0.01 ha	2	0	0.08%	0	0.00%
Total	2623		100.00%	198536.55	100.00%

Source: LCC

Table 7 shows that whilst there is a large area of the general and outer rural zoned areas held in larger holdings (76% above 100ha and 46% above 400ha) the area is clearly fragmented by smaller holdings with 84% below 100ha and 62% below 40ha.

Table 8 below provides a further breakdown of this holding analysis across the planning precincts. The precinct experiencing the highest level of fragmentation is the Rural South precinct with 506 holdings between 1 and 40ha.

Table 8. Holding Sizes in General and Outer Rural above 40 ha by precinct

Holding Scenarios							
	Average Holding size	Total No of Holdings	Lithgow	Wallerawang	Portland	Rural Nth	Rural Sth
1ha -5ha	3ha	328	65	12	17	83	145
5ha- 10ha	8ha	164	19	11	5	34	94
10ha – 40ha	21ha	612	49	33	37	226	267
Above 40Ha	182ha	1008	40	32	56	477	403
Above 100Ha	362ha	418	14	13	12	203	176
Above 200Ha	553ha	223	4	7	7	126	79
Above 400Ha	831ha	111	1	5	2	67	36

Note: Slight variances between total number of holdings and precinct totals may occur due to cadastre boundaries.

Table 8 also shows the average holding size of properties above 40 ha in the Lithgow LGA rural areas. This data shows that the current minimum lot size of 40 ha is inconsistent with the size of average holdings, meaning that, should the minimum lot size remain unchanged, that the potential for further significant land fragmentation may occur.

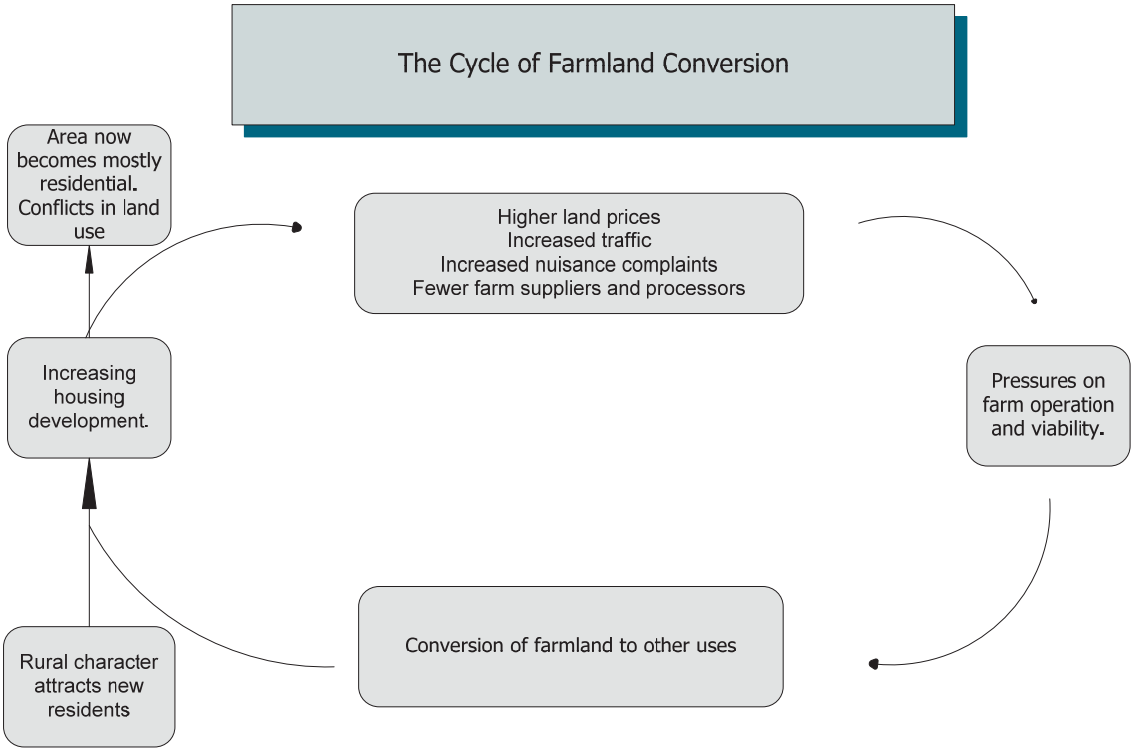
The table shows that the variance between the average holding size and minimum lot size would not substantially reduce until subdivision below 200ha was removed.

DRIVERS OF LAND FRAGMENTATION

One of the most significant threats to the sustainable management of rural lands is the pressure from rural lifestyle development. Rural Lifestyle development in this context is best described as development of a dwelling on rural lands as the primary use of the land to achieve a “lifestyle and amenity” which in most cases is unrelated to full-time agricultural pursuits.

This form of development results in fragmentation of rural lands that is almost always non-reversible. The opportunity for future consolidation of lands is lost once the value of lands are elevated beyond their agricultural value. The inflated prices of rural lands also prevents the entry of new farmers. The cycle of rural land conversion is illustrated in the Figure 2:

Figure 2. Cycle of Farmland Conversion



Source: Daniels and Bower 1997

The fragmentation of rural lands in the Lithgow LGA is clearly being driven by rural lifestyle development pressures. The Lithgow Development Approvals Monitor 1996-2010 indicates that 32.7% of dwelling applications lodged were located within the Rural General zone. The majority of these dwellings were unrelated to the use of the land for any other purpose except for rural lifestyle residential.

Land fragmentation may also occur due to other forms of development such as intensive agriculture, tourism development and industrial development. The level of fragmentation due to these forms of development have historically been low in the Lithgow LGA and is not considered a key driver of fragmentation, however will also require further consideration in this Strategy.

CONCESSIONAL ALLOTMENT PROVISIONS

The Lithgow Subdivision Monitor 1996-2006 found that 49% (211) of all new allotments applied for in this period were under the concessional allotment provisions.

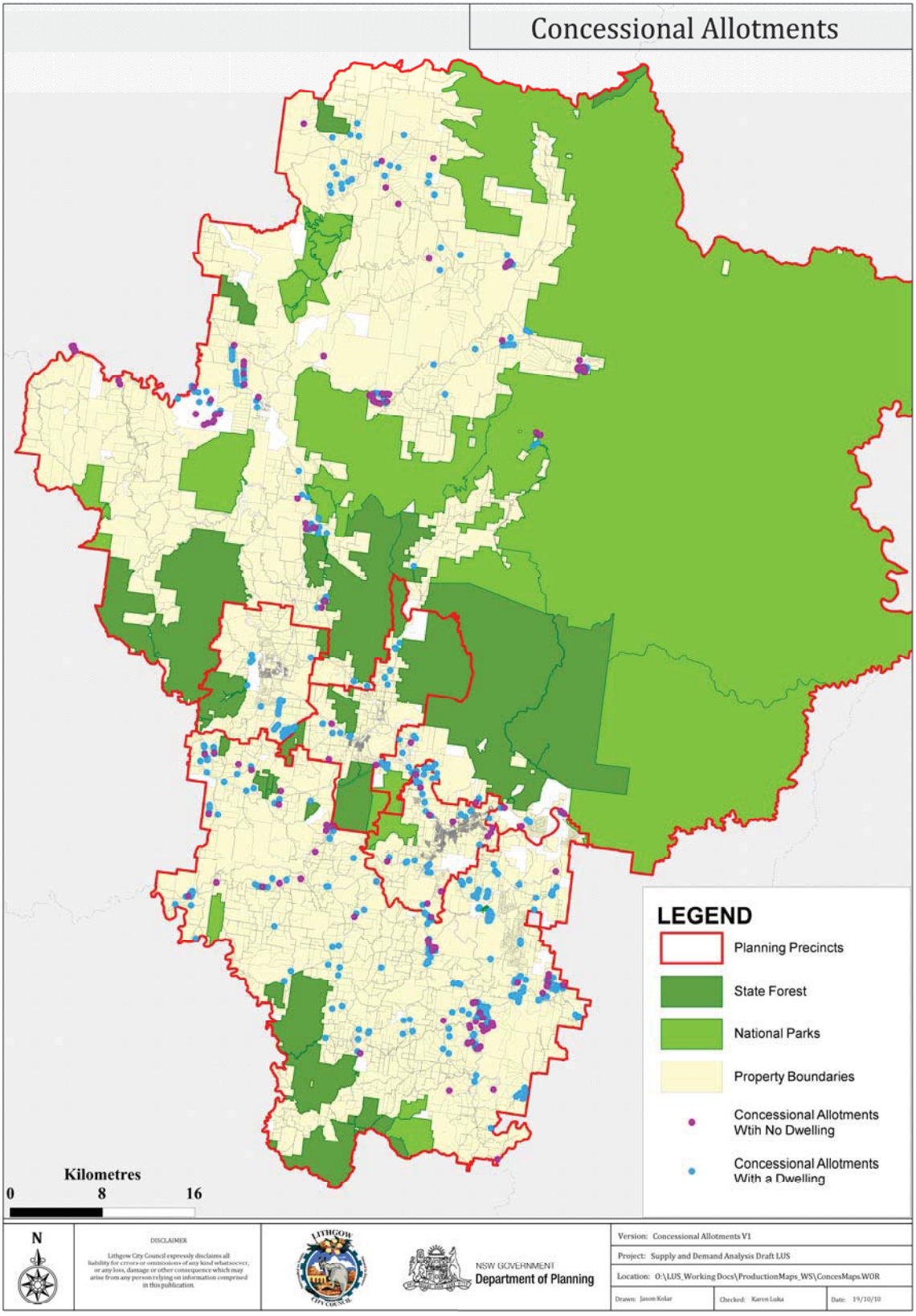
Concessional allotments were originally introduced to provide small lots, below the standard minimum lot size, for farm workers and to encourage intergenerational farming by allowing the erection of dwellings on separate lots whilst minimising the fragmentation of the larger holding. As stated in Central West Rural Lands Panel Report “this objective is no longer relevant and this concession has been misused with many of the concessional

lots being sold to unrelated rural lifestylers. In this way concessional lots have become residential in nature and have resulted in land use conflict".

In the Lithgow LGA, past planning policy in the early 1970s to make concessions for the introduction of the 40 hectare minimum lot size has also created several unplanned rural residential estates in locations isolated from town centres and in some cases areas of marginal suitability and capability to sustain this land use.

An investigation of all small lots below 40 hectares in the Rural General area of the LGA has revealed a total of 555 collectively termed concessional allotments, 109 of which remain vacant. The distribution of these allotments is shown in Figure 3, highlighting the impact on rural land fragmentation.

Figure 3. Pattern of Concessional Allotment take up in Lithgow LGA



EXISTING MINIMUM LOT SIZE

Although removal of the concessional allotment provisions will stem the flow of small rural lifestyle lots it, in itself, will not be sufficient to reverse the trends for rural lifestyle development driving rural land fragmentation within the Lithgow LGA. Any new planning approach must also address the appropriateness of the existing 40 hectare minimum lot size.

The Lithgow Subdivision Monitor 1996-2006 found that 48% (208, 45 of which were residual allotments >80ha) of new allotments applied for in this period were enabled by the standard 40 hectare minimum lot size provision. Again the majority of these dwelling lots were unrelated to the use of the land for any other purpose except for rural lifestyle residential as indicated by 32.7 % of dwelling applications between 1996- 2009 being within the General Rural zone.

An analysis of the future potential of further rural land fragmentation under the existing 40 hectare minimum lot size indicates a maximum potential for an additional 3545 lots to be created in the Rural (General) area and distributed in the planning precincts as indicated in Table 8 below.

Note: Category B are vacant lands in the rural zone with further subdivision potential, whilst category C lands are those lands with a dwelling in the rural zone with further subdivision potential. Such distinction recognises that lands have different levels of market readiness and/or motivations for subdivision.

This LGA supply level under the current demand indicators of 33 dwellings per year would take 107 years to be exhausted. Broken down into precincts the supply years are represented as 241 in the Rural North and 73 years in the Rural South precincts.

Over the 20 year life of the strategy this hanging supply, under current demand indicators, would result in a further 160 dwellings (400 persons) in the Rural North precinct and 346 dwellings (884 persons) in the Rural South precinct. Although the numbers themselves may not appear significant, they are when considered against the principles of a settlement hierarchy and provisions of services and facilities to support communities.

Table. 9 Potential Supply under existing 40 Hectare provision

	Lithgow	Portland	Wallerawang	Rural North	Rural South	Total
Category B						
Subdivision Vacant Lots 80ha> 1(a)	58	42	32	304	270	706
Category C						
Subdivision Holdings 80ha> with a dwelling 1(a)	40	44	59	1199	831	2173

Continued and unchecked conversion of rural lands in this manner is not sustainable and will only contribute to the worsening of the other issues facing rural lands as discussed below.

LAND USE CONFLICT

Rural land use conflict is a significant consequence and reflection of rural land fragmentation. It occurs as a result of the inappropriate union of incompatible land uses, in particular the proximity of residential development

to primary production such as forestry, agriculture, mining and extractive industry, other industry as well as environmentally sensitive areas.

The major contributor to land use conflict in the Lithgow LGA is the dispersed and unplanned proliferation of rural lifestyle development on a range of lot sizes. Often rural "lifestylers" move into rural areas because of the rural setting but with an expectation that primary production land uses will not impact on their amenity or enjoyment of their land. This is notwithstanding that in many cases the primary production land use/activity preceded the rural lifestyle development and complies with relevant legislation and policies.

Conflict by nature arises from unmatched expectations. The divergence of some of the more common expectations between rural "lifestylers" and the more traditional rural landowners is shown in the following table:

Table 10. Expectations for Land Use

Rural Lifestylers Expectations for land use	Traditional Rural Landowners Expectation for land use
Residential amenity with associated services such as garbage collection	Weed control
Low noise tolerance	Bush Fire Hazard control
Low odour tolerance	Domestic animals control
Low dust tolerance	
Maintenance of limited curtilage around dwelling with little or no attention to remaining land area	Land stewardship land restoration
Keeping of domestic and hobby farm animals	Feral animals control
Unrestricted use of recreational vehicles (motorcycles, 4WD and quad bikes)	Stock control and adequate fencing
Siting of dwelling for views or ease of construction	Siting of buildings for functional operation and maintenance or rural character

As land is split up and the number of landowners increase on the boundaries of larger holdings the resolution of these conflicts and achievement of natural resource management objectives becomes more difficult to achieve.

Whilst the above represents conflict between rural "lifestylers" and agricultural landowners, conflict can and does occur with other types of rural land users such as industry, mining and forestry. Such conflict often impacts on the normal operations of these uses and, depending on the extent of these conflicts, may jeopardise the future expansion and/or viability of some areas resulting in resource sterilisation or industry job losses.

In the Lithgow LGA, a prime example of unresolvable land use conflict and inappropriate juxtaposition of land uses occurs in the area locally known as Blackmans Flat. In this area conflict between rural lifestyle development and the power generation and mining industry cannot be reconciled without extreme measures such as land acquisition. This case study highlights the fact that development assessment and regulatory processes are ill equipped to address such intense land use conflict. The potential for this level of conflict needs to be removed in the strategic planning process and implemented through the LEP.

The two operating planning instruments (LEPs) are ineffectual in minimising land use conflict. They are structured on a flexible zoning framework, whereby the Rural General zone permits a range of land uses ranging from a dwelling to offensive and hazardous industries and do not contain any provisions for prescriptive buffering of land use likely to give rise to land use conflict. Compounding this fact is the low minimum lot size for rural lifestyle development and the retention of concessional lot and existing holding dwelling entitlements throughout the rural area.

UNECONOMIC PROVISION OF INFRASTRUCTURE AND SERVICES

The Lithgow LGA contains a large land mass (4,550km²) with varying landforms and capability. Providing infrastructure and services throughout the LGA is difficult due to the distances between higher order centres and the varying level of services available.

Continued and dispersed forms of settlement in the rural areas create an uneconomic demand for infrastructure and services provided by both local government and other levels of government.

From a local government perspective, it creates a demand for increased level of service and provision of rural roads, garbage collection facilities, library outreach services, cemeteries and community facilities such as halls and support facilities for emergency services.

It also increases the cost of provision of governance and regulatory services such as development assessment and environmental health.

In the rural areas, the most significant infrastructure provision is that of rural roads and bridges.

Council's road network includes 192.5km of urban sealed roads, 23.9km of urban unsealed roads and 43.8km of arterial road which are all sealed. With regard to Council's unsealed roads there is a total length of 411.8km of unsealed rural road and 201.6km of sealed rural road. For a population of the Lithgow Council area of approximately 22,000 you can see that Council's road network is indeed extensive with regard to that population. There are also a number of RTA roads which traverse the Council area. They come to a total of 149.5km and in the past Council has been responsible for the maintenance of the shoulders and drainage structures on such roads.

Council expends 1.45 million dollars on urban road maintenance and 1.296 million dollars on rural roads maintenance.

The Capital Works program on an annual basis for improvements is very limited by funding options and basically is restricted to about 1.6 million dollars per year for Capital improvements. In the opinion of Council's road experts, Council needs an allocation of a minimum of 6-8 million dollars per year for Capital Improvements to its rural road network to maintain an appropriate standard.

Demands on Councils rural roads network in addition to demands from redistribution of populations throughout the rural areas is extremely high. Council has an extensive rural road network that provides access to a number of remote areas, predominantly in the valleys within the Lithgow Council area and it is far from economical to continue to maintain these roads under normal conditions for residential and tourist traffic. The added costs of upgrading some of these existing roads to a standard suitable for further ongoing development scattered throughout the Council area is causing serious problems for Council, in not only maintaining the existing road network but also improving the road network to a satisfactory standard that is being expected more and more from Council's road users.

Council's rural road network is also located in very difficult topographic areas and the extreme climates of the LGA further add to the maintenance costs and difficulties of ensuring that the rural road network is up to a standard that is acceptable to all users. The added burden of tourist traffic throughout the area coupled with the demands from new residents in the rural area is proving to be a major financial impost on Council's ability to allocate funds to meet the demands of the community.

Intensification of population outside the major urban centres in a dispersed manner does not allow Council to effectively plan and budget for road maintenance and this leads to a demand for level of services that cannot be met into the future. It also does not allow for an effective developer contributions framework to be developed due

to the uncertainty of spatial demand and establishment of nexus between development and required infrastructure improvements and service provision.

Lithgow City Council does not have the financial capacity to meet these increased costs without significantly sharing the cost burden across all ratepayers through rate increases.

LOSS OF CRITICAL MASS FOR URBAN CENTRES

Whilst living opportunities in the rural areas provide a "lifestyle" choice, when it replaces development in the urban areas to the extent experienced since 1996 (representing more than 50% of all dwelling application lodged), it reduces the opportunity for critical mass to be retained in urban areas and achievement of economies of scale.

The wider distribution of the population base also increases the potential for a proportion of the population to access higher order services in district centres outside of the LGA.

This places in jeopardy the retention of critical higher order community infrastructure within the main town centres and reduces the potential for new services to be secured.

SOCIAL ISOLATION AND POCKETS OF DISADVANTAGE

Chapter 5 discusses the SEIFA index for the Lithgow Local Government Area. The LGA has been identified as an area of disadvantage with Postcode 2846 being in the top 5% of disadvantaged postcodes in NSW (Community Adversity and Resilience 2004).

Dispersed rural settlement has the potential to create social isolation and pockets of disadvantage due to the distances to higher order centres, lack of community structure and equitable access to social and community services.

Reliance on the motor vehicle is critical due to lack of public transport options in rural areas. Rising fuel costs compound this issue.

This will be made worse into the future as the population ages and access to services becomes more critical. The opportunity for ageing in place (ie, remaining in ones own homes) is significantly reduced in rural areas.

PROTECTION OF ENVIRONMENTALLY SENSITIVE LANDS AND NATURAL RESOURCE MANAGEMENT

Environmental values and characteristics of the LGA are contained within Section 6 of the 2007 Local Profile.

The rural areas of the Lithgow LGA have diverse and significant environmental values, many of which are not protected within the National Park and Reserves. The LGA's environmentally sensitive areas have been mapped and these are included in Chapter 7.

The most significant threat to these environmentally sensitive areas is the inappropriate location and intensification of rural lifestyle development.

In 2006 DECC identified "rural land fragmentation and settlement intensification as a major pressure on many community values that are core elements of sustainable development".

Impact on the environmental values of rural land through rural lifestyle development can occur through the following:

- Increased risk of land use conflict
- Increased risk of vegetation and biodiversity loss
- Increased risk of bush fire threat
- Increased risk of soil erosion and loss of soils
- Increased risk to river health and fish habitat
- Increased risk to the control of noxious weeds and feral animals
- Increased risk to preservation of rural landscapes and cultural heritage.

This form of development, being dispersed and unplanned, works against the achievement of natural resource management outcomes. Such outcomes are more easily achieved when land is retained in larger holdings.

Consideration of the range of environmental values should not be deferred to the development assessment process, as often, conservation objectives cannot be achieved at this scale.

A planning approach coupling cluster planning of rural lifestyle development through a large minimum lot size for the erection of a dwelling and the consideration of a range of zonings to protect significant environmental sensitivities is required.

PROTECTION OF PRIMARY PRODUCTION RESOURCES

MINERAL RESOURCES

The Lithgow LGA contains a range of important known and potential energy and industrial mineral resources. These include coal, coal seam gas and sand resources in the eastern portion of the LGA and limestone and related industrial mineral resources in the west. Metallic minerals (gold, copper and base materials) are also present within the western portion of the LGA and exploration licences are in force.

While the location of mineable deposits cannot always be predicted, known resources need to be protected so they are not sterilised by incompatible land uses.

These resources have been mapped by the Department of Industry and Investment (DII) and the Draft findings are shown in Figure 8 of Chapter 7. DII are currently finalising the 2010 Resource Audit for the Lithgow LGA to which the Ministerial Direction under Section 117 of the EP & A Act will apply. This information has been used in evaluating the location and extent of current and potentially new settlement areas in the LGA to avoid land use conflict.

The mining industry employs 773 persons (2006) and represents 10% of the Lithgow LGA workforce. Thermal power generation is interdependent on the local coal mining activity. Two base-load power stations are operated by Delta Electricity in Lithgow LGA. These enterprises and the coal mines generate multiplier effects in engineering and the maintenance industries in the LGA. It is considered that these will remain the mainstay of employment and economic drivers in the Lithgow LGA throughout the life of this Strategy.

Coal mining and extractive industries present the following challenges:

- These activities are permissible with development consent within the current General Rural and Outer Rural zones. This conflicts with the general perception of a rural zone being primarily for agriculture and ancillary housing.

- How to manage mine and extractive industry rehabilitation, including both progressive and upon closure.

- Impact of mining and extractive industry on the environment such as key natural features, land form and landscape quality.

- Local planning to protect state and regionally significant resources is restricted by a Ministerial Direction (No 1.3) under Section 117 of the EP & A Act, 1979.

One of the largest threats to the mining and extractive industry base that can be controlled by the planning process is land use conflict driven by a proliferation of rural lifestyle development.

AGRICULTURE

The Agricultural industry in the Lithgow LGA contributes approximately $14 million dollars annually to the economy (2007 Local Profile). Although a smaller contribution than surrounding regions, it is still significant and for the most part represents an additional income for rural landowners.

The Lithgow LGA has negligible land areas classified as prime crop and pasture lands. Only 64% of the land within the General Rural zone is capable of some form of agriculture (2007 Local Profile Table 5.19). Grazing is the predominant activity of which beef and sheep production are the most significant enterprises. Here, agricultural activities/land use match land capability, essential to their sustainability.

Land capability and holding size are both major determinants of land use within the LGA. The majority of agricultural capable land has already been divided into holdings less than 400 hectares (Ivey ATP, 2006). In nearly all instances, owners of these holdings would be relying on off-farm income. It is important to note that many of the smaller holdings classed as being capable of supporting agriculture (on a land capability basis) are not economically sustainable in their own right.

Ivey ATP (2006) found that there were only 9 holdings within agriculturally capable land in the LGA large enough (1000ha) to be considered self-sufficient agricultural enterprises. This was based on the assumption that most agricultural ventures would require an annual turnover of at least $132,000 to cover enterprise and overhead costs (2007 Local Profile Section 5). Smaller holdings, with an average turnover of below $132,000 would likely need some level of off-farm income to remain economically viable.

The biggest threat to agricultural lands within the LGA is continued fragmentation predominantly for rural lifestyle development. The extent and impacts of land fragmentation have already been discussed in previous sections

The protection of the agricultural resource in the Lithgow LGA raises the following key challenges:

- Managing land fragmentation and conversion of agriculturally capable lands for rural lifestyle development.

- Managing land use conflict.

- Determining an appropriate minimum lot size for the erection of a rural dwelling.
- Providing opportunity for new and emerging agricultural enterprises.
- Integrating and aligning the land use planning process with natural resource management objectives and regulatory regimes.

FORESTRY

Forestry zoned lands represent 14.89% of land area within the Lithgow LGA and they are located as shown in Figure 5 Chapter 7. The LGA also has one known private forest involving a further 279.5ha of rural land.

Forests NSW (2006) have advised that the Central Tablelands, incorporating Lithgow City Council, hosts a timber industry with $525 million in output, $226 million in gross regional product, $91 million in household income and almost 2,000 full time equivalent jobs which represents 5.8% of the Central Tableland gross regional product.

Plantation and native forests are dynamic systems exposed to management activities, recreation activities and natural forces.

Many of the activities that occur within forests have the potential to change the amenity value of adjacent lands. Perceptions of rural amenities such as visual landscape, fresh air, lack of urban noise and general peacefulness can be challenged by activities within forests and within most primary industries. In nearly all circumstances the location of residential (including rural lifestyle) on forest boundaries reduces the economic viability of forest management and the timber industry (Forests NSW).

Forests also provide for a range of tourism activities. Newnes, Sunny Corner, Ben Bullen and Jenolan State Forests are in the top most frequently visited Forests in NSW (Forests NSW).

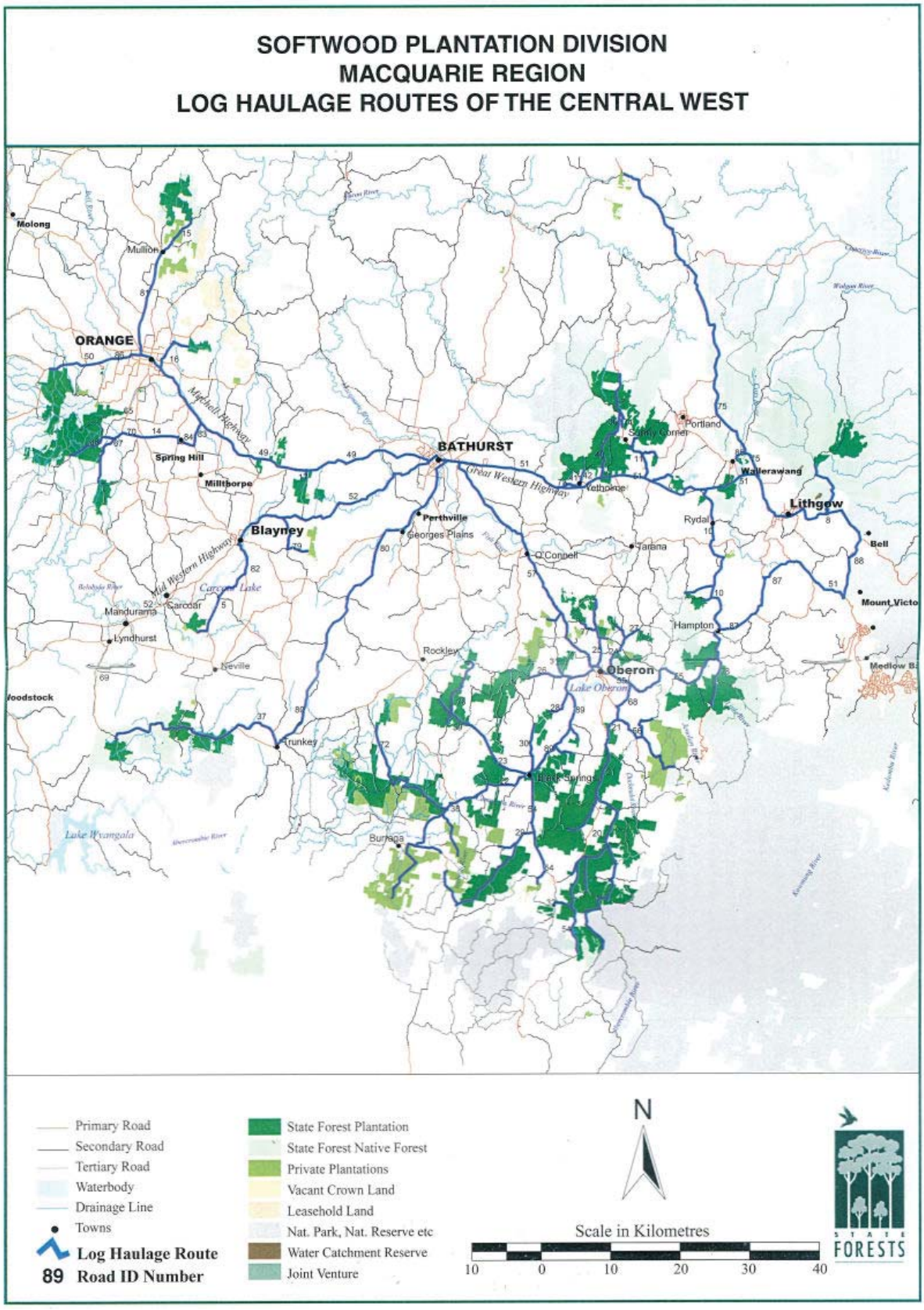
Forests NSW construct roads and fire trails for harvesting, haulage, management and fire protection measures. These same roads, once constructed, fulfil other community functions. However, members of the public do not have unfettered rights to use forestry roads in the same manner as public roads. Forests NSW can restrict access in order to provide safety to its employees and the public, protect the environment and maintain the economic viability of the forest.

Haulage of timber products can impact upon local and State government road networks. Forests NSW has requested that where it has contributed to road improvement works that consideration be given to protecting timber haulage roads from subsequent residential development. The separation of heavy trucks and rural industry is also sound planning practice.

In the Lithgow LGA significant conflict exists between the use of Forests NSW roads for tourism and recreation access to the Newnes State Forest and the Glow-worm Tunnels within the Wollemi National Park.

The protection of land resources for forestry is most threatened by all forms of residential and urban development on its boundaries. The clear identification of forest resources and the allocation of compatible adjoining land uses will improve protection of this resource, increase certainty for landowners and reduce conflict.

Figure 4. Log haulage routes of the Central West



Source: State Forests

WIND RESOURCE

The NSW Wind Atlas, Figure 5 shows that the Lithgow LGA has a relatively high wind speed as depicted by green shading.

The NSW Government is positioning NSW to take advantage of the predicted increase in investment in renewable energy that will result from the expanded national renewable energy target (RET) to 20% by 2020. Initially it is expected that most of the renewable energy supply will be met by wind energy developments. (DECC)

Six renewable energy precincts have been established across NSW in areas with the best-known wind resources in order to streamline the planning and approval process for wind developers. These include: New England Tablelands, Upper Hunter, Central Tablelands, NSW/ACT Border Region, South Coast and Cooma-Monaro. (DECC)

Precinct advisory committees will be formed in each of the six regions. A key focus of committees will be to enhance consultation and engagement with local government and local communities so that local communities will get a voice and a stake in renewable energy development within their region. To help facilitate improved engagement, the precinct advisory committees will include broad community representation. (DECC)

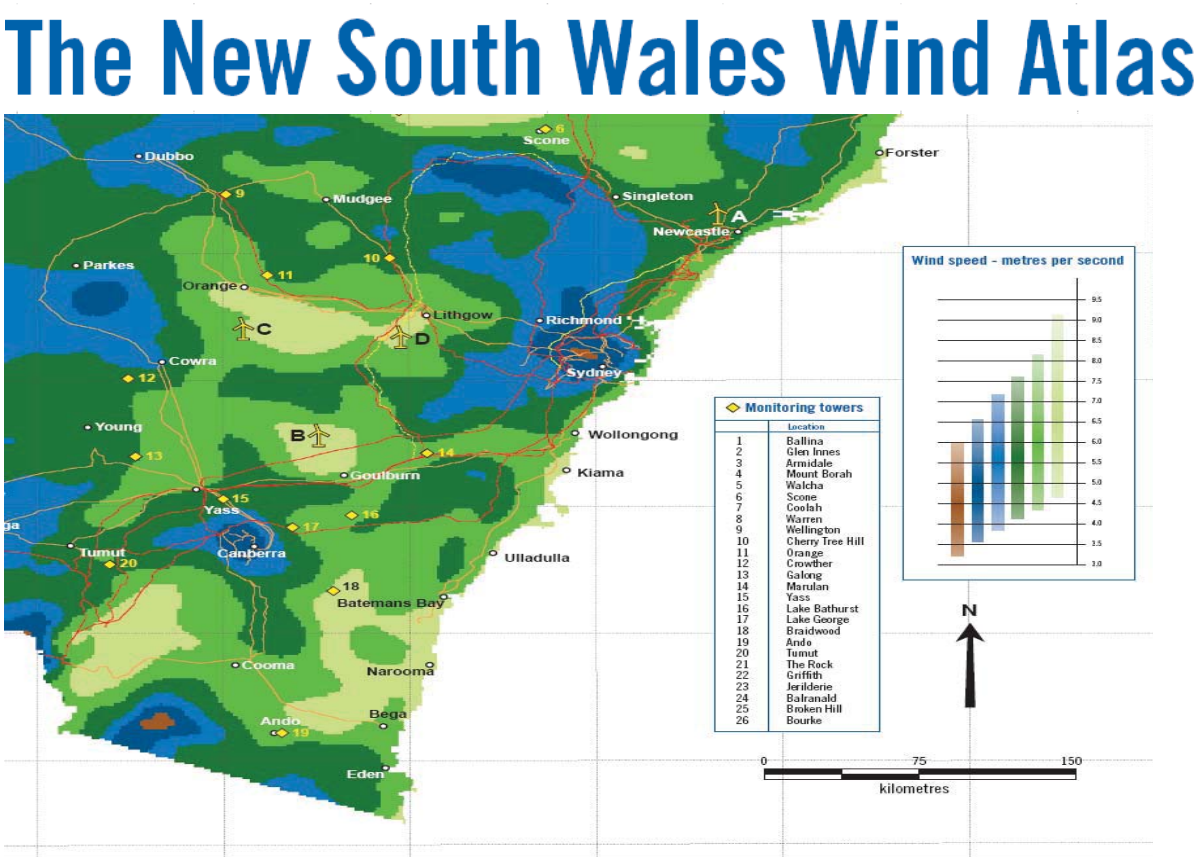
The Lithgow LGA has been introduced to Wind Farms through the establishment of the Hampton Wind Park and increasing focus and priority on alternative energy supplies provides further potential opportunities. The Hampton Wind Park produces power from two 660kW wind turbines and enhances the quality of supply in the surrounding rural electricity grid. This wind farm supplies electricity to Integral Energy's Green Power customers.

Key issues associated with wind energy land use as identified by Planning NSW (2002) includes:

- Selection of an appropriate location
- Minimisation of landscape and visual amenity impacts
- Minimisation of noise and electromagnetic disturbance impacts
- Minimisation of adverse impacts on aerial fauna
- Minimisation of land use conflicts

Management of rural lands through this Strategy to cluster settlement intensification away from natural resource areas (including high wind areas) and to reduce dispersed rural lifestyle will benefit both the planning and future potential for renewable energy projects within the LGA. This will enable planning at the operational and assessment level to function more effectively by minimising land use conflict and identifying priority land uses for rural areas.

Figure 5. The New South Wales Wind Atlas



Source: Extract of SEDA Wind Atlas

DISCUSSION OF NEW PLANNING APPROACH

DETERMINING AN APPROPRIATE MINIMUM LOT SIZE (MLS) FOR ERECTION OF A DWELLING

The establishment of minimum lot sizes is the key planning tool by which the planning system is able to manage development and land use within the rural areas.

It is not the determinant of what constitutes a viable holding for agricultural and rural purposes.

Since the introduction of the Rural Lands SEPP (clause 9), adherence to a prescribed minimum lot size for primary production land use and activities where no dwelling is involved has been relaxed. This allows land owners a greater chance to achieve zone objectives that facilitate primary production. It recognises the changing face of agriculture where the trends are for larger farms to become larger and smaller farms becoming smaller and where no longer is farm viability measured on holding size. It also allows for non-contiguous farming enterprises particularly in relation to the mainstay of agriculture in the Lithgow LGA being grazing.

Therefore minimum lot size as a planning tool is now focused primarily on managing the density of rural dwellings.

REVIEW OF THE CURRENT MINIMUM RURAL LOT SIZE

The current predominant rural minimum lot size of 40 hectares was introduced as Policy by the State Planning Authority in 1973. The policy was introduced in response to the concerns about the spread of residential lots in rural areas that were seen to alter the character of rural areas and lead to associated problems such as the fragmentation of farms, inflated land values, loss of agricultural land and the uneconomic diversion of services away from towns and rural villages. All concerns that remain relevant today.

The 40 hectare Policy was intended to be an arbitrary holding measure whilst Councils determined a more appropriate MLS. However this LGA along with many others showed little initiative to review this standard. The most significant threat to primary production lands and environmentally sensitive lands is the proliferation of dispersed rural dwellings. It is also the major driver of rural land use conflict. The 40 hectare development standard widely applied actively promotes the fragmentation of rural lands and its associated impacts.

As a result of local government amalgamations in 2004 and amendments to the Lithgow Local Environmental Plan in 2008, there are currently inconsistencies with the MLS provisions in the operating Local Environmental Plans.

Of significance are the following:

- A 100ha MLS applies to the Outer Rural 1(e) zone in the Lithgow Local Environmental Plan, being the area formerly part of the Evans Shire.

- A 40ha MLS applies to the General Rural 1(a) zone in the Lithgow Local Environmental Plan. Notwithstanding this development standard, Clause 12(1) of this Local Environmental Plan contains a

general restriction that restricts further subdivision of any land that has in whole, or in part , been previously subdivided to create a concessional allotment.

- A 40ha MLS applies to the General Rural 1(a) zone in the Rylstone Local Environmental Plan. Notwithstanding this development standard, Clause 13(1) (c) prohibits subdivision of land comprising prime crop and pasture land. Prime crop and pasture land is defined as land that is Class 1 -3 identified by the Agricultural Suitability Map, 1982.

  This classification affects a large proportion of the former Rylstone Shire area in and around the Capertee Valley. This area is shown as shaded in Figure 8

  To be clear if Council elects to maintain the existing 40ha MLS development standard in this area, no further subdivision of this area can occur. It is only by reviewing and implementing a change to the rural MLS policy that this prohibition can be overcome.

The Rural Lands State Environmental Planning Policy (2008) does not require Council to review the rural minimum lot size or change the minimum lot size in the existing LEPs.

Having regard to the previous discussion of rural planning issues, it is considered necessary to review the rural minimum lot size for the following reasons:

- The continued fragmentation of primary production lands for rural lifestyle development is unsustainable.
- The current standards, if left unchanged, will continue to produce poor planning outcomes across the four sustainability areas of social, economic, environmental and governance. The impact of these outcomes will worsen over time.
- The LGA currently has two disparate minimum lot sizes relating to the General Rural (40ha) and Outer Rural (100ha) land use zones as a result of repealing the former Evans Shire planning instruments as well as disparate supporting provisions.
- There is an existing Council resolution (Min No 008-227) to strategically review minimum lot size for the erection of a rural dwelling in the development of a Land Use Strategy the new LEP.
- To implement related strategies of Council's 2007 Strategic Plan in particular G2 and G5.

RURAL PLANNING AND SUBDIVISION PRINCIPLES UNDER SEPP (RURAL LANDS) 2008

In reviewing the minimum lot size of rural lands under Local Environmental Plans, the Minister of Planning under Section 117 of the Environmental Planning & Assessment Act has directed that Councils exercise their functions in accordance with the Rural Planning Principles and Rural Subdivision Principles outlined in State Environmental Planning Policy (Rural Lands) 2008.

RURAL PLANNING PRINCIPLES ARE AS FOLLOWS:

a) The promotion and protection of opportunities for current and potential productive and sustainable economic activities in rural areas.
b) Recognition of the importance of rural lands and agriculture and the changing nature of agriculture and of trends, demands and issues in agriculture in the area, region or State.
c) Recognition of the significance of rural land uses to the State and rural communities, including the social and economic benefits of rural land use and development.

d) In planning for rural lands, to balance the social, economic and environmental interests of the community.
e) The identification and protection of natural resources, having regard to maintaining biodiversity, the protection of native vegetation, the importance of water resources and avoiding constrained land.
f) The provision of opportunities for rural lifestyle, settlement and housing that contribute to the social and economic welfare of rural communities.
g) The consideration of impacts on services and infrastructure and appropriate location when providing for rural housing.
h) Ensuring consistency with any applicable regional strategy of the Department of Planning or any applicable local strategy endorsed by the Director General.

RURAL SUBDIVISION PRINCIPLES ARE AS FOLLOWS:

a) The minimisation of rural land fragmentation.
b) The minimisation of rural land use conflicts, particularly between residential land uses and other rural land uses.
c) The consideration of the nature of existing agricultural holdings and the existing and planned future supply of rural residential land when considering lot sizes for rural lands.
d) The consideration of the natural and physical constraints and opportunities of land.
e) Ensuring that planning for dwelling opportunities takes account of those constraints.

Any proposed change to the rural minimum lot size requires an assessment against the above principles.

BALANCING PLANNNING PRINCIPLE WITH COMMUNITY EXPECTATION

From a pure strategic land use planning perspective the principle strategies and justifications within the Draft Land Use Strategy relating to the proposed increase in the rural minimum lot size to 400ha and the phasing out of dwelling entitlements below this standard remain valid for the following key reasons:

- Supporting an identified settlement hierarchy
- Minimising rural land use conflict with primary production uses including mining, extractive industry, forestry and agriculture
- Minimising the uneconomic provision of services and infrastructure
- Minimising the potential for further land fragmentation and erection of dispersed dwellings
- Directing development away from environmentally sensitive areas
- Protecting water quality
- Protecting rural landscape'

However what is evident from the public exhibition and consultation program outcomes is that the Draft Strategy did not give sufficient weight to the social and economic impact of the policy on existing landowners.

In addition the ten-fold increase in the minimum lot size has been seen as just too large of an adjustment to be made in the first review of this nature since the early 1980s.

A detailed analysis of the submissions has revealed that approximately 72.5% of submissions can be related to landowners owning less than 80ha (48.8% below 40ha and 23.6% between 40 and 80ha).

Therefore, in relation to the debate around the 400ha minimum lot size, the most contentious issues arising from the Draft Strategy were the recommendations in relation to the phasing out of dwelling entitlements (ability to

lodge a development application) on existing allotments/holdings that would be less than the proposed new minimum lot size rather than the effect of the new minimum lot size on future land subdivision potential.

Since the writing of the Draft Land Use Strategy and in response to the issues raised in the submissions, Council has undertaken a more robust analysis of rural lands and has been able to more accurately estimate the impact (particularly in terms of potential dwellings) of various policy directions for rural minimum lot size across the local government area (LGA).

Further consideration has also been given to the demand trends for rural dwellings. A review of historic development application data since 2009 has shown that the trend towards rural dwellings continues to fall. The average annual demand for rural dwellings between 1999-2004 was 41, whilst in the period 2005-2010 it fell to 20 per year. Demand is changing and more closely aligning with the recommended settlement hierarchy where Lithgow takes the larger share of new residential development representing 45% in the last five years compared with 26 % in the previous five years.

Having regard to this analysis, further options have been developed that seek to provide a better balance between planning principle, community expectation and social and economic equity.

In order to effectively address the issues raised during public exhibition it is considered necessary to separate the key issues associated with rural MLS being, provisions in relation to the erection of a dwelling on existing allotments/holdings and future subdivisional potential of rural holdings.

DWELLING PROVISIONS FOR EXISTING OR APPROVED ALLOTMENTS

The exhibited Draft Land Use Strategy recommended an increase in the rural MLS from 40ha to 400ha. As a result, further recommendations in relation to existing dwelling provisions were also proposed to phase out, over time, the erection of dwellings on allotments less than the new minimum lot size. This was to be achieved through the immediate extinguishment of dwelling provisions relating to holdings less than 40ha and a sunset period of two years for all other existing dwelling provisions/entitlements including those allotments legally created by subdivision under any previous planning instrument following the gazettal of a new LEP.

These recommendations were strongly objected to by the community. As stated previously 72.5 % of submissions can be related to landowners owning less than 80ha. As these landowners do not have any subdivisional potential under the current operating LEP's, the identified issue is the impact on the landowners' ability to erect a dwelling.

In engaging with the community, it has become clearly apparent that the recommendations of the exhibited strategy did not recognise the social and economic implications on individual landowners of not honouring past planning policy decisions, albeit that these decisions can now be shown to be inappropriate.

It is estimated from a desktop analysis that 672 (448 of these are on allotments less than 40ha) dwelling opportunities exist on holdings that do not have the ability to further subdivide, under the provisions of the current operating LEP's. These opportunities are reasonably distributed across the LGA.

In reality this figure may increase as it does not include those allotments that have been approved by subdivision application that have not yet been issued with separate title. Council does not currently have an accurate or detailed land monitor that identified and tracks subdivision approvals for the erection of a dwelling through to the occupation of the dwelling. Therefore Council is at this time, is unable to quantify the number,

location and status of approved live development applications for the creation of new allotments. This is a significant data gap for strategic analysis.

It is the recommendation of this Strategy that all dwelling provisions within the operating LEP's be carried over through a savings clause in the new LEP.

To be clear this includes all allotments less than 40ha defined as existing holdings in the operating LEP's and all allotments created by an approved subdivision for the purposes of a dwelling under any previous planning instrument.

APPROPRIATE MINIMUM LOT SIZE FOR SUBDIVISION

The exhibited Draft Land Use Strategy proposed one rural zone and one rural minimum lot size of 400ha. As stated previously, the justifications for this recommendation as outlined in the Draft Strategy remain valid.

However, having regard to the outcomes of the community consultation it is clear that the community does not want the planning outcomes of that recommendation. In order to achieve a greater balance between planning principle and community expectation a more robust analysis of rural lands was undertaken.

This analysis produced a further two rural planning options to compare against the maintenance of the existing provisions.

METHODOLOGY OF ANALYSIS

The opportunities and constraints present in the rural areas of the LGA were further refined using the following:

- Identifying where areas of both high biodiversity and Land Capability 7 & 8 are present using Environmentally Sensitive Areas mapping
- Identifying biodiversity corridors linking key habitat areas as specified by the Office of Environment and Heritage
- Identifying contiguous areas of endangered ecological communities using Environmentally Sensitive Areas mapping
- Identifying areas of National Parks, State Conservation Areas and State Forests
- Identifying significant natural landform and where appropriate physical infrastructure including roads and railway lines.

Note: High Biodiversity areas are characterised by a high degree of flora and fauna habitat. Areas of Land Capability 7 & 8 are characterised by one or more of the following and are unsuitable for development; steep slopes, shallow soils, salinity, temporary or permanent inundation, rocky outcrops, high dispersability and erosion potential or the presence of karst systems.

Once the above data was mapped, distinct sector boundaries began to emerge and areas of the highest sensitivity were identified. It should be noted that not all areas of high sensitivity and high biodiversity within the LGA are included in these areas as other remnant pockets exist that are not contiguous.

The sectors were then further refined to link as far as possible, areas of similar holding patterns and environmental characteristics.

The LGA's high sensitivity areas as shown by hatching on the attached maps have been identified as occurring predominantly on the fringes of the LGA corresponding to the LGA's characteristic landform of escarpment areas surrounding the various valleys. These areas contain varying degrees of slope and are usually areas of dense remnant vegetation. These areas cover 44.16% of all the rural land in the LGA. These areas are not suited to land use intensification.

Typical landform of these areas is evident in the images below:



Photo: Looking to escarpment areas from Mill Creek Road.



Photo: Area around Turon Gates.

The outcomes of this analysis are shown in the following figures and tables:

OPTION 1 - VARIABLE MINIMUM LOT SIZE

This option introduces a variable minimum lot size across the LGA of 40ha and 100ha. The increased 100ha minimum lot size is the predominant MLS applied.

Under this option indicated in Table 11 and Figure 6, there would be a potential for a further 2125 dwellings, 898 of which would occur without the need for further subdivision. This is reflective of the high level of existing fragmentation enabled through past planning policy decisions.

This option identifies areas of highest sensitivity (44.16% of all rural land) across the LGA and proposes to apply a minimum lot size of 100ha in those areas.

It provides added protection to a further 35.58% of rural lands through an increased minimum lot size of 100ha.

It also identifies two sectors (6 and 9 as shown in Figure 6) within the LGA that due to the current holding pattern would not substantially benefit from an increased minimum lot size. These areas are surrounding Portland and Wallerawang and to the south and east of Lithgow in the Hartley/Kanimbla valleys. These areas are proposed to retain a 40ha minimum lot size.

Figure 6. Option 1 – Rural Planning Directions

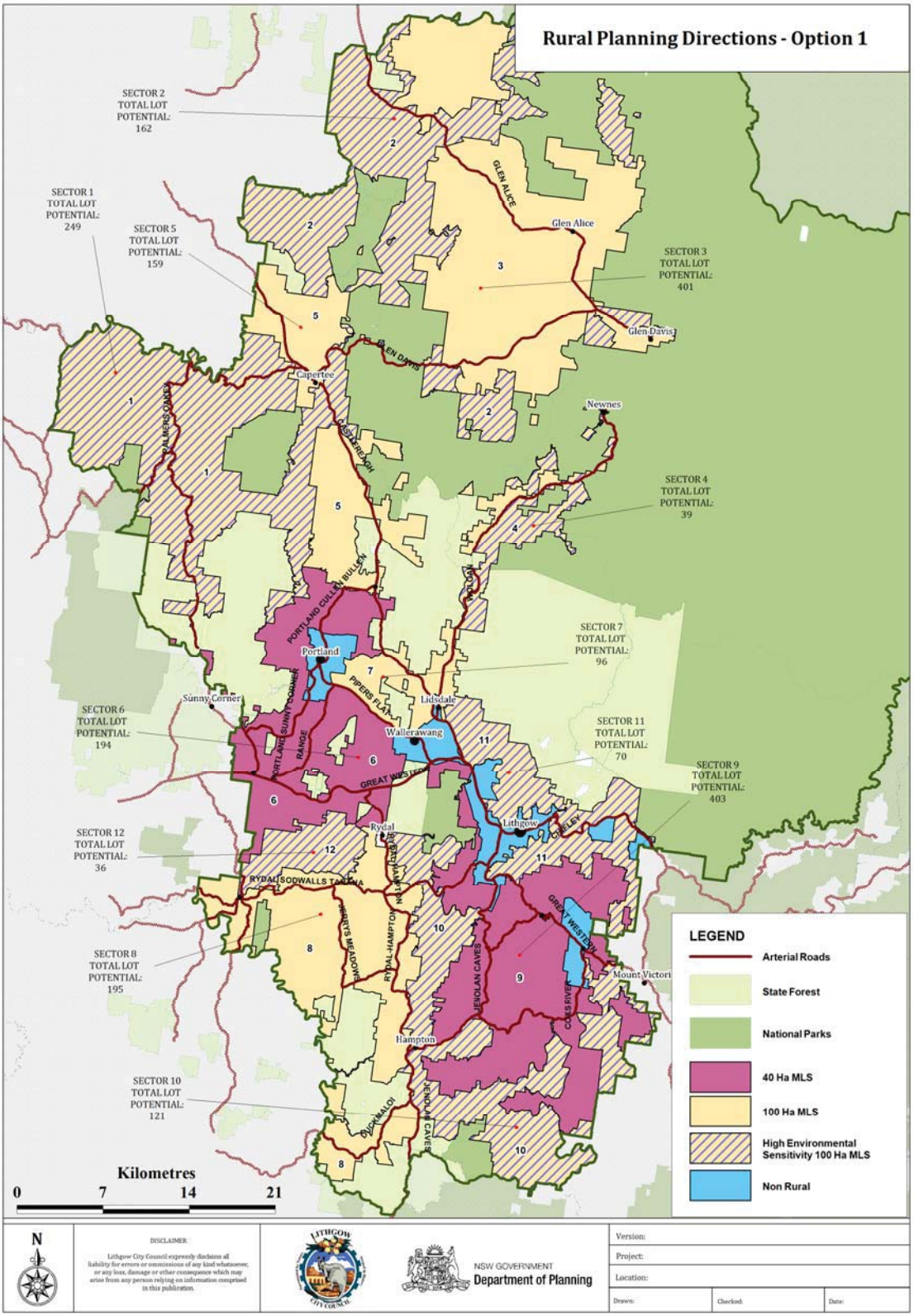


Table .11 Option 1 – Variable minimum lot size

Option 1 - Variable MLS(40 & 100 in rural & 100ha in ESA Areas	*1 - 100ha*	*2- 100ha*	*3 - 100ha*	*4 - 100ha*	*5 - 100ha*	*6 - 40ha*	*7 - 100ha*	*8 - 100ha*	*9- 40ha*	*10- 100ha*	*11- 100ha*	*12- 100ha(17)*	Total
Savings Clause	**22**	**18**	**59**	**8**	**22**		**23**	**63**		**30**	**8**	**1**	**254**
Vacant Properties 100 - 200	5	5	6	0	3		1	5		7	5	1	**38**
Vacant Lots 100 - 200	25	9	17	4	20		2	13		12	6	3	**111**
Vacant Properties 40 - 80						16			22				**38**
Vacant Lots 40 - 80						4			5				**9**
Vacant Existing Holdings	12	3	73	5	38	24	19	31	41	7	32	0	**285**
Vacant Concessionals	12	12	51	0	13	9	1	10	34	8	13	0	**163**
Subdivision Potential Vacant Holdings > 200	58	24	8	0	11		21	14		23	6	7	**172**
Subdivision Potential Holdings > 200 With a Dwelling	115	91	187	22	52		29	59		34	0	24	**613**
Subdivision Potential Vacant Holdings > 80						25			19				**44**
Subdivision Potential Holdings >80 with dwelling						116			282				**398**
Totals	**249**	**162**	**401**	**39**	**159**	**194**	**96**	**195**	**403**	**121**	**70**	**36**	**2125**

OPTION 2 - VARIABLE MINIMUM LOT SIZE

This option also introduces a variable lot size across the LGA of 40ha and 100ha. In this option the 40ha is the predominant minimum lot size applied.

Under this option indicated in Table12 and Figure 7, there would be a potential for a further 2529 dwellings, 822 of which would occur without the need for further subdivision.

This option identifies areas of highest sensitivity (44.14% of rural land) across the LGA and proposes to apply a minimum lot size of 100ha in those areas.

All other rural areas would have a 40 ha minimum lot size.

Figure 7. Option 2 – Rural Planning Directions

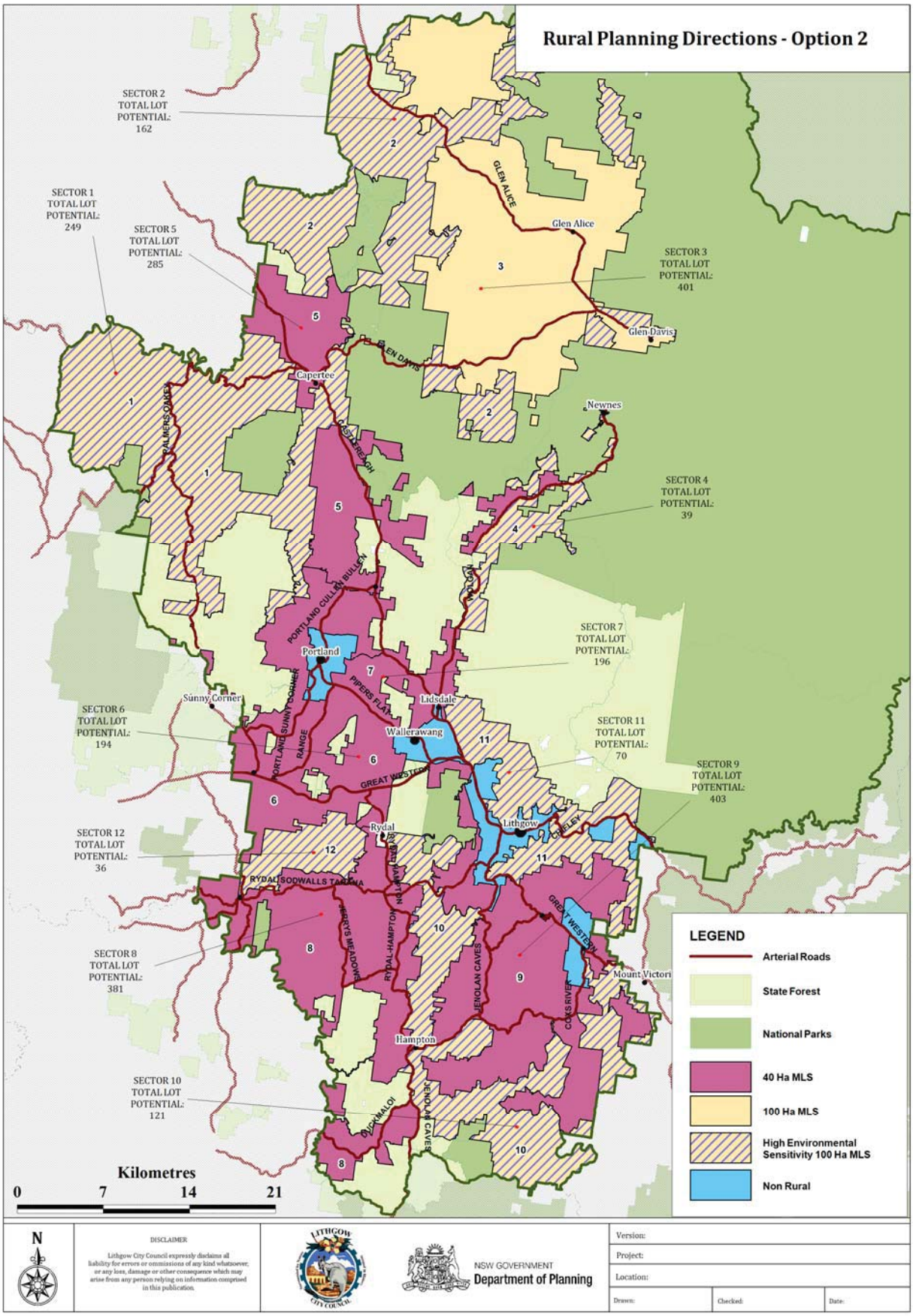


Table 12. Option 2- Variable minimum lot size

Option 2 - Variable MLS(40 & 100ha in ESA areas)	*1 - 100ha*	*2 - 100ha*	*3 - 40ha*	*4 - 100ha*	*5 - 40ha*	*6 - 40ha*	*7 - 40ha*	*8 - 40ha*	*9- 40ha*	*10 - 100ha*	*11 - 100ha*	*12 - 100ha*	Total
Savings Provisions	**22**	**18**		**8**						**30**	**8**	**1**	87
Vacant Properties 40 - 80	-	-	37	-	10	16	14	39	22	-	-	-	**138**
Vacant Lots 40 - 80	-	-	9	-	3	4	2	8	5	-	-	-	**31**
Vacant Properties 100 - 200	5	5	-	0	-	-	-	-	-	7	5	1	**23**
Vacant Lots 100 - 200	25	9	-	4	-	-	-	-	-	12	6	3	**59**
Vacant Existing Holdings	12	3	73	5	38	24	19	31	41	7	32	0	**285**
Vacant Concessionals	12	12	51	0	13	9	1	10	34	8	13	0	**163**
Subdivision Potential Vacant Holdings > 80	-	-	41	-	40	25	62	57	19	-	-	-	**244**
Subdivision Potential Vacant Holdings > 80 With a Dwelling	-	-	535	-	181	116	98	228	282	-	-	-	**1440**
Subdivision Potential Vacant Holdings > 200	58	24	-	0	-	-	-	-	-	23	6	7	**118**
Subdivision Potential Holdings > 200 With a Dwelling	115	91	-	22	-	-	-	-	-	34	0	24	**286**
Total	**249**	**162**	**746**	**39**	**285**	**194**	**196**	**373**	**403**	**121**	**70**	**36**	**2874**

OPTION 3 - NO CHANGE TO EXISTING MINIMUM LOT SIZE

This option exercises Council's right under State Environmental Planning Policy (Rural Lands) 2008 not to change existing rural minimum lot sizes.

Under this option indicated in Table 13 and Figure 8, there would be a potential for a further 3545 dwellings, 672 of which would occur without the need for further subdivision.

This option retains the disparate rural minimum lot sizes and provisions across the LGA and provides no further protection to high sensitivity areas or areas where land is held on larger holdings.

A comparison of the relative advantages and disadvantages of options 1, 2 and 3 is provided in Table 14.

Figure 8. Option 3- Rural Planning Directions

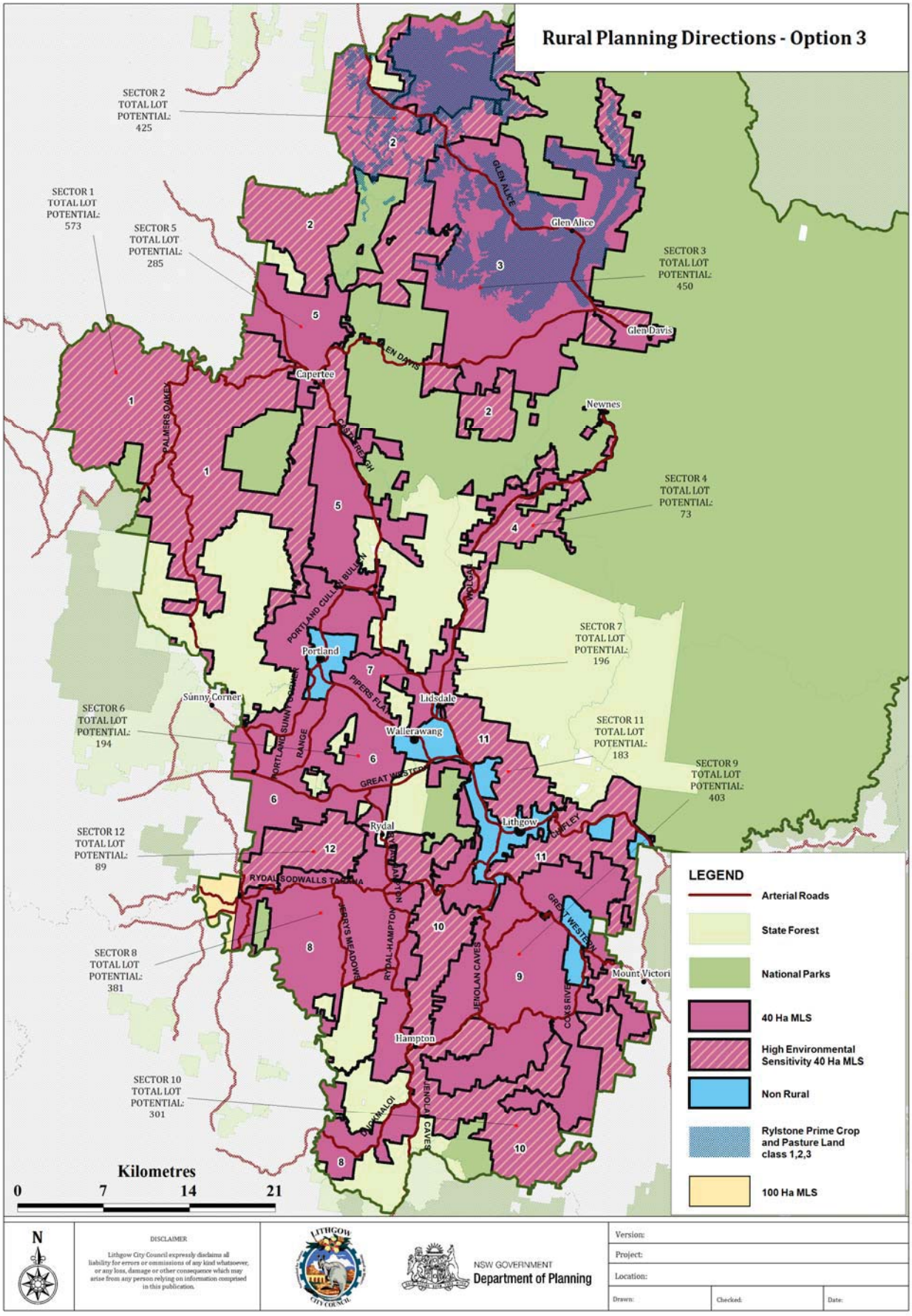


Table 13. Option 3 - No change to minimum lot size

Option 3 - 40ha	*1 - 40ha*	*2 - 40ha*	*3 - 40ha*	*4 - 40ha*	*5 - 40ha*	*6 - 40ha*	*7 - 40ha*	*8 - 40ha*	*9- 40ha*	*10 - 40ha*	*11 - 40ha*	*12 - 40ha*	Totals
Vacant Properties 40 - 80	9	12	46	**4**	13	20	16	47	27	**21**	**8**	**1**	**224**
Vacant Existing Holdings	12	3	73	5	38	24	19	31	41	7	32	0	**285**
Vacant Concessionals	12	12	51	0	13	9	1	10	34	8	13	0	**163**
Subdivision Potential Vacant Holdings > 80	167	76	41	0	40	25	62	57	19	101	37	21	**646**
Subdivision Potential Vacant Holdings > 80 With a Dwelling	373	322	535	64	181	116	98	228	282	164	93	67	**2523**
Total	**573**	**425**	**746**	**73**	**285**	**194**	**196**	**373**	**403**	**301**	**183**	**89**	**3841**

A comparison summary of the rural lands analysis is provided in the following table:

Table 14. Rural Lands Analysis

MLS *Scenario*	Description of Option	Estimated Dwelling Potential without subdivision	Estimated Dwelling Potential with subdivision	Advantages	Disadvantages
Option 1	This option introduces a variable MLS across the LGA of 40ha and 100ha. The increased 100ha MLS is the predominant MLS. This MLS is applied to areas identified of highest sensitivity and areas of the LGA (as shown by hatching on the Option 1 map) that have been identified as having a holding pattern that may result in substantial future fragmentation at the current 40ha MLS.	898 includes 448 protected by actions recommended previously. Includes further 254 potential dwellings in holdings between 40ha and 100ha proposed to be protected through new existing holding savings clause.	1227	• Balances community expectation with achieving sound planning outcomes • Reduces potential for land use conflict and encroachment of intensified settlement on resource lands such as coal deposits, extractive resources as identified in Section 117 Directions, forestry and higher quality grazing land • Enables higher planning outcomes to be achieved across 79.74% of the rural areas • Recognizes current development and holding patterns • Recognises the prevalence of prime crop and pasture land in the former Rylstone Shire area and introduces a new MLS of 100ha that would remove the current prohibition of subdivision of this land • Maintains rural housing choice • Supports desired settlement hierarchy principles	• Number of dispersed rural dwellings is still high. This level does not substantially reduce until a MLS of 200ha or higher is applied • Does not substantially reduce potential for the uneconomic provision of services such as road and social infrastructure and governance • Still defers significant strategic matters to the development assessment process and open to the influences of market forces

MLS Scenario	Description of Option	Estimated Dwelling Potential without subdivision	Estimated Dwelling Potential with subdivision	Advantages	Disadvantages
Option 2	This option introduces a variable MLS across the LGA. It retains the existing 40ha MLS in all areas of the LGA except for: • those areas identified as highest sensitivity (as shown by hatching on the Option 2 map) • Sector 3 (as shown on the Option 2 map) being an area in and around the Capertee Valley to which a 100ha MLS will apply. • The area of the former Evans Shire LGA which would retain a 100ha MLS	822 includes 448 protected by actions recommended previously and includes 146 potential dwellings in holdings between 40ha and 100ha proposed to be protected through new existing holding savings clause.	1707	• Balances community expectation with improved planning outcomes in areas of highest sensitivity when compared to the existing 40ha policy • Maintains rural housing choice across the LGA • Enables higher planning outcomes in 44.16% of the rural areas	• Maintains a demand and expectation for the uneconomic provision of road and social infrastructure and governance • Still defers significant strategic matters to the development assessment process and open to the influences of market forces • Promotes further fragmentation of rural land for the primary purpose of a dwelling • Does not substantially reduce land use conflict with resource lands • Does not support the recommended growth management and sustainability principles/settlement hierarchy principles outlined in Chapter 4 of the exhibited Draft Strategy • Requires the current performance criteria and provisions in each operating LEP to be given effect in the new LEP. This includes Clause 12 General Restriction of the Lithgow LEP preventing further subdivision of lands previously subdivided for concessional allotments and Clause 13 of the Rylstone LEP that prohibits subdivision of prime crop and pasture land that affects the majority of land within the former Rylstone area.

MLS Scenario	Description of Option	Estimated Dwelling Potential without subdivision	Estimated Dwelling Potential with subdivision	Advantages	Disadvantages
Option 3	This option represents NO CHANGE. The current 40ha MLS is retained across all rural areas of the LGA.	672 includes 448 protected by actions recommended previously	2873	• Landowners not directly disadvantaged	• Does not support the recommended growth management and sustainability principles/settlement hierarchy principles outlined in Chapter 4 of the exhibited Draft Strategy • Actively promotes further fragmentation of rural land for the primary purpose of a dwelling. Level of potential dwellings is unsustainably high. • Defers significant strategic matters to the development assessment process and opens planning decisions to the influences of market forces. This places increased pressure on Council's assessment processes to avoid litigation. • Ability to address cumulative impact associated with dispersed rural dwellings is diminished • Does not reduce land use conflict with resource lands • Does not provide broad strategic protection to areas of highest sensitivity and cannot demonstrate adequate consideration of Environmentally Sensitive Areas as required by Section 117 Direction 2.1

MLS Scenario	Description of Option	Estimated Dwelling Potential without subdivision	Estimated Dwelling Potential with subdivision	Advantages	Disadvantages
					• Maintains a demand and expectation for the uneconomic provision of road and social infrastructure and governance • No change to MLS retains the former Evans Shire area at 100ha whilst all other rural areas will be retained at 40ha. • Requires the current performance criteria and provisions in each operating LEP to be given effect in the new LEP. This includes Clause 12 General Restriction of the Lithgow LEP preventing further subdivision of lands previously subdivided for concessional allotments and Clause 13(1) (c) of the Rylstone LEP that prohibits subdivision of prime crop and pasture land that affects the majority of land within the former Rylstone area.

IDENTIFICATION OF A PREFERRED MINIMUM LOT SIZE OPTION

Table 15 lists the growth management and sustainability principles (GMP's) of this Strategy and provides a subjective assessment "score" of the ability of the different minimum lot size scenarios, as compared against each other, to meet the GMP's. The assessment is based on assigning a subjective score between 1 (Very low) – 5 (Very High) within the matrix.

Table 15. Comparative Assessment of Minimum Lot Size Scenarios against Growth Management and Sustainability Principles

	Option 3 Status Quo	Option 1 (Variable) (Preferred Option)	Option 2 (Variable)	400ha (Draft Strategy Recommendation)
Thresholds to Growth	1	2	1	3
Land Use Suitability and Capability	1	3	2	4
Infrastructure Provision	1	2	1	2
Diversity of Lifestyle	2	2	3	4
Character, Identity and Urban Design	1	2	1	3
Economic Growth	2	2	3	3
Access & Equity	1	2	2	3
Total	9	16	13	22

At what level does the scenario meet the GMSP

1 – Very Low
2 – Low
3 – Medium
4 – High
5 – Very High

PREFERRED RURAL MINIMUM LOT SIZE

The Draft Strategy provided justification for the 400ha minimum lot size as the most effective in meeting the GMP's. Although this justification remains valid, this Strategy must take into consideration the community interest and expectation and provide a balance between the social, economic, environmental and governance parameters facing the LGA.

Therefore, Option 1 presents itself as the preferred rural minimum lot size scenario. The justification for this option as reflected in each of the assessment scores is summarised in Table 16 below:

Table 16. Justification of Option 1 Variable Minimum Lot Size

STRATEGIC PLAN REFERENCE	Guiding Principle	Justification of Preferred Option 1
G1 Planning for an annual growth rate of 1 to 2% for the LGA. (NB Revised by this Strategy to 0.5-1%) G2 Planning growth in the towns and villages followed by rural residential areas. G4 Providing residential land to cater for future growth	GMSP1 Thresholds to Growth	An analysis of historic development application data has indicated a trend towards dispersed rural lifestyle development with 32.7 % (415) of all dwelling applications between 1996-2009 being within the General Rural area. This is higher than 30% in the Lithgow urban area. Such unplanned growth is unsustainable and is inconsistent with the recommended settlement hierarchy designed to create critical mass within the three urban centres of the LGA supported by the rural villages. The application of an increased minimum lot size is necessary to generally not attract rural lifestyle development as the primary use and driver of fragmentation of rural land. The MLS must therefore function to "price-out" prospective rural lifestyle purchasers. Consultation with rural landowners has revealed that 100ha would be sufficient to achieve this outcome. An increased MLS for the majority of the wider rural areas supports a clustered approach to providing for residential land use within a rural environment. By reducing this choice in the wider rural areas to locations where land is already fragmented, new growth may be directed back into the planned and clustered areas currently known as rural small holding 1(c) and areas predominantly within the 15km outer limit from the Lithgow township. As a result of community consultation it is proposed to save all existing dwelling opportunities within the rural areas that do not require further subdivision. This in itself is a large concession from the recommendations of the Draft Land Use Strategy and under Option 1 represents the retention of 898 dwelling opportunities. Such concession minimises the individual landowner burden of the introduction of a 100ha MLS policy in the majority of the wider rural areas. Although the ability of Option 1 to meet this GMP is low, it does represent an improvement upon the current provisions. This demonstrates consistency with Rural Land Principles (f) and (g) and Rural Subdivision Principle (a) (c).
G3 Facilitating the sustainable planning of land through assessment criteria E2 Identifying and protecting the Department of Environment and Climate Changes Estates	GMP 2 Land Use Suitability and Capability	Potential for land use conflict is increased with land fragmentation and the proliferation of unplanned dispersed rural lifestyle development. Whilst the 40 ha MLS may be sufficient to separate incompatible land use on any one development site, it is the cumulative impact of these uses that creates widespread land use conflict that can most effectively be addressed at the strategic planning level. The larger the MLS the greater the potential to minimise rural land use conflict and achieve rural land zone objectives.

STRATEGIC PLAN REFERENCE	Guiding Principle	Justification of Preferred Option 1
E3 Protecting and enhancing biodiversity through consultation and development of partnerships E/I13 Protecting the economic assets		The rural areas of the Lithgow LGA contain varying landforms and land capability. The Environmentally Sensitive Areas mapping and the Strategic Land and Water Capability Assessment as referred to in Chapter 7 are indicators of the LGA land capability and suitability for differing land uses. The protection of the natural resource base and the minimisation of inappropriate pressure on scarce resources is a critical component of ecologically sustainable development. The general message from key government stakeholders is that it is easier to protect the natural resource base when rural property holdings are larger and there is less dwelling intensification in rural areas (Collie Pty Ltd Cowra LUS '09). Option 1 identifies areas of highest sensitivity within the LGA. These areas represent 44.16% of all rural land in the LGA. The potential to achieve natural resource outcomes and minimise land use conflict will be maximised in these areas by the introduction of the higher 100haMLS. Consideration was given to a higher MLS of 200ha in these areas however due to the current land holding pattern such increase did not make a significant change to the overall outcome in terms of the numbers of potential dwellings that may result. Option 1 also provides further protection for a further 35.58% of rural land from further land fragmentation driven purely for lifestyle development. It will reduce the number of new dispersed rural lots by 1646 or 57.3% when compared with the current provisions. This demonstrates consistency with Rural Planning Principle (d) and (e) and Rural Subdivision Principle (b), (c) (d) and (e).
G6 Providing infrastructure for growth T1 Providing road infrastructure which meets the needs of residents T3 Promoting equitable access to public transport T5 Improving and expanding the pedestrian and bicycle network E8Securing the community access to water	GMP 3 Infrastructure Provision	There are significant costs associated with unplanned dispersed rural settlement including, but not limited to, road and transport infrastructure and services, waste disposal, rural land protection, emergency services and noxious weed control. When these services are provided over a wider area, there is a loss of critical mass and economies of scale are unable to be achieved. This results in the service provision being subsidised by the wider community. It also creates effects of displaced demand and includes the loss of population critical mass to attract or retain retail catchments and catchments for higher order services such as health, emergency services, law enforcement and community social services. The application of an increased MLS supports the recommended settlement hierarchy and ensures that rural lifestyle development remains ancillary to primary production. Again, the higher the MLS the less pressure for dispersed settlement which maximises the opportunity for a clustered settlement hierarchy to be achieved. The increased MLS enables future growth in areas to be forecasted with more certainty, enabling infrastructure and service provision to

STRATEGIC PLAN REFERENCE	Guiding Principle	Justification of Preferred Option 1
		be properly planned for and funded through appropriate mechanisms such as developer contribution plans, development serving plans and grant allocations. The ability of Option 1 to meet this GMP is still low however it will significantly reduce the potential number of new dispersed lots to be created in the rural areas by 1646 or 57.3% when compared to the current provisions. This demonstrates consistency with Rural Planning Principle (g) and Rural Subdivision Principle (c), (d) and (e).
G2 Planning growth in the towns and villages followed by the rural residential areas G5 Providing for rural living in an appropriate development form that will minimise its impact and maximise the concentration of population of population in around existing town centres and villages C9 Providing a range of housing opportunities to meet the diverse needs of the community	GMP 4 Diversity of Lifestyle	The Lithgow LGA holding analysis shows that there is extensive rural living opportunities already created in the rural zones on land of various lot sizes. These opportunities will be saved in the new LEP and under this option represent 898 dwellings (448 of which are on allotments below 40ha). The LGA also provides for clustered small lot rural lifestyle in various locations throughout the LGA. The implementation of an increased MLS will serve to direct rural lifestyle development into a more sustainable clustered form. The MLS for rural lifestyle in the wider rural areas needs to be sufficiently high to ensure that it is a limited alternative to urban development instead of replacing it as has been the trend in the last decade. Option 1 will provide for a further 1227 rural lots to be created. This demonstrates consistency with Rural Planning Principle (c) and Rural Subdivision Principle (c).
C2 Protecting and enhancing areas of unique qualities and character C4 Determining and prioritising the recreational needs of the community and explore funding options C7 Ensuring adequate open space is provided throughout the towns and villages HR1 Identifying preserving, improving and promoting the LGA's indigenous and non indigenous built and natural heritage	GMP 5 Character, Identity and Urban Design	The proliferation of unplanned and dispersed rural dwellings within the wider rural areas leads to a blurring of the rural character, identity and amenity. Rural lifestylers have different expectation of amenity than traditional rural landowners. It also significantly impacts upon the scenic quality of rural landscapes and vistas. These are often interrupted and alienated by inappropriate location, design and structured landscaping of rural lifestyle development. An increased MLS reduces the pressure on rural lands for rural lifestyle development and enables rural character and amenity to be retained. This demonstrates consistency with Rural Planning Principle (c) and Rural Subdivision Principle (b).

STRATEGIC PLAN REFERENCE	Guiding Principle	Justification of Preferred Option 1
E/I1 Planning for a diversified economy which supports local employment E/I2 Encouraging local employment opportunities for the community E/I14 Providing employment generation lands E/I15 Providing retailing opportunities in the LGA E/I16 Developing our natural and cultural assets for the tourism market	GMP 6 Economic Growth	Primary production land uses and activities contribute significantly to the LGA economy and employment base. Primary threats to these land uses such as land fragmentation and land use conflict created from rural lifestyle development are significantly reduced the higher the MLS. Option 1 will provide further protection to 79.74% of rural lands within the LGA. The reduced number of dispersed rural dwellings will assist with the retention of the rural landscape and resource areas to facilitate economic growth. At the same time, economic growth through lifestyle development will still occur through the saving of 898 potential dwelling opportunities without further subdivision. This demonstrates consistency with Rural Planning Principle (a) and (d) and Rural Subdivision Principle (a).
C3 Encouraging equitable access to services and facilities which meet the needs of the community	GMP 7 Access and Equity	The potential for the provision of infrastructure and services to be aligned with the role of the area within the recommended settlement hierarchy is significantly improved through an increased MLS that will ensure that primary production remains the mainstay land use of rural areas. The increased MLS in the majority of rural areas will also remove the level of uncertainty as to population growth potential in areas across the LGA enabling infrastructure and service provision to be better planned. This demonstrates consistency with Rural Planning Principle (f) and (g) and Rural Subdivision Principle (c).

Source: LCC

MINIMUM LOT SIZE FOR INTENSIVE AGRICULTURE

As stated previously the Lithgow LGA contains negligible lands considered to be prime crop and pasture lands capable of sustaining intensive agricultural pursuits (Refer to Figure 5.11 of 2007 Local Profile). This has been reflected in low demand for this land use since the introduction of the existing planning instruments.

A further assessment of the Strategic Land and Capability Assessment mapping, prepared by the Sydney Catchment Authority, indicates that the majority of lands contained within the Sydney Drinking Water Catchment has low to very low capability to meet water quality objectives in relation to intensive plant and livestock agriculture land uses.

The recommendation in this Strategy is that Council investigates measures to restrict intensive agriculture land use where appropriate either by nominating an alternate zone to the primary production zone to vary permissible

land use in different areas, or by increased development assessment criteria provisions through the use of overlays within the new LEP.

Notwithstanding the above, it is recognised that as technology and farming practices change, new and emerging agricultural enterprises need to be catered for where land capability permits.

Clause 9 of the 2008 Rural Lands SEPP provides for rural lands to be subdivided with consent for the purposes of primary production of any size with no dwelling.

Where the primary production rural zone will remain it is the recommendation of this Strategy that intensive agriculture be permitted with consent. It is considered that the majority of these uses can be carried out without the need for a dwelling to be located upon the same holding and that sufficient housing choice would be available in most circumstances either within a rural or urban context within commuting distance.

.

COUNCIL DETERMINATION AND RESOLUTION

Council at its meeting of 31st October, 2011 considered a planning report from the Strategic Land Use Planner in relation to the Draft Land Use Strategy and proposed amendments following community and government agency consultation.

A copy of this report can be viewed at the following link:

http://www.council.lithgow.com/gen_businesspapers.html

The recommendations of this report and strategy in relation to rural lands policy were NOT supported by Council.

The Council exercised its right to review, but not change, the rural minimum lot size provisions of the current operating LEPs as provided under State Environmental Planning Policy (Rural Lands) 2008.

Council at its Ordinary meeting of 31 October, 2011 resolved the following in relation to rural lands:

Min 11-450

THAT:

1B Rural Land Use
"Council adopts Option 3, "status quo" for rural planning directions for Council's Draft Land Use Strategy".

SUMMARY OF KEY ACTIONS

Action 9.1 Original action prior to Council Resolution

- Introduce a variable minimum lot size in the 2012 LEP for the erection of a dwelling in the primary rural zone of 40ha and 100ha as indicated in Figure 6 Chapter 9.

Action 9.2 Original action prior to Council Resolution

- Introduce a new existing holdings savings clause in the 2012 LEP to retain dwelling opportunities in the primary rural zone for holdings between 40ha and 100ha as outlined in Option 1 Chapter 9.

- Retain through a savings provision all existing dwelling opportunities for all lots less than 40ha defined as existing holdings and all allotments created by an approved subdivision under any previous planning instrument.

Action 9.1 Modified by Council Resolution

- Carry forward the existing rural minimum lot size provisions under the current operating LEPs into the new 2012 LEP.

Action 9.2 Modified by Council Resolution

- Carry forward the existing provisions governing the erection of a dwelling under the current operating LEP's into the new 2012 LEP.

Action 9.3

- Develop a Land Monitor to identify and track all subdivision and dwelling approvals within the primary production areas.

Action 9.4

- Limit the range of development permissible within the primary production zones to those compatible with sustaining the natural primary resource base within the Lithgow City 2012 LEP.

Action 9.5

- Use Environmentally Sensitive Area mapping to inform the identification of new zones, land use permissibility, and /or assessment criteria defined by overlays in the rural areas within the Lithgow City 2012 LEP.

Action 9.6

- Restrict intensive plant and animal agriculture in areas of low capability as defined by Environmentally Sensitive Area mapping and Sydney Catchment Authority Strategic Land and Water Capability Assessments within the Lithgow City 2012 LEP.

Action 9.7

- Undertake a biodiversity strategy in areas identified by Environmentally Sensitive Area mapping as moderate to high biodiversity as resources permit.

Action 9.8

- Identify areas of high scenic value and protect through appropriate rural or environmental conservation zone and/or overlay provisions in the Lithgow City 2012 LEP.

CHAPTER 9 RURAL LAND USE

SUPERCEDED

STRATEGIC RURAL PLANNING PRINCIPLES

The Planning principles to be used to guide the development of this Strategy and to inform the future management and development of rural lands in the Lithgow LGA are as follows:

- Rural planning principles of the Rural Lands 2008 SEPP.
- Recognise and protect mining, extractive industries, forestry and agriculture (predominantly extensive grazing) as key primary production land uses and significant economic contributors in the Lithgow LGA.
- Protect primary production lands and their interface from further land fragmentation and land use conflict.
- Protect environmental conservation areas and their interface from further land fragmentation and land use conflict.
- Recognise and protect natural and cultural resources and features of the Lithgow LGA.
- Recognise tourism as an emerging industry for the Lithgow LGA and provide for opportunities.
- Consider the environmental capacity of the rural land and ensure that any development within rural areas is within the capability of, and is suitable for, the land having regard to constraints and opportunities analysis and mapping.
- Provide for the development of intensive agricultural land use activities in appropriate areas.
- Recognise the capability of the Lithgow LGA to contribute to renewable energy development.
- Provide for heavy industry in the rural areas in appropriate location subject to land capability and suitability.
- Remove general and light industry land use and activity from rural areas into designated zones.
- Reinforce the recommended settlement hierarchy by minimising further rural lifestyle development opportunities outside of nominated areas and ensure that rural settlement is ancillary to primary production.
- Determine an appropriate minimum lot size for the erection of a dwelling in rural areas having regard to the recommended growth management and sustainability principles, the principles contained within the Rural Lands SEPP and the principles outlined in this section.
- Determine a management framework to address existing inconsistent living opportunities through the sunsetting of entitlements.

PLANNING CONTEXT

Rural lands provide a range of key functions and uses ranging from primary production to forms of settlement and environmental conservation. The management and planning of the rural lands of the LGA is critical to long term sustainability of the significant primary and natural resources and conservation values present.

The three largest zones by land area within the Lithgow LGA are the Rural (General), Rural (Forestry) and National Park, which collectively cover over 97% of the LGA land area.

The Rural (General) zone covers 46.66% and due to the flexibility of the zone is used for a number of land uses other than agriculture such as mining, power generation, industry, private forests, rural lifestyle and tourism developments. Agricultural land use equates to 28.87% of the LGA land area with the majority of this area (28.79%) being used for grazing.

Table 5.2 and Figure 5.2 of the Local Profile shows the distribution of land use classes as defined by Department of Natural Resources in the LGA.

One of the largest threats to rural lands is the continuing fragmentation of lands driven by unplanned rural lifestyle development.

This Strategy will seek to balance the competing pressures of urban and rural settlement growth against the protection and conservation of primary resources and environmentally sensitive lands.

PAST STUDIES AND CONSULTATION

LOCAL

In the 1980s several planning studies were carried out preceding the development of the current Lithgow City 1994 Local Environmental Plan. These included the following:

Table 1. Studies

Planning Study/Report	Key Findings
Greater Lithgow Local Environmental Study – Kinhill Pty Ltd – March 1981	To examine new development areas to manage predicted population increase to 35,000 by 2001 as a result of new coal and power generation developments. Predominantly concerned with residential expansion in urban areas with rural issues only briefly examined. It suggested that additional rural residential land in limited quantities be appropriately located in western areas, possibly near Portland.
City of Greater Lithgow Rural Environmental Study – Latona Masterman and Associates – April 1983	To define conservation areas; identifying recreation resources, maintain amenity of existing communities whilst providing for population growth and to identify and conserve agricultural and natural resources. The study made recommendations for rural "living opportunities " in the following localities; Cox's River Rd, Hartley Valley near Brown's Gap, Bowenfels- Farmers Creek, Rydal, Mt Lambie, Sunny Corner, together with one-off rural home site opportunities as a concessional lot per

Superceded

Planning Study/Report	Key Findings
	100ha of rural holding. It also recommended the balance of the rural areas to have a MLS of 200ha.
Lithgow Rural Strategy – JTCW Planning – August 1985	To review previous planning reports particularly in relation to approach to rural subdivision and the provision of rural residential opportunities. This study recommended a flexible planning approach advocating a large area (concentrated along existing roads and related to settlement) for rural small holdings with no MLS and subject to merit based assessment; maintenance of status quo in general rural area allowing limited small subdivisions subject to merit controls and Section 94 framework.

Source: LCC

It would appear from these studies that the Lithgow City 1994 LEP contained an eclectic combination of the recommendations of all three studies. Rural planning has not been significantly reviewed since 1994.

Key facts and findings in relation to Lithgow LGA rural lands are summarised in Table 2

Table 2. Summary Rural Agricultural Key Facts and Findings

RURAL LANDS TOPIC	KEY FACTS AND FINDINGS
AGRICULTURAL RESOURCE	• Less than 33% of land within the LGA is classed as suitable for agricultural production. • Of the land zoned Rural General (210,357ha) only 64% (134,563ha) is capable of sustaining agricultural production. • Of the land suited to agriculture only 1.4% (2,945ha) is capable of sustaining regular cultivation. This fact explains the bias towards grazing within the LGA. • Approximately (37,300ha) of land classed as being agriculturally capable is being used for non-agricultural purposes such as tree and shrub cover and urban and conservation land uses. However it is also evident that 20,784 ha of grazing is occurring outside land that is classed as agriculturally capable. • Only 16% of holdings in the Rural General zone of the LGA are greater than 100ha. • Significantly whilst there is a large total area of large holdings (76% greater than 100ha and 46% above 400ha) the LGA is clearly fragmented by smaller holdings. • The 129,224ha within the Rural General zone likely to be capable of agricultural production is significantly less than both the area zoned (210,357ha) and that classed as being capable of cultivation and/or grazing (145,586). • Total value of agricultural production to the LGA is low. • Major agricultural enterprise for the LGA is beef cattle production (84% of ag holdings), followed by sheep production (39% of ag holdings) • Average value of agriculture within the agriculturally capable land in the LGA in 2006 was calculated at $135 per hectare. This suggests that many agricultural enterprises are reliant on off-farm income

Source: LCC 2007 Local Profile and 2010 Addendum; Draft LCC Land Use Strategy Appendix 1 Supply and Demand Analysis

COMMUNITY CONSULTATION

Community consultation carried out in conjunction with the 2007 Local Profile and Strategic Plan identified the following key issue areas for rural lands:

- Land use conflict as a result of rural lifestyle development
- Impact of rural lifestyle development on normal operations of a rural holding in particular weed control, bush fire hazard reduction, control of feral animals, fencing etc
- Protection of resources and maximising opportunities for growth of employment lands
- Diversification of the economic base
- A desire to provide for a legitimate demand for rural lifestyle development but subject to a more planned approach, in closer proximity to town centres
- Planning system removing the "right to subdivide" and its impact upon maintenance of sustainable rural enterprises
- Developing tourism potential
- Conservation of environmentally sensitive areas
- Protection of rural landscape and character

A summary of government authority consultation also carried out in conjunction with the 2007 Local Profile is included in Section 9 of Local Profile.

REGIONAL

In February 2007, the Minister for Planning established the Central West Rural Lands Inquiry, appointing an Independent Review Panel (IRP) to investigate, report and make recommendations on land use planning in the Central West Region of NSW. The IRP were asked to give particular regard to balancing the protection of agricultural lands with other competing interests including, but not limited to, subdivision and rural residential development.

A key finding of the Central West Rural Lands Inquiry was that adherence to the Department of Primary Industry (Agriculture) methodology for determining rural minimum lot size for subdivision was flawed and that, in particular, the issue of minimum lot size for agricultural activity should be separated from the issue of rural/residential/rural lifestyle development.

The key outcome of the Inquiry was the introduction of a new State Environmental Planning Policy to apply to the State that supports a more strategic approach to rural planning issues. State Environmental Planning Policy (Rural Lands) released in May 2008, effectively implements the following recommendations of the IRP:

- Retaining existing minimum lot sizes, which may be varied by councils, but only if the decision is based on appropriate criteria.
- Retaining existing rights to build new homes on rural land on subdivisions that have already been approved.
- Preparation of a new State Environmental Planning Policy (SEPP) to support a strategic approach to rural planning across councils and to manage land-use conflicts.
- Removal of concessional lot provisions on rural land – which have been misused in the past – through a SEPP.
- Establishment of an Independent Hearing and Assessment Panel to advise councils on development applications that fall outside of normal planning controls but may be subject to exceptional circumstances within appropriate criteria.

Superceded

- Requiring new local environmental plans (LEPs) to recognise the changing face of agriculture, such as smaller farms, share farming, leasing or farms that may consist of a number of separate holdings.

The specific provisions of the Rural Lands SEPP and its implications are discussed further later in this chapter.

POLICY AND LEGISLATIVE FRAMEWORK

The key state and federal policy and legislation governing rural land use within the Lithgow LGA is summarised as follows:

Instrument Name
KEY ACTS
Environmental Planning and Assessment Act
Local Government Act
National Parks and Wildlife Act 1974
Environment Protection and Biodiversity Conservation Act 1999 (EPBC)
Threatened Species and Conservation Act 1995 (TSC)
Protection of the Environment Operations Act 1997 (POEO)
Rural Fires Act 1997
Mining Act 1992
Crown Land Act 1989
KEY MINISTERIAL DIRECTIONS (Section 117)
Direction 1.1 Business and Industrial Zones
Direction 1.2 Rural Zones
Direction 1.3 Mining, Petroleum and Extractive Industries
Direction 1.4 Rural Lands
Direction 2.1 Environmental Protection Zones
Direction 2.3 Heritage Conservation
Direction 4.4 Planning for Bushfire Protection
Direction 5.2 Sydney Drinking Water Catchments
KEY STATE ENVIRONMENTAL PLANNING POLCIES
Standard Instrument (LEP) Order 2006
Drinking Water Catchments Regional Environmental Plan No 1 (Deemed SEPP)
Mining Petroleum Production and Extractive Industries 2007
Rural Lands 2008
Infrastructure SEPP (2007)

Please refer to Chapter 3 for more detail.

LOCAL PLANNING PROVISIONS

SUBDIVISION OF LAND IN LITHGOW LGA

Current subdivision standards within the two operating LEPs in the Lithgow LGA are summarised in the following Table 3.

Table 3. Subdivision Standards

Local Environmental Plan	Provision
Lithgow City Local Environmental Plan 1994	Clause 12 Subdivision of Land in Zone 1(a) General Restriction (1) Land may only be subdivided in accordance with (2) if it does not comprise the whole or in part of an allotment or portion of land previously subdivided in accordance with a consent granted after the commencement of this Plan. Creation of 40 ha allotments (2) Each allotment to be created has an area of not less than 40 ha Exceptions for subdivisions to allow agriculture • For the purposes of agriculture, an allotment of any size provided that Council is satisfied the agricultural production will be viable on any land less than 40ha. Clause 12A Subdivision of Land in Zone 1(e) Each allotment to be created has an area of not less than 100ha Clause 13 Subdivision for other purposes in Zone 1(a) or 1(e) (1) for other purposes other than agriculture or a dwelling is the land (a) is not prime crop and pasture land (b) the area of each allotment is appropriate having regard to the purpose for which it is created (2) Despite (1) an allotment may be created if it is satisfied that (a) the proposed lot will be used for the purpose of supplying goods and services for which there is a demand (b) no other land in the locality could reasonably be used for that purpose, and (c) the level of demand for the goods and services and the extent of the use justifies the creation of the lot regardless of its agricultural value.
Rlystone Local Environmental Plan 1996	Clause 12 Subdivision for the purpose of agriculture in Zone 1(a) An allotment of any size for the purposes of agriculture Clause 13 Subdivision for the purposes of dwellings within Zone 1(a) (1) (a) Each allotment created has an areas of not less than 40 hectares (2) Is unlikely to affect the existing and potential capability of the land adjacent land to produce food or fibre or to be used for other agricultural purposes, and (3) Does not comprise prime crop and pasture land. Clause 14 Subdivision for other purposes within Zone 1(a) (1) for purposes other than agriculture and dwellings if (a) none of the land is prime crop and pasture land (b) the area of each lot to be created is appropriate having regard to the purpose for which it is being created (3) Despite (1) an allotment may be created if it is satisfied that (a) the proposed lot will be used for the purpose of supplying goods and services for which there is a demand (b) no other land in the locality could reasonably be used for that purpose, and (c) the level of demand for the goods and services and the extent of the use justifies the creation of the lot regardless of its agricultural value.

Source: Lithgow City Local Environmental Plan 1994 and Rylstone Local Environmental Plan 1996

The standards in Table 3 only applied from May 2008 with the introduction of the Rural Lands SEPP. The Rural Lands SEPP removed all concessional allotment provisions from the LEP but retained dwelling entitlement for any lot already created under such provisions.

CONCESSIONAL ALLOTMENTS

For the purposes of discussing and providing context to rural land fragmentation in the Lithgow LGA we must also look to the subdivision standards that applied prior to their removal in 2008. The repealed provisions are outlined in the following table:

Table 4. Repealed Provisions of Subdivision Standards (Pre May 2008)

Local Environmental Plan	Provision
Lithgow City Local Environmental Plan 1994	Clause 12 (3) Excision of dwelling allotment from smaller holdings Excision of one allotment from an existing holding within Zone 1(a), being an existing holding that has a total area of not less than 50ha and not more than 80ha if: (a) the Council is satisfied the allotment will be used for the purpose of a dwelling, and (b) the allotment does not comprise prime crop and pasture land, and (c) the allotment will have an area of not less than 2 and not more than 10ha, and (d) the residue of the existing holding is consolidated into one allotment, and (e) the Council is satisfied that effective disposal of domestic waste water within the boundaries of the allotment is achievable, and (f) the excision of the allotment is, in the opinion of the Council, unlikely to have a significant adverse effect on the existing capability and use, for agricultural purposes, of the residue land and adjacent land. Clause 12(4) Excision of allotments from larger holdings Excision of one allotment from an existing holding within Zone 1(a), being an existing holding for every 80 ha of that existing holding if; (a) the Council is satisfied the allotment will be used for the purpose of a dwelling, and (b) the allotment does not comprise prime crop and pasture land, and (c) the allotment will have an area of not less than 2 and not more than 10ha, and (d) the residue of the existing holding is consolidated into one allotment, and (e) the Council is satisfied that effective disposal of domestic waste water within the boundaries of the allotment is achievable, and (f) the excision of the allotment is, in the opinion of the Council, unlikely to have a significant adverse effect on the existing capability and use, for agricultural purposes, of the residue land and adjacent land.
	Clause 12(5) Exception for family allotments Council may consent to the excision of an allotment within Zone 1(a) if the Council is satisfied that the allotment will be used for the purpose of a dwelling-house, but only if: (a) The allotment Is required for the erection or use of a dwelling the Council is satisfied will be occupied by the person who owned the land on 24th April 1969 (…) or by a brother, sister, son, daughter, grandson, or granddaughter of that owner, and (b) Only one such allotment is excised for each 10 ha of a parcel of contiguous land, with a maximum of three(3) allotments permitted including all allotments created for

Local Environmental Plan	Provision
	relatives under Interim Development Order No 1 – Shire of Blaxland and any consented to in accordance with subclause 3, and (c) The Council is satisfied that effective disposal of domestic waste water within the boundaries of each allotment is achievable, and (d) The allotment does not comprise prime crop and pasture land.
Rylstone Local Environmental Plan 1996	Clause 13(1) Subdivision for the purpose of dwelling Zone 1(a) Council may consent to the subdivision of land within Zone 1(a) if Council is satisfied that each of the allotments to be created is intended to be used for the purposes of a dwelling, but only if each allotment, (a) has an area of not less than 40 hectares, provided that one concessional allotment of less than 4 hectares but not less than 0.4ha may be created for a relative of the owner of for the owner, (b) is unlikely to affect the existing and potential capability of the land and adjacent land to produce food or fibre or to be used for other agricultural purposes, and (c)does not comprise prime crop and pasture land 13 (2) Notwithstanding any other provision of this plan, the Council may consent to the subdivision of land within Zone 1(a) resulting in the creation of one but one more than one allotment on which a dwelling stands from an existing holding of that dwelling was lawfully erected on that land on or before the appointed day.

Source: Lithgow City Local Environmental Plan 1994 and Rylstone Local Environmental Plan 1996 (Pre May 2008).

APPROPRIATENESS OF EXISTING LEPS

Both of the current LEPs were structured on a flexible planning approach enabling a wide and varied range of land uses within each zone. In the General Rural and Outer Rural zones this flexibility, instead of encouraging diversified development has, in some cases hindered it due to lack of investment certainty.

The current General Rural and Outer Rural zones permit a range of uses from a dwelling house to offensive and hazardous industry increasing significantly the potential for land use conflict.

The LEPs are also not supported by detailed development control plans. This has resulted in land use decisions being based solely on a site by site merit assessment basis where cumulative impact cannot be properly addressed.

Super

SUMMARY OF ISSUES

Table 5. Summary Key Rural Planning Issues

ISSUE	WHY IS IT AN ISSUE?
Unplanned dispersed settlement Increased risk of social isolation	• Past and current planning provisions have retained a range of provisions to enable the subdivision of rural land and the erection of a dwelling with limited to no consideration of natural and primary production resource management and protection. • What was initially intended to be an alternative to urban living has grown significantly in that the population now living in the urban areas has fallen from 95% in 2001 to 80% in 2006. Due to the unplanned and dispersed nature of this form of settlement growth it has not led to the sustainability of rural villages. • Increased land fragmentation • Encroachment of development into more marginal lands without regard to the carrying capacity of the land. This places onus on the development assessment process to control impacts on a site-by-site basis and this has limited potential to address cumulative impact. • Increased potential for land use conflict leading to primary production lands being limited in their capacity to operate without restriction. • Increasing infrastructure and service costs particularly in relation to provision and maintenance of rural roads and garbage services, but also in social and governance services. • Loss of critical mass in urban areas to maintain and improve services and higher order infrastructure.
	• Increased risk of social isolation due to lack of community structure and the impacts of ageing of the population in rural areas.
Increased environmental footprint of development and impact upon environmentally sensitive lands and rural landscape.	• Reduced ability to achieve natural resource management objectives due to increased stakeholders with smaller parcels of land and different expectations. • Increased potential for negative impact upon natural resources such as water, soils, vegetation and biodiversity. • Increased threat of bushfire hazard. • Loss of rural landscape and rural character.
Land use conflict impact on primary production resources (ag land, forestry, resource lands, mining, extractive industries) impact on environmental conservation	• Proliferation of rural lifestyle development in primary production areas impacts upon the ability for these lands to maximise their potential in terms of the natural and primary resource. Specific examples of this conflict occurs in locations such as Blackmans Flat (impact on mining and power generating developments), Clarence (impact upon underground mining), Baal Bone Colliery (impact upon underground mining and surface works), Megalong and Kanimbla Valleys (impact on agricultural management). • Reduction in security of investment for both those seeking rural lifestyle and primary producers. • Rural lifestyle development introduces matters of land stewardship in relation to weed control, bush fire hazard reduction, introduction of domestic animals, maintenance of water quality and quantity and soil management. • Conflict occurs at the interface of DECC and forestry lands and impedes the production and management regimes of these lands.
Fragmentation and conversion of primary production lands	• Conversion of lands from primary production inflates land values beyond primary production value, making it difficult for entry of rural producers and resource industries to buy in. • Land once converted in many cases will never revert back to primary production use. • Land parcel isolation. Rural land interspersed with rural lifestyle development is often cut off from other major land holdings making consolidation of land possible for farm management.

DISCUSSION OF ISSUES

Issues relating to the planning and management of rural lands are complex and varied. All issues are inter-related with the cumulative impact being greater than that of any one issue in isolation. This is the reason why these issues require a more strategic approach in the development of LEPs and supporting planning strategies and policies. It also requires an alignment and recognition of the myriad of legislative and policy frameworks across all three levels of government and the forging of successful community partnerships to achieve better planning outcomes.

The key rural planning issues for the Lithgow LGA are discussed in detail below.

FRAGMENTATION OF RURAL LAND

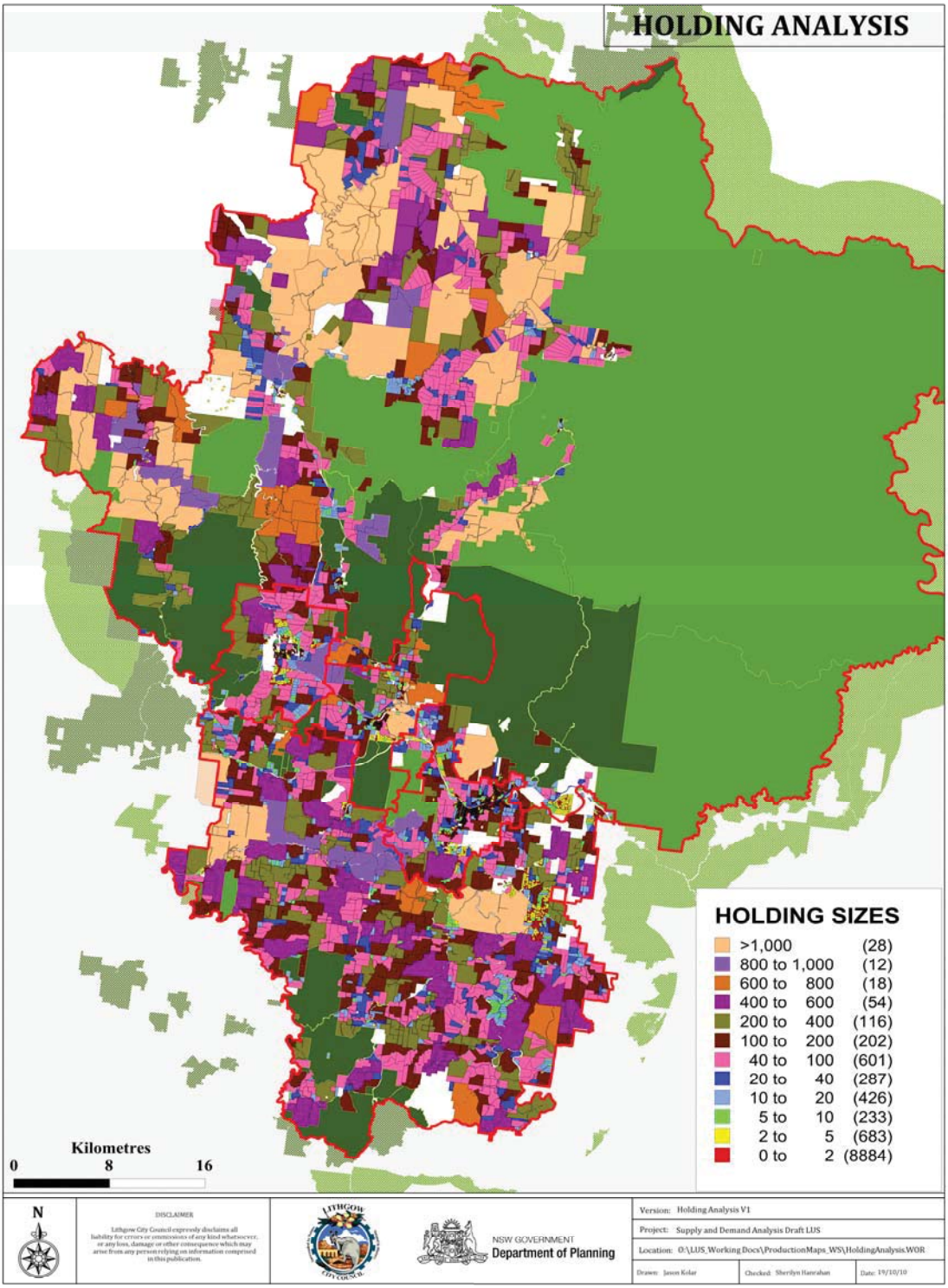
The fragmentation and potential loss of rural lands has been identified as a major issue for the Lithgow LGA in that it has the ability to impact significantly on the following areas:

- primary production such as mining and extractive industries, forestry and agriculture
- environmental values and environmentally sensitive lands
- sustainability of rural village and urban centres
- rural landscape and character.

Figure 1 clearly demonstrates the distribution of existing fragmentation within the wider rural areas of the LGA.

Superceded

Figure 1. LGA Holding Analysis



NOTE: There may be slight discrepancies between Figure 1 and Table 6 due to the date of their production. The manner in which land holdings are held is a continually changing factor. Within Council this data is updated on a monthly basis.

Table 6. Holding analysis of rural lands within the General and Outer Rural zones

Holding Size	Number of Holdings	Average Holding Size(ha)	% of Total Holdings	Area (ha)	% of Area
≥ 1000 ha	27	1626.59037	1.03%	43917.94	22.12%
400-1000 ha	84	574.6072619	3.20%	48267.01	24.31%
200-400 ha	112	277.7236607	4.27%	31105.05	15.67%
100-200 ha	195	143.0297949	7.43%	27890.81	14.05%
40-100 ha	590	54.79410169	22.49%	32328.52	16.28%
10-40 ha	612	20.76727124	23.33%	12709.57	6.40%
5-10 ha	164	7.952378049	6.25%	1304.19	0.66%
1-5 ha	328	2.68347561	12.50%	880.18	0.44%
0.1-1 ha	324	0.380185185	12.35%	123.18	0.06%
0.01-0.1 ha	185	0.054594595	7.05%	10.1	0.01%
≤0.01 ha	2	0	0.08%	0	0.00%
Total	2623		100.00%	198536.55	100.00%

Source: LCC

Table 6 shows that whilst there is a large area of the general and outer rural zoned areas held in larger holdings (76% above 100ha and 46% above 400ha) the area is clearly fragmented by smaller holdings with 84% below 100ha and 62% below 40ha.

Table 7 below provides a further breakdown of this holding analysis across the planning precincts. The precinct experiencing the highest level of fragmentation is the Rural South precinct with 506 holdings between 1 and 40ha.

Table 7. Holding Sizes in General and Outer Rural above 40 ha by precinct

Holding Scenarios							
	Average Holding size	Total No of Holdings	Lithgow	Wallerawang	Portland	Rural Nth	Rural Sth
1ha -5ha	3ha	328	65	12	17	83	145
5ha- 10ha	8ha	164	19	11	5	34	94
10ha – 40ha	21ha	612	49	33	37	226	267
Above 40Ha	182ha	1008	40	32	56	477	403
Above 100Ha	362ha	418	14	13	12	203	176
Above 200Ha	553ha	223	4	7	7	126	79
Above 400Ha	831ha	111	1	5	2	67	36

Note: Slight variances between total number of holdings and precinct totals may occur due to cadastre boundaries.

Table 7 also shows the average holding size of properties above 40 ha in the Lithgow LGA rural areas. This data shows that the current minimum lot size of 40 ha is inconsistent with the size of average holdings, meaning that, should the minimum lot size remain unchanged, that the potential for further significant land fragmentation may occur.

The table shows that the variance between the average holding size and minimum lot size would not substantially reduce until subdivision below 200ha was removed.

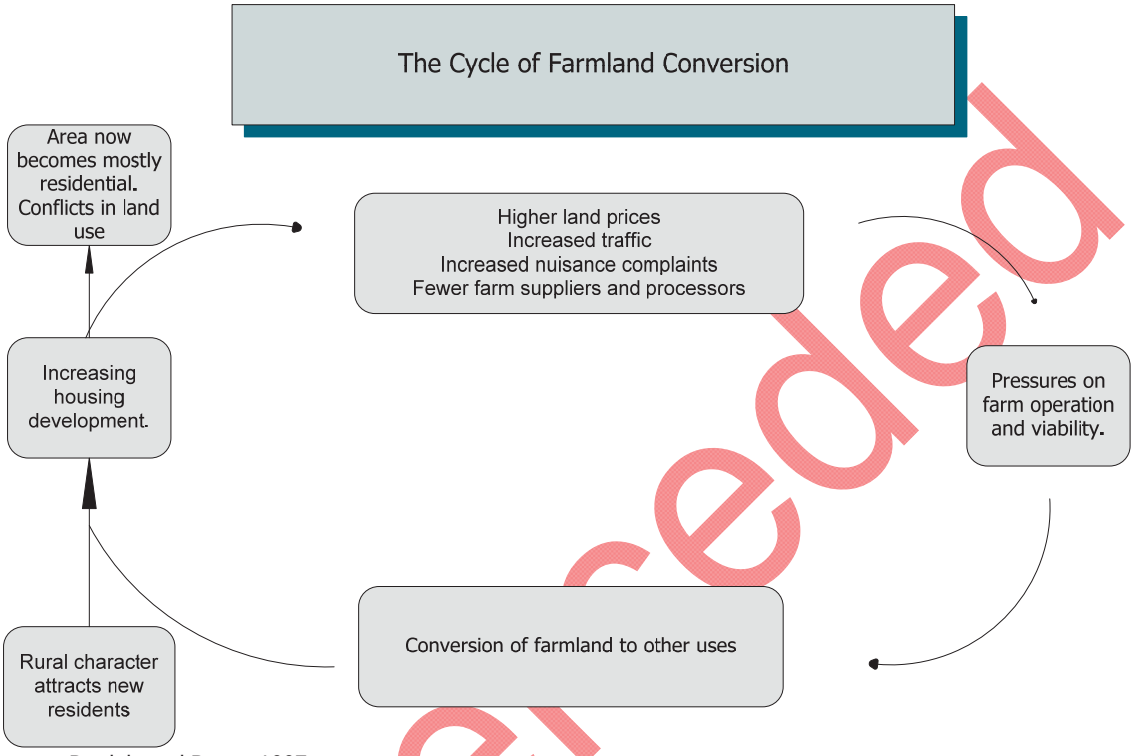
DRIVERS OF LAND FRAGMENTATION

One of the most significant threats to the sustainable management of rural lands is the pressure from rural lifestyle development. Rural Lifestyle development in this context is best described as development of a dwelling on rural lands as the primary use of the land to achieve a “lifestyle and amenity” which in most cases is unrelated to full-time agricultural pursuits.

Superseded

This form of development results in fragmentation of rural lands that is almost always non-reversible. The opportunity for future consolidation of lands is lost once the value of lands are elevated beyond their agricultural value. The inflated prices of rural lands also prevents the entry of new farmers. The cycle of rural land conversion is illustrated in the Figure 2:

Figure 2. Cycle of Farmland Conversion



Source: Daniels and Bower 1997

The fragmentation of rural lands in the Lithgow LGA is clearly being driven by rural lifestyle development pressures. The Lithgow Development Approvals Monitor 1996-2010 indicates that 32.7% of dwelling applications lodged were located within the Rural General zone. The majority of these dwellings were unrelated to the use of the land for any other purpose except for rural lifestyle residential.

Land fragmentation may also occur due to other forms of development such as intensive agriculture, tourism development and industrial development. The level of fragmentation due to these forms of development have historically been low in the Lithgow LGA and is not considered a key driver of fragmentation, however will also require further consideration in this Strategy.

CONCESSIONAL ALLOTMENT PROVISIONS

The Lithgow Subdivision Monitor 1996-2006 found that 49% (211) of all new allotments applied for in this period were under the concessional allotment provisions.

Concessional allotments were originally introduced to provide small lots, below the standard minimum lot size, for farm workers and to encourage intergenerational farming by allowing the erection of dwellings on separate lots whilst minimising the fragmentation of the larger holding. As stated in Central West Rural Lands Panel Report “this objective is no longer relevant and this concession has been misused with many of the concessional

Superseded

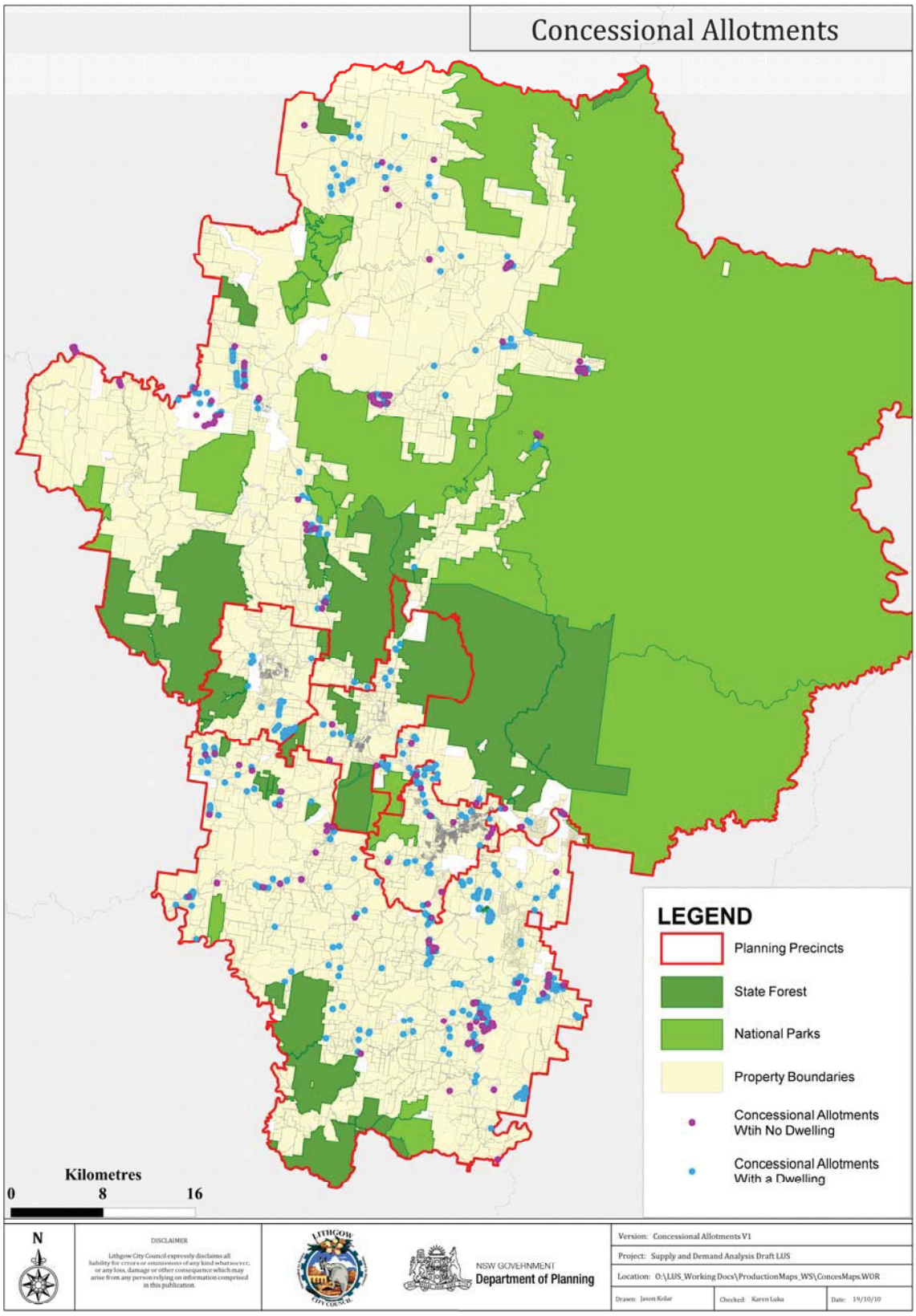
lots being sold to unrelated rural lifestylers. In this way concessional lots have become residential in nature and have resulted in land use conflict".

In the Lithgow LGA, past planning policy in the early 1970s to make concessions for the introduction of the 40 hectare minimum lot size has also created several unplanned rural residential estates in locations isolated from town centres and in some cases areas of marginal suitability and capability to sustain this land use.

An investigation of all small lots below 40 hectares in the Rural General area of the LGA has revealed a total of 555 collectively termed concessional allotments, 109 of which remain vacant. The distribution of these allotments is shown in Figure 3, highlighting the impact on rural land fragmentation.

Superceded

Figure 3. Pattern of Concessional Allotment take up in Lithgow LGA



EXISTING MINIMUM LOT SIZE

Although removal of the concessional allotment provisions will stem the flow of small rural lifestyle lots it, in itself, will not be sufficient to reverse the trends for rural lifestyle development driving rural land fragmentation within the Lithgow LGA. Any new planning approach must also address the appropriateness of the existing 40 hectare minimum lot size.

The Lithgow Subdivision Monitor 1996-2006 found that 48% (208, 45 of which were residual allotments >80ha) of new allotments applied for in this period were enabled by the standard 40 hectare minimum lot size provision. Again the majority of these dwelling lots were unrelated to the use of the land for any other purpose except for rural lifestyle residential as indicated by 32.7 % of dwelling applications between 1996- 2009 being within the General Rural zone.

An analysis of the future potential of further rural land fragmentation under the existing 40 hectare minimum lot size indicates a maximum potential for an additional 3775 lots to be created in the Rural (General) area and distributed in the planning precincts as indicated in Table 8 below.
Note: Category B are vacant lands in the rural zone with further subdivision potential, whilst category C lands are those lands with a dwelling in the rural zone with further subdivision potential. Such distinction recognises that lands have different levels of market readiness and/or motivations for subdivision.

This LGA supply level under the current demand indicators of 33 dwellings per year would take 114 years to be exhausted. Broken down into precincts the supply years are represented as 290 in the Rural North and 66 years in the Rural South precincts.

Over the 20 year life of the strategy this hanging supply, under current demand indicators, would result in a further 160 dwellings (384 persons) in the rural north and 340 dwellings (816 persons) in the Rural South. Although the numbers themselves may not appear significant, they are when considered against the principles of a settlement hierarchy and provisions of services and facilities to support communities.

Table 8. Potential supply under existing 40 hectare provision

	Lithgow	Portland	Wallerawang	Rural North	Rural South	
Category B						
Subdivision Vacant Lots 80ha> 1a	68	52	42	660	280	1102
Category C						
Holding 80ha> 1a with dwelling	50	54	69	1659	841	2673

Source: Extract LCC Supply and Demand Analysis Oct 2010 Appendix 1

Continued and unchecked conversion of rural lands in this manner is not sustainable and will only contribute to the worsening of the other issues facing rural lands as discussed below.

LAND USE CONFLICT

Rural land use conflict is a significant consequence and reflection of rural land fragmentation. It occurs as a result of the inappropriate union of incompatible land uses, in particular the proximity of residential development to primary production such as forestry, agriculture, mining and extractive industry, other industry as well as environmentally sensitive areas.

Superceded

The major contributor to land use conflict in the Lithgow LGA is the dispersed and unplanned proliferation of rural lifestyle development on a range of lot sizes. Often rural "lifestylers" move into rural areas because of the rural setting but with an expectation that primary production land uses will not impact on their amenity or enjoyment of their land. This is notwithstanding that in many cases the primary production land use/activity preceded the rural lifestyle development and complies with relevant legislation and policies.

Conflict by nature arises from unmatched expectations. The divergence of some of the more common expectations between rural "lifestylers" and the more traditional rural landowners is shown in the following table:

Table 9. Expectations for Land Use

Rural Lifestylers Expectations for land use	Traditional Rural Landowners Expectation for land use
Residential amenity with associated services such as garbage collection	Weed control
Low noise tolerance	Bush Fire Hazard control
Low odour tolerance	Domestic animals control
Low dust tolerance	
Maintenance of limited curtilage around dwelling with little or no attention to remaining land area	Land stewardship land restoration
Keeping of domestic and hobby farm animals	Feral animals control
Unrestricted use of recreational vehicles (motorcycles, 4WD and quad bikes)	Stock control and adequate fencing
Siting of dwelling for views or ease of construction	Siting of buildings for functional operation and maintenance or rural character

As land is split up and the number of landowners increase on the boundaries of larger holdings the resolution of these conflicts and achievement of natural resource management objectives becomes more difficult to achieve.

Whilst the above represents conflict between rural "lifestylers" and agricultural landowners, conflict can and does occur with other types of rural land users such as industry, mining and forestry. Such conflict often impacts on the normal operations of these uses and, depending on the extent of these conflicts, may jeopardise the future expansion and/or viability of some areas resulting in resource sterilisation or industry job losses.

In the Lithgow LGA, a prime example of unresolvable land use conflict and inappropriate juxtaposition of land uses occurs in the area locally known as Blackmans Flat. In this area conflict between rural lifestyle development and the power generation and mining industry cannot be reconciled without extreme measures such as land acquisition. This case study highlights the fact that development assessment and regulatory processes are ill equipped to address such intense land use conflict. The potential for this level of conflict needs to be removed in the strategic planning process and implemented through the LEP.

The two operating planning instruments (LEPs) are ineffectual in minimising land use conflict. They are structured on a flexible zoning framework, whereby the Rural General zone permits a range of land uses ranging from a dwelling to offensive and hazardous industries and do not contain any provisions for prescriptive buffering of land use likely to give rise to land use conflict. Compounding this fact is the low minimum lot size for rural lifestyle development and the retention of concessional lot and existing holding dwelling entitlements throughout the rural area.

Superce

UNECONOMIC PROVISION OF INFRASTRUCTURE AND SERVICES

The Lithgow LGA contains a large land mass (4,550km²) with varying landforms and capability. Providing infrastructure and services throughout the LGA is difficult due to the distances between higher order centres and the varying level of services available.

Continued and dispersed forms of settlement in the rural areas create an uneconomic demand for infrastructure and services provided by both local government and other levels of government.

From a local government perspective, it creates a demand for increased level of service and provision of rural roads, garbage collection facilities, library outreach services, cemeteries and community facilities such as halls and support facilities for emergency services.

It also increases the cost of provision of governance and regulatory services such as development assessment and environmental health.

In the rural areas, the most significant infrastructure provision is that of rural roads and bridges.

Council's road network includes 192.5km of urban sealed roads, 23.9km of urban unsealed roads and 43.8km of arterial road which are all sealed. With regard to Council's unsealed roads there is a total length of 411.8km of unsealed rural road and 201.6km of sealed rural road. For a population of the Lithgow Council area of approximately 22,000 you can see that Council's road network is indeed extensive with regard to that population. There are also a number of RTA roads which traverse the Council area. They come to a total of 149.5km and in the past Council has been responsible for the maintenance of the shoulders and drainage structures on such roads.

Council expends 1.45 million dollars on urban road maintenance and 1.296 million dollars on rural roads maintenance.

The Capital Works program on an annual basis for improvements is very limited by funding options and basically is restricted to about 1.6 million dollars per year for Capital improvements. In the opinion of Council's road experts, Council needs an allocation of a minimum of 6-8 million dollars per year for Capital Improvements to its rural road network to maintain an appropriate standard.

Demands on Councils rural roads network in addition to demands from redistribution of populations throughout the rural areas is extremely high. Council has an extensive rural road network that provides access to a number of remote areas, predominantly in the valleys within the Lithgow Council area and it is far from economical to continue to maintain these roads under normal conditions for residential and tourist traffic. The added costs of upgrading some of these existing roads to a standard suitable for further ongoing development scattered throughout the Council area is causing serious problems for Council, in not only maintaining the existing road network but also improving the road network to a satisfactory standard that is being expected more and more from Council's road users.

Councils rural road network is also located in very difficult topographic areas and the extreme climates of the LGA further add to the maintenance costs and difficulties of ensuring that the rural road network is up to a standard that is acceptable to all users. The added burden of tourist traffic throughout the area coupled with the demands from new residents in the rural area is proving to be a major financial impost on Council's ability to allocate funds to meet the demands of the community.

Intensification of population outside the major urban centres in a dispersed manner does not allow Council to effectively plan and budget for road maintenance and this leads to a demand for level of services that cannot be met into the future. It also does not allow for an effective developer contributions framework to be developed due

Superceded

to the uncertainty of spatial demand and establishment of nexus between development and required infrastructure improvements and service provision.

Lithgow City Council does not have the financial capacity to meet these increased costs without significantly sharing the cost burden across all ratepayers through rate increases.

LOSS OF CRITICAL MASS FOR URBAN CENTRES

Whilst living opportunities in the rural areas provide a "lifestyle" choice, when it replaces development in the urban areas to the extent experienced since 1996 (representing more than 50% of all dwelling application lodged), it reduces the opportunity for critical mass to be retained in urban areas and achievement of economies of scale.

The wider distribution of the population base also increases the potential for a proportion of the population to access higher order services in district centres outside of the LGA.

This places in jeopardy the retention of critical higher order community infrastructure within the main town centres and reduces the potential for new services to be secured.

SOCIAL ISOLATION AND POCKETS OF DISADVANTAGE

Chapter 5 discusses the SEIFA index for the Lithgow Local Government Area. The LGA has been identified as an area of disadvantage with Postcode 2846 being in the top 5% of disadvantaged postcodes in NSW (Community Adversity and Resilience 2004).

Dispersed rural settlement has the potential to create social isolation and pockets of disadvantage due to the distances to higher order centres, lack of community structure and equitable access to social and community services.

Reliance on the motor vehicle is critical due to lack of public transport options in rural areas. Rising fuel costs compound this issue.

This will be made worse into the future as the population ages and access to services becomes more critical. The opportunity for ageing in place (ie, remaining in ones own homes) is significantly reduced in rural areas.

PROTECTION OF ENVIRONMENTALLY SENSITIVE LANDS AND NATURAL RESOURCE MANAGEMENT

Environmental values and characteristics of the LGA are contained within Section 6 of the 2007 Local Profile.

The rural areas of the Lithgow LGA have diverse and significant environmental values, many of which are not protected within the National Park and Reserves. The LGA's environmentally sensitive areas have been mapped and these are included in Chapter 7.

The most significant threat to these environmentally sensitive areas is the inappropriate location and intensification of rural lifestyle development.

Superceded

In 2006 DECC identified "rural land fragmentation and settlement intensification as a major pressure on many community values that are core elements of sustainable development".

Impact on the environmental values of rural land through rural lifestyle development can occur through the following:

- Increased risk of land use conflict
- Increased risk of vegetation and biodiversity loss
- Increased risk of bush fire threat
- Increased risk of soil erosion and loss of soils
- Increased risk to river health and fish habitat
- Increased risk to the control of noxious weeds and feral animals
- Increased risk to preservation of rural landscapes and cultural heritage.

This form of development, being dispersed and unplanned, works against the achievement of natural resource management outcomes. Such outcomes are more easily achieved when land is retained in larger holdings.

Consideration of the range of environmental values should not be deferred to the development assessment process, as often, conservation objectives cannot be achieved at this scale.

A planning approach coupling cluster planning of rural lifestyle development through a large minimum lot size for the erection of a dwelling and the consideration of a range of zonings to protect significant environmental sensitivities is required.

PROTECTION OF PRIMARY PRODUCTION RESOURCES

MINERAL RESOURCES

The Lithgow LGA contains a range of important known and potential energy and industrial mineral resources. These include coal, coal seam gas and sand resources in the eastern portion of the LGA and limestone and related industrial mineral resources in the west. Metallic minerals (gold, copper and base materials) are also present within the western portion of the LGA and exploration licences are in force.

While the location of mineable deposits cannot always be predicted, known resources need to be protected so they are not sterilised by incompatible land uses.

These resources have been mapped by the Department of Industry and Investment (DII) and the Draft findings are shown in Figure 8 of Chapter 7. DII are currently finalising the 2010 Resource Audit for the Lithgow LGA to which the Ministerial Direction under Section 117 of the EP & A Act will apply. This information has been used in evaluating the location and extent of current and potentially new settlement areas in the LGA to avoid land use conflict.

The mining industry employs 773 persons (2006) and represents 10% of the Lithgow LGA workforce. Thermal power generation is interdependent on the local coal mining activity. Two base-load power stations are operated by Delta Electricity in Lithgow LGA. These enterprises and the coal mines generate multiplier effects in engineering and the maintenance industries in the LGA. It is considered that these will remain the mainstay of employment and economic drivers in the Lithgow LGA throughout the life of this Strategy.

Superceded

Coal mining and extractive industries present the following challenges:

- These activities are permissible with development consent within the current General Rural and Outer Rural zones. This conflicts with the general perception of a rural zone being primarily for agriculture and ancillary housing.

- How to manage mine and extractive industry rehabilitation, including both progressive and upon closure.

- Impact of mining and extractive industry on the environment such as key natural features, land form and landscape quality.

- Local planning to protect state and regionally significant resources is restricted by a Ministerial Direction (No 1.3) under Section 117 of the EP & A Act, 1979.

One of the largest threats to the mining and extractive industry base that can be controlled by the planning process is land use conflict driven by a proliferation of rural lifestyle development.

AGRICULTURE

The Agricultural industry in the Lithgow LGA contributes approximately $14 million dollars annually to the economy (2007 Local Profile). Although a smaller contribution than surrounding regions, it is still significant and for the most part represents an additional income for rural landowners.

The Lithgow LGA has negligible land areas classified as prime crop and pasture lands. Only 64% of the land within the General Rural zone is capable of some form of agriculture (2007 Local Profile Table 5.19). Grazing is the predominant activity of which beef and sheep production are the most significant enterprises. Here, agricultural activities/landuse match land capability, essential to their sustainability.

Land capability and holding size are both major determinants of land use within the LGA. The majority of agricultural capable land has already been divided into holdings less than 400 hectares (Ivey ATP, 2006). In nearly all instances, owners of these holdings would be relying on off-farm income. It is important to note that many of the smaller holdings classed as being capable of supporting agriculture (on a land capability basis) are not economically sustainable in their own right.

Ivey ATP(2006) found that there were only 9 holdings within agriculturally capable land in the LGA large enough (1000ha) to be considered self-sufficient agricultural enterprises. This was based on the assumption that most agricultural ventures would require an annual turnover of at least $132,000 to cover enterprise and overhead costs (2007 Local Profile Section 5). Smaller holdings, with an average turnover of below $132,000 would likely need some level of off-farm income to remain economically viable.

The biggest threat to agricultural lands within the LGA is continued fragmentation predominantly for rural lifestyle development. The extent and impacts of land fragmentation have already been discussed in previous sections

The protection of the agricultural resource in the Lithgow LGA raises the following key challenges:

- Managing land fragmentation and conversion of agriculturally capable lands for rural lifestyle development.

- Managing land use conflict.

Superceded

- Determining an appropriate minimum lot size for the erection of a rural dwelling.
- Providing opportunity for new and emerging agricultural enterprises.
- Integrating and aligning the land use planning process with natural resource management objectives and regulatory regimes.

FORESTRY

Forestry zoned lands represent 14.89% of land area within the Lithgow LGA and they are located as shown in Figure 5 Chapter 7. The LGA also has one known private forest involving a further 279.5ha of rural land.

Forests NSW (2006) have advised that the Central Tablelands, incorporating Lithgow City Council, hosts a timber industry with $525 million in output, $226 million in gross regional product, $91 million in household income and almost 2,000 full time equivalent jobs which represents 5.8% of the Central Tableland gross regional product.

Plantation and native forests are dynamic systems exposed to management activities, recreation activities and natural forces.

Many of the activities that occur within forests have the potential to change the amenity value of adjacent lands. Perceptions of rural amenities such as visual landscape, fresh air, lack of urban noise and general peacefulness can be challenged by activities within forests and within most primary industries. In nearly all circumstances the location of residential (including rural lifestyle) on forest boundaries reduces the economic viability of forest management and the timber industry (Forests NSW).

Forests also provide for a range of tourism activities. Newnes, Sunny Corner, Ben Bullen and Jenolan State Forests are in the top most frequently visited Forests in NSW (Forests NSW).

Forests NSW construct roads and fire trails for harvesting, haulage, management and fire protection measures. These same roads, once constructed, fulfil other community functions. However, members of the public do not have unfettered rights to use forestry roads in the same manner as public roads. Forests NSW can restrict access in order to provide safety to its employees and the public, protect the environment and maintain the economic viability of the forest.

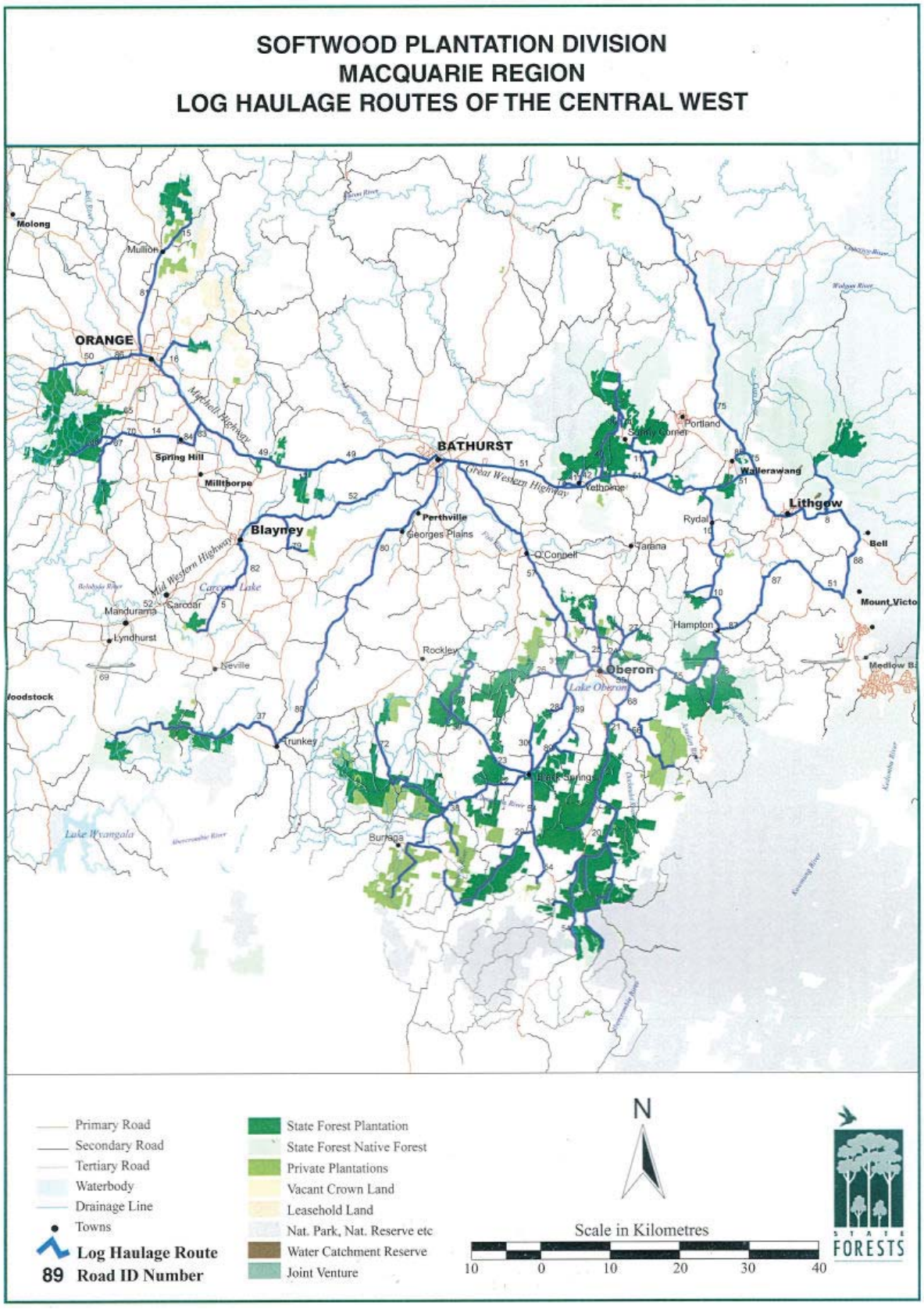
Haulage of timber products can impact upon local and State government road networks. Forests NSW has requested that where it has contributed to road improvement works that consideration be given to protecting timber haulage roads from subsequent residential development. The separation of heavy trucks and rural industry is also sound planning practice.

In the Lithgow LGA significant conflict exists between the use of Forests NSW roads for tourism and recreation access to the Newnes State Forest and the Glow-worm Tunnels within the Wollemi National Park.

The protection of land resources for forestry is most threatened by all forms of residential and urban development on its boundaries. The clear identification of forest resources and the allocation of compatible adjoining land uses will improve protection of this resource, increase certainty for landowners and reduce conflict.

Superceded

Figure 4. Log haulage routes of the Central West



Source: State Forests

WIND RESOURCE

The NSW Wind Atlas, Figure 5 shows that the Lithgow LGA has a relatively high wind speed as depicted by green shading.

The NSW Government is positioning NSW to take advantage of the predicted increase in investment in renewable energy that will result from the expanded national renewable energy target (RET) to 20% by 2020. Initially it is expected that most of the renewable energy supply will be met by wind energy developments. (DECC)

Six renewable energy precincts have been established across NSW in areas with the best-known wind resources in order to streamline the planning and approval process for wind developers. These include: New England Tablelands, Upper Hunter, Central Tablelands, NSW/ACT Border Region, South Coast and Cooma-Monaro. (DECC)

Precinct advisory committees will be formed in each of the six regions. A key focus of committees will be to enhance consultation and engagement with local government and local communities so that local communities will get a voice and a stake in renewable energy development within their region. To help facilitate improved engagement, the precinct advisory committees will include broad community representation. (DECC)

The Lithgow LGA has been introduced to Wind Farms through the establishment of the Hampton Wind Park and increasing focus and priority on alternative energy supplies provides further potential opportunities. The Hampton Wind park produces power from two 660kW wind turbines and enhances the quality of supply in the surrounding rural electricity grid. This wind farm supplies electricity to Integral Energy's Green Power customers.

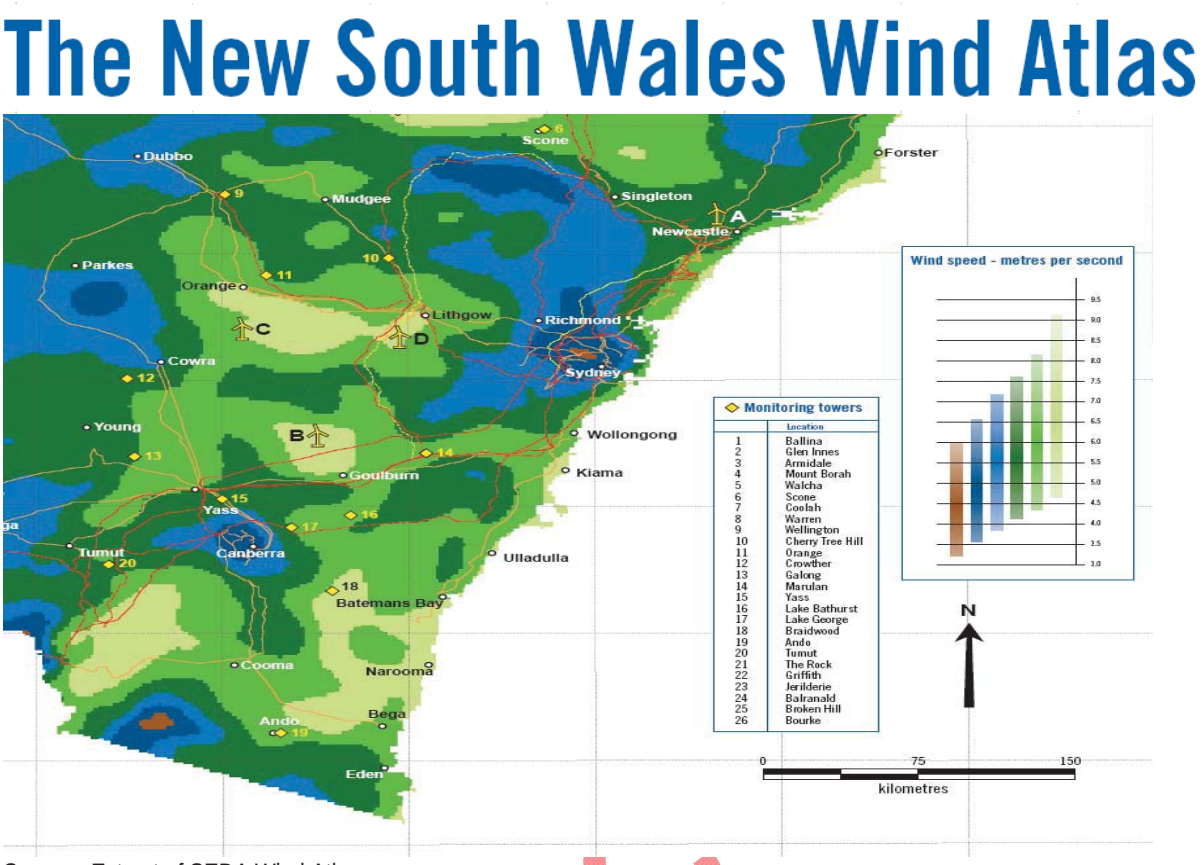
Key issues associated with wind energy land use as identified by Planning NSW (2002) includes:

- Selection of an appropriate location
- Minimisation of landscape and visual amenity impacts
- Minimisation of noise and electromagnetic disturbance impacts
- Minimisation of adverse impacts on aerial fauna
- Minimisation of land use conflicts

Management of rural lands through this Strategy to cluster settlement intensification away from natural resource areas (including high wind areas) and to reduce dispersed rural lifestyle will benefit both the planning and future potential for renewable energy projects within the LGA. This will enable planning at the operational and assessment level to function more effectively by minimising land use conflict and identifying priority land uses for rural areas.

Superceded

Figure 5. The New South Wales Wind Atlas



Source: Extract of SEDA Wind Atlas

Superc

DISCUSSION OF NEW PLANNING APPROACH

DETERMINING AN APPROPRIATE MINIMUM LOT SIZE (MLS) FOR ERECTION OF A DWELLING

The establishment of minimum lot sizes is the key planning tool by which the planning system is able to manage development and land use within the rural areas.

Since the introduction of the Rural Lands SEPP (clause 9), adherence to a prescribed minimum lot size for primary production land use and activities where no dwelling is involved has been relaxed. This allows land owners a greater chance to achieve zone objectives that facilitate primary production. It recognises the changing face of agriculture where the trends are for larger farms to become larger and smaller farms becoming smaller and where no longer is farm viability measured on holding size. It also allows for non-contiguous farming enterprises particularly in relation to the mainstay of agriculture in the Lithgow LGA being grazing.

Therefore minimum lot size as a planning tool is now focused primarily on managing the density of rural dwellings.

REVIEW OF THE CURRENT MINIMUM RURAL LOT SIZE

The Rural Lands SEPP does not require Council to review the rural minimum lot size or change the minimum lot size in the existing LEPs.

Notwithstanding this, and having regard to the discussion or rural planning issues, the following provides a review of the rural minimum lot size for the following reasons:

- The continued fragmentation of primary production lands for rural lifestyle development is unsustainable.
- The current standards, if left unchanged, will continue to produce poor planning outcomes across the four sustainability areas of social, economic, environmental and governance. The impact of these outcomes will worsen over time.
- The LGA currently has two disparate minimum lot sizes relating to the General Rural (40ha) and Outer Rural (100ha) land use zones as a result of repealing the former Evans Shire planning instruments.
- There is an existing Council resolution (Min No 008-227) to strategically review minimum lot size for the erection of a rural dwelling in the development of a Land Use Strategy the new LEP.
- To implement related strategies of Council's 2007 Strategic Plan in particular G2 and G5.

RURAL PLANNING AND SUBDIVISION PRINCIPLES UNDER SEPP (RURAL LANDS) 2008

In reviewing the minimum lot size of rural lands under Local Environmental Plans, the Minister of Planning under Section 117 of the Environmental Planning & Assessment Act has directed that Councils exercise their functions in accordance with the Rural Planning Principles and Rural Subdivision Principles outlined in State Environmental Planning Policy (Rural Lands) 2008.

Superceded

RURAL PLANNING PRINCIPLES ARE AS FOLLOWS:

a) The promotion and protection of opportunities for current and potential productive and sustainable economic activities in rural areas.
b) Recognition of the importance of rural lands and agriculture and the changing nature of agriculture and of trends, demands and issues in agriculture in the area, region or State.
c) Recognition of the significance of rural land uses to the State and rural communities, including the social and economic benefits of rural land use and development.
d) In planning for rural lands, to balance the social, economic and environmental interests of the community.
e) The identification and protection of natural resources, having regard to maintaining biodiversity, the protection of native vegetation, the importance of water resources and avoiding constrained land.
f) The provision of opportunities for rural lifestyle, settlement and housing that contribute to the social and economic welfare of rural communities.
g) The consideration of impacts on services and infrastructure and appropriate location when providing for rural housing.
h) Ensuring consistency with any applicable regional strategy of the Department of Planning or any applicable local strategy endorsed by the Director General.

RURAL SUBDIVISION PRINCIPLES ARE AS FOLLOWS:

a) The minimisation of rural land fragmentation.
b) The minimisation of rural land use conflicts, particularly between residential land uses and other rural land uses.
c) The consideration of the nature of existing agricultural holdings and the existing and planned future supply of rural residential land when considering lot sizes for rural lands.
d) The consideration of the natural and physical constraints and opportunities of land.
e) Ensuring that planning for dwelling opportunities takes account of those constraints.

An assessment of these planning principles against the recommendations of this strategy has been included in Chapter 3.

MINIMUM LOT SIZE SCENARIOS

In order to address the above principles a series of data tables and maps have been produced comparing the future land management outcomes under a range of different minimum lot size scenarios.

The information presented in each scenario is a set of quantified data based on a desk top analysis of information derived from:

- Council's property data base using both a holdings and lot analysis to determine how land is held as well as existing dwelling entitlements under current planning instruments.
- Interpretation of aerial photography to determine if land is vacant.
- Demographic profile using Council's online community profile to forecast population.
- Identification of primary constraints.
  The overview primary constraints mapping identifies those lands within the LGA by: Environmentally Sensitivity Areas (including Land, Water and Biodiversity), Section 117 Directions- Mineral Resource Audit and Coal. High agricultural capability(class 1-3), Low Land capability(class 7 & 8).

Superceded

In order to quantify the supply of rural zoned land (with a dwelling entitlement) throughout the LGA, supply has been categorised based on its capacity to service demand in the immediate to short term. The following categories have been established as shown in Table 10 below.

Table 10. Supply of Rural Zoned Land

Category	Land Supply
Category A	Vacant land within the rural zone with no further subdivision potential but with dwelling entiltement
Category B	Vacant land in the rural zone with further subdivision potential
Category C	Land with a dwelling in the rural zone with subdivision potential

Source: LCC Supply and Demand Analysis, Appendix1

NOTE: The exercise of strategic scenario building is purely academic and presents a "worst case scenario", but it is useful as part of a suite of planning tools to guide the development of planning strategy.

Council has not maintained a register of approvals or land monitor that enables the spatial tracking of subdivision activity for the purposes of strategic analysis. This is a major data gap that does not allow easy analysis of the implications of the General Restriction Clause 12(1) for the determination of future subdivision potential. Therefore the building of the minimum lot scenarios below has been undertaken without consideration of this Clause and as such, represents maximum lot potential which may in some cases be an overestimation.

This exercise also assumes that all landowners have the same desire and capacity to subdivide their lands and that all lands have equal capability of subdivision potential.

Superc

EXISTING 40 HA MINIMUM LOT SIZE SCENARIO

Under this scenario, indicated in Table 11 and Figure 6 below indicates that there would be a potential for a maximum of 3775 new allotments that may be able to be created in the Lithgow LGA. The majority of which (61.4% of 2319 lots) would be within the Rural North precinct.

The table also indicates that there would be a further 666 allotments that would attract a dwelling entitlement without the need for subdivision under the 40ha minimum lot size, existing holdings and concessional dwelling entitlements).

Together, this estimated subdivision and dwelling potential could see a further 10, 658 persons living in the rural areas using the assumption that all entitlements would be taken up, and all houses would be occupied by 2.4 persons (being the average LGA household size at 2006 Census).

Under this existing scenario only 7.58% of the rural land area within the LGA would be protected from further fragmentation.

Table 11. Scenario of existing 40ha Minimum Lot Size for Dwellings within the wider Rural area

	Lithgow	Portland	Wallerawang	Rural North	Rural South	
Category A						
Vacant Holdings 1a 40><80	10	2	5	79	62	158
Vacant Existing Holdings 1a	25	11	7	281	75	399
Vacant Concessionals 1a	8	0	0	67	34	109
Category B						
Subdivision Vacant Lots 80ha>1a	68	52	42	660	280	1102
Category C						
Holding 80ha>1a with dwelling	50	54	69	1659	841	2673
Total Supply	161	119	123	2746	1292	4441
Potential population (persons)	386	285	295	6590	3100	10658
Total Supply less Existing holdings (lots)	136	108	116	2462	1217	4039
Potential populations (persons)	326	259	278	5908	2920	9691
% of rural zone within LGA protected from further fragmentation						7.58%

Source: LCC

Superseded

Figure 6. 40 Hectare scenario

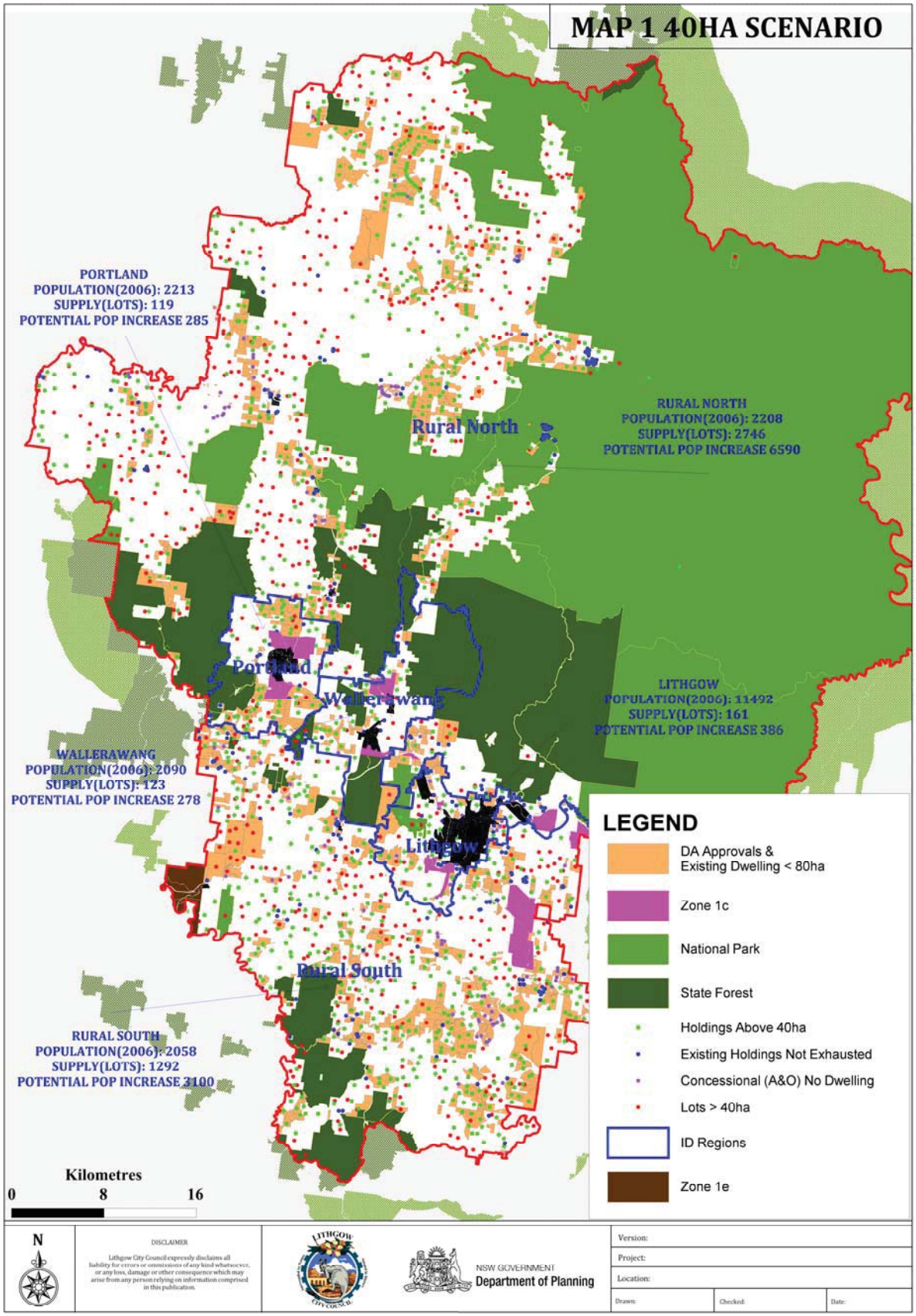
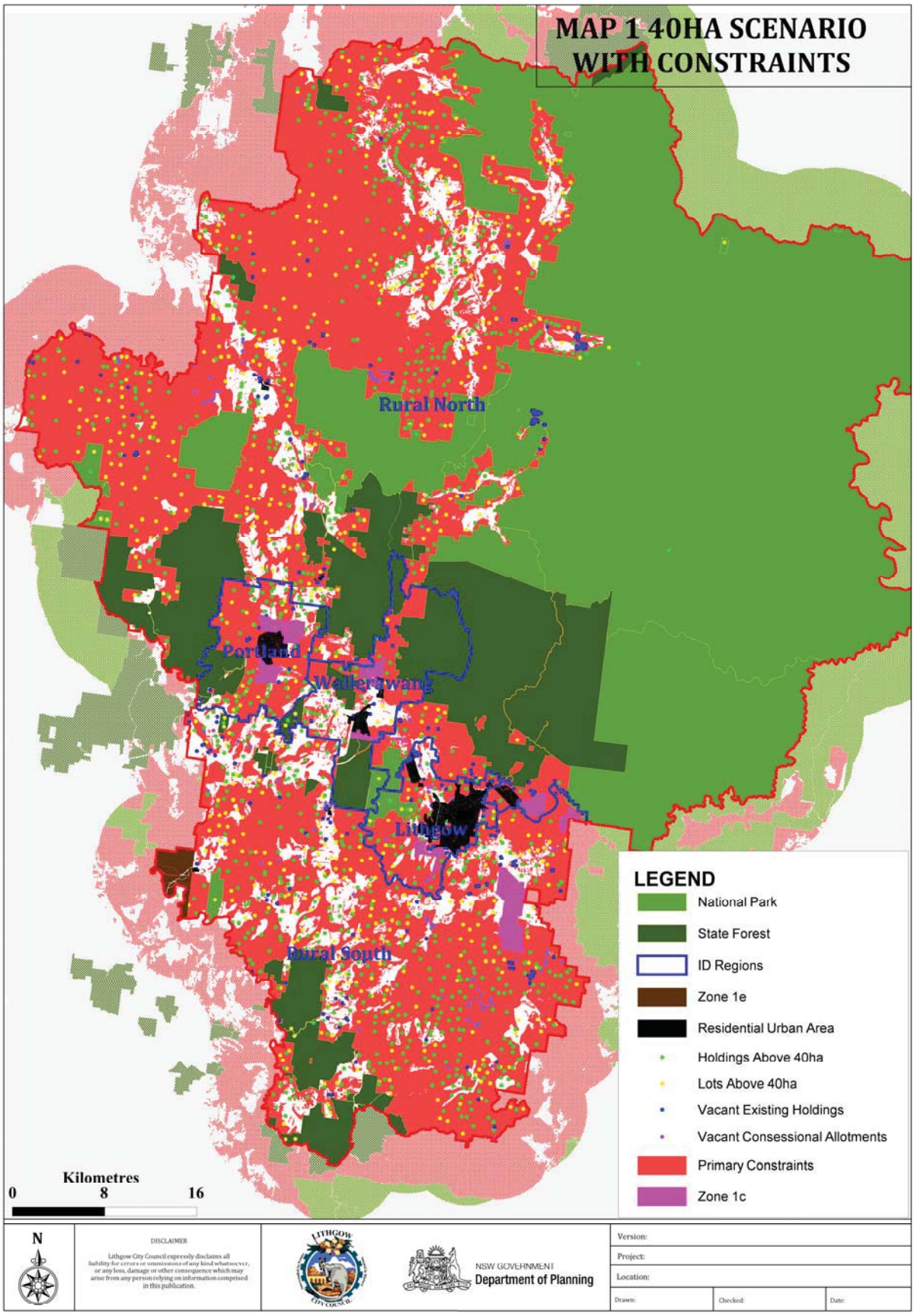


Figure 7. 40HA Scenario with Constraints



100HA MINIMUM LOT SCENARIO

Under this scenario, Table 12 and Figure 8 below indicates that there would be a potential for a maximum of 1068 new allotments that may be able to be created in the Lithgow LGA. The majority of which (69%, 738) would be within the Rural North precinct.

The table also indicates that there would be a further 565 allotments that would attract a dwelling entitlement without the need for subdivision under a 100 ha minimum lot size, existing holdings and concessional dwelling entitlements).

Together, this estimated subdivision and dwelling potential could see a further 3919 persons living in the rural areas using the assumption that all entitlements would be taken up, and all houses would be occupied by 2.4 persons (being the average LGA household size at 2006 Census.

Under this scenario 23.8% of the rural land area within the LGA would be protected from further fragmentation.

Table 12. Scenario of a 100ha Minimum Lot Size for Dwellings within the wider Rural area

	Lithgow	Portland	Wallerawang	Rural North	Rural South	
Category A						
Vacant Holdings 1a 100><200	7	0	1	27	22	57
Vacant Existing Holdings 1a	25	11	7	281	75	399
Vacant Concessionals 1a	8	0	0	67	34	109
Category B						
Subdivision Vacant Lots 200ha>1a	7	11	7	167	66	
Category C						
Holding 200ha>1a with dwelling	5	11	20	571	204	
Total Supply	52	33	34	1113	401	1633
Potential population (persons)	124	79	81	2671	962	3919
Total Supply less Existing holdings (lots)						
Potential populations (persons)	64	52	64	1996	782	2961
% of rural zone within LGA protected from further fragmentation						23.8%

Source: LCC

Superseded

Figure 8. 100 Hectare Scenario

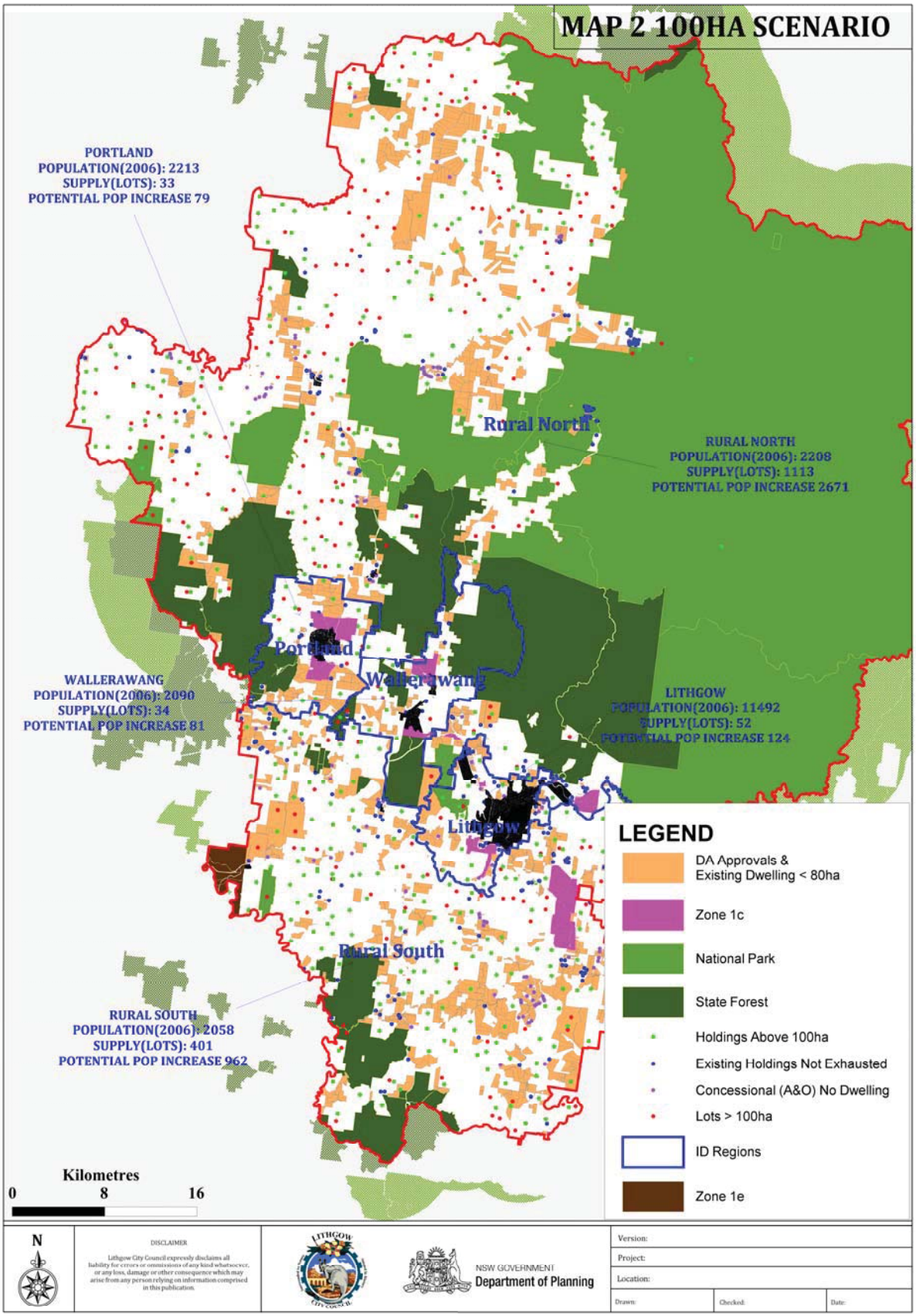
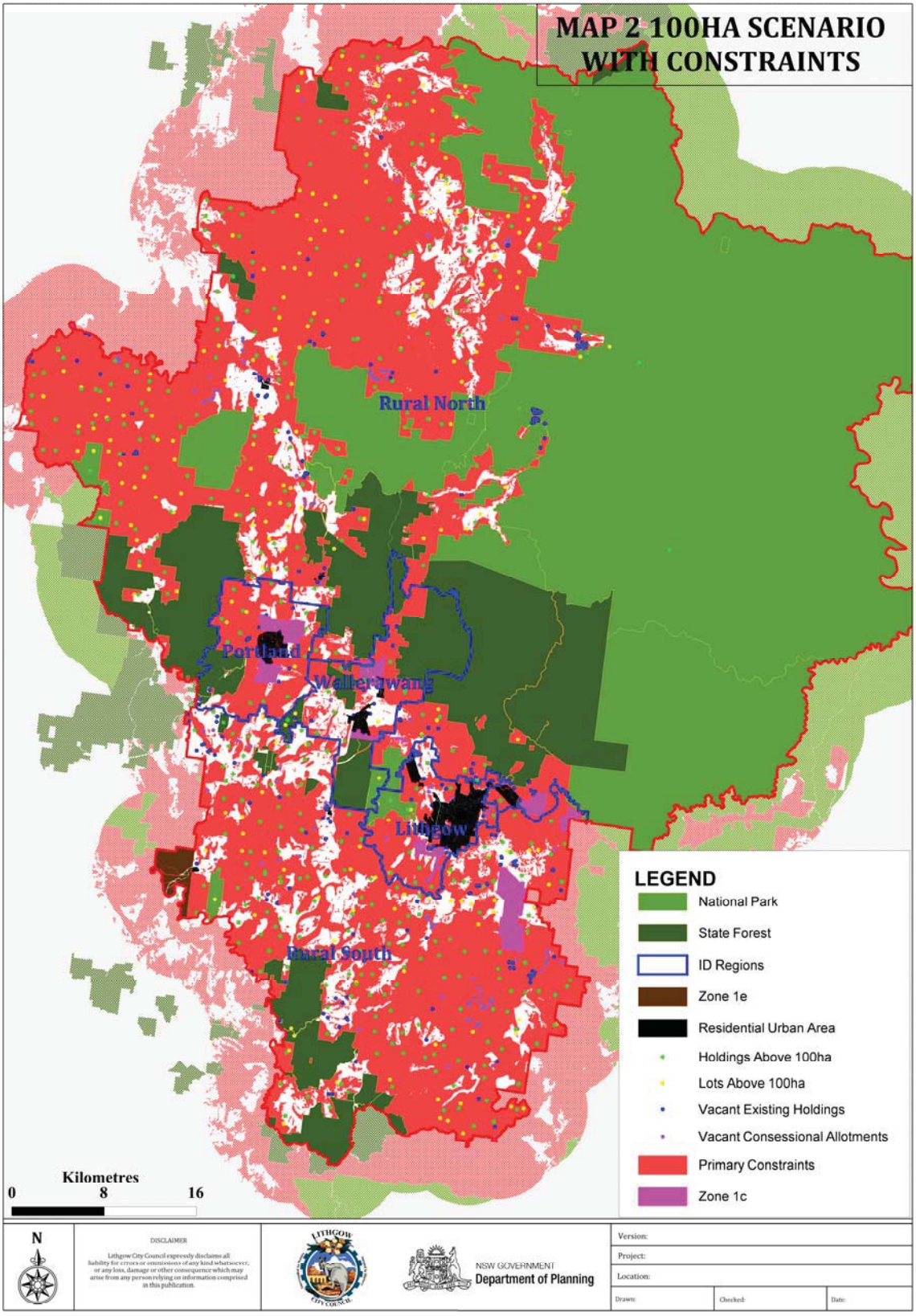


Figure 9. 100HA Scenario with Constraints



200 HA MINIMUM LOT SIZE SCENARIO

Under this scenario, Table 13 and Figure 10 below indicates that there would be a potential for a maximum of 374 new allotments that may be able to be created in the Lithgow LGA. The majority of which (73.5%, 275) would be within the Rural North precinct.

The table also indicates that there would be a further 544 allotments that would attract a dwelling entitlement without the need for subdivision under a 200 ha minimum lot size, existing holdings and concessional dwelling entitlements).

Together, this estimated subdivision and dwelling potential could see a further 2203 persons living in the rural areas using the assumption that all entitlements would be taken up, and all houses would be occupied by 2.4 persons (being the average LGA household size at 2006 Census.

Under this scenario 37.7 of the rural land area within the LGA would be protected from further fragmentation.

Table 13. Scenario of a 200ha Minimum Lot Size for Dwellings within the wider Rural area

	Lithgow	Portland	Wallerawang	Rural North	Rural South	
Category A						
Vacant Holdings 1a 200><400	3	1	1	18	13	36
Vacant Existing Holdings 1a	25	11	7	281	75	399
Vacant Concessionals 1a	8	0	0	67	34	109
Category B						
Subdivision Vacant Lots 400ha>1a	0	4	2	58	16	
Category C						
Holding 400ha>1a with dwelling	1	1	8	217	67	
Total Supply	37	17	18	641	205	918
Potential population	88	40	43	1538	492	2203
Total Supply less Existing holdings (lots)	12	6	11	360	130	519
Potential Population	28	14	26	864	312	1245
% of rural zone within LGA protected from further fragmentation						37.77%

Source: LCC

Superseded

Figure 10. 200 Hectare scenario

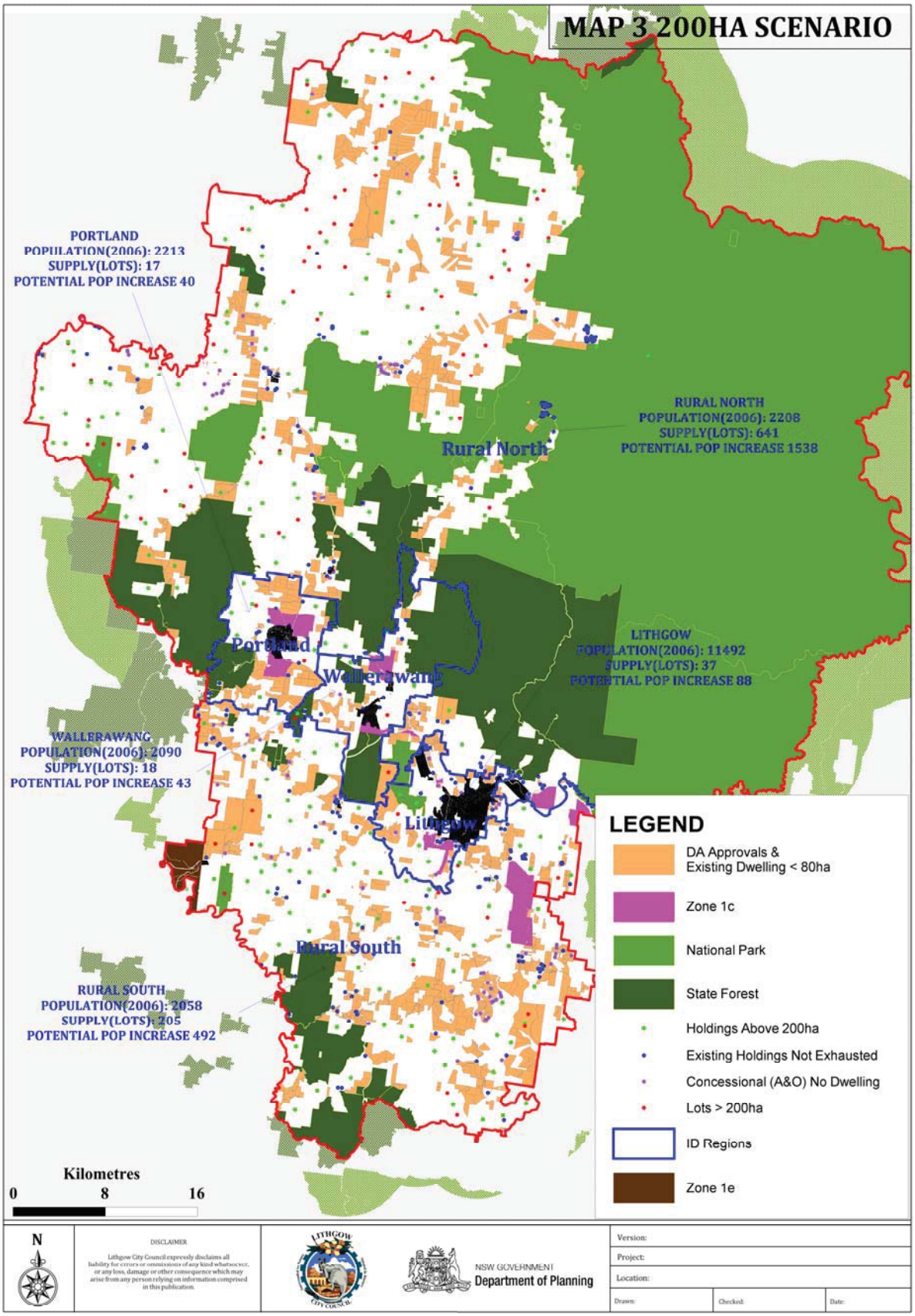
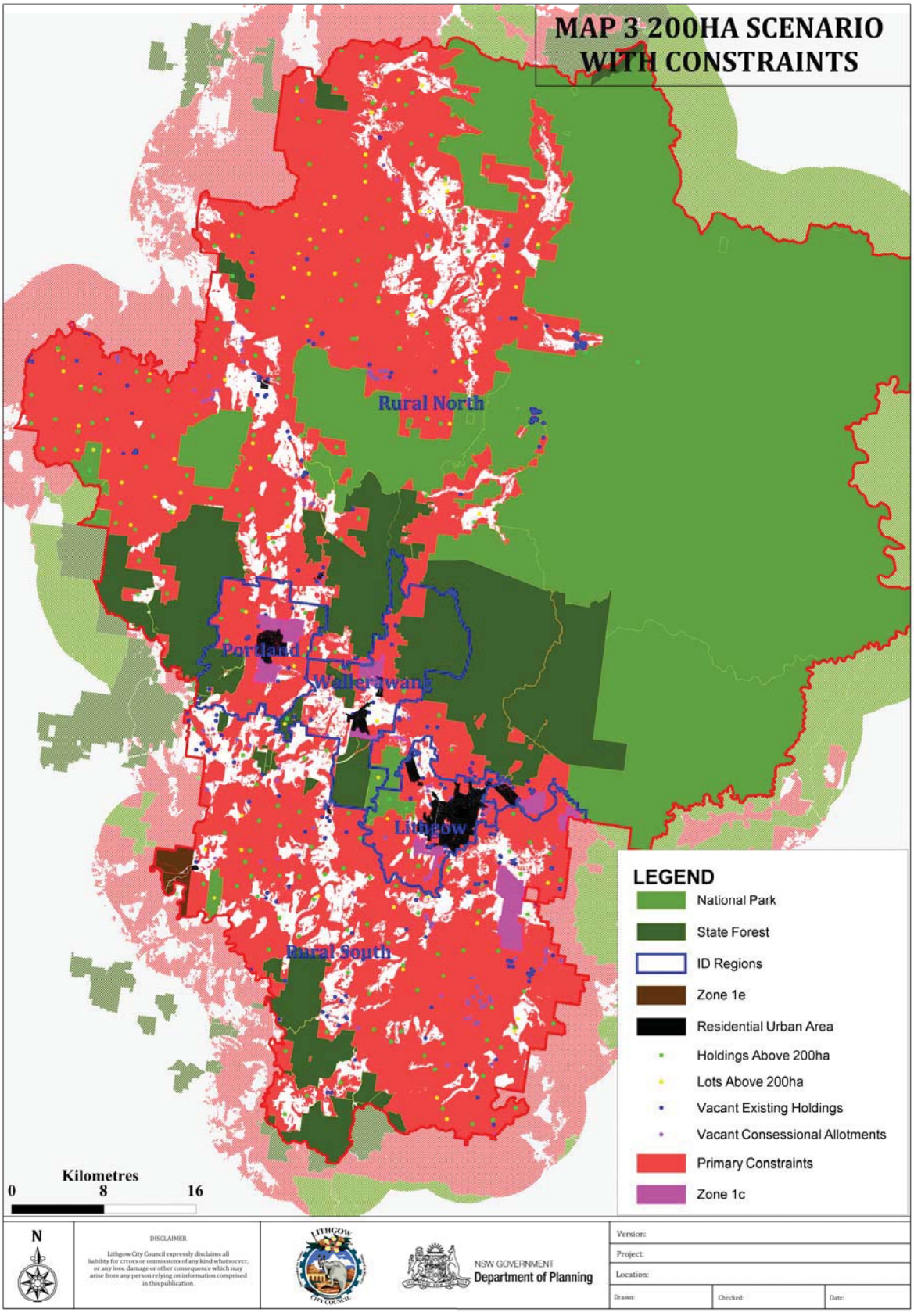


Figure 11. 200HA Scenario with Constraints



400HA MINIMUM LOT SIZE SCENARIO

Under this scenario, Table 14 and Figure 12 below indicates that there would be a potential for a maximum of new 102 allotments that may be able to be created in the Lithgow LGA. The majority of which (87%, 89) would be within the Rural North precinct.

The table also indicates that there would be a further 520 allotments that would attract a dwelling entitlement without the need for subdivision under a 400 ha minimum lot size, existing holdings and concessional dwelling entitlements).

Together, this estimated subdivision and dwelling potential could see a further 1492 persons living in the rural areas using the assumption that all entitlements would be taken up, and all houses would be occupied by 2.4 persons (being the average LGA household size at 2006 Census.

Under this scenario 54.75% of the rural land area within the LGA would be protected from further fragmentation.

Table 14. Scenario of a 400ha Minimum Lot Size for Dwellings within the wider Rural area.

	Lithgow	Portland	Wallerawang	Rural North	Rural South	
Category A						
Vacant Holdings 1a 400><800	0	0	1	6	5	12
Vacant Existing Holdings 1a	25	11	7	281	75	399
Vacant Concessionals 1a	8	0	0	67	34	109
Category B						
Subdivision Vacant Lots 800ha>1a	0	1	0	20	1	
Category C						
Holding 800ha>1a with dwelling	0	0	1	69	11	
Total Supply	33	12	8	443	126	622
Potential population	79	28	19	1063	302	1492
Total Supply less Existing holdings (lots)	8	1	1	162	51	223
Potential Population	19	2	2	388	122	535
% of rural zone within LGA protected from further fragmentation						53.75%

Source: LCC

Superseded

Figure 12. 400 Hectare Scenario

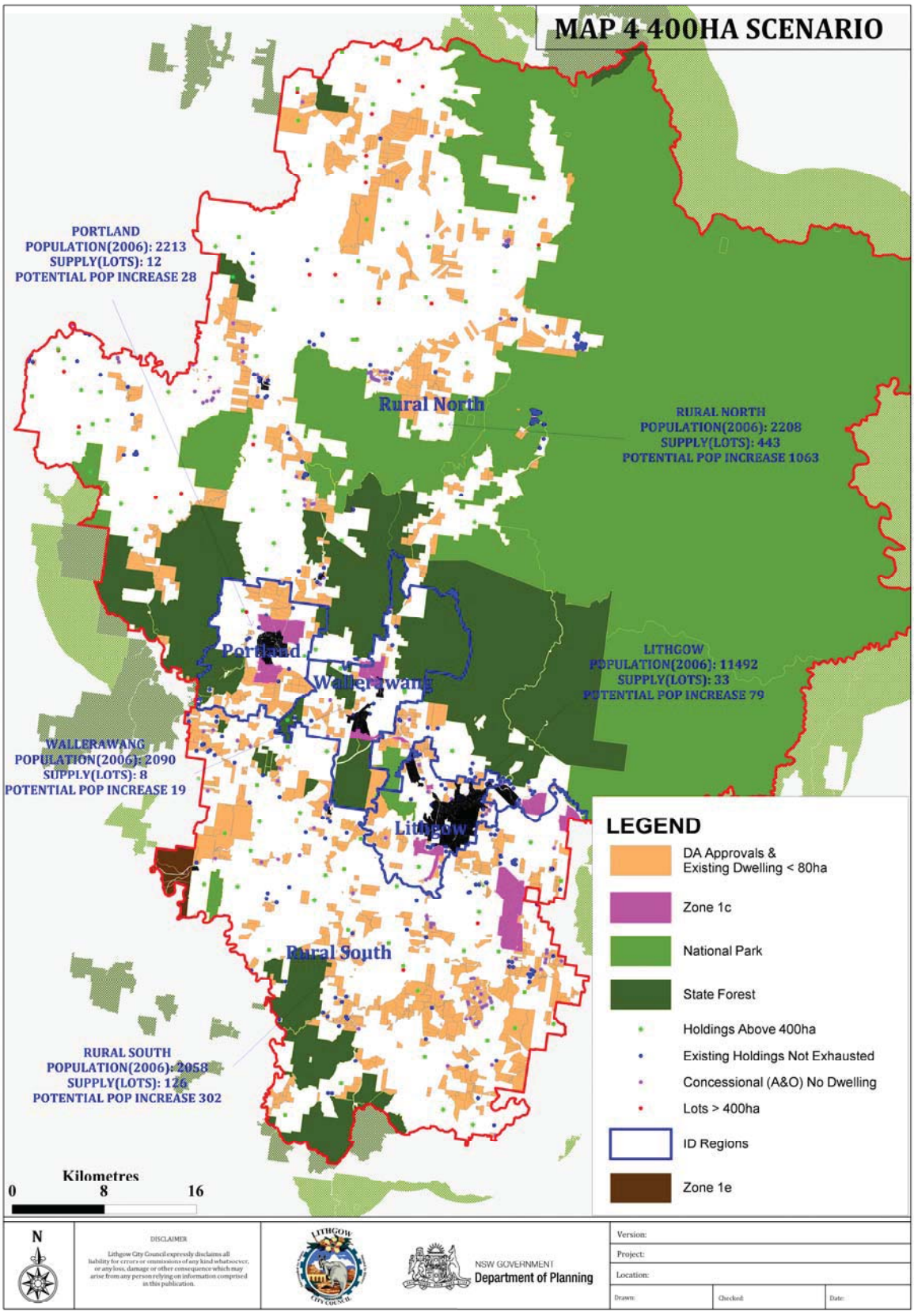
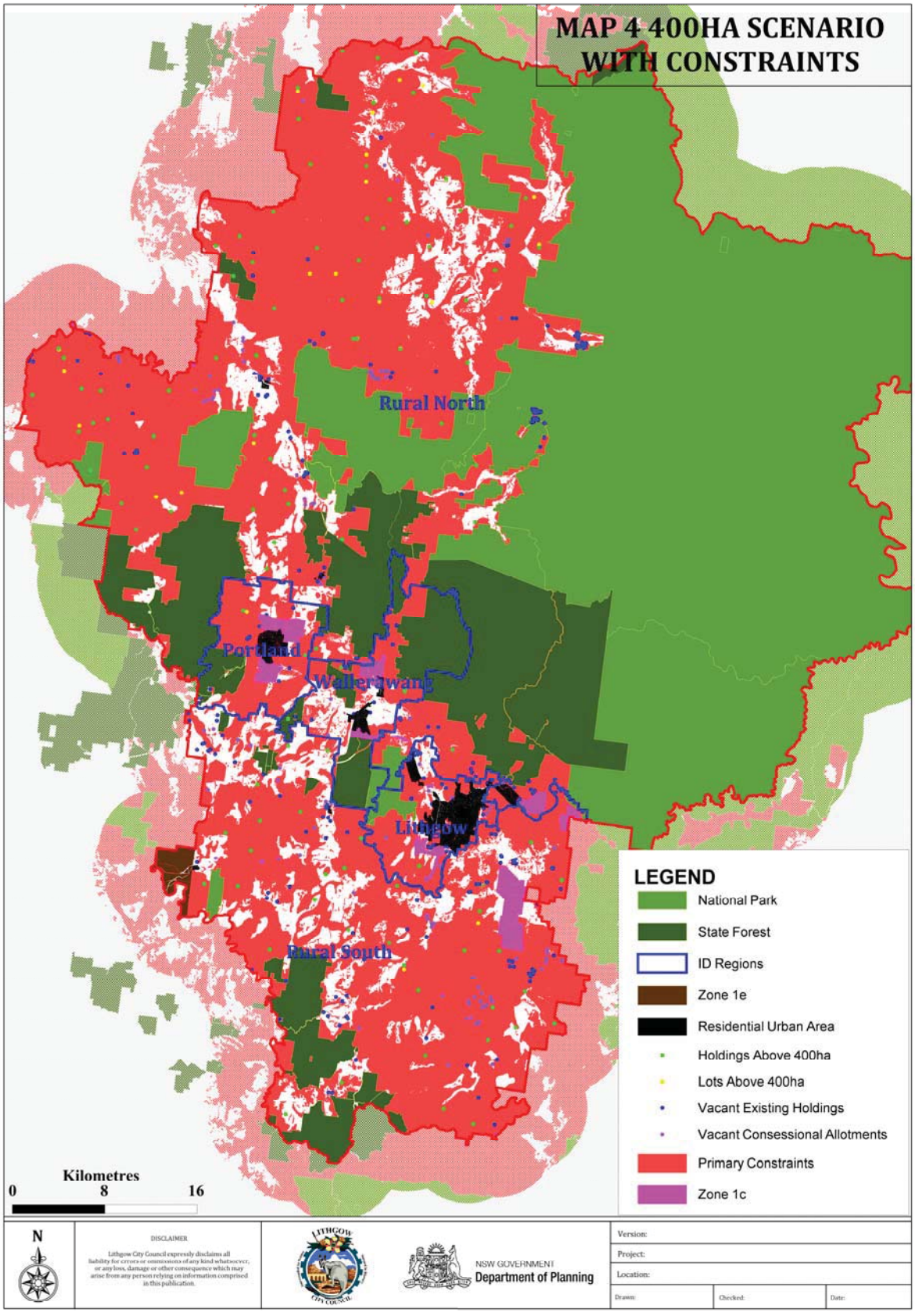


Figure 13. 400HA Scenario with Constraints



MINIMUM LOT SUITABILITY ASSESSMENT

The above analysis provided raw unqualified data. To further assist with determining an appropriate MLS the above scenarios were further considered having regard to

Strategic Primary constraints identified by the following planning tools and data:

- Environmentally Sensitive Areas
- Mineral Resource Audit including Coal Titles

A series of maps were produced to depict each of the MLS scenarios against the strategic primary constraints tools as shown in Figures 7, 9, 11 and 13.

The maps clearly indicate that the pressures on Environmentally Sensitive Areas and resource areas is not relieved sufficiently under either the 40ha or 100ha MLS scenario. The 200ha scenario shows significant improvement, however the best outcome to relieve land use pressure and recognise the environmental sensitivity and capability of rural lands is the 400ha MLS scenario.

Table 15 lists the recommended growth management and sustainability principles (GMPs) of this Strategy and provides a subjective assessment "score" of the ability of the different minimum lot size scenarios detailed in the above to meet the GMPs. The assessment is based on assigning a subjective score between 1 (Very Low) – 5 (Very High) within the matrix.

Table 15. Assessment of Minimum Lot Size Scenarios against Growth Management and Sustainability Principles

	40ha	100ha	200ha	400ha
Thresholds to Growth	1	1	3	3
Land Use Suitability and Capability	1	2	3	4
Infrastructure Provision	1	1	2	2
Diversity of Lifestyle	2	2	3	4
Character, Identity and Urban Design	1	1	3	3
Economic Growth	2	2	3	3
Access & Equity	1	1	3	3
Total	9	10	20	22

At what level does the scenario meet the GMSP
1 – Very Low
2 – Low
3 – Medium
4 – High
5 – Very High

Superseded

PREFERRED MINIMUM LOT SIZE

The total score in Table 15 indicates that the most suitable minimum lot size for the Lithgow LGA is 400ha. The justification for this MLS as reflected in each of the assessment scores is summarised in Table 16 below.

Table 16. Justification of 400HA minimum lot size

Guiding Principle	Justification of Assessment Score
GMSP1 Thresholds to Growth	An analysis of historic development application data has indicated a trend towards dispersed rural lifestyle development with 32.7 % (415) of all dwelling applications between 1996-2009 being within the General Rural area. This is higher than 30% in the Lithgow urban area. Such growth is unsustainable and is inconsistent with the recommended settlement hierarchy designed to create critical mass within the three urban centres of the LGA. The application of an increased minimum lot size is necessary to generally not attract rural lifestyle development as the primary use of rural land. The MLS must therefore function to "price-out" prospective rural lifestyle purchasers. An increased MLS for the wider rural areas supports a clustered approach to providing for residential land use within a rural environment. By reducing this choice in the wider rural areas, this growth may be directed back into the planned and clustered areas currently known as rural small holding 1(c). This GMP could also be achieved by the 200ha scenario however the outcome is improved exponentially as the MLS increases as indicated in Table 15 and 16 This demonstrates consistency with Rural Land Principles (f) and (g) and Rural Subdivision Principle (a) (c).
GMP 2 Land Use Suitability and Capability	Potential for land use conflict is increased with land fragmentation and the proliferation of unplanned dispersed rural lifestyle development. Whilst the 40 ha MLS may be sufficient to separate incompatible land use on any one development site, it is the cumulative impact of these uses that creates widespread land use conflict that can most effectively be addressed at the strategic planning level. The larger the MLS the greater the potential to minimise rural land use conflict and achieve rural land zone objectives. The rural areas of the Lithgow LGA contain varying landforms and land capability. The Environmentally Sensitive Areas mapping and the Strategic Land and Water Capability Assessment as referred to in Chapter 7 are indicators of the LGA land capability and suitability for differing land uses. The protection of the natural resource base and the minimisation of inappropriate pressure on scarce resources is a critical component of ecologically sustainable development. The general message from key government stakeholders is that it is easier to protect the natural resource base when rural property holdings are larger and there is less dwelling intensification in rural areas (Collie Pty Ltd Cowra LUS '09). The potential to achieve natural resource outcomes and minimise land use conflict is maximised the higher the MLS. This is demonstrated by the % of the rural zones protected from further land fragmentation and increased development pressure increasing from 7.58% with a 40ha MLA to 37.77 % with a 200ha MLS and 53.75% with a 400haMLS. This demonstrates consistency with Rural Planning Principle (d) and (e) and Rural Subdivision Principle (b), (c) (d) and (e).

Guiding Principle	Justification of Assessment Score
GMP 3 Infrastructure Provision	There are significant costs associated with unplanned dispersed rural settlement including, but not limited to, road and transport infrastructure and services, waste disposal, rural land protection, emergency services and noxious weed control. When these services are provided over a wider area, there is a loss of critical mass and economies of scale are unable to be achieved. This results in the service provision being subsidised by the wider community. It also creates effects of displaced demand and includes the loss of population critical mass to attract or retain retail catchments and catchments for higher order services such as health, emergency services, law enforcement and community social services. The application of an increased MLS supports the recommended settlement hierarchy and ensures that rural lifestyle development remains ancillary to primary production. Again, the higher the MLS the less pressure for dispersed settlement which maximises the opportunity for a clustered settlement hierarchy to be achieved. The increased MLS enables future growth in areas to be forecasted with more certainty, enabling infrastructure and service provision to be properly planned for and funded through appropriate mechanisms such as developer contribution plans, development serving plans and grant allocations. This demonstrates consistency with Rural Planning Principle (g) and Rural Subdivision Principle (c), (d) and (e).
GMP 4 Diversity of Lifestyle	The Lithgow LGA holding analysis shows that there is extensive rural living opportunities already created in the rural zones on land of various lot sizes. The LGA also provides for clustered small lot rural lifestyle in various locations throughout the LGA. The implementation of an increased MLS will serve to direct rural lifestyle development into a more sustainable clustered form. The MLS for rural lifestyle in the wider rural areas needs to be high to ensure that it is a limited alternative to urban development instead of replacing it as has been the trend in the last decade. This demonstrates consistency with Rural Planning Principle (c) and Rural Subdivision Principle (c).
GMP 5 Character, Identity and Urban Design	The proliferation of unplanned and dispersed rural dwellings within the wider rural areas leads to a blurring of the rural character, identity and amenity. Rural lifestylers have different expectation of amenity than traditional rural landowners. It also significantly impacts upon the scenic quality of rural landscapes and vistas. These are often interrupted and alienated by inappropriate location, design and structured landscaping of rural lifestyle development. An increased MLS reduces the pressure on rural lands for rural lifestyle development and enables rural character and amenity to be retained. This demonstrates consistency with Rural Planning Principle (c) and Rural Subdivision Principle (b).
GMP 6 Economic Growth	Primary production land uses and activities contribute significantly to the LGA economy and employment base. Primary threats to these land uses such as land fragmentation and land use conflict created from rural lifestyle development are significantly reduced the higher the MLS.

Guiding Principle	Justification of Assessment Score
	This demonstrates consistency with Rural Planning Principle (a) and (d) and Rural Subdivision Principle (a).
GMP 7 Access and Equity	The potential for the provision of infrastructure and services to be aligned with the role of the area within the recommended settlement hierarchy is significantly improved through an increased MLS that will ensure that primary production remains the mainstay landuse of rural areas. The increased MLS will also remove the level of uncertainty as to population growth potential in areas across the LGA enabling infrastructure and service provision to be better planned. This demonstrates consistency with Rural Planning Principle (f) and (g) and Rural Subdivision Principle (c).

Source: LCC

REVISED SUPPLY AND DEMAND SCENARIOS

Table 17 indicates the difference in supply under the current 40 hectare and the proposed 400 hectare minimum lot size scenarios as distributed for each precinct. Whilst it would appear that the supply in the rural areas of the precincts particularly in the rural south precinct is deficient in terms of current demand, it demonstrates that the increased minimum lot size still provides for an overall opportunity for rural living throughout the LGA. The revised supply indicated in Table 17 is consistent with the implementation of the recommendation settlement hierarchy outlined in Chapter 4.

Table 17. Revised Supply and Demand

Zone/Precinct	Current Land Supply	Revised Supply from LUS	Current Dwelling Demand to 2031(20yrs)
Lithgow			
Residential	1352 (46.6yrs)	1352 (46.6yrs)	580
Rural	161 (40.25yrs)	20 (5yrs)	75
Large Lot Residential	25 (12.5yrs)	144 (72yrs)	40
Precinct Total	1538	1516	704
Wallerawang			
Rural	123 (61.5yrs)	5 (2yrs)	26
Large Lot Residential	107 (53.5yrs)	331 (165yrs)	40
Residential	396 (66yrs)	190 (31yrs)	123
Precinct Total	626	526	195
Portland			
Rural	119 (59.5yrs)	8(4yrs)	30
Large Lot Residential	192 (38.4yrs)	192(38.4yrs)	95
Residential	801 (133.5yrs)	84(14yrs)	116
Precinct Total	1112	284	244
Rural Nth			
Rural	2746 (343yrs)	309 (38.6yrs)	160
Large Lot Residential	11 (5.5yrs)	11 (5.5yrs)	40
Village	42 (84yrs)	31 (62yrs)	9

Precinct Total	2799	351	209
Rural Sth			
Rural	1292 (76yrs)	150 (8.8yrs)	346
Large Lot Residential	247 (22.45yrs)	250 (22yrs)	221
Village	33 (16.5yrs)	24 (12yrs)	32
Precinct Total	1572	424	599
Total	7647 lots	3101	1951dwellings

* Demand at current levels projected forwarded.
* Vacant Existing Holdings have been excluded from supply.

MINIMUM LOT SIZE FOR INTENSIVE AGRICULTURE

As stated previously the Lithgow LGA contains negligible lands considered to be prime crop and pasture lands capable of sustaining intensive agricultural pursuits (Refer to Figure 5.11 of 2007 Local Profile). This has been reflected in low demand for this land use since the introduction of the existing planning instruments.

A further assessment of the Strategic Land and Capability Assessment mapping, prepared by the Sydney Catchment Authority, indicates that the majority of lands contained within the Sydney Drinking Water Catchment has low to very low capability to meet water quality objectives in relation to intensive plant and livestock agriculture land uses. The recommendation in this Draft Strategy is that Council investigates measures to restrict intensive agriculture land use where appropriate either by nominating an alternate zone to the primary production zone to vary permissible land use in different areas, or by increased development assessment criteria provisions through the use of overlays within the new LEP.

Notwithstanding the above, it is recognised that as technology and farming practices change, new and emerging agricultural enterprises need to be catered for where land capability permits.

Clause 9 of the 2008 Rural Lands SEPP provides for rural lands to be subdivided with consent for the purposes of primary production of any size with no dwelling.

The approach of this Draft Strategy is to permit small scale intensive agriculture in the primary production rural zones with consent. It is considered that the majority of these uses can be carried out without the need for a dwelling to be located upon the same holding and that sufficient housing choice would be available in most circumstances either within a rural or urban context within commuting distance.

The approach of this draft Strategy therefore is to maintain one MLS (400ha) across the LGA for the erection of a dwelling.

MANAGEMENT OF EXISTING DWELLING AND SUBDIVISION ENTITLEMENTS

As this draft Strategy is recommending an increase in the MLS for subdivision for the erection of a dwelling in the rural areas, it must also address the level of existing “dwelling entitlements” and pending subdivisions enabled under the current planning instruments and how these will be managed into the future.

Superceded

EXISTING HOLDINGS

Table 18. Existing holding definitions

Planning Instrument	Definition
Lithgow City Local Environmental Plan 1994	(a) except as provided by paragraph (b), the area of a lot, portion or parcel of land as it was at the date of gazettal of this Plan (2/12/94) (b) if as at the date of gazettal of this Plan, a person owned 2 or more adjoining or adjacent lots, portions or parcels of land, the combined area of these lots, portions or parcels as they were on that date.
Rylstone Local Environmental Plan 1996	(a) in respect of the land that was transferred from the Shire of Cudgegong to the Shire of Rylstone on 1 January 1974, the area of a lot, portion or parcel of land as it was on 24 November 1967, or (b) in respect of the land was in the balance of the Shire of Rylstone, the area of a lot, portion or parcel of land as it was on 31 July 1970.

Source: Lithgow City Local Environmental Plan 1994 and Rylstone Local Environmental Plan 1996

An investigation (July 2009) of all allotments below the 40 hectare minimum lot size in the Lithgow LGA (excluding the former areas of Rylstone Shire due to lack of data, although only 14 holdings within this area were found to be below 40 ha), revealed that there were 826 existing holdings that are enabled by Clause 17 (b) of the Lithgow City LEP to have a dwelling with development consent.

Of these 826 allotments the investigation, through desktop analysis of aerial photography, revealed that 427 of these holdings have been exhausted; that is a dwelling is already erected upon those holdings.

A further 399 holdings remain available in the Lithgow LGA. The spatial distribution of these holdings is depicted in Figure 5 of the 40ha MLS scenario.

Many local government areas sought to limit this form of dwelling entitlement in each successive LEP (such as the 1996 Rylstone LEP), whereby over time these entitlements would become non-existent. However, the Lithgow City 1994 LEP not only retained these entitlements but added to them by creating a dwelling entitlement for all lands that were below the 40ha minimum lot size at that time.

These entitlements have no planning basis and exist purely due to the way land was held at a certain point in time. These allotments have varying capability and some may not even be able to gain development consent for the erection of dwelling due to the presence of physical constraints.

These entitlements are dispersed in and amongst primary production lands and add to the impacts of land fragmentation.

It is considered that sufficient time since the introduction of the Lithgow City 1994 (16 years) and Rylstone 1996 (14 years) LEP has passed to enable those genuinely wishing to seek development approval for a dwelling on these allotments to take up that opportunity.

It is therefore the recommendation of this Draft Strategy that these entitlements be extinguished immediately upon gazettal of the new (2011) LEP.

Superceded

EXISTING AND LATENT CONCESSIONAL ALLOTMENTS

An investigation (July 2009) of all allotments below the 40 hectare minimum lot size in the Lithgow LGA (excluding the former areas of Rylstone Shire due to lack of data, although, only 14 holdings within this area were found to be below 40 ha), revealed that there were 555 holdings that have been created by some form of concessional allotment provision of which 446 have been exhausted, that is a dwelling is already erected upon those holdings.

Of the 555, the investigation, through desktop analysis of aerial photography, revealed that 109 of these allotments remain vacant and would have a dwelling entitlement either under the savings provision of the Rural Lands SEPP or Clause 17(e) of the Lithgow City LEP.

The spatial distribution of these holdings is depicted in Figure 3 with 67 in the Rural North precinct, 34 in the Rural South precinct, and 8 in the Lithgow precinct.

NOTE: Council is unable to readily identify the number, location and status of existing live development approvals for concessional allotments that have not proceeded to title registration. These potential dwelling entitlements would be in addition to the 109 identified above.

From a strategic planning point of view, this form of subdivision and provision for dwelling entitlement has been recognised by both the Department of Planning and the Central West Rural Lands Independent Review Panel as an inappropriate form of development. As such, the removal of concessional allotments from all LEPs across the state was undertaken as a key provision of the Rural Lands SEPP (2008). The Rural Lands SEPP does however retain any entitlement already created under the repealed provisions.

Like existing holdings, concessional allotments have relied on nothing more than the size of land holdings as a pre-condition for consideration of subdivision potential. This has resulted in the creation of dispersed and isolated housing allotments not related to the primary production use of the land. The impacts from this were discussed earlier in this chapter.

These allotments differ from existing holdings in that these were created by subdivision and have therefore undergone a due site assessment of the land suitability and capability to accommodate the erection of a dwelling.

Notwithstanding the above, it is the recommendation of this Strategy that concessional allotment dwelling entitlements be extinguished following a sunset period following the gazettal of the new (2011) LEP.

The sunset provision will apply to the following circumstances:

- Any concessional allotment that has been approved by a development application that has not been registered
- Any concessional allotment that has been approved by a development application that has not been substantially commenced
- Any allotment that has been registered under separate title but has yet to gain development approval for a dwelling.

Superceded

In determining the period of the intended sunset clause the following considerations have been taken into account:

- The period must allow adequate opportunity for developers to finalise outstanding subdivisions and to market and sell allotments for the intended dwelling-house purpose;

- The period must allow adequate opportunity for developers who do not have the capacity to complete subdivision works within the period to on-sell their properties to prospective developers who do have the intention of completing the required works within the sunset period;

- The period must allow adequate time for landowners to lodge a development application with Council for the erection of a dwelling. It is recognised that all landowners will not wish to construct a dwelling immediately within the sunset period, however it must be stressed that it will not be necessary for the dwelling to be physically constructed for landowners to retain their right to build. The action of obtaining development consent through the lodgement and favourable determination of a development application within the sunset period will secure a right to construct a dwelling on their land. The Environmental Planning and Assessment Act, 1979 currently provides for a five year life for development approvals to substantially commence construction works to prevent the lapsing of a development approval. Effectively this provides landowners with a maximum time frame of the sunset period plus five years to commence the construction of a dwelling to prevent loss of entitlement.

- The period must allow adequate time for landowners who do not wish to construct a dwelling within the sunset period to on sell their properties to prospective purchasers who do have the intentions and capacity to build within the sunset period or at the very least gain development consent for the erection of a dwelling within the sunset period.

  It is the recommendation of this Strategy that the sunset period be set at two years from the date of gazettal of the new (2011) LEP. However, Council would not be adverse to a period of up to five years depending on the outcomes of consultation with affected landowners.

EXISTING AND LATENT RURAL LIFESTYE (40HA) ALLOTMENTS

Council does not currently have an accurate or detailed land monitor that identifies and tracks subdivision approvals for the erection of a dwelling through to the occupation of the dwelling. Therefore, Council is at this time unable to quantify the number and location or status of approved live development applications for the creation of 40 ha allotments. This is a significant data gap for strategic analysis.

Notwithstanding this, as this Strategy is proposing a substantially increased minimum lot size (400ha) that a sunset period should also apply to dwelling entitlements that remain due to unacted subdivision approvals creating allotments between 40 ha and 400ha. This would provide equity to those landowners in the same way as those landowners of concessional allotments and should alleviate some of the perceived loss to some landowners due to a change in planning policy.

The sunset provision will apply to the following circumstances:

- Any allotment between 40 ha and 400ha that has been approved by a development application that has not been registered
- Any allotment between 40ha and 400ha that has been approved by a development application that has not been substantially commenced

Superceded

- Any allotment between 40 ha and 400ha created by subdivision that has been registered under separate title but has yet to gain development approval for a dwelling.

It is the recommendation of this Strategy that the sunset period in this circumstance be limited to two years from the date of gazettal of the new (2011) LEP to take account of the fact that the potential number of allotments and their spatial distribution has not been quantified.

Superceded

SUMMARY OF KEY ACTIONS

Action 9.1
Introduce a new increased minimum lot size in the Lithgow City 2011 LEP for the erection of a dwelling in the primary production areas of 400ha.

Action 9.2
Remove and extinguish all existing holding dwelling provisions within the Lithgow City 2011 LEP.

Action 9.3
Introduce a 2 year sunset clause in the Lithgow City 2011 LEP to phase out dwelling opportunities within the primary production areas for concessional allotments and allotments created or proposed to be created by subdivision between 40-80ha.

Action 9.4
Develop a Land Monitor to identify and track all subdivision and dwelling approvals within the primary production areas

Action 9.5
Limit the range of development permissible within the primary production zones to those compatible with sustaining the natural primary resource base within the Lithgow City 2011 LEP.

Action 9.6
Identify and apply appropriate buffers (minimum 500m) to all identified resource and Forestry lands within the Lithgow City Standard Instrument LEP or Development Control Plan.

Action 9.7
Use Environmentally Sensitive Area mapping to inform the identification of new zones, land use permissibility, and /or assessment criteria defined by overlays in the rural areas within the Lithgow City 2011 LEP.

Action 9.8
Identify and apply appropriate land use separation/ buffers (Minimum 500m) to all National Parks and DECC estate within the Standard Instrument LEP or Development Control Plan.

Action 9.9
Restrict intensive plant and animal agriculture in areas of low capability as defined by Environmentally Sensitive Area mapping and Sydney Catchment Authority Strategic Land and Water Capability Assessments within the Lithgow City 2011 LEP.

Action 9.10
Undertake a biodiversity strategy in areas identified by Environmentally Sensitive Area mapping as moderate to high biodiversity as resources permit.

Action 9.11
Identify areas of high scenic value and protect through appropriate rural or environmental conservation zone and/or overlay provisions in the Lithgow City 2011 LEP.

Superceded

CHAPTER 10 LARGE LOT RESIDENTIAL

STRATEGIC PLANNING DIRECTIONS

The planning principles to be used to guide the development of this Strategy and to inform the future management and development of large lot residential lands in the Lithgow LGA are as follows:

- Reinforce the recommended settlement hierarchy by locating any new large lot residential development opportunities inside the 15km maximum outer limit as identified in Figures 4 and 5 Chapter 4.
- Consider the environmental capacity of the land and ensure that any development is within the capability of, and is suitable for, the land having regard to constraints and opportunities analysis and mapping.
- Ensure that large lot residential development is provided as an alternative to standard residential development and is not instead of.
- Ensure that any development within large lot residential areas is compatible with residential amenity.
- Ensure that large lot residential development outside the urban core does not detract from the rural landscape and character of the area.
- Ensure that the interface between large lot residential development with the urban core and wider rural areas minimises land use conflict through appropriate planning and design.
- Ensure that any new large lot residential development is provided with efficient and economic provision of services and where possible is provided with reticulated water and sewer.

PLANNING CONTEXT

This chapter of the Strategy deals with the form of rural settlement that occurs on small rural lots (predominantly 1ha-10ha in size) in a clustered estate format. This development is commonly referred to as "rural residential". In this document all three terms "clustered rural lifestyle"," rural residential" and "large lot residential" are considered to be interchangeable.

Within the Lithgow LGA this form of development has been provided in a number of locations such as Hartley, Dargan, Clarence, Lidsdale, Portland North and Portland South, Wallerawang South/East and Wallerawang South/West as shown in Figure 1. These areas are currently zoned 1(c) Rural (Small Holdings).

These areas were introduced in the 1994 Lithgow LEP following an earlier amendment to the Blaxland Shire Interim Development Order. The Clarence and Dargan estates were existing subdivisions approved under the Blaxland Shire Interim Development Order.

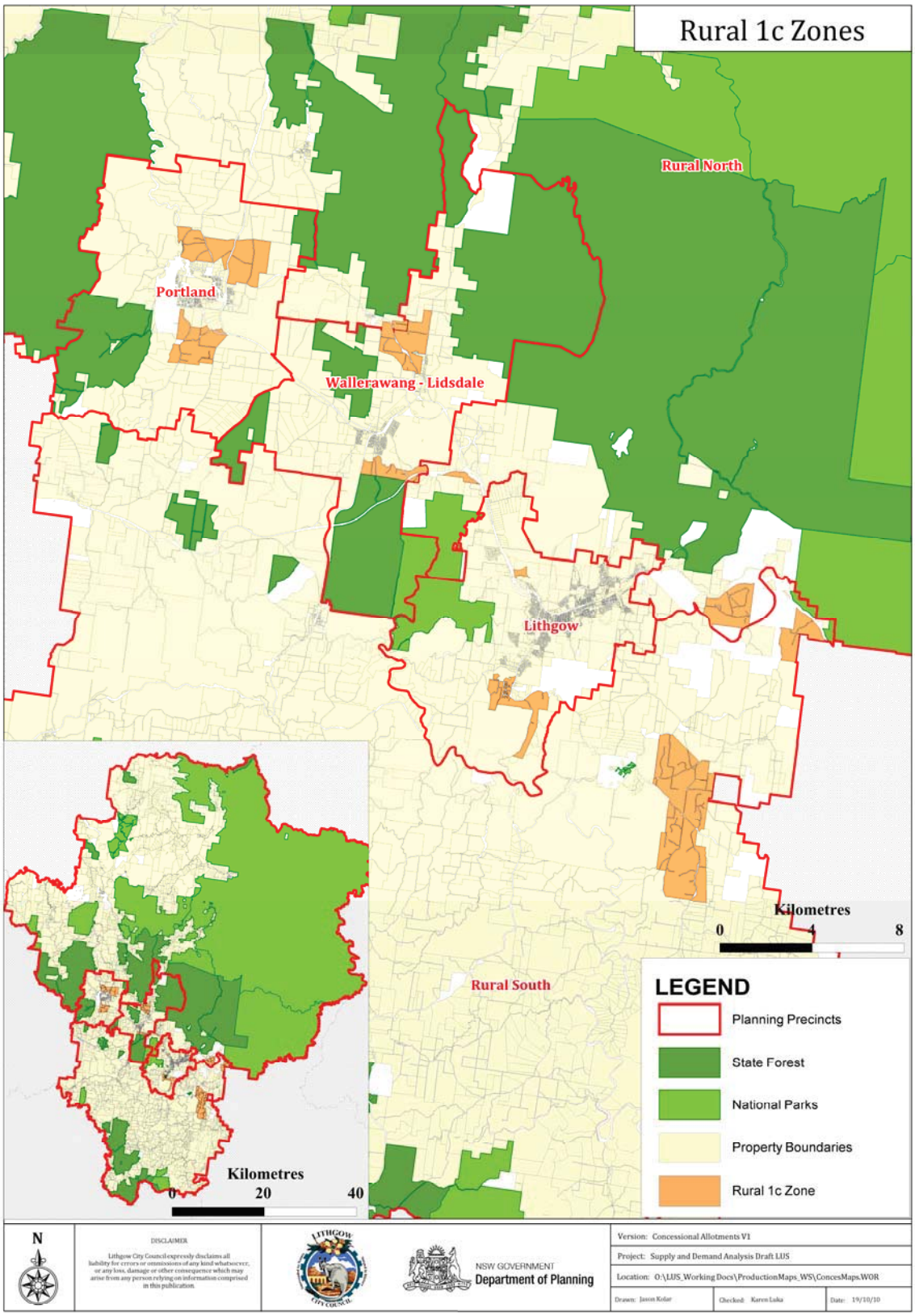
Development activity within these areas has been significant and accounted for 22.4% (284) of all dwelling applications lodged between 1996 -2009.

These areas have varying degrees of take-up with the most significant development occurring in the Hartley area.

Indications are that this form of development is still in high demand and will increase in popularity into the future as the trends towards "tree change" lifestyle in rural settings in close proximity to metropolitan areas continue.

The challenge for this Strategy is to ensure that the demand for this form of settlement occurs in a sustainable manner and does not detract from the ongoing viability of existing centres or impose on the Lithgow community an unreasonable demand for services and facilities.

Figure 1. Rural 1c Zones



PAST STUDIES AND CONSULTATION

Identified studies within Chapter 9 Rural Lands are also relevant for this Chapter. Please refer to Chapter 9 for details.

POLICY AND LEGISLATIVE FRAMEWORK

The key state and federal policy and legislation governing rural land use within the Lithgow LGA is as follows:

Instrument Name
KEY ACTS
Environmental Planning and Assessment Act
Local Government Act
Rural Fires Act 1997
KEY MINISTERIAL DIRECTIONS (Section 117)
Direction 1.2 Rural Zones
Direction 1.4 Rural Lands
Direction 2.1 Environmental Protection Zones
Direction 2.3 Heritage Conservation
Direction 4.4 Planning for Bushfire Protection
Direction 5.2 Sydney Drinking Water Catchments
KEY STATE ENVIRONMENTAL PLANNING POLCIES
Standard Instrument (LEP) Order 2006
Drinking Water Catchments Regional Environmental Plan No 1 (Deemed SEPP)
Rural Lands 2008

Please refer to Chapter 3 for more detail.

LOCAL PLANNING PROVISIONS

The areas identified in Figure 1 are zoned Rural (Small Holdings) 1(c) under the Lithgow City Local Environmental Plan 1994.

The primary objective of this zone is to allow rural small holdings and a range of other land uses compatible with the environmental capabilities of the land.

The zone permits with consent a range of land uses ranging from dwellings to light industries and bulky goods salesroom and showrooms.

SUBDIVISION PROVISIONS

Subdivision for residential purposes within Zone 1(c) is permitted under the following provisions:

Table 1. Subdivision for Residential Purposes within Zone 1(c)

LEP	Provisions
Lithgow Local Environmental Plan 1994	Clause 14(1) (a) each allotment to be created will have an area of not less than 1ha (b) after the subdivision, the average area of the allotments that have been and will be created from the existing holding concerned by all subdivisions, including all allotments created since 8 May 1992 and those

LEP	Provisions
	effected in accordance with this clause will be not less than 2 hectares. (c) a geotechnical survey indicates the capacity of the land for septic disposal of effluent within the boundaries of each allotment or a water balance assessment indicates that effluent can be disposed of within the boundaries of each allotment using domestic aerated sewerage or similar treatment. (d) the land capability is classified as predominantly Class 1 to V, inclusive, as defined on maps prepared by the Department of Conservation and Land Management and deposited in the office of the Council. (e) appropriate measures will be undertaken to prevent pollution of water catchment areas from each allotment. (f) appropriate measures will be taken to control soil erosion and stormwater flows across each allotment or onto adjoining land. (g) the subdivision is so arranged that the number of new vehicular access points to main roads is minimised. (h) adequate measures will be taken in relation to each allotment for the provision of a water supply, power supply, access and disposal of domestic waste water. (i) development on each allotment is unlikely to be exposed to significant risks from natural hazards, or to increase those risks to other land.

Source: Lithgow City LEP 1994

Clause 14(b) of the Lithgow City LEP 1994 is complex and is not transparent regarding the development potential of lands. This clause not only provides an administrative challenge, it also has little regard to the capability or suitability of the land as a determinative of minimum lot size.

The minimum lot size for subdivision in these areas should be simplified to remove ambiguity and to reflect the assessed capability of the land.

SUMMARY OF ISSUES

As this form of development occurs within the wider rural context and landscape, many of the issues discussed in the Rural Lands chapter are also relevant here. The major difference is that impacts from this form of development are clustered and are therefore more predictable. This assists in the development of appropriate planning and governance responses.

Table 2. Issues of Clustered Rural Lifestyles Planning

LARGE LOT RESIDENTIAL ISSUES	WHY IS IT AN ISSUE?
A significant proportion (22.4%) of all development applications lodged between 1996 and 2009 were in clustered rural residential areas. In the years 1996-2001 the number of dwelling approvals in clustered rural residential areas exceeded approvals for the main urban areas.	• Areas of large lot residential development have grown in population size disproportionately to their role in an orderly settlement hierarchy and level of service provision. • Increasing infrastructure and service costs particularly in relation to provision and maintenance of rural roads and garbage services, but also in social and governance services. • Loss of critical mass in urban areas to maintain and improve services and higher order infrastructure. • Increased risk of social isolation due to lack of community structure and the impacts of ageing of the population in rural areas
Potential for areas of clustered rural residential lands to grow in population beyond their capacity to	• Areas of large lot residential development have grown in population size disproportionately to their role in an orderly settlement hierarchy and level of

LARGE LOT RESIDENTIAL ISSUES	WHY IS IT AN ISSUE?
provide services and facilities.	service provision. This is particularly relevant to the Hartley area • Community expectation and demand for services may not align with Council's ability or desire to provide services and facilities
An apparent oversupply of clustered rural residential lands across LGA, based on current demand levels.	• The oversupply of land across the LGA will impede the effectiveness of any strategy to consolidate growth in urban areas • Despite this supply level Council is still under pressure to release more lands for large lot residential development • Some landowners of land currently zoned for this land use appear reluctant or unwilling to develop lands and therefore the market supply level may be different from the theoretical supply
Land use conflict within clustered areas and at the interface with adjoining lands.	• The current zone and permitted land uses create an anomaly in expectation of amenity between residential and semi rural and therefore creates land use conflict. • Current development control provisions are ineffective
Potential cumulative impact upon water quality from on-site effluent disposal systems.	• Many of the on-site effluent disposal systems in these areas are failing to meet operational and performance standards. • Potential for these areas to grow in population beyond a level that can reasonably be serviced with on-site systems.

DISCUSSION OF ISSUES

SUPPLY AND DEMAND FORECASTS

The key findings of the Supply and Demand Analysis in relation to the existing clustered rural lifestyle areas (Zone 1(c)) are summarised in Table 3.

Table 3. Key Findings of the Supply and Demand Analysis

Demand And Supply By Precinct/Zone						
Zone/Precinct	Dwelling Approvals1996-2009	Avg Yearly Demand	Land Supply	Projected Dwelling Demand 2031(20yrs)	Pop Increase	Land Supply/Years
Lithgow						
1c	26	2	25	40	96	12.5
Wallerawang						
1c	26	2	107	40	96	53.5
Portland						
1c	62	5	192	95	228	38.4
Rural Nth						
1c	26	2	11	40	96	5
Rural Sth						
1c	144	11	247	221	530	22
LGA Total	284	22	558	436	1046	25.3

Source: LCC

The above table illustrates that on an LGA wide basis, based on current demand levels that supply will meet demand over the 20 year life of this Strategy. However, it also demonstrates that demand will not be met in each planning precinct without identification of new opportunity areas for this land use.

In reviewing the suitability and capability of the existing areas against the strategic primary constraints and other secondary criteria such as presence of land use conflict and current holding patterns it has been identified that not all existing areas should be retained, some areas require modification to their boundaries and some new areas should be considered. Further detail regarding constraints analysis is summarised in Table 4 below:

Table 4. Constraints Summary of Existing Large Lot Residential

Existing Supply Large Lot Residential						
Supply Area	Total Area	Number of hectares constrained	Comment		Remaining Supply (ha)	Remaining Supply (lots)
Lithgow South						
1(c)	260 ha	209.1ha	SLWCA	Excludes areas of low/very low capability	50.9ha	24lots
			Slope	Excludes areas of low/very low capability		Limited subdivision potential
			This area is heavily constrained by ESA's and SLWCA's. The unconstrained area of supply in this 1© area has been exhausted for further subdivision.			
East Bowenfels						
1(c)	18.2ha	9.7ha	SLWCA	Excludes areas of low/very low capability	8.5ha	1lot
			Slope	Excludes areas of low/very low capability		
			This area is heavily constrained by ESA's and SLWCA's. The unconstrained area of supply in this 1© area has been exhausted.			
Portland South						
1(c)	304ha	193ha	ESA		111ha	25 lots
			This area is very constrained due to ESA.			
Portland North						
1(c)	539.5ha	165.5ha	ESA		374ha	167lots
			This area is very constrained due to ESA.			

Supply Area	Total Area	Number of hectares constrained	Comment		Remaining Supply (ha)	Remaining Supply (lots)
Wallerawang South						
1(c)	165ha	149.3ha	s.117 Data	Silica Quartz	15.7ha	20 lots
			SLWCA	Excludes areas of low/very low capability.		
			Slope	Excludes areas of low/very low capability		
			This area is heavily constrained due to the s.117 directions for protection of mineral deposits. Some existing approved lots remain vacant and will be counted as supply, but there is no further subdivision potential in this area.			
Lidsdale						
1(c)	350.7ha	135ha	s.117 Data	Coal	215 ha	87 lots
			SLWCA	Excludes areas of low/very low capability.		
			Slope	Excludes areas of low/very low capability		
			This main area of constraint are the s.117 directions for coal related minerals. Also the ESA & SLWCA data. The potential for land use conflict in this area is high. The future land use direction recommended for this location must be mindful of this potential conflict. Minimal subdivision has occurred in this area for rural residential development.			

Supply Area	Total Area	Number of hectares constrained	Comment		Remaining Supply (ha)	Remaining Supply (lots)
Clarence						
1(c)	289 ha		s.117 Data	Coal		11 lots
			SLWCA	Excludes areas of low/very low capability		
			Slope	Excludes areas of low/very low capability		
			This area is heavily constrained by ESA and s.117 direction for coal resources. The only remaining supply would be the vacant lots within the Clarence subdivision			
Dargan						
1(c)	197.5 ha		This area is heavily constrained by ESA and s.117 direction for coal resources. The only remaining supply would be the vacant lots within the Dargan subdivision.			14 lots
Hartley						
1(c)	1240 ha	537 ha	SLWCA	Excludes areas of low/very low capability	703 ha	233 lots
			Slope	Excludes areas of low/very low capability	Moyne Farm subdivision approved for 49 lots 09/09. This is in an area of constrained supply but has already been approved.	
			The Hartley area has a remaining lot potential of 184 after existing dwellings are taken into consideration.			

Source: LCC: Table 30 Supply Summary of Appendix 1

The challenge for this Strategy and LEP is to determine whether demand for large lot residential opportunities should be met in each precinct and, if not, then should the shortfall be met and where can it be accommodated.

RELATIONSHIP TO RECOMMENDED SETTLEMENT HIERARCHY

The location of the existing clusters of Zone 1(c), are all generally consistent with the clustered planning approach of the recommended Settlement Hierarchy within this Strategy with the exception of Clarence, Dargan and Hartley.

The Hartley area is the most significant anomaly to the standard settlement hierarchy structure. The area is not physically connected to any town centre, being located approximately 15km from Lithgow, and does not have any service infrastructure. This area, under current planning provisions, has significant growth potential in excess of 100% upon the existing number of dwellings. Such growth could see the area have a population base of approximately 850 persons.

Careful consideration will need to be given to this area within this strategy in determining its future hierarchy placement beyond the short term.

LAND USE CONFLICT

As with all other land use categories the flexibility of the 1994 LEP provisions has increased the potential for land use conflict both within the Zone 1(c) and with adjoining land. The predominant land use is residential, however the combination of large lot sizes and planning provisions such as exempt rural sheds have led to the emergence of secondary land uses which are often “illegal”, quasi light industrial and commercial land uses incompatible with the residential nature of the areas.

Other land use conflicts can occur from the keeping of animals such as horses, goats, chickens etc.

These uses can impact upon the residential amenity of the area for those land owners who only use their land for residential purposes.

These issues can be managed effectively through LEP zoning and permissible use provisions and a robust development control plan. The Standard Instrument direction for this form of development is large lot residential. Such a zoning will reflect the predominant use of the land and protect residential amenity. Such an approach will remove the ambiguity created between rural and residential land use.

The challenge for the new LEP is to ensure that the range of permissible uses within this zone, are consistent with the amenity expectations of the community. In particular, all industrial land use should be prohibited.

Land use conflict can and does occur at the interface between these clustered areas and the wider rural zone. This type of conflict is best addressed through the appropriate planning and location of these areas away from environmentally sensitive areas, primary resources, Department of Environment, Conservation and Climate Change and State Forest estates.

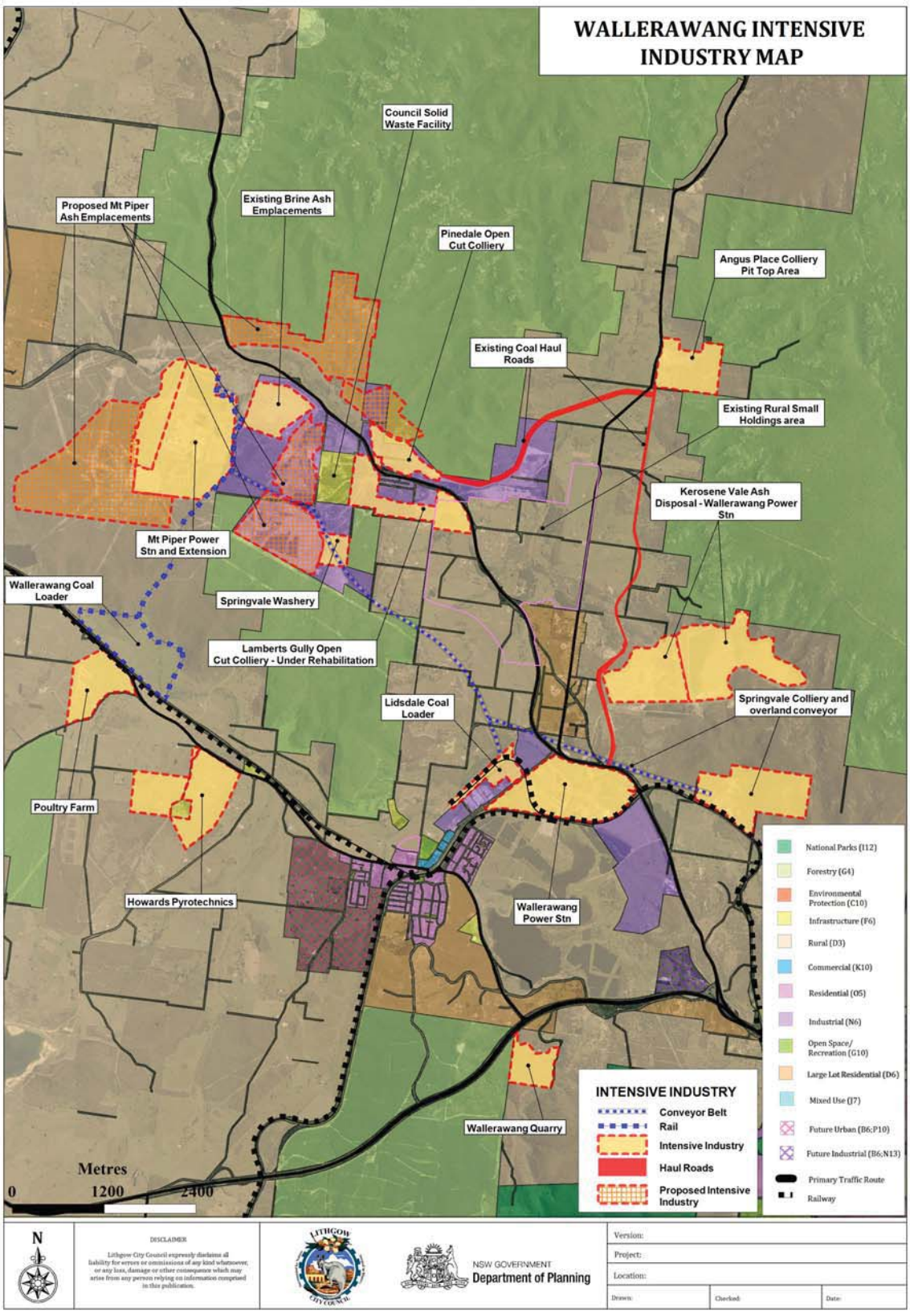
The areas within Lithgow LGA have been available since the early 1990s and the areas are predominantly free of significant interface conflict, except for the Wallerawang South area abutting the Lidsdale State Forest, and the Lidsdale area located between Blackmans Flat and Lidsdale.

The Wallerawang South area has already been subdivided and the majority of lots bordering the State Forest have been developed. Therefore opportunities to minimise conflict through applying a buffer allotment is not

possible. Future conflict may occur due to the approved Wallerawang Silica Quarry, however the Great Western Highway does provide a physical barrier in this location.

The Lidsdale area has had very little take up since its introduction and is located amidst a myriad of incompatible land uses and infrastructure linked to coal mining and power generation. Potential for land use conflict in this location is significant and the opportunity now exists through this Strategy to remove this potential conflict. The extent of this land use conflict is illustrated in Figure 2.

Figure 2. Wallerawang Intensive Industry Map



Note: This figure indicates the land use strategic framework

DISCUSSION OF NEW PLANNING APPROACH

FUTURE LAND REQUIREMENTS

In identifying future land requirements for large lot residential development it is necessary to consider how the supply and demand for this land will be affected by other recommendations of this Strategy and the findings of the constraints analysis.

By adopting a target population growth of 0.5 - 1%pa as identified in this Strategy, and growth management principles based on a recommended settlement hierarchy, the demand on supply of land in each precinct will be challenged in different ways to that identified by current settlement trends. Different settlement scenarios have been utilised to demonstrate how the application of these fundamental planning principles may change the look of the supply and demand across the precincts and land use categories into the future. These scenarios are shown in Table 12 of the Supply and Demand Analysis, Appendix 1.

This table, although representing hypothetical scenarios, serves to indicate that there is sufficient supply of large lot residential lands across the LGA to accommodate a redistribution of demand as a result of restricting supply of larger rural lifestyle allotments as recommended in Chapter 9.

What is also evident is that supply of large lot residential land will be limited in the Lithgow and Wallerawang precincts without new opportunities being identified in this Strategy.

When considering demand, what is also interesting to note is that the demand trends for large lot residential lands appear to fluctuate depending on availability of new standard residential lands. Since 2005 the demand for large lot residential land has fallen, whilst the demand for standard residential has generally increased. This corresponds to the availability of lands in both South Bowenfels and Wallerawang for standard residential development. Refer to Figure 2 of the Supply and Demand Analysis which graphs these trends.

This Strategy will seek to balance demand and provide a diversity of living opportunities.

This Strategy proposes to provide large lot residential opportunities in the following areas.

RURAL NORTH PRECINCT

The Rural North precinct provides little opportunity for large lot residential living.

This is consistent with the recommended Growth Management Principles and Settlement Hierarchy outlined in Chapter 4 to cluster living opportunities around existing town centres and prevent further land use intensification in areas of significant natural and primary resources.

DARGAN (EXISTING)

This area was subdivided in the late 1960s with only 14 vacant lots remaining with no further subdivision potential due to identified land capability.

The existing primary land use of residential will be recognised in this area via a large lot residential land zoning.

CAPERTEE (NEW AND AS MODIFIED FROM VILLAGE)

Although historic demand levels for housing development in Capertee village have been low, the Draft Land Use Strategy recognised that there is a need to enhance growth opportunities in this area for the following reasons:

- To assist with the retention of the existing higher level of services this community enjoys such as an infant/primary school, police station and service station.
- To service the daily needs of surrounding employment land at the Airly coal mine and future coal mining development at Running Stream
- To support and enhance the growing tourism potential of the Capertee Valley.

The options presented in the Draft strategy to achieve the above have been revised in the following manner and as shown in the Figure 3 below .

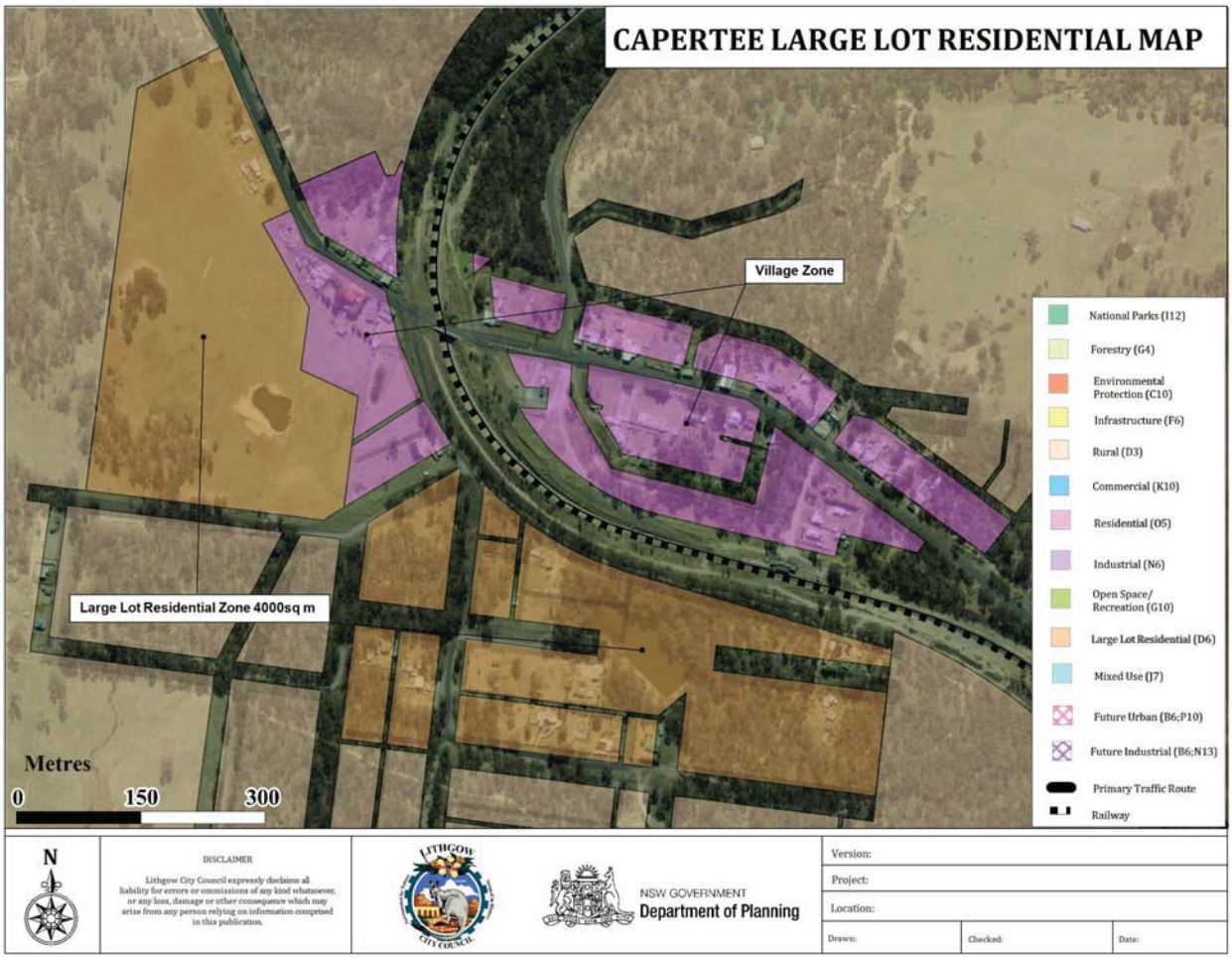
These area would have a minimum lot size of 4000m² applied being the standard adopted by this Strategy for unsewered residential development adjoining existing towns or villages.

Based on land area alone, a maximum potential of 46 new lots having a land area of 4000m² may be created. This number may be reduced due to the presence of constraints in the area, predominantly to the south of the Castlereagh Highway.

Although this area currently contains 59 allotments (43 of which are vacant), due to the current holding and development pattern the majority of new allotments (27 lots) would occur in the new area surrounding the Capertee Hotel.

Allotments and holdings within this area below 4000m² will have no future residential development opportunity.

Figure 3. Capertee LEP Directions



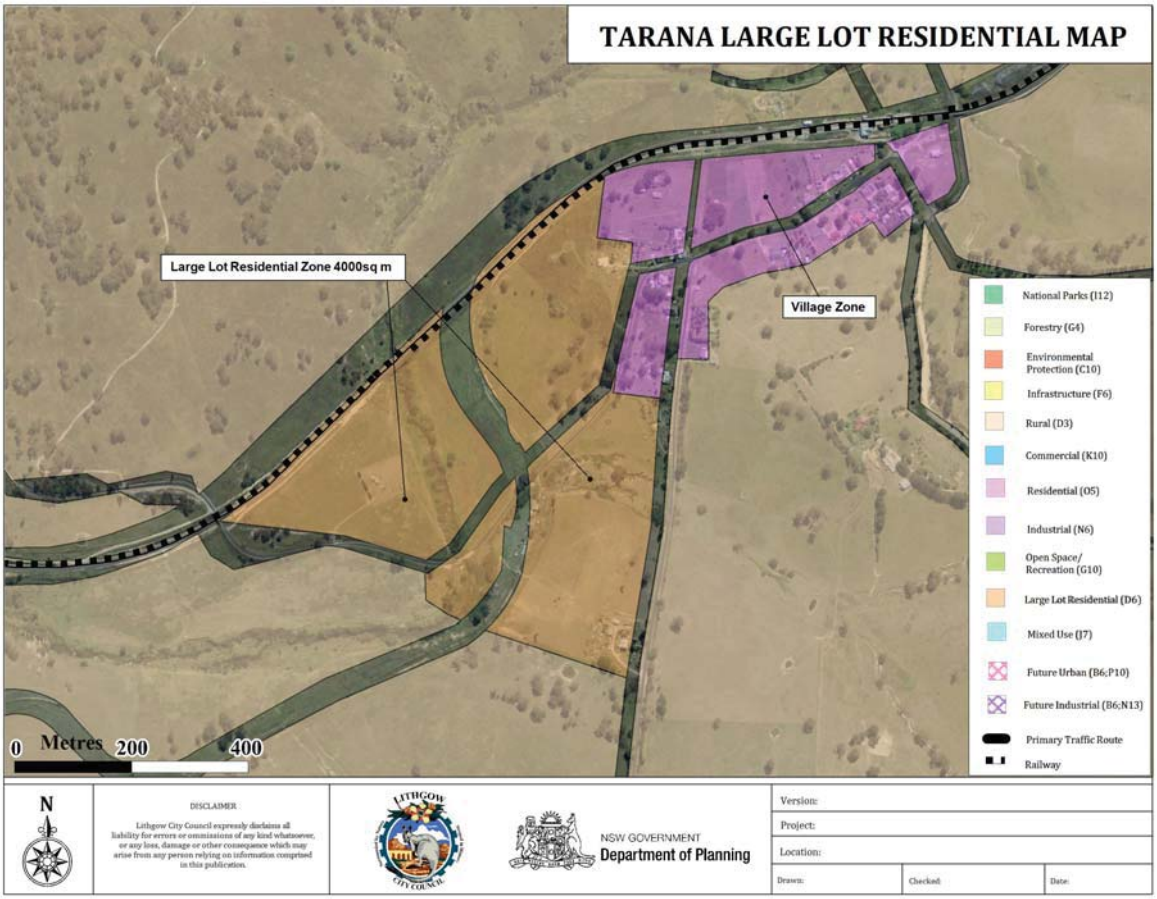
RURAL SOUTH PRECINCT

TARANA (NEW)

It is proposed to provide a small large lot residential area to the east of the modified village area to reflect the existing development pattern of the locality. This area (although being 28ha in area) would, due to the existing holding pattern and location of dwellings, only yield a further 3 lots based on a recommended 2ha minimum lot size.

This area will compliment the modifications to the existing village zone as identified in Chapter 11 and ensure that the future population of Tarana remains consistent with its ability to provide infrastructure and services.
As shown in Figure 4 below.

Figure 4. Tarana LEP Directions



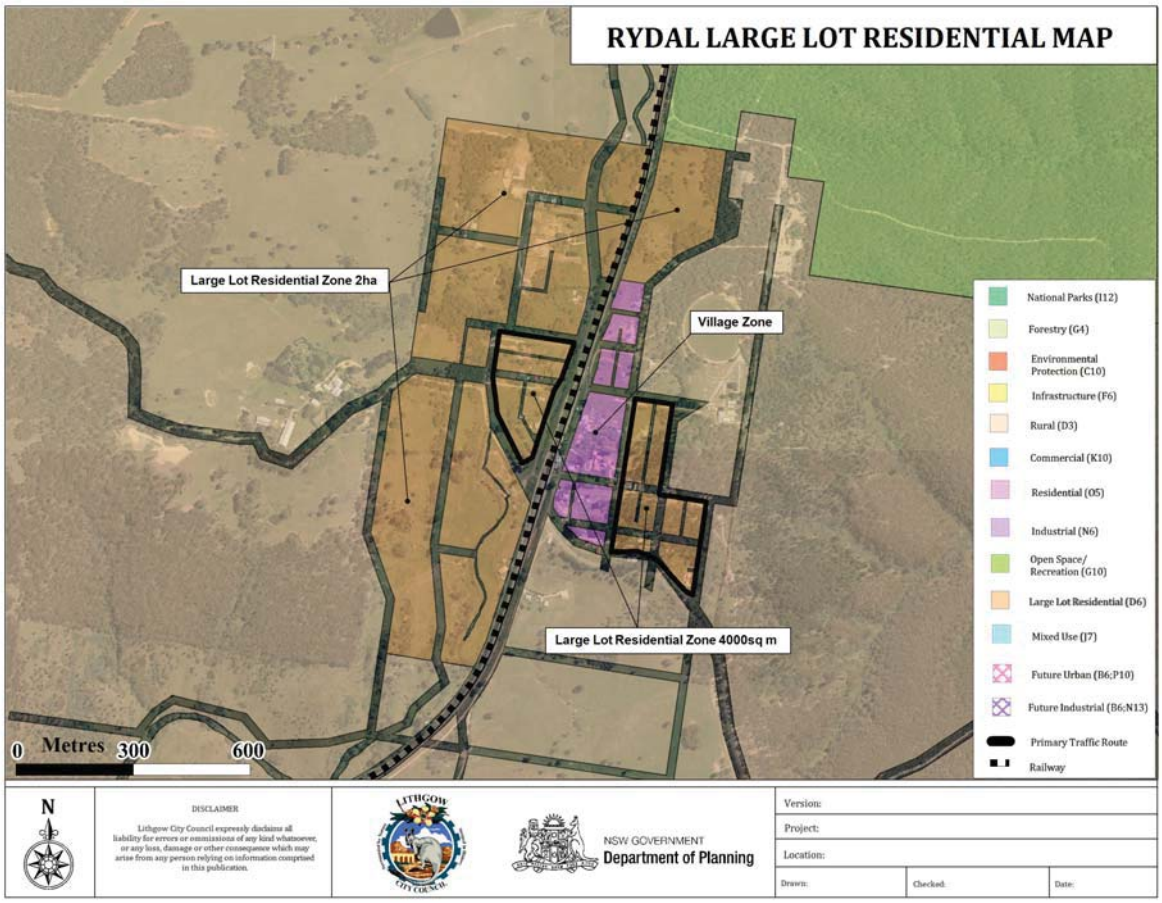
RYDAL (NEW)

It is proposed to provide a new large lot residential area to surround a contracted Rydal village area to the north, east and west as shown in Figure 5 below.

This area will complement the modification of the existing village zone as identified in Chapter 11 and will assist with the future sustainability of the Rydal village community.

This area will have a potential capacity to yield a further 14 allotments under a variable minimum lot size as outlined in Table 8 of Chapter 11.

Figure 5. Rydal LEP Directions



HARTLEY (EXISTING)

This area is the largest area of clustered rural residential lands in the LGA, having an area of 1240ha. The area is dissected by the Great Western Highway and includes local distributor roads being Mid Hartley Road, Browns Gap Road, Coxs River Road and Baaners Lane which connect them to a network of local access roads.

The area exhibits strong cultural heritage with a number of significant heritage items.

The constraints analysis identifies that approximately 537ha of this land is identified as constrained and as such has been removed from supply calculations. However recently, a development approval has been granted

within part of the constrained areas to the south yielding 49 lots, this supply has therefore been added into the overall calculations.

A desktop analysis has revealed that the remaining unconstrained area has the potential to yield 233 lots based on an applied minimum lot size of 2ha.

There is little opportunity to pull back the zoning of this area to account for identified constraints due to the existing and approved development pattern. This area will therefore remain unchanged as a large lot residential area. It is however recommended that robust development control plan provisions be developed to ensure that future land use within this area reflects its varying land capability as reasonably identified by the primary constraints mapping utilised by this Strategy and further onsite assessment.

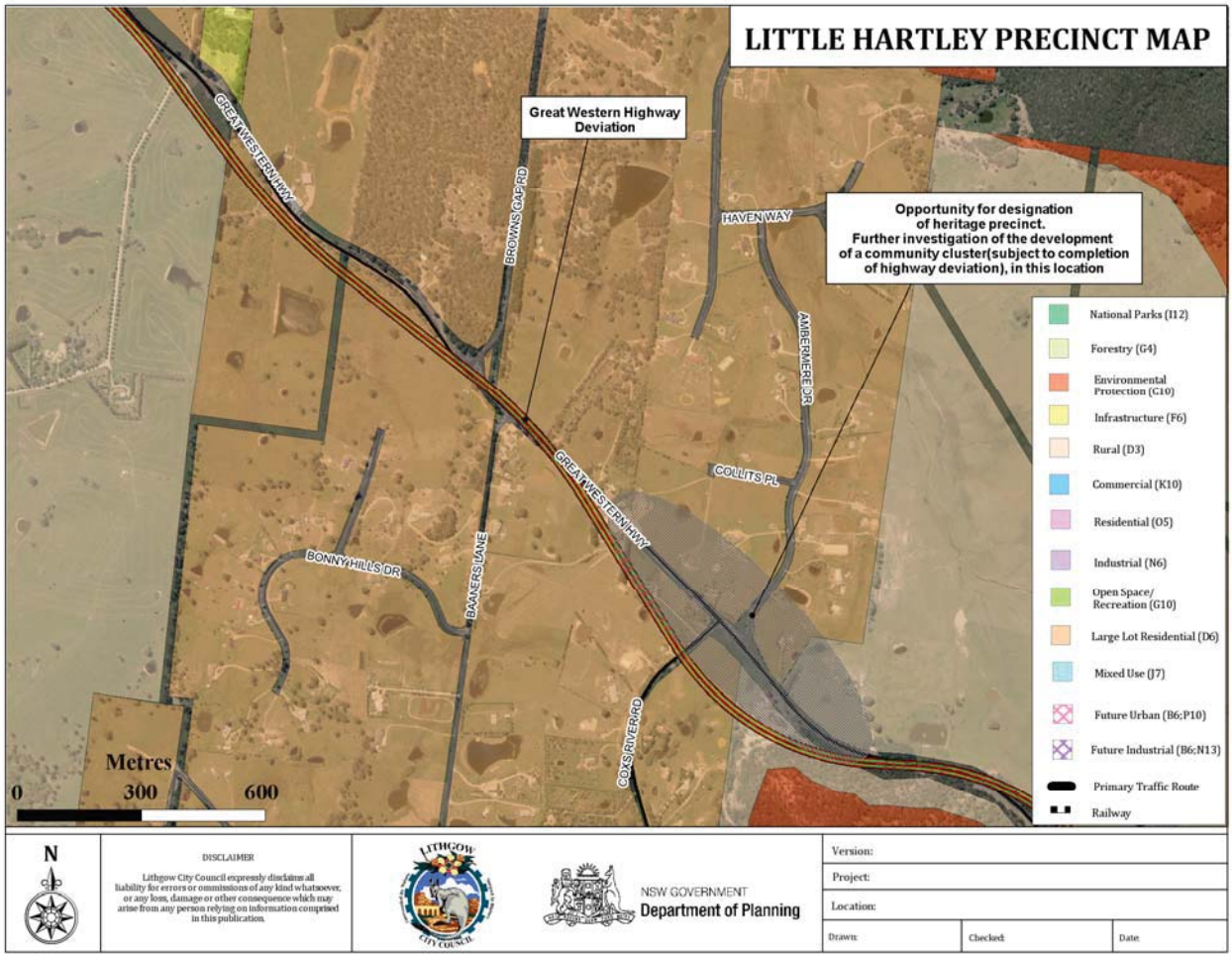
As has been stated previously this area has the potential to grow to a population level consistent with a village order in the settlement hierarchy, however this is inconsistent with the level of service provision to the area.

The application of pure and sound strategic planning principles would suggest that this anomaly should be remedied by restricting further subdivision potential in this location. However this is not a feasible option given the following considerations:

- The length of time that the land has been zoned to allow rural residential development, resulting in significant capital investment decisions made by landowners.
- The level of expectation of future land use and tenure created through zoning.
- The need for equity in planning decisions.
- The fragmented and dispersed nature of existing subdivisions.
- The primary residential amenity and character established within the area.

This Strategy must then consider how best to manage this area into the future. The preferred route of the Great Western Highway deviation provides an opportunity for a small central “village” area to be created to enable some limited small scale commercial and community activity to service the surrounding area and encourage tourism potential. The deviation provides a defined extent of this area as shown in Figure 6.

Figure 6. Little Hartley Precinct Map



Source: LCC

This area should not however be rezoned until the highway deviation is complete. At this time careful consideration will need to be given in the LEP in defining the extent of permissible land uses. Such land use will need to be compatible with the role of the area within the settlement hierarchy, the heritage significance of the area and the overall desired future sense of place and character.

CLARENCE (EXISTING)

This area was subdivided in the late 1960s with only 11 vacant lots remaining with no further subdivision potential due to identified land capability.

The existing primary land use of residential will be recognised in this area via a large lot residential land zoning.

LITHGOW PRECINCT

MAGPIE HOLLOW ROAD (NEW)

The area to the south of Magpie Hollow Road is currently reserved for future urban land use. It has a land area of 34.9ha of which 10.7ha has been identified as constrained.

Magpie Hollow Road provides a good physical delineation to the urban areas of Lithgow. This land to the south provides an opportunity to provide a transitional interface between standard urban and rural density.

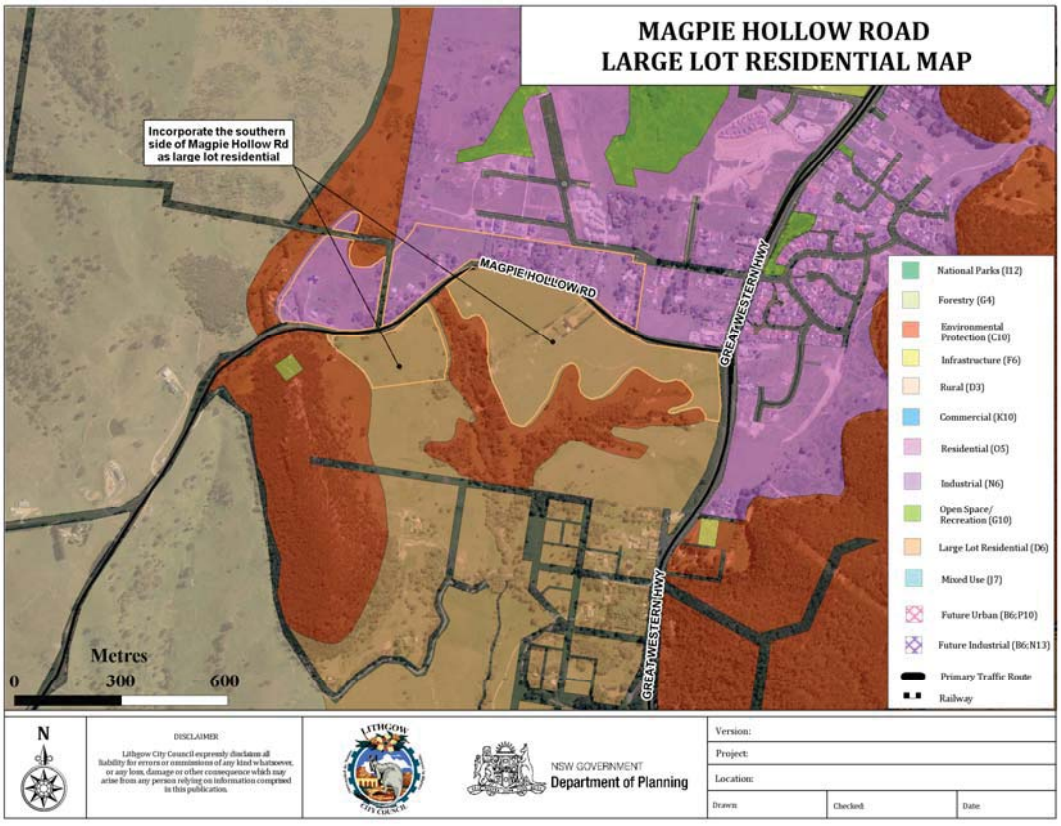
The provision of large lot residential in this location would fulfil the lack of this form of living opportunity within the Lithgow precinct and enable the land to better respond to its varying land capability and sensitivity.

The land is able to be fully serviced which provides a unique opportunity for larger living allotments on the fringe of the major town centre of Lithgow.

The LEP would need to consider an appropriate minimum allotment size for this area. Based on a conservative hypothetical minimum lot size of 4000m², the area has the potential to yield 60 allotments. At 2000m² the area may yield 120 allotments.

The area to be considered for zoning change is identified in Figure 7.

Figure 7. Areas considered for zoning change.



LITHGOW SOUTH/ MCKANES FALLS (EXISTING)

This area has an area of 260ha of which 209.1ha has been identified as being constrained by one or more of the primary constraints.

A desktop analysis has revealed that the unconstrained land area may yield a further 24 lots based on an applied 2ha minimum allotment size, however due to the existing development pattern and location of existing dwellings, this area may be essentially exhausted for further subdivision.

The level of constraints within this area is high, however given the existing pattern of development it is considered that little may be gained by back zoning and would potentially sterilise small areas of land with suitable capability.

Future land use intensification within this area should be guided by robust development control provisions to ensure that such land use reflects its varying land capability as reasonably identified by the primary constraints mapping utilised by this Strategy and further onsite assessment.

EAST BOWENFELS /COOERWULL ROAD (EXISTING)

This area is an island of land having an area of 18.2ha of which 9.7ha is identified as being constrained.

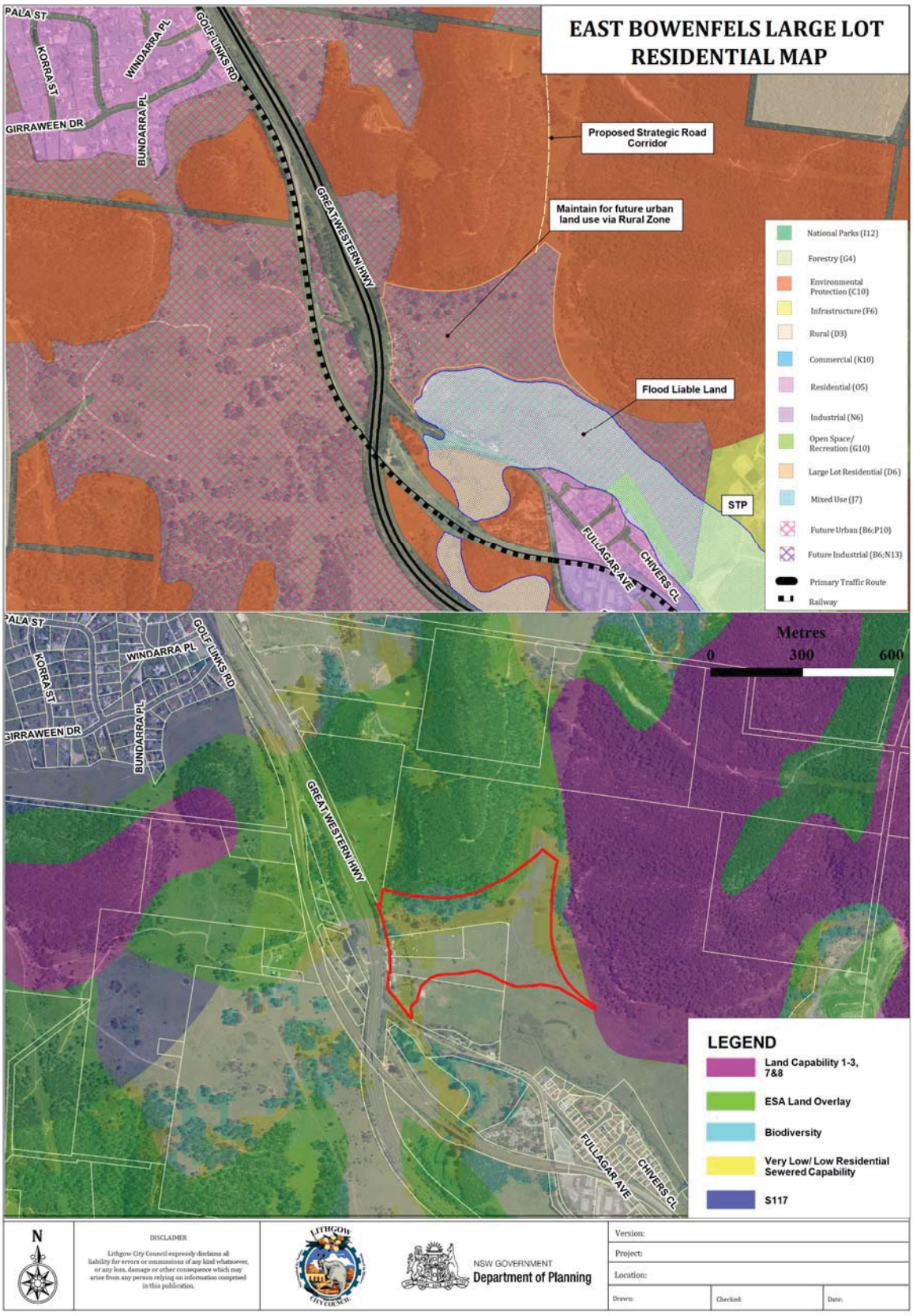
Potential lot yield of the unconstrained land would be four lots applying a 2ha minimum lot size, three of which already have a dwelling erected.

This area within its wider geographical context as shown in Figure 8 presents further issues to be addressed including:

- Identification and preservation of a road corridor to link the future urban area of Marrangaroo to Lithgow via Cooerwull Road.
- Consideration of the environmentally sensitive areas at the foot of the surrounding vegetated hills.
- Maintaining a buffer from the existing Sewage Treatment Plant.
- Identification of the flood affected areas from Farmers Creek.

Until these issues can be resolved to identify the urban capability of this land, it is recommended that this area and it surrounds be back zoned to a rural zone.

Figure 8. East Bowenfels Large Lot Residential Map



WALLERAWANG PRECINCT

WALLERAWANG EAST/BARTON AVE (NEW)

This area includes 64ha of land and is currently zoned Village. 56.2ha of this area has been identified as being constrained by one or more of the primary constraints as identified in Figure 50 Appendix 1.

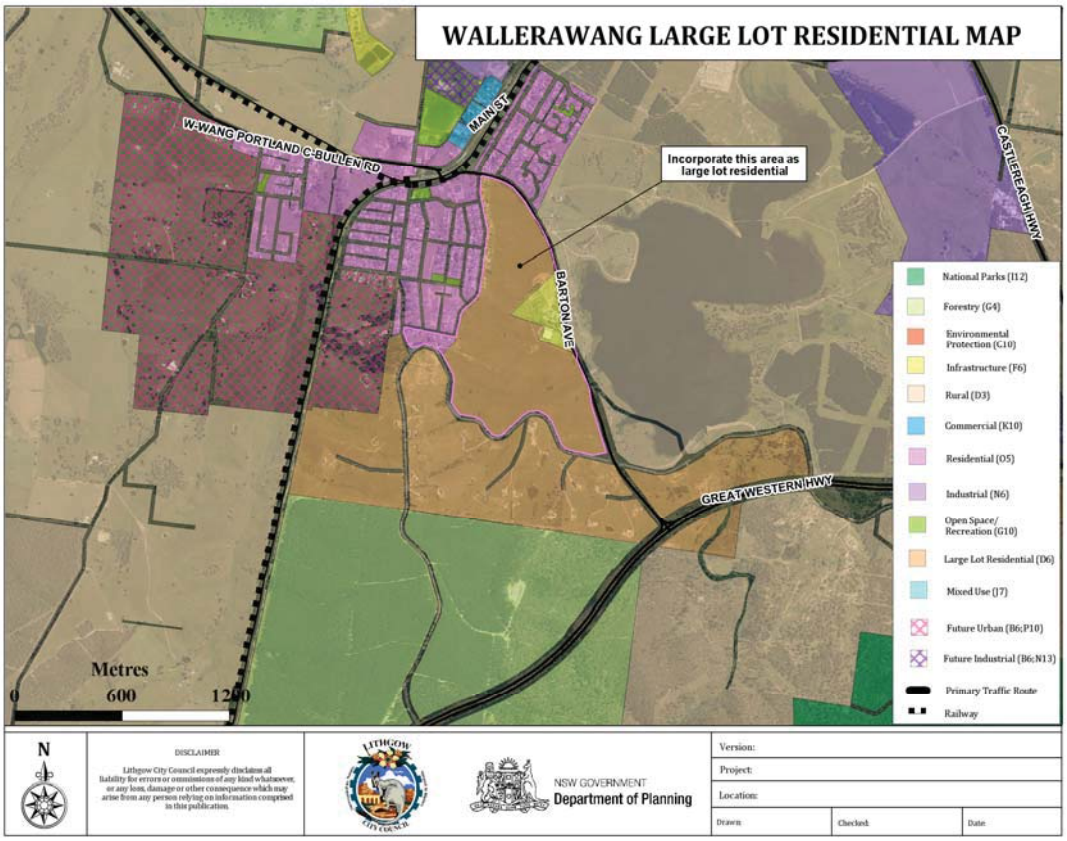
The land surrounds the existing public school and indoor sports stadium.

The land has limited capability for standard residential development, but would have varying capability for large lot residential. This area would be able to be fully serviced enabling this area to form a transitional interface between standard residential development and the larger rural lots to the south.

It is recommended that the area be back zoned to provide for serviced large lot residential allotments with an appropriate minimum lot size to enable a range of lot sizes to reflect the varying capability and infrastructure capacity of the land. The land would adjoin the existing area zoned for this use as shown in Figure 9 below.

It is further recommended that robust development control plan provisions be developed to ensure that future land use within this area reflects its varying land capability as reasonably identified by the primary constraints mapping utilised by this Strategy and further onsite assessment.

Figure 9. Wallerawang Large Lot Residential Map



WALLERAWANG SOUTH (EXISTING)

This area has an area of 165ha. This area has been identified as being highly constrained by one or more of the primary constraints. In particular the land is constrained for further development by the application of the Section 117 buffer area for the Wallerawang Silica Quartz Resource located on the opposite side of the Great Western Highway. This coupled with the existing development pattern limits further subdivision potential of this area.

A desktop analysis has revealed that 20 allotments remain vacant and therefore contribute to future supply.

It is recommended that this area remain identified for large lot residential land use. The LEP is to consider an appropriate minimum lot size or other appropriate provisions to limit further subdivision potential in the short term.

LIDSDALE (MODIFIED)

There is currently an area of zoned Rural Small Holdings 1(c) located in between Lidsdale and Blackmans Flat. This is a large area of 350.7ha and is dissected by the Castlereagh Highway. It is indicated through the constraints analysis that 135.7ha of this land is constrained by one or more of the primary constraints. As indicated in Figure 47 Appendix 1.

To date there has been very low take-up in this area resulting in little change to the land holdings. A desktop analysis revealed that there are twenty dwellings located within this area.

As stated previously this area is in close proximity to coal mining, coal related developments and infrastructure such as coal haul roads. It therefore has significant potential for unresolvable land use conflict should the land use intensify into a developed large lot residential area with the ability to net a further 87 allotments based on an applied 2ha minimum lot size.

This Strategy recommends that this area be back zoned to a more appropriate rural zoning with the primary focus being rural and primary production land use.

It is further recommended that this area be replaced by a modification to the existing Lidsdale Village Zone to provide for large lot residential land use as indicated in Figure 10. This new area will have an unconstrained area of 54.5ha. This approach not only reflects current land use and development density within this area but also serves to reinforce the recommended settlement hierarchy through ensuring that future commercial activity takes place within the Wallerawang town centre.

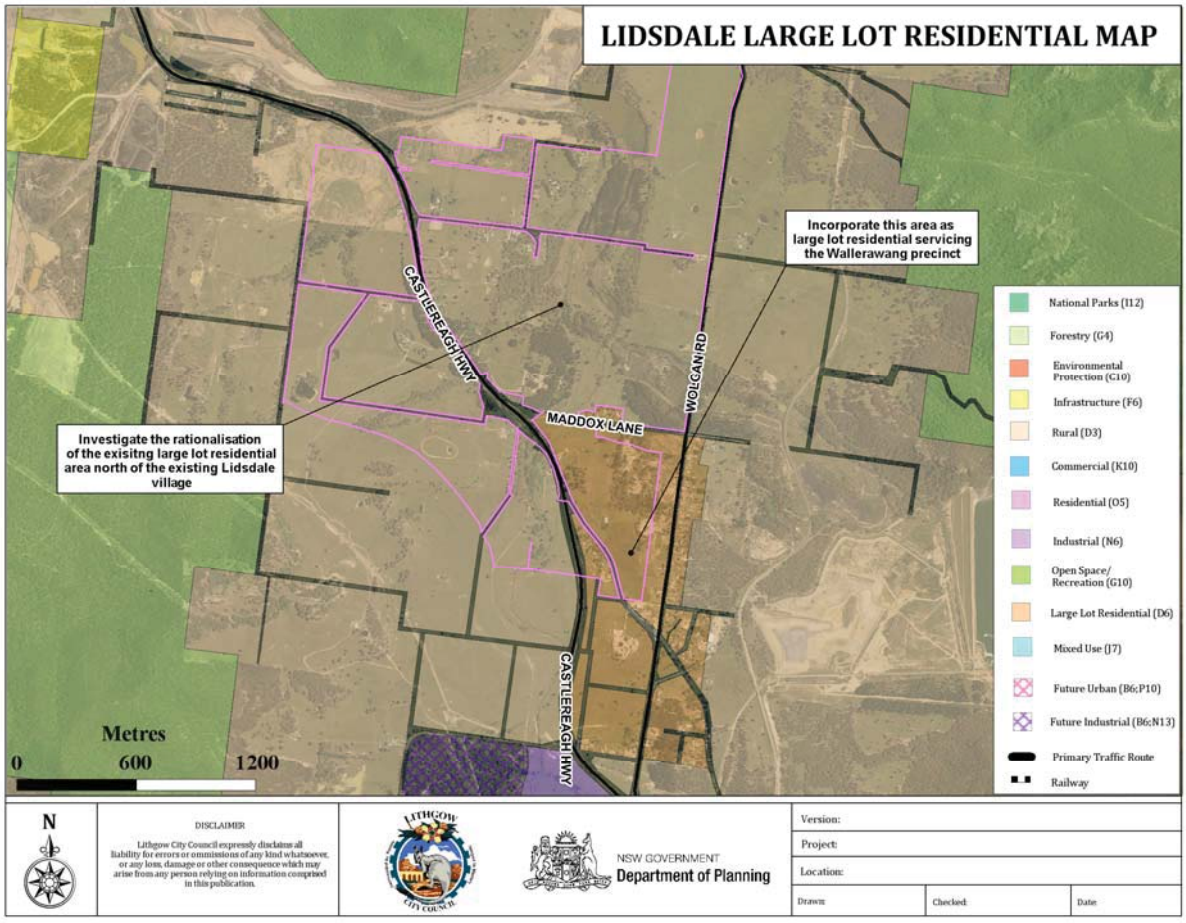
Having regard to the existing development and holding pattern this area may contribute approximately 272 large lot residential allotments based on a hypothetical applied minimum lot size of 2000m^2. Development will be predominantly on the western side of Wolgan Road.

The LEP will need to determine an appropriate minimum lot size to retain the existing low density and character of the area, whilst ensuring that land is not unnecessarily sterilised.

This area will serve to fill the shortfall of supply for this form of living within the Wallerawang precinct following the removal of the existing zoned area.

Development within this area will need to be guided by robust development control provisions to consider lot layout and design, built form and scale to ensure that the desired future character of the area is achieved.

Figure 10. Lidsdale Large Lot Residential Map



PORTLAND PRECINCT

PORTLAND SOUTH (EXISTING)

This area adjoins the existing village zone to the south of Portland and has an area of 304ha, of which 193ha has been identified as being constrained by one or more of the primary constraints.

The area is dissected by two major local roads being Sunny Corner Road and Range Road as well as a minor local road being John Mackey Drive.

Having regard to the identified constraints and existing development pattern, it has been identified that the area may yield a further 25 allotments based on an applied 2ha minimum lot size.

It is recommended that this area remain identified for large lot residential land use supported by robust development control provisions to guide future development.

PORTLAND NORTH (EXISTING)

This area adjoins the existing village zone to the north of Portland and has an area of 539.5ha, of which 165.5ha has been identified as being constrained by one or more of the primary constraints.

The area is dissected into four parts by Cullen Bullen Road, the Main Western Railway and Back Cullen Road.

Having regard to the identified constraints and existing development pattern, it has been identified that the area may yield a further 167 allotments based on an applied 2ha minimum lot size.

It is recommended that this area remain identified for large lot residential land use supported by robust development control provisions to guide future development.

PORTLAND (NEW AND AS MODIFIED FROM VILLAGE)

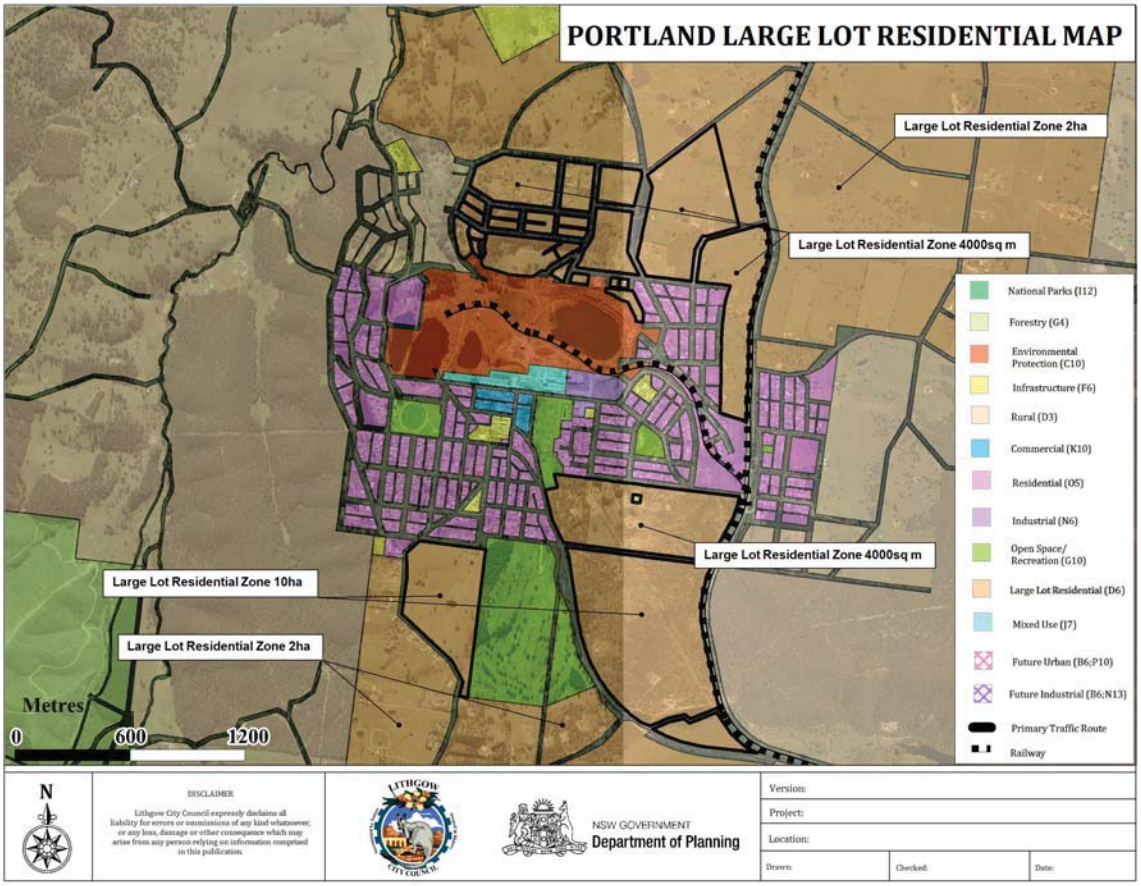
It is further proposed to change the future land use allocation of the following areas as shown in Figure 11 in Portland to form new large lot residential areas:

- An area of 52.6ha of land adjoining the Portland Village zone to the east of Wallerawang Road which is currently zoned Future Urban 1(d), highly constrained and given the current development pattern of 10ha lots is not likely in the future to add to standard urban supply. The area will have a minimum lot size of 10ha.
- An area of 21.9ha of land south of Falnash St that is currently zoned Village 2(v). This area is being removed from residential supply in the short term to reduce pressure on sewage infrastructure. It remains in the strategic framework as an area for future urban land use. A minimum lot size 10ha is to be applied to prevent fragmentation for large lot residential use that would prevent its future urban potential. All future subdivision of this area should be designed so as to not prejudice its future role for standard residential development.
- An area of 31ha of land south of Purcell Street that is currently zoned Village 2(v) is predominantly constrained and would benefit from the lower density land use of large lot residential. As the area cannot in the short term be provided with reticulated sewer, the minimum lot size for this area should be 4000m², being the standard to be adopted by this Strategy for unsewered residential lands.

An area of approximately 88 ha to the north of Roxburgh St and east of High St that is currently zoned Village 2(v). This area is being removed from standard residential supply in the short term to reduce pressure on sewage infrastructure. It remains in the strategic framework as large lot residential with the potential to be serviced large lot residential in the longer term. In the interim this area will have a 4000m² minimum lot size applied being the standard recommended by this Strategy for unsewered residential lands.

The new LEP directions for Portland are shown in figure 11 below:

Figure 11. Portland LEP Directions



REVISED SUPPLY AND DEMAND SCENARIOS

Table 5 below indicates the differences between the existing supply of large lot residential land in each precinct and the supply that would be available should all recommendations of this strategy be implemented. The revised supply is adequate to meet the current demand anticipated over the next 20 years in all precincts.

Table 5. Revised Supply & Demand

Current & Proposed Demand And Supply By Precinct/Land Use			
Zone/Precinct	Current Land Supply	Revised Supply from LUS	Current Dwelling Demand to 2031(20yrs)
Lithgow			
Residential	1352 (46.6yrs)	1352 (46.6yrs)	580
Rural	141 (37.6yrs)	141 (37.6yrs)	75
Large Lot Residential	25 (12.5yrs)	146 (72yrs)	40
Precinct Total	1518	1639	704
Wallerawang			
Rural	103 (79yrs)	103 (79yrs)	26
Large Lot Residential	107 (53.5yrs)	341 (170.5yrs)	40
Residential	396 (66yrs)	190 (31yrs)	123
Precinct Total	606	634	195
Portland			
Rural	99 (66yrs)	99 (66yrs)	30
Large Lot Residential	192 (38.4yrs)	334(70yrs)	95
Residential	801 (133.5yrs)	84(14yrs)	116
Precinct Total	1092	517	244
Rural Nth			
Rural	1930 (241yrs)	1019 (127yrs)	160
Large Lot Residential	11 (5.5yrs)	57(28.5yrs)	40
Village	42 (84yrs)	15(30yrs)	9
Precinct Total	1983	1091	209
Rural Sth			
Rural	1272 (76yrs)	763 (44yrs)	346
Large Lot Residential	247 (22.45yrs)	271 (24yrs)	221
Village	33 (16.5yrs)	4(2.5yrs)	32
Precinct Total	1552	1038	599
Total	6751	4919	1951 dwellings

The scenarios show an improved distribution within each planning precinct where large lot residential development is considered appropriate.

Table 6 indicates, although representing hypothetical scenarios, that should all recommendations of this Strategy be implemented that there remains sufficient supply of large lot residential lands across the LGA to accommodate a redistribution of demand as a result of restricting supply of larger rural lifestyle allotments as recommended in Chapter 9.

Table. 6 Scenarios of Large Lot Residential

Zone /Areas	Scenario One Demand Share	Demand over 20 years	Supply in Years	Estimated Supply	Scenario Two Demand Share	Demand over 20 Years	Supply in Years
Large Lot Res							
Lithgow	5%	98	36yrs	146	5%	98	29.8yrs
Portland	5%	98	83yrs	334	10%	196	34yrs
Wallerawang/ Lidsdale	3%	58.8	170yrs	341	5%	98	69.6yrs
Clustered Rural Lifestyle (Tarana, Rydal, Capertee, Clarence, Hartley & Dargan)	14%	274	23.9yrs	328	5%	98	66.9 yrs

DETERMINING AN APPROPRIATE MINIMUM LOT SIZE FOR LARGE LOT RESIDENTIAL LANDS

The current complex provisions within the Lithgow City Local Environmental Plan 1994 should not be retained.

Having regard to the variation of capability of lands identified for large lot residential land use it is considered the LEP should adopt varying minimum lot sizes for individual areas across the LGA. The new LEP in determining appropriate minimum lot sizes should have regard to the following:

- The identified environmental capability of the land through application of the primary constraints mapping and further on-site assessment.
- The identified infrastructure capacity of the area.
- The holding and development pattern of the area.
- The identified role of the area within the recommended settlement hierarchy.
- The desired future character of the area determined through community consultation.

Except as otherwise stated in this Strategy a new minimum lot size of 2HA for unserviced large lot residential areas is recommended. This removes the current 1HA minimum lot size currently applied. Allotments of less than 2ha previously created with development approval will retain their dwelling entitlement in the new LEP through a savings provision.

A minimum lot size for serviced large lot residential areas of 2000sqm is recommended.

SUMMARY OF KEY ACTIONS

Action 10.1

- Adopt the Growth Management and Sustainability Principles and Settlement Hierarchy as outlined in Chapter 4 of this Strategy and ensure all future large lot residential living opportunities are located within the 15km maximum outer limit as indicated by Layer 3 Figure 4 Chapter 4.

Action 10.2

- Retain and appropriately zone existing areas (excluding the Lidsdale and East Bowenfels/Cooerwull Rd area) of rural small holdings to large lot residential in the Lithgow City 2012 LEP.

Action 10.3

- Introduce the following minimum lot sizes for large lot residential areas in the Lithgow City 2012 LEP unless otherwise indicated in this Strategy.

    - Serviced (water and sewer) 2000sqm; and
    - Unserviced 2ha

Action 10.4

- Introduce a new large lot residential area in the Lithgow City 2012 LEP to the west of the Tarana village as indicated in Figure 27 in Chapter 14.

Action 10.5

- Alter the land use zone for the area to the south of Magpie Hollow Road to provide for fully serviced large lot residential development in the Lithgow City 2012 LEP as indicated in Figure 7.

Action 10.6

- Back zone the existing Lidsdale Rural Small Holdings zone to a primary production rural zone in the Lithgow City 2012 LEP to minimise land use conflict and reflect the capability of the land as indicated in Figure 10.

Action 10.7

- Back zone the existing Lidsdale Village to a large lot residential and incorporate part of the area of the existing Lidsdale Rural Small Holdings zone to the west bounded by the Castlereagh Highway in the Lithgow City 2012LEP as indicated in Figure 10.

Action 10.8

- Back zone the land to the west of Barton Ave Wallerawang to provide for large lot residential in the Lithgow City 2012LEP as indicated in Figure 9.

Action 10.9

- Back zone the existing East Bowenfels Rural Small Holdings zone to a rural or environmental zone in the Lithgow City 2012 LEP as a holding mechanism to prevent further fragmentation and investigation of the urban capability of the land.

Action 10.10

- Extend the large lot residential areas to the south of Portland in the Lithgow City 2012 LEP by:
    - Altering the zone of the areas to the south of Purcell Street Portland, bounded by the Western Railway and Wallerawang Road to large lot residential as indicated in Figure 11. This area to have a 4000m² minimum lot size.
    - Back zoning the parcel of land to the east of Wallerawang Road to large lot residential as indicated in Figure 11. This area to have a minimum lot size of 10ha.
    - Back zoning the parcel of land bounded by Falnash St, Portland Sunny Corner Road and the Golf course to large lot residential as indicated in Figure 11. This area to have a 10ha minimum lot size as a holding mechanism for future urban land use.

Action 10.11

- Extend the large lot residential area to the north of Portland in the Lithgow City 2012 LEP by:
    - Back zoning the areas to the north of Roxburgh St and east of High Street to large lot residential as indicated in Figure 11. This area to have a 4000m² minimum lot size.

Action 10.12

- Alter the land use zones at Capertee to provide for a new large lot residential zone to the south and east of Castlereagh Highway as shown in Figure 3.

Action 10.13

- Alter the land use zones at Rydal to provide a new large lot residential zone as shown in Figure 5.

Action 10.14

- Alter the land use zones at Tarana to provide a new large lot residential zone as shown in Figure 4.

Action 10.15

- Use Environmentally Sensitive Area mapping to inform the identification of new zones, land use permissibility, and /or assessment criteria defined by overlays to apply to large lot residential areas within the Lithgow City 2012 LEP.

Action 10.16

- Prepare a Development Control Plan to provide effective and appropriate land use management guidelines for large lot residential development areas.

Action 10.17

- Prepare and administer a land monitor to track the demand and take-up of large lot residential areas.

CHAPTER 11 RESIDENTIAL LAND

STRATEGIC RESIDENTIAL PLANNING PRINCIPLES

The planning principles to be used to guide the development of this Strategy and to inform the future management and development of residential lands in the Lithgow LGA are as follows:

- Reinforce the recommended settlement hierarchy by providing for the main focus of housing opportunities within the LGA at Lithgow, Wallerawang and Portland supported by the villages and rural areas.
- Define the limits to outward growth of the townships and villages and prevent urban sprawl.
- Recognise and protect local character and heritage values in the provision of new residential development.
- Recognise and protect environmentally sensitive lands.
- Protect the scenic landscapes that surround the existing towns and villages and consider appropriate development for the interface.
- Provide for a range of lot size and housing density to respond to changing community needs and align with the provision of higher order infrastructure.
- Identify opportunities for seniors housing.
- Residential development and occupation to respond to environmentally sustainable design principles and natural and cultural values.
- Provide for high quality living environments with links to town centres and open space networks via pedestrian, cycle ways and roadways.
- Residential land releases and development to be planned to accommodate the orderly and efficient provision of infrastructure and services and enable an effective development contributions system to operate.
- Provide for water sensitive urban design in all future residential development.
- Ensure that all new residential development within the defined boundaries (Layer 1A and 1B of Hierarchy) of Lithgow, Wallerawang and Portland townships is fully serviced with reticulated water and sewer.

PLANNING CONTEXT

This chapter addresses the residential land use within an urban context and includes housing opportunities provided in the three town centres and the five villages. Housing opportunities provided in the rural context is separately discussed in Chapters 9 and 10.

At the 2006 ABS Census 78.3% (15,477) of the LGA's population lived within the urban precincts, predominantly in the major townships of Lithgow (including Marrangaroo), Portland and Wallerawang. This figure is less than the 80.9% of persons living in these precincts in 2001 meaning that there is an increasing proportion of the population living in rural areas.

Settlement trends over the last decade have indicated the preferred housing choice in the urban context is single detached, low density housing. This is confirmed by Census data as shown in Appendix 2. The largest change in the type of dwellings occupied by households in Lithgow City between 2001 and 2006 were for those occupying separate houses (+391 dwellings).

The majority of new residential activity in the Lithgow LGA over the past ten years has been in the South Bowenfels area. Two significant tracts of land west of the Great Western Highway have been rezoned in this area since 2003 yielding an estimated lot potential of 862 lots, with subdivision approvals for the creation of 362 lots granted, 202 of which have been registered and 59 of which have been taken up by dwelling construction. Part of this area is also being developed for a 128 2-3 bedroom villa development (35 constructed) marketed to the people over 55 years of age.

Approval has also been granted for a further 105 lots at South Bowenfels on the eastern side of the Great Western Highway, 18 of which have been registered and 10 of those have dwelling construction upon them.

The only other residential subdivision of significance within the LGA recently has been a 130 lot estate to the west of Wallerawang, 15 of which have dwelling construction upon them to date.

Development interest, either through development approval, concept planning or structure planning has also occurred in the following key strategic areas: Pottery Estate Study Area, former Lithgow RSL site, former Lithgow Hospital site and the Marrangaroo Study Area. This activity is discussed in more detail later in this Chapter.

The largest determinant of residential growth into the future is the provision of critical infrastructure, in particular the provision of sufficient bulk water supply.

In this section residential development is taken to include standard dwellings and all forms of medium density development such as duplex (dual occupancy), villa units and residential flat buildings containing 3 or more dwellings in an urban and village context. It does not include residential opportunities (rural lifestyle) provided in the rural context, this form of development is separately discussed in Chapter 10.

PAST STUDIES AND CONSULTATION

In the early 1980s Lithgow experienced a mining and power generation boom with a series of new and expanding coal and power developments. The population of the Lithgow LGA was predicted at this time to expand rapidly from 20,000 in 1980 to between 30,000 to 33,000 in 1990 and a possible 35,000 in the year 2000 (Greater Lithgow Local Environmental Study - Kinhill Pty Ltd 1981).

By early 1983 these population figures were revised downwards, however the 1994 Local Environmental Plan proceeded with the identification of land supplies consistent with those inflated projections.

A series of planning studies were commissioned around this time to identify sufficient land supply to cater for this rapid growth scenario. More recently (2006) Council commissioned a Local Environmental Study and Structure Plan for the Marrangaroo Study Area. The key urban planning studies are listed in Table1

Table 1. Key aims and findings of relevant past studies

Planning Study/Report	Key Aims and Findings
Greater Lithgow Local Environmental Study – Kinhill Pty Ltd – March 1981	To examine new development areas to manage predicted population increase to 35,000 by 2001 as a result of new coal and power generation developments. A Local Environmental Study to assess the suitability and capability of identified candidate areas including: Old Bowenfels, West Bowenfels, Marrangaroo West, Marrangaroo East, Wallerawang East, Wallerawang South, Wallerawang North and West, Portland East and North, Portland West. Recommended development of the Old Bowenfels, West Bowenfels, West Marrangaroo and East Wallerawang candidate areas and included a staging and structure plan for development and infrastructure provision.
South Bowenfels and West Bowenfels Residential Study – Gutterridge, Haskins and Davey – June 1990	To prepare residential strategy/structure plans for South and West Bowenfels to provide for the urban expansion of Lithgow. Study found that both areas were well placed to accommodate urban development comprising a range of land uses – residential, open space, scenic and environmental protection, retail, community and educational facilities. South Bowenfels was found to be generally more suited to residential development than West Bowenfels for a number of reasons including road connections and road costs, landform and site features. Estimated that the study areas could accommodate a population of 12,180, 5,934 for West Bowenfels and 6,246 for South Bowenfels. Identified need for augmentation to bulk water supply and capacity of the Lithgow STP.

Planning Study/Report	Key Aims and Findings
Marrangaroo Local Environmental Study – Geolyse – June 2006	To provide a Local Environmental Study and structure plan that identified the "highest and best" use of the study area in terms of suitability and capability and the efficient and economic allocation of resources to service the land. Recommended a structure plan supported by urban design guidelines that identified potential for the following land uses within the Study area, employment generation, highway business services, large lot residential, standard urban, open space and recreation.

Source: LCC

COMMUNITY AND GOVERNMENT AUTHORITY CONSULTATION

Community consultation carried out in conjunction with the 2007 Local Profile and Strategic Plan identified the following key issue areas for residential lands:

COMMUNITY

- Potential for growth to change the character of existing areas
- Provision of different forms of housing to meet different needs and life phases
- Higher density housing to keep a human scale
- Need to recognise the roles and town structures of Portland and Wallerawang and provide more robust planning controls
- Lot sizes and density of development should be more in character with existing areas
- Need to align the provision of new housing areas with the provision and capacity of infrastructure
- Land use conflict due to the varying land uses permitted within residential zones
- Protection of heritage items and values
- Provision of open space and connections
- Need for planning controls to address urban design and residential amenity issues and provide more certainty for investment.

GOVERNMENT

- Maintaining flexibility for social housing opportunities throughout the urban centres (Dept of Housing)
- Provision of wider housing choice and affordable housing to respond to the changing needs of the community. Department of Housing predicts that by 2011, 58.8% of housing needs in the LGA will be for one bedroom accommodation and 29.8% for two bedroom.
- Consideration of provision of adaptable housing to enable ageing in place.

POLICY AND LEGISLATIVE FRAMEWORK

The key state and federal legislation and policy governing residential land use in the Lithgow LGA is summarised as follows:

Table 2. Legislation Summary

Instrument Name
KEY ACTS
Environmental Planning and Assessment Act
Local Government Act Building Code of Australia
Rural Fires Act 1997
Contaminated Lands Management Act 1997
KEY MINISTERIAL DIRECTIONS (Section 117)
Direction 2.1 Environmental Protection Zones
Direction 2.3 Heritage Conservation
Direction 3.1 Residential Zones
Direction 4.2 Mine Subsidence and Unstable Land
Direction 4.3 Flood Prone Land
Direction 4.4 Planning for Bushfire Protection
Direction 5.2 Sydney Drinking Water Catchments
KEY STATE ENVIRONMENTAL PLANNING POLCIES
Standard Instrument (LEP) Order 2006
Drinking Water Catchments Regional Environmental Plan No 1 (Deemed SEPP)
Exempt and Complying Development Codes 2008
Housing for Seniors or Other People with Disability 2004
Affordable Rental Housing 2009

Please refer to Chapter 3 for more detail.

EXISTING LOCAL PLANNING PROVISIONS

Standard residential development is governed by the Lithgow City Local Environmental Plan 1994 (as amended).

Land within the South Bowenfels Release Area is also governed by the South Bowenfels Development Control Plan- Residential Development Feb 2006.

ZONING

Currently all forms of residential development are provided in the following land use zones and areas:

- Residential 2(a) within the town of Lithgow
- Commercial 3 within the town of Lithgow
- Village 2(v) within the villages of Portland, Wallerawang, Lidsdale and smaller villages of Cullen Bullen, Capertee, Tarana, and Rydal.

Dwellings and dual occupancy is also permissible in the Future Urban 1(d) zones located in the following areas:

- Bowenfels (including West Bowenfels and South of Magpie Hollow Road), Wallerawang East and Portland South and East.

A limited opportunity for dwellings is also provided for in the Industrial 4 zone where such is in conjunction with another permissible use.

MINIMUM LOT SIZE

The Lithgow Local Environmental Plan does not contain a minimum lot size provision for serviced residential development within either the 2(a) or 2(v) zone.

Historically Lithgow City Council has applied a minimum urban allotment size of 550m² as a provision of the Engineering Guidelines for Subdivisions and Developments. This provision is therefore a matter of Policy and does not assume determinative weight in the assessment of development applications.

In the new Release Area of South Bowenfels, Council has introduced through a Development Control Plan a provision to achieve an average lot size of 700m² in all subdivision developments or stage of development.

Any new unsewered lots to be created within the Village 2(v) zone must have a minimum area of 2000m² or greater dependent on the capacity of the land to dispose of effluent on-site.

The minimum lot size within the Future Urban 1(d) zone is 10 hectares, recognising that it is a holding zone for future urban development.

DENSITY CONTROL

The current LEP does not provide development standards to control residential density. The South Bowenfels Development Control Plan introduces the following development controls applicable to the South Bowenfels Study Area

a) All development shall not exceed a floor space ratio greater than 0.5:1. For the purposes of calculating the total gross floor area, each car parking space is deemed to have an area of 18m².
b) The maximum number of dwellings on each site for medium density development shall not exceed:

- one 1 bedroom dwelling per 220m² of site area
- one 2 bedroom dwelling per 300m² of site area
- one 3+ bedroom dwelling per 375m² of site area.

c) Notwithstanding clauses a) & b) above, development for the purposes of dual occupancies and medium density shall not be carried out on an allotment of land to which this DCP applies where:

- the shortest distance between the point on the boundary of the allotment and a point on the boundary of an allotment on which another dual occupancy or medium density development has been carried out, or for which there is a current consent for development of that classification, is less than 75m.

In other areas Council has an interim planning guideline for residential unit development which requires the following:

- Site density of residential units shall not exceed one unit per 200m².

This guideline is just that, it holds no determinative weight in the development assessment process.

SUMMARY OF ISSUES

Table 3. Summary of Key Residential Planning Issues

RESIDENTIAL ISSUES	WHY IS IT AN ISSUE?
Limitations of existing LEP	• The flexibility of the current LEP, instead of encouraging development opportunity has to some degree, stifled development as a result of an uncertain investment environment. • LEP does not provide a defined minimum lot size or density controls for differing residential form and types allowing market demand to dictate. • The range of permissible uses in the residential zone and other zones where residential development is permitted has created land use conflict. • The flexibility of the LEP is not supported by a detailed Development Control Plan.
Primary constraints impact on residential development opportunities	• The presence of natural and physical constraints defines the limits of the three urban centres and has led to a lateral expansion of these centres. • Primary constraints analysis may require some existing zoned areas to be back zoned or provide reduced density to avoid environmental impact. • The management of constrained areas will require more detailed development standards and provisions to be implemented through the LEP and/or DCP.
Defining and maintaining residential character and amenity	• The flexibility of the current LEP does not differentiate the desired character and amenity to be achieved in each residential neighbourhood. This creates conflict between new and existing development.
Housing choice and affordability	• The LGA has a high percentage of detached single dwellings (77.5%). This reduces the ability of the LGA to provide housing choice and affordability. • The LGA has an increase in lone person household and households with couples without children, indicative of an aging population, and therefore there will be an increasing need for more diverse housing structure to be provided. • A new planning approach will be required to encourage the development a mix of housing types and forms.
Future provision of seniors housing	• The rapidly aging population will increase the need for varying forms of seniors housing. • The planning system will need to respond positively to this form of development and should provide “go to areas” to encourage and facilitate development.
Potential for urban renewal and consolidation	• Despite the flexibility of the existing LEP, urban renewal and consolidation has not been considered a viable alternative to the development of new areas. This is due in part to the relative ease and cost of development in the new release areas. • As the existing housing stock ages and the demand for smaller housing increases there will be pressure on existing areas to accommodate higher density living opportunities and the potential for some areas to experience new development and change in character. • Planning for this scenario must be considered in the development of the new LEP and DCP.
Infrastructure and Service Provision	• The ability to service some of the existing zoned lands will require consideration of back zoning or reduction in density to ensure all future development can be adequately serviced.

RESIDENTIAL ISSUES	WHY IS IT AN ISSUE?
	• Council currently does not have a development contributions plan or development servicing plan to ensure that the costs of servicing new development is equitably shared between developers and the existing community.
Managing supply and urban release	• The planning system should be able to regulate the supply of land to effectively manage the provision of infrastructure and create a positive living and investment environment. Both of these outcomes can be adversely affected by the provision of too little or too much residential land supply.

DISCUSSION OF ISSUES

LIMITATIONS OF EXISTING LEP

The 1994 Lithgow Local Environmental Plan sought to provide a high level of flexibility for the area to respond to undefined growth opportunities. This flexibility, instead of encouraging development opportunity, has to some degree, stifled development as a result of creating an uncertain investment environment.

The LEP has also not been supported by a robust development control plan to provide the defined detail and development standards for residential development. This has led to each application for residential development being assessed on a subjective merit basis where cumulative impact cannot adequately be considered and consistency of standards may not always be achieved.

In the context of residential development the application of a flexible zoning regime coupled with flexible permissible land uses across the range of zones, has created a circumstance where medium density development is not identified as a preferred land use in any area of the LGA. This is reflected in the low development activity for this form of development, as in many cases, the development assessment process is fraught with too many issues to overcome.

Having one residential zone, the LEP also does not provide a minimum lot size for subdivision of residential land. This has the potential to create a two pronged adverse effect: on the one hand it creates the potential for lot sizes substantially lower than the average of existing areas thereby changing its character; and on the other hand creates the potential for inefficient land use when market forces dictate a desired larger lot size.

Without sufficient direction from the governing LEP, the development assessment process is ill equipped to deal with the issues this creates.

PRIMARY CONSTRAINTS TO URBAN/RESIDENTIAL DEVELOPMENT

The defined limits to growth of each of the three urban centres is determined by the presence of natural barriers such as steep slopes, dense vegetation road and rail networks or a combination of the three. This has necessarily led to a lateral expansion of town centres as the luxury of a more traditional concentric pattern of growth is not afforded. The impact of which, is a larger environmental footprint and spread of infrastructure networks.

Whilst future development will need to avoid areas of high environmentally sensitivity, it should also seek sustainable means to manage and integrate land constraints where possible instead of the current practice of land sterilisation. This can be achieved through appropriate site analysis, planning and design.

Each area identified for future land supply for residential purposes has been evaluated against a set of strategic constraints data as follows:

Table 4. Strategic Constraints Data

Criteria/Primary Constraint	Assessment tool/s
Vegetation coverage	Environmental Sensitivity Area maps SLWCA Stage 1 threshold maps for SCA Aerial photographs/ mapping Local Knowledge
Slope	Environmental Sensitivity Area maps SLWCA Stage 1 threshold data maps for SCA Topographic maps and aerial photographs Local Knowledge
Drainage/Water	Environmental Sensitivity Area maps SLWCA Stage 1 threshold maps for SCA Topographic maps and aerial photographs Local Knowledge
Access to key service	Liaising with Council GIS data

Source: LCC Supply and Demand Analysis Appendix 1

This strategic constraints analysis has been applied and has revealed that some of the supply areas are potentially unsuitable for residential settlement. As a consequence, some lands have been discounted either partially or fully from the potential land supply. Details and mapping of this analysis is provided in the Supply and Demand Analysis (Appendix 1).

The discounted lands may in the future hold some capacity for development based on detailed site specific investigations beyond what is suggested here and therefore will not in all cases suggest a need for a zoning change.

RESIDENTIAL CHARACTER AND AMENITY

The community have raised concern regarding the retention of residential character and amenity, should growth occur.

The key threats to residential amenity include the following:

- Inappropriate development (form, density, building design, siting and issues associated with privacy and overshadowing)
- Concentration of higher density housing opportunities causing a substantial change of character for some streets and areas where historical housing form has been detached dwellings
- Conflicting land use
- Traffic conflict
- Interruption and impact upon streetscape characteristics and aesthetics particularly in the vicinity of heritage items

These issues although plausible, can be effectively managed through implementation of a range of robust planning tools such as the LEP and DCP to address zoning, land use permissibility, height, and the full range of design parameters such as bulk and scale, setback, site coverage, privacy, overshadowing, car- parking etc.

HOUSING CHOICE AND AFFORDABILITY

The NSW Department of Housing, Sydney West Area Health Service and the community have all identified the need for wider housing choice, affordable housing and the need to maintain the unique character and amenity of the area.

With a projected increase of the over 65 age group from 13.2% in 2001 to 31.6 % in 2031, easy lifestyle homes in close proximity to shops and services will be in demand.

The Department of Housing have assessed that Lithgow has people in housing need, especially young people, Indigenous Australians, low income earners, unemployed, aged pensioners, people with disabilities, frail aged, single parents with young children, homeless people and a proportion of middle income earners. The Department (2006) projects that by 2011, 58.8 % of the need for housing provided by the Department of Housing will be one bedroom accommodation and 29.8% for two bedrooms.

This is in stark contrast to the current strong trend towards the provision of 3- 4 bedroom detached houses in a low density environment.

Currently only 6.6% (2006 ABS Census) of housing stock in the Lithgow LGA is of higher density dwelling types, the majority of which is provided in the Lithgow precinct. There has been a long held community apprehension towards medium density development largely due to concerns regarding design issues and retention of residential amenity and to some degree from a preconception that those living in medium density housing are of a lesser character than those in detached dwellings.

The challenge for this Strategy and future planning instruments is to find ways to encourage affordable and adaptable housing, wider choice of allotment sizes and more dense housing in close proximity to town centres and to address the fears of the community to this form of housing.

PROVISION OF SENIORS HOUSING

The Lithgow LGA is rapidly ageing and as such the future provision of housing for seniors will be a critical issue for both social and land use planners.

The Lithgow LGA also has a high proportion of detached large dwellings and traditionally aged persons in Lithgow have aged in place or have been cared for by family members.

The LGA does provide forms of assisted care in both Lithgow and Portland for the elderly with self care units also available in these centres and Wallerawang. It is reported however that these facilities have long waiting lists and are struggling to cope with demand. This situation will continue to worsen at a rapid rate should new facilities not be provided.

POTENTIAL FOR URBAN RENEWAL AND CONSOLIDATION

The LGA's existing residential areas across the three town centres contain a range of lot sizes and established densities. Of course, this is more apparent in the larger township of Lithgow where a more usual pattern of density is prevalent, that is higher density around the town CBD, lessening towards the urban fringe. Recent residential activity in the South Bowenfels area has progressed at a low density.

The potential for urban renewal and consolidation has in the past been perceived to be low due to limited vacant land holdings and the ease of which new development areas on the fringes of town were being developed. The concept of "knock down and rebuild" has to date not been considered a viable alternative to development of new areas. There has also been a low take up of dual occupancy provisions across the LGA despite such standards for such development type being relatively flexible.

It is considered that as existing housing stock ages and the demand for smaller housing increases that there will be pressure on existing urban areas to accommodate higher density living opportunities and there is the potential for some areas to experience new development.

How this development is integrated with the existing built form, particularly in areas of high heritage value, will be of critical importance. It will be important that development achieves a high standard of liveability and /urban design.

A detailed housing strategy has never been prepared for the Lithgow LGA. This is considered a major data gap that will be required to further inform future land use planning in this regard. Council has scheduled to complete a Housing Strategy in the year 2013/14.

INFRASTRUCTURE AND SERVICE PROVISION

The potential for the Lithgow LGA to accommodate further residential growth is interdependent on the ability of the area to provide critical infrastructure such as water and sewer.

The critical infrastructure facts that impact upon residential growth opportunities are summarised below:

The Lithgow bulk water supply is challenged by the vagaries of climate change and especially drought conditions. This may limit growth potential should alternative supply schemes as the Clarence Water Transfer System not come on line.

All three Sewerage Treatment Plants require upgrades. The Lithgow and Wallerawang plant upgrades are currently underway.

The Portland plant is at capacity and will not be able to be upgraded until at least the year 2017 due to a shortfall in funding availability. This will restrict growth in the Portland town.

The South Bowenfels new release areas require connection to a new water reservoir currently under construction and augmentation of the trunk sewer system back to the STP. This may restrict the release of subdivision certificates in this area for subdivisions already approved and limit new development opportunities in the short to medium term.

Please refer to Chapter 6 for more detail.

Such issues will be required to be managed by a planned staged release program for new and developing areas which may mean that some areas will not be able to be developed in the short to medium term.

The challenge then, for this Strategy to reassess land supplies to ascertain whether there are sufficient serviced supply areas to meet projected demand within the short to medium term, and if not, then this Strategy must redirect its actions to limit residential growth until infrastructure capacity can be aligned.

SUPPLY AND DEMAND FORECASTS

A detailed supply and demand analysis is provided in Appendix 1. This analysis replaces the supply and demand analysis provided in the 2007 Local Profile.

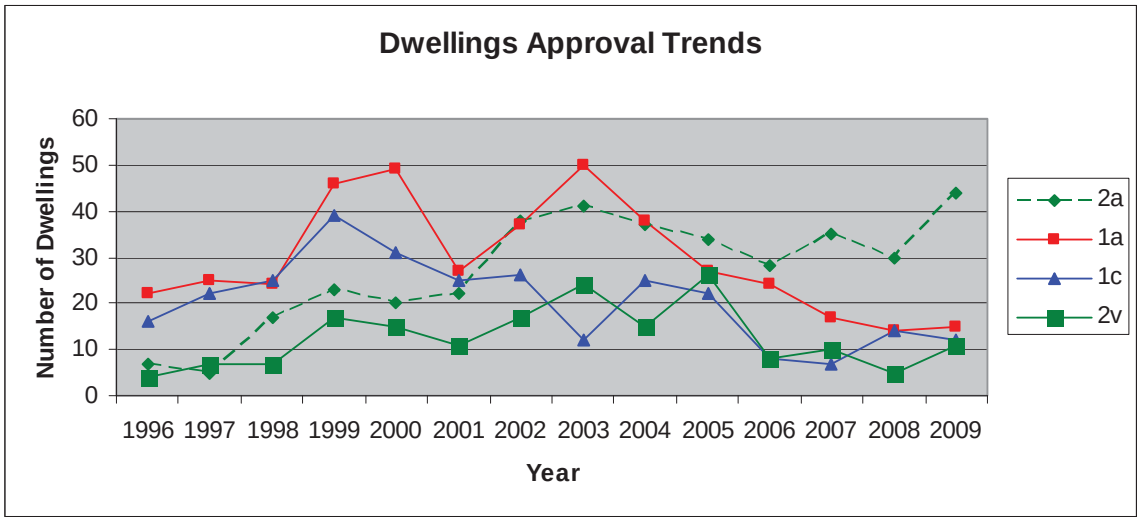
The following is a summary of the key facts and findings of this summary in relation to residential lands.

DWELLING DEMAND ACROSS THE LGA 1996-2009

From the analysis of Council's dwelling monitor, 1269 dwellings were approved across the LGA for the period 1996-2009. This equates to an average of ninety eight (98) dwellings per year.

Dwelling approval rates were highest in the period 1999–2000 and 2002 – 2005. These periods coincide with residential land releases in both the rural residential and urban areas of the Lithgow LGA. Aside from these spikes in dwelling approvals, the rate of dwellings approvals is relatively stable across the selected data capture period as shown in Figure 1.

Figure 1. Dwelling approvals over time



Source: LCC Approvals Monitor 1996-2000

Over the thirteen (13) year period, the following facts were evident:

- 55.1% of dwelling approvals occurred in the rural areas of the LGA i.e zones 1(a) and 1(c).
- 30.3% of dwelling approvals were recorded in the Lithgow urban area. i.e 2(a) & 1(d)
- 6.1% of dwelling approvals were recorded in the village area of Portland i.e 2(v) & 1(d).
- 6.6% of dwelling approvals were recorded in the village area of Wallerawang. i.e 2(v) & 1(d).
- 3.9% of approvals were recorded in the other village areas of Tarana, Rydal, Cullen Bullen and Capertee.

The spatial distribution of these dwelling approvals within the planning precincts is shown in Figure3 of the Supply and Demand Analysis.

Future demand forecasts for urban equivalent zones (2(a), 2(v)) have been generated using the current average yearly demand levels projected over the 20 year life of this strategy for each precinct as follows:

Table 5. Forecast Demand for Urban Equivalent Zones

Precinct	Forecast Demand
Lithgow	580
Wallerawang	120
Portland	120
Rural North	10
Rural South	40

Source: LCC Approvals Monitor 1996-2009

This demand level equates to an average non-compounded 0.5% annual growth rate for standard residential development.

LAND SUPPLY

Current land supply for residential purposes in each precinct have been calculated using a strategic constraints analysis to determine the supply of land based on its capability to support residential development. As a consequence some lands have been discounted either partially or fully from the potential land supply. The identification of available supply areas and detailed analysis of the urban supply is included in the full Supply and Demand Analysis in Appendix 1

Table 6 is a summary of the supply analysis relating to Residential 2(a) and Village 2(v) zones. The table also presents the supply against projected demand and indicates the number of supply years under current demand levels for each precinct.

Table 6. Summary of the supply analysis

Demand And Supply By Precinct/Zone						
Zone/Precinct	Dwelling Approvals1996-2009	Avg Yearly Demand	Land Supply	Projected Dwelling Demand 2031(20yrs)	Pop Increase	Land Supply/Years
Lithgow						
2a	383	29	1352	580	1392	46
Wallerawang						
2v	80	6	308	123	295	66
Portland						
2v	76	6	801	116	278	133
Rural Nth						
2v	6	0.5	42	9	21	84
Rural Sth						
2v	15	2	33	32	76	16.5

Source: Adapted from LCC Supply and Demand Analysis Appendix 1

The above table shows that under current demand levels and spatial distribution of that demand that supply can be easily met and in fact far outstrips demand in all precincts of the LGA over the life of the Strategy, with the exception of Rural South where demand will outstrip supply by only one year.

FUTURE SUPPLY AND DEMAND SCENARIO

Whilst this data is useful, it is the function of this Strategy to review supply based on the implications of the recommended strategies of this supply.

It is the intention of this Strategy to reverse the trend of dispersed rural lifestyle development dominating dwelling and residential demand as has been evidenced in the past thirteen years whereby on average 55.1% of all dwelling approvals have been granted within the rural areas, 32.7% of which have been for this form of development.

The adoption of the recommended Growth Management and Sustainability Principles and adherence to the recommended settlement hierarchy (detailed in Chapter 4) as fundamentals of this Strategy, dictates that dwelling demand will be redirected in the future into a more compact form focusing on the three urban centres.

Table 7 shows how application of these fundamental principles may change the look of the supply and demand based on different assumptions regarding where displaced demand from the rural areas may be refocussed in the broad land use categories into the future.

Table 7. Supply and demand redistribution scenario

Zone/Areas	Scenario One Demand Share	Demand over 20 years	Estimated Supply	Scenario Two Demand Share	Demand over 20 years
Standard Residential					
Lithgow	50%	980	1352	40%	784
Portland	13%	254	801	15%	294
Wallerawang/Lidsdale	13%	254	396	15%	294
Villages	4%	78	75	5%	98
Rural Lifestyle	5%	98	4177	5%	98
Clustered Rural Lifestyle	15%	294	582	20%	392

Source: LCC
* Based on current dwelling demand average 98 per annum
* Based on current MLS for Rural Lifestyle (40ha) and Clustered Rural Lifestyle (2ha)

What the above table illustrates is that on a LGA wide basis current supply for each land use category is available to accommodate strategies that will substantially reduce the number of potential new dwellings in the rural zones without further land rezonings.

The challenge for this Strategy is then how to manage the apparent oversupply of residential lands and provide direction of the future staged release of lands having regard to demand and variables in infrastructure capacity within each of the planning precincts.

ADDRESSING KEY RESIDENTIAL PLANNING ISSUES – ANALYSIS OF OPTIONS AND PREFERRED DIRECTION

ROLE OF PORTLAND AND WALLERAWANG

As determined by the recommended settlement hierarchy the towns of Wallerawang and Portland are to be recognised as town centres and are well placed to absorb development growth well in excess of the current demand share of 6%, over the 20 year life of this Strategy.

The town of Portland has the highest capacity to absorb growth due to its size and current level of services, however it will be restricted in the short term as the Sewerage Treatment Plant is currently at capacity. Augmentation of this system will not be able to occur until external funding is available which will not be prior to the year 2017. Further detail on the infrastructure capacity is provided in Chapter 6.

The staging and absolute limit to growth in these town centres will be critically determined by infrastructure capacity particularly in relation to the following:

- Provision of a bulk water supply with the capabilities to remove the towns from reliance on the Fish River Water Supply Scheme
- Augmentation of the Wallerawang Sewerage Treatment Plant
- Augmentation of the Portland Sewerage Treatment Plant

Through the implementation of this Strategy, these centres are planned to play a larger role (taking up to a potential 20% of the current demand share) in the provision of residential development opportunities into the future. As such the zoning of the towns require review to:

- Ensure that growth can be accommodated without the potential for increased land use conflict.
- Provide certainty around development investment
- To pull back existing zoned areas that are incapable of providing for residential development due to constraints or known servicing requirements in the short to medium term to direct growth into appropriate areas and align infrastructure capacities.

ROLE OF VILLAGES

There are five villages within the Lithgow LGA that are recognised through a village zoning, Lidsdale in the Wallerawang precinct, Cullen Bullen and Capertee in Rural North precinct and Rydal and Tarana in the Rural South precinct.

There are also a number of small hamlets or concentrations of settlement that remain within the wider General Rural zone such as Hampton, Hartley Vale and Sodwalls in the south and Glen Davis, Glen Alice in the north. It is proposed that these areas remain as hamlets and contained with the rural zone.

These villages (and hamlets to a lesser degree) support the wider rural communities and this Strategy has assessed each zoned village in terms of its capability to retain existing population levels and/or support future growth.

These villages with the exception of Lidsdale rely on on-site effluent disposal systems. As has been shown in the recent inspection of these systems throughout the LGA many systems are failing performance criteria. In line with best practice for on-site effluent disposal systems (Environment and Health Guidelines On-Site Sewerage Management for Single Households, DLG 1998 "Silver Book"), it is proposed to increase the minimum lot size for a dwelling in the village zone with on-site effluent disposal from 2000 square metres to 4000 square metres.

Due to the holding pattern of these villages there is little capacity for future growth as indicated in Table 10 of Appendix 1 Supply and Demand Analysis.

Each village has been assessed as to its future role in the Settlement Hierarchy, primary constraints analysis and infrastructure and servicing capacity. The proposed directions for each village are as follows:

CULLEN BULLEN

This Strategy recommends no change to the existing village boundaries

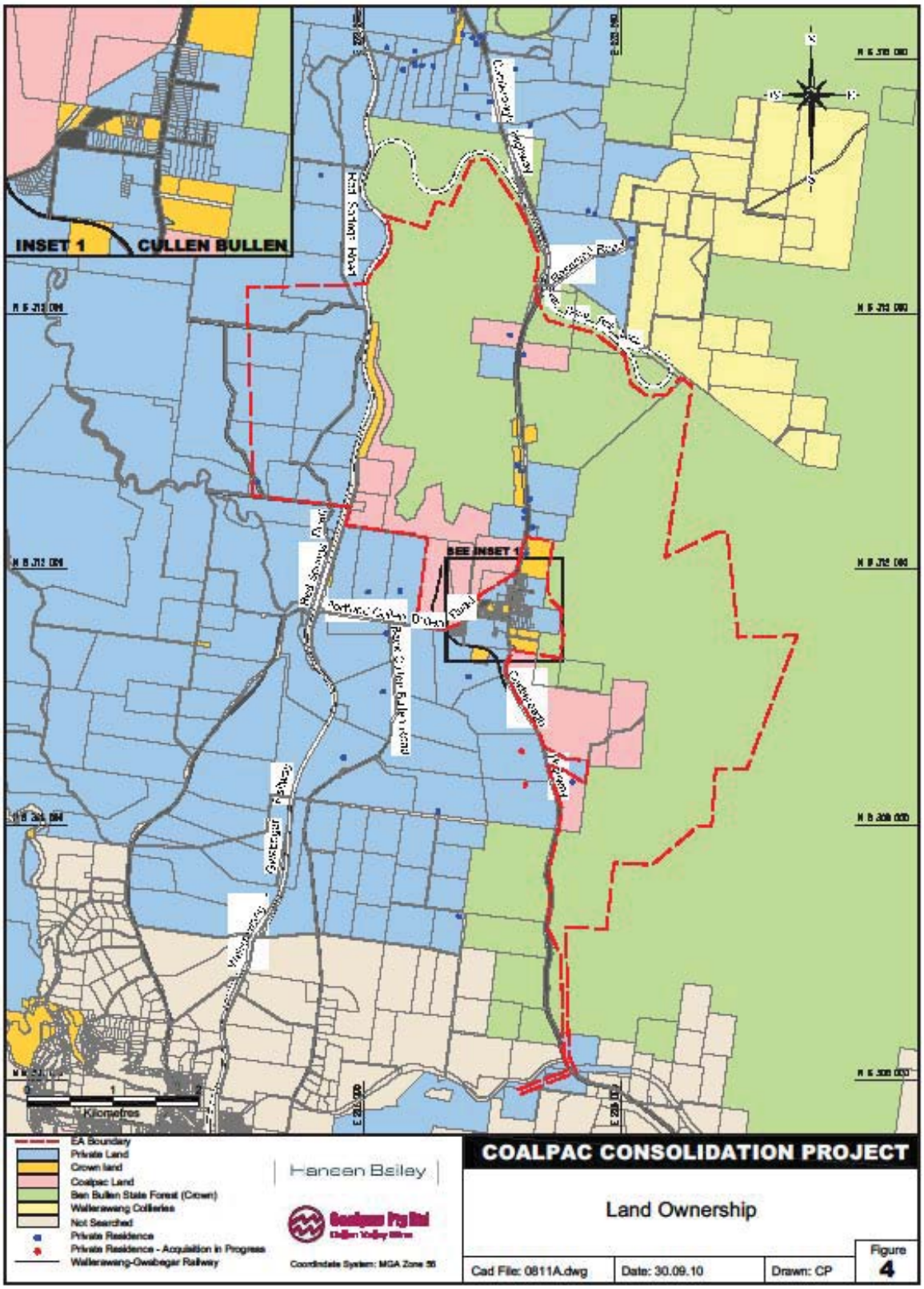
There is limited potential for future growth of this Village due to:

- Limited capacity of the soils in the area to sustain on-site effluent disposal. In addition the average holding size is 2017m², being well below the new recommended minimum lot size of 4000m² for on-site effluent disposal.
- Potential for land use conflict to occur as a result of the village being surrounded by existing and proposed open cut mining. The Cullen Valley mine currently operates to the north east of the village.

As shown in Figure 2, the area shown hatched red is a current environmental assessment area for a further mining project that would if approved encapsulate the Village.

Based on the current holding and development pattern a further 12 allotments may be created within the village area having an area of 4000m².

Figure 2. Cullen Bullen Mining Proposal – Coalpac



Source: Coalpac Community Consultation Newsletter

CAPERTEE

It has been identified that it is important that growth opportunities in this village be maintained and enhanced for the following reasons:

- To assist with the retention of the existing higher level of services this community enjoys such as an infant/primary school, police station and service station.
- To service the daily needs of the surrounding employment lands of the Airly coal mine
- To support and enhance the growing tourism potential of the Capertee Valley

As can be seen in Figure 3 the existing village zone to the south of the Castlereagh Highway is constrained by dense vegetation.

The majority of this land is Crown Land representing an historic crown subdivision and is not accessible by formed public roads under the control of Council. Due to the relative low development capability of this land for standard residential development or allied village land uses, it is recommended that the village zone be pulled back to a rural zone south of Goulburn St and a large lot residential zone between Goulburn St and the Castlereagh Highway.

Due to the current holding and development pattern, the area of large lot residential will not yield significant allotments once the standard minimum lot size for unsewered residential lands of 4000m² is applied.

To compensate for this loss of residential opportunity, a further area has been identified for a new large lot residential area to the west as indicated in Figure 4. This area is a greenfield site relatively free of constraints.

It has been estimated that these two large lot residential areas have the capacity to yield a maximum of 46 allotments.

The remaining village zone having an area of 11.3ha is considered sufficient to provide for a range of allied land uses. Due to the existing holding and development pattern this area is only likely to supply a further 3 residential allotments based on a minimum lot size of 4000m².

The introduction of the 4000m² minimum lot size will in this area, as in all other village and town areas that remain unsewered, necessarily mean that some existing allotments and holdings will have no residential development opportunity.

Figure 3. Capertee Existing Village Zone

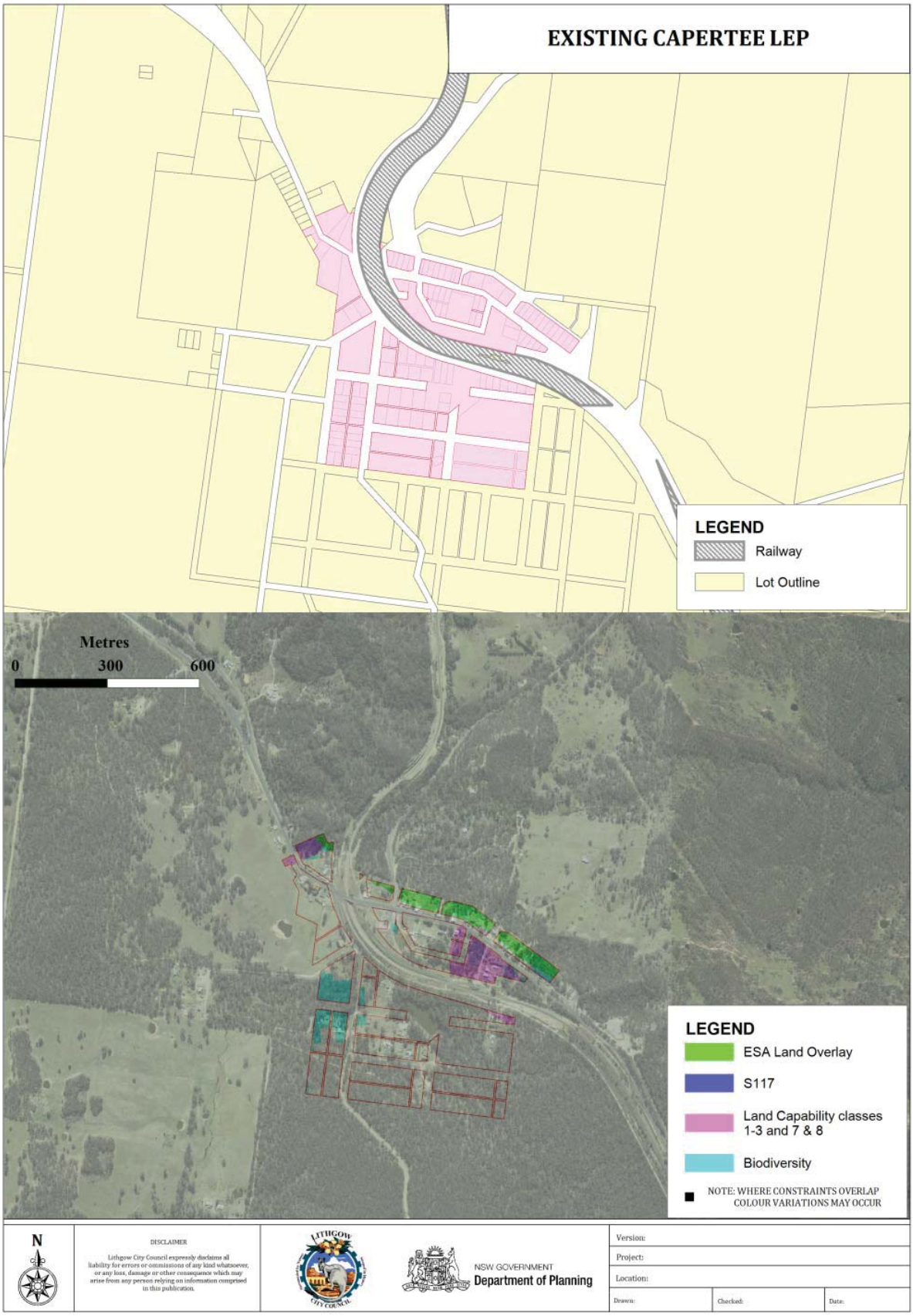
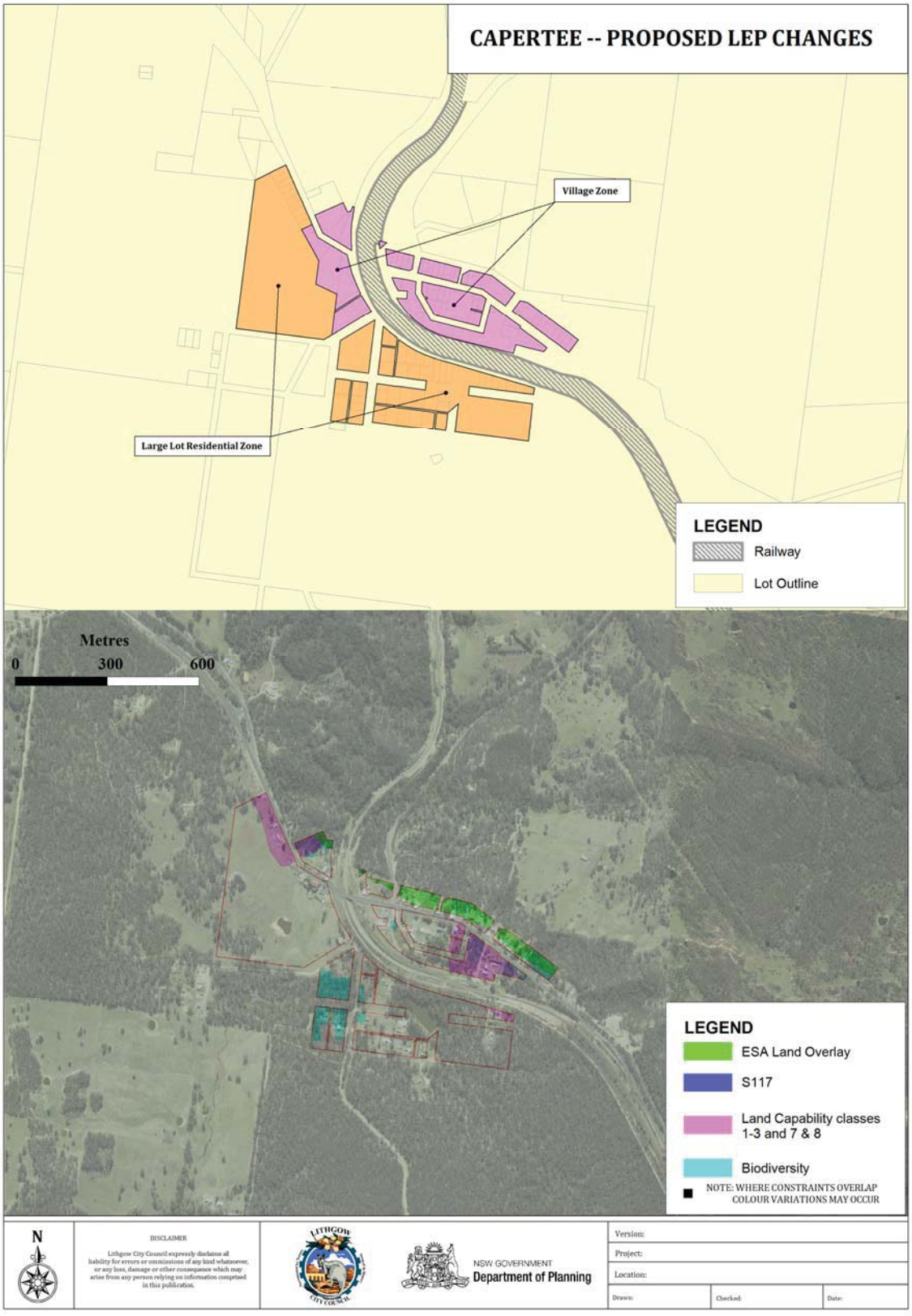


Figure 4. Capertee Proposed Modification of Village Zone



RYDAL

This village provides a crucial community function for the surrounding rural community. The existing zoned village as shown in figure 5 has limited capacity to absorb any further residential growth based on the existing holding pattern and the proposed new minimum lot size for unsewered village lands of 4000m². Therefore the Draft strategy recommended an extension of the village to the eastern side of the road and rail corridor. Community feedback on this recommendation has suggested a desire to provide for small scale expansion of land for large lot residential living and not necessarily full village expansion. As a result of community feedback the following alterations have been adopted as shown in Figure 6:

- The area to the west of Charles St and the area to the north of Quarry St to be changed from rural to large lot residential with a minimum allotment size for the erection of a dwelling of 2ha
- The area to the west of the railway line bounded by Charles St, Quarry St and Railway St, be changed from rural to large lot residential with a minimum allotment size for the erection of a dwelling of 4000m²
- The existing s village zone to the east of Cartwright St be back zoned from village to large lot residential with a minimum allotment size for the erection of a dwelling of 4000m²
- The proposed extension to the village area to the north be changed to large lot residential with a minimum allotment size for the erection of a dwelling of 2ha
- A minimum allotment size for the erection of a dwelling in the zoned village area of 4000m².

A holding analysis in and around the village of Rydal revealed the following potential lot yields under this variable minimum lot size scenario:

Table 8. Rydal Potential Lot Yields

Area	Minimum Lot Size	Lot Yield
West of the railway line and west of Charles St and the north of Quarry St	2ha	8
West of the railway line bounded by Charles St, Quarry St and Railway St	4000m²	1-2
North of the existing village	2ha	2
East of Cartwright St	4000m²	4

This level of low key residential growth potential is supported to encourage the ongoing vitality of the village and provide for a sustainable community that is aging.

The contraction of the existing village zone into a more compact form to the west of Cartwright St will enable the clustering of allied land uses to support the day to day needs of the community it services as well as allow additional development to support the growing tourism potential of the area,

Importantly these changes will not significantly alter the existing heritage character of the village.

Figure 5. Existing Rydal Village Zone

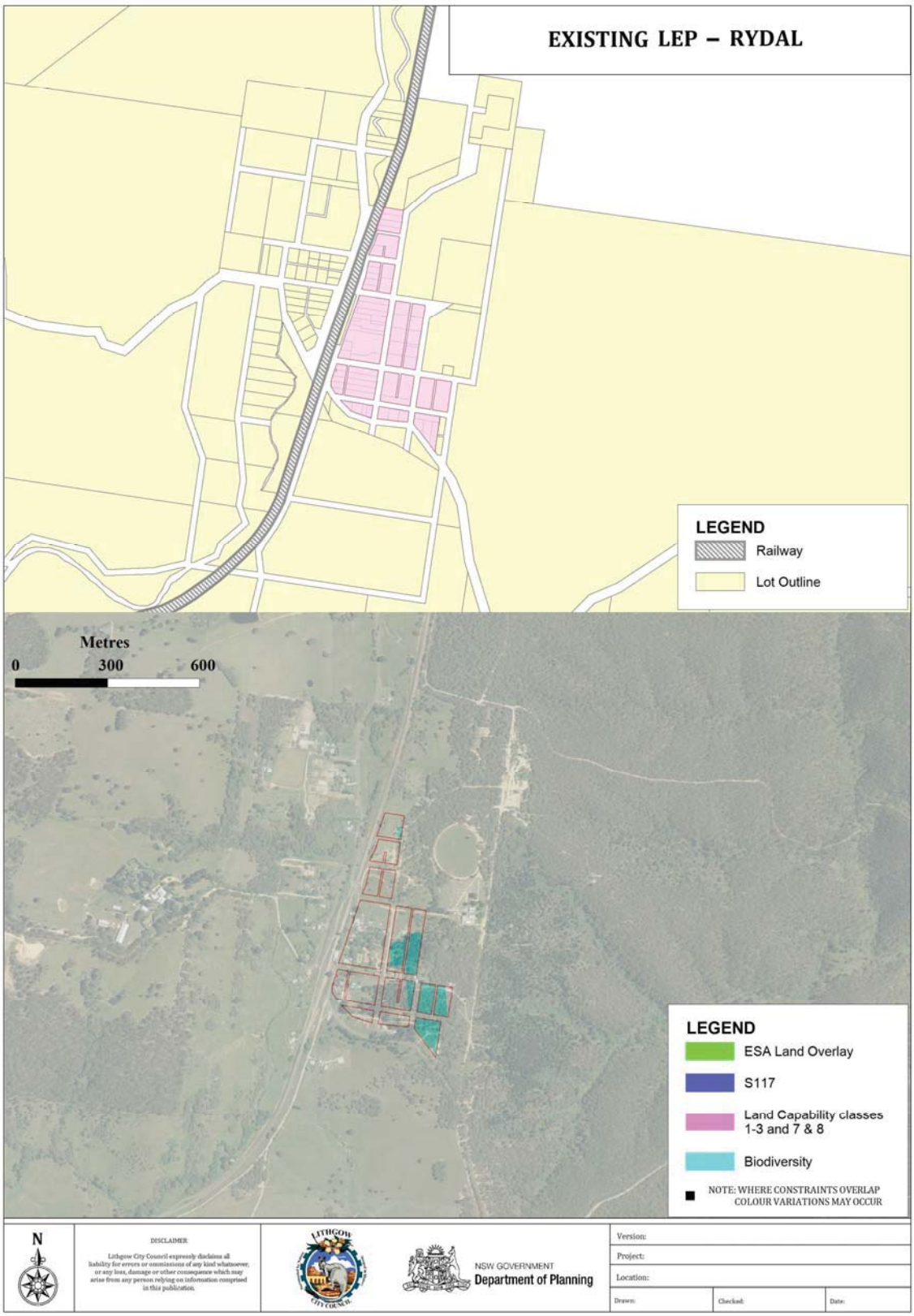
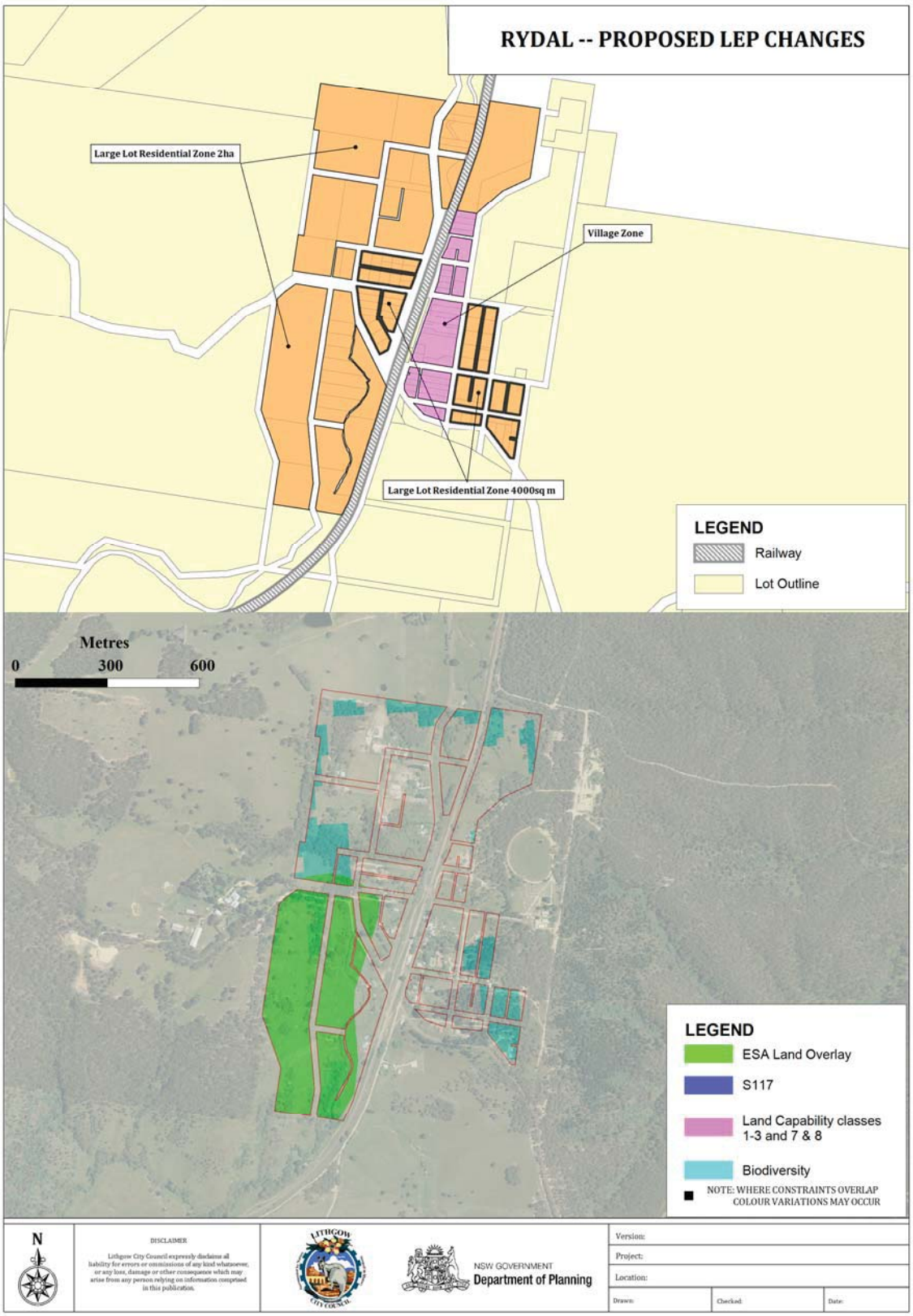


Figure 6. Rydal Proposed Modification to Village Zone



LIDSDALE

This village area for the all intensive purposes is an extension of the Wallerawang town centre and is characterised by dwellings on larger lots (average holding size 0.5ha). The village does not support any uses that service the daily needs of the area, this role is provided in Wallerawang.

In order to reinforce the settlement hierarchy and strengthen the viability of the Wallerawang commercial precinct, it is proposed to replace the existing village zone with a zone that reflects its large lot residential land use. Any existing commercial/business uses would retain existing use rights and would be unaffected by such change. It is also proposed to include further lands to the west of the existing village that would otherwise be alienated due to the new alignment of the Castlereagh Highway

Figure 7. Lidsdale Existing Village Zone

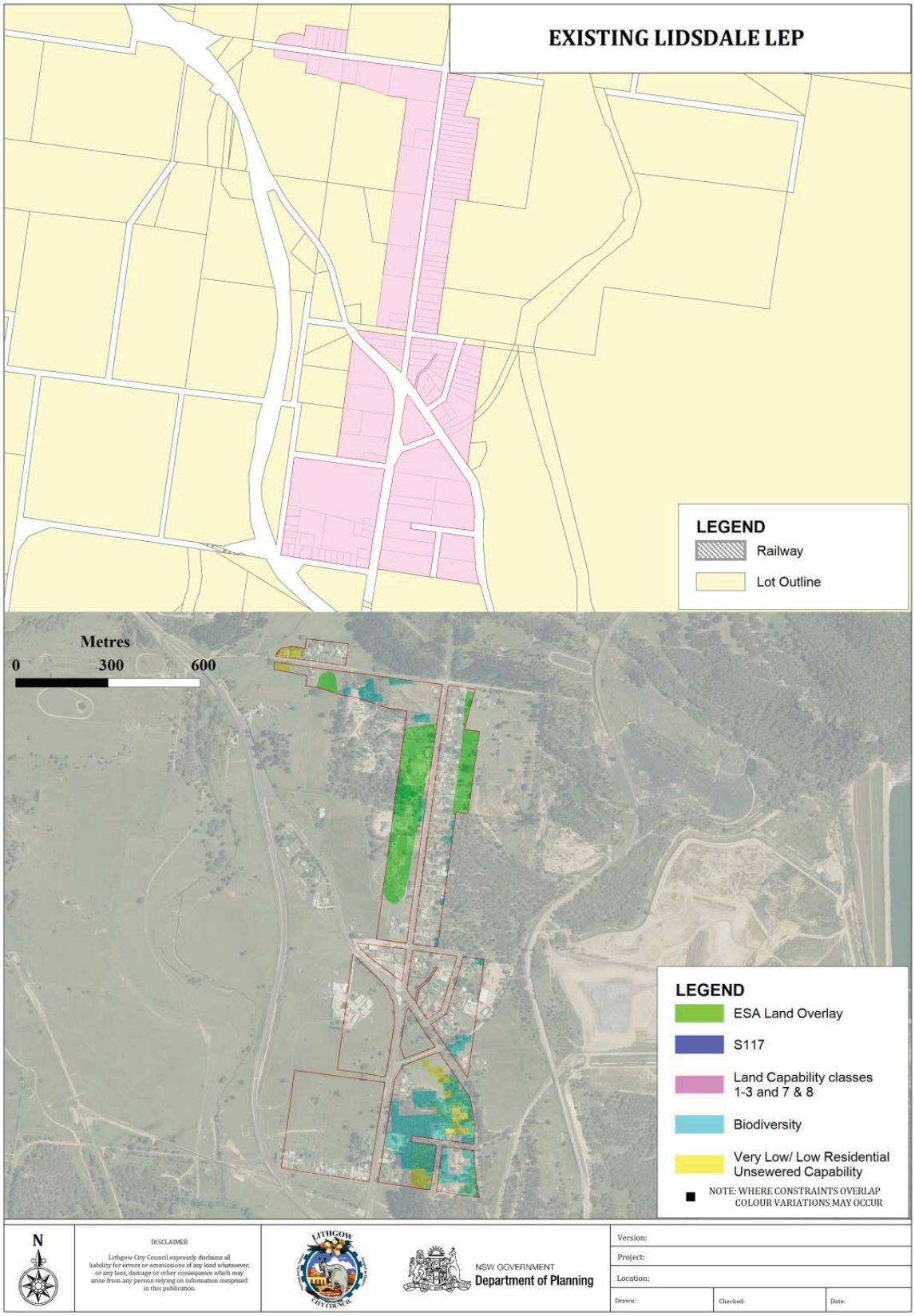
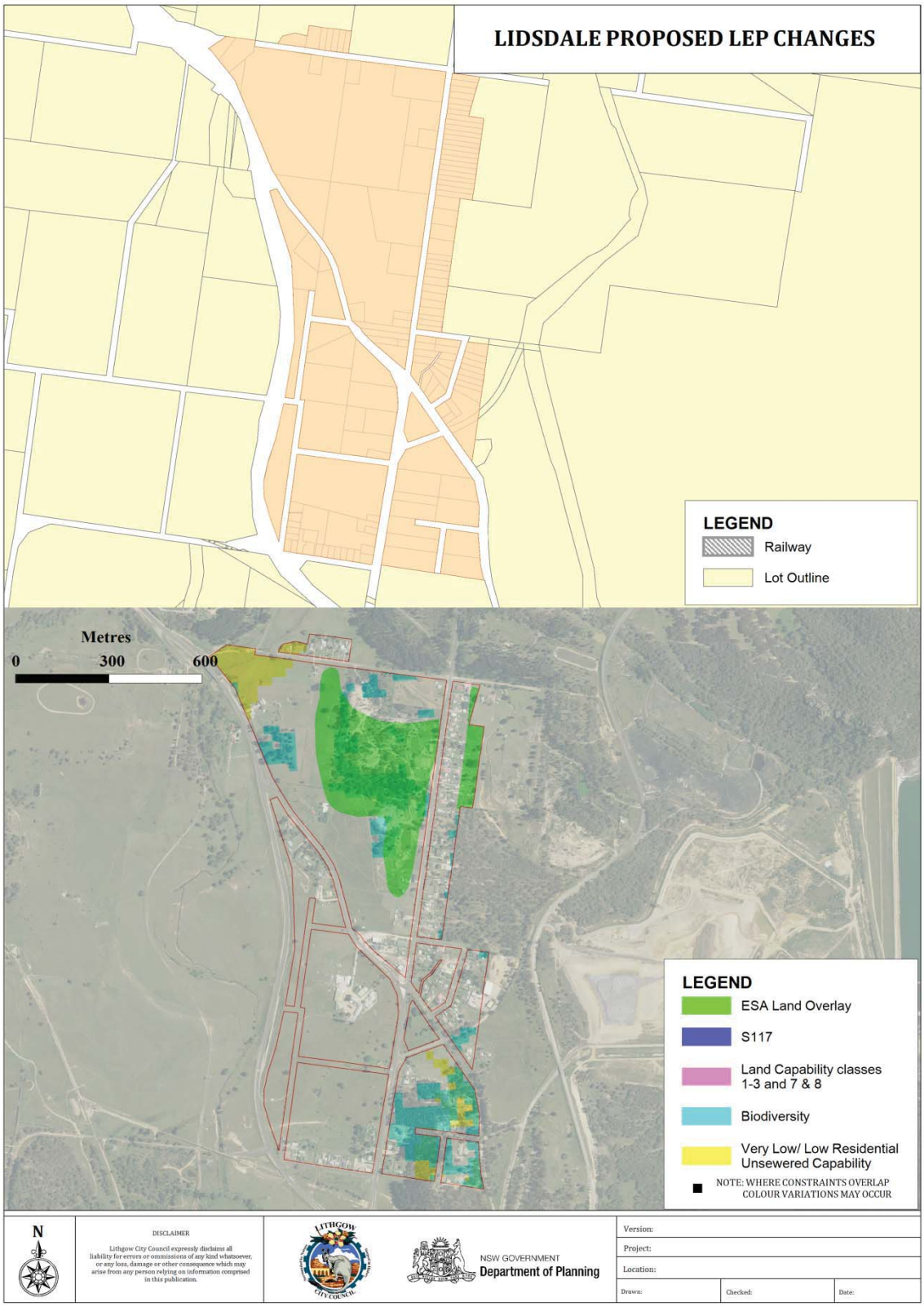


Figure 8. Lidsdale Proposed Modification to Land Use



The existing Lidsdale Village is fully serviced with reticulated water and sewer. It will therefore be required that any large lot residential development would also be fully serviced.

This Strategy recommends a minimum lot size of 2000m² for serviced large lot residential land use.

TARANA

Land use in this village area is characterised by rural dwellings on large lots. The hotel is the dominant land use other than housing. It is recommended that the character of this area as a large lot residential area within a rural context be recognised through changes to the village zone. It is recommended that the village zone be modified to:

- retain areas around the Hotel and Railway Station to provide for development servicing the daily needs of residents and visitors as well as tourism support uses.
- to enable a small area of large lot residential to better reflect and capture existing land use patterns.

Figure 9. Tarana Existing Village Zone

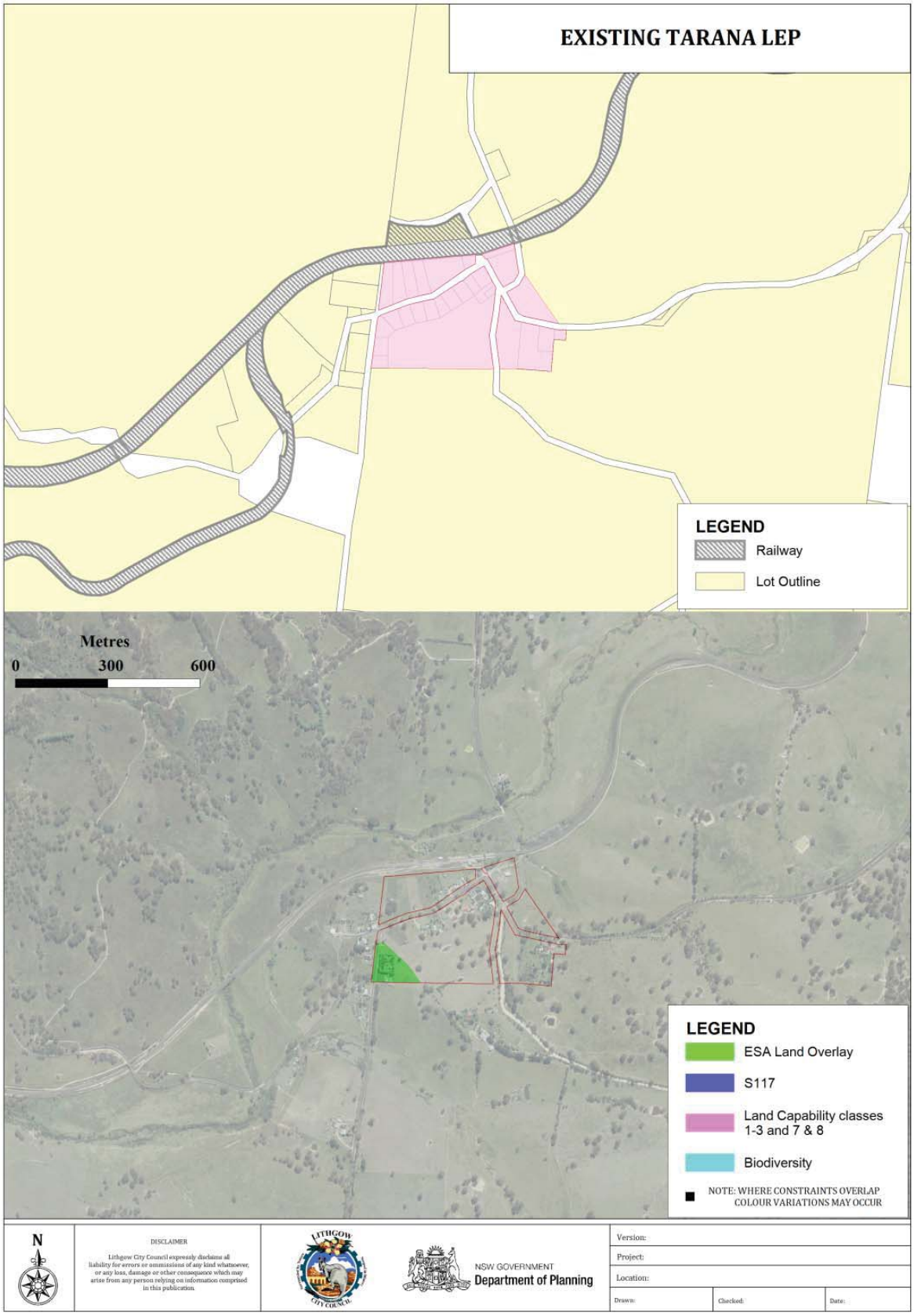
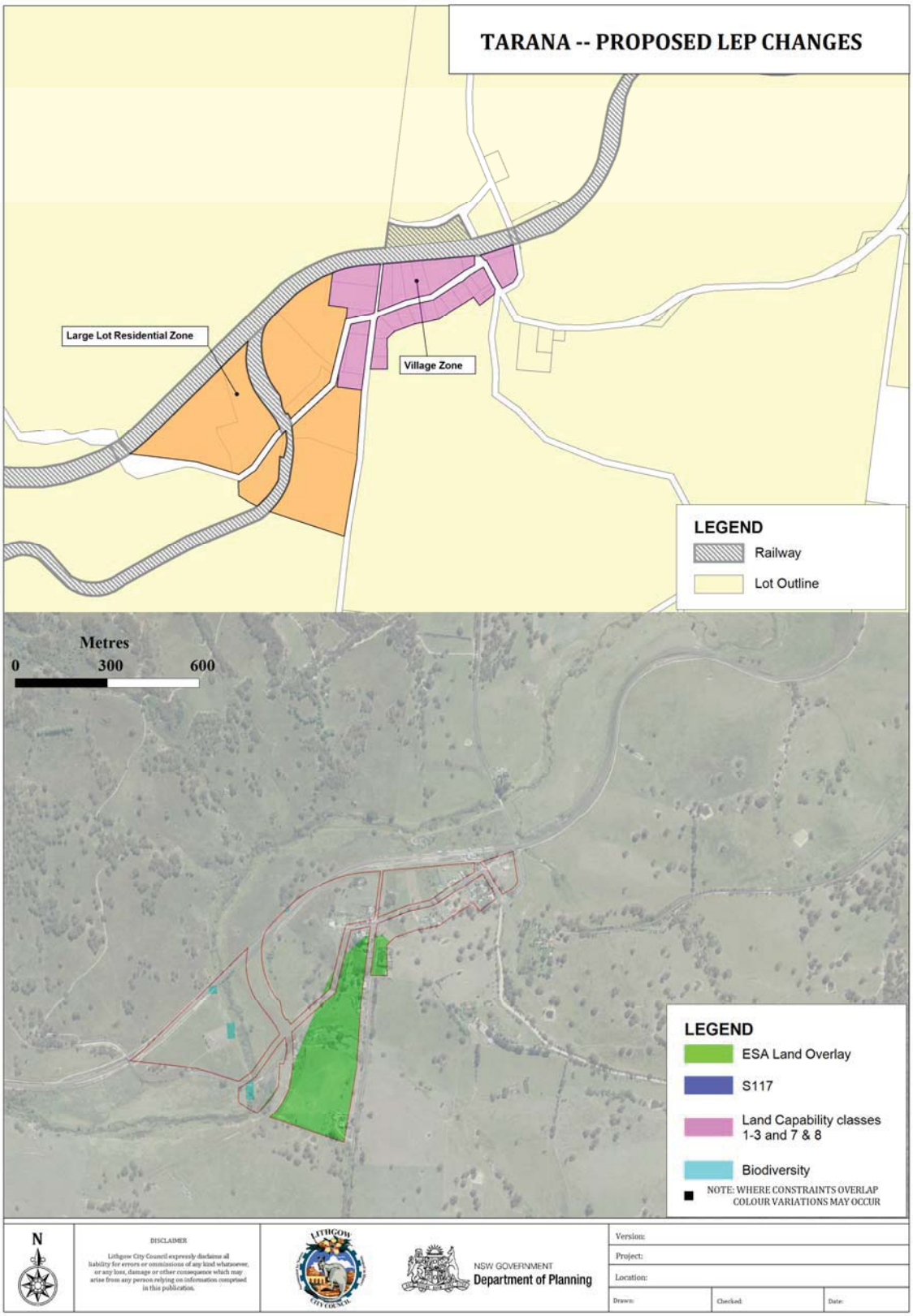


Figure 10. Tarana Proposed Land Use Changes



This area is currently unserviced and will remain so for the life of this Strategy.

It is recommended that a minimum lot size of 4000m² for residential land use should apply to the village area and 2ha should be applied to the large lot residential area thereby distinguishing development density for the two areas.

Having regard to the current holding and development pattern, a very modest growth potential of four lots within the village area and seven lots in the large lot residential area may be created.

ROLE OF STRATEGIC SITES

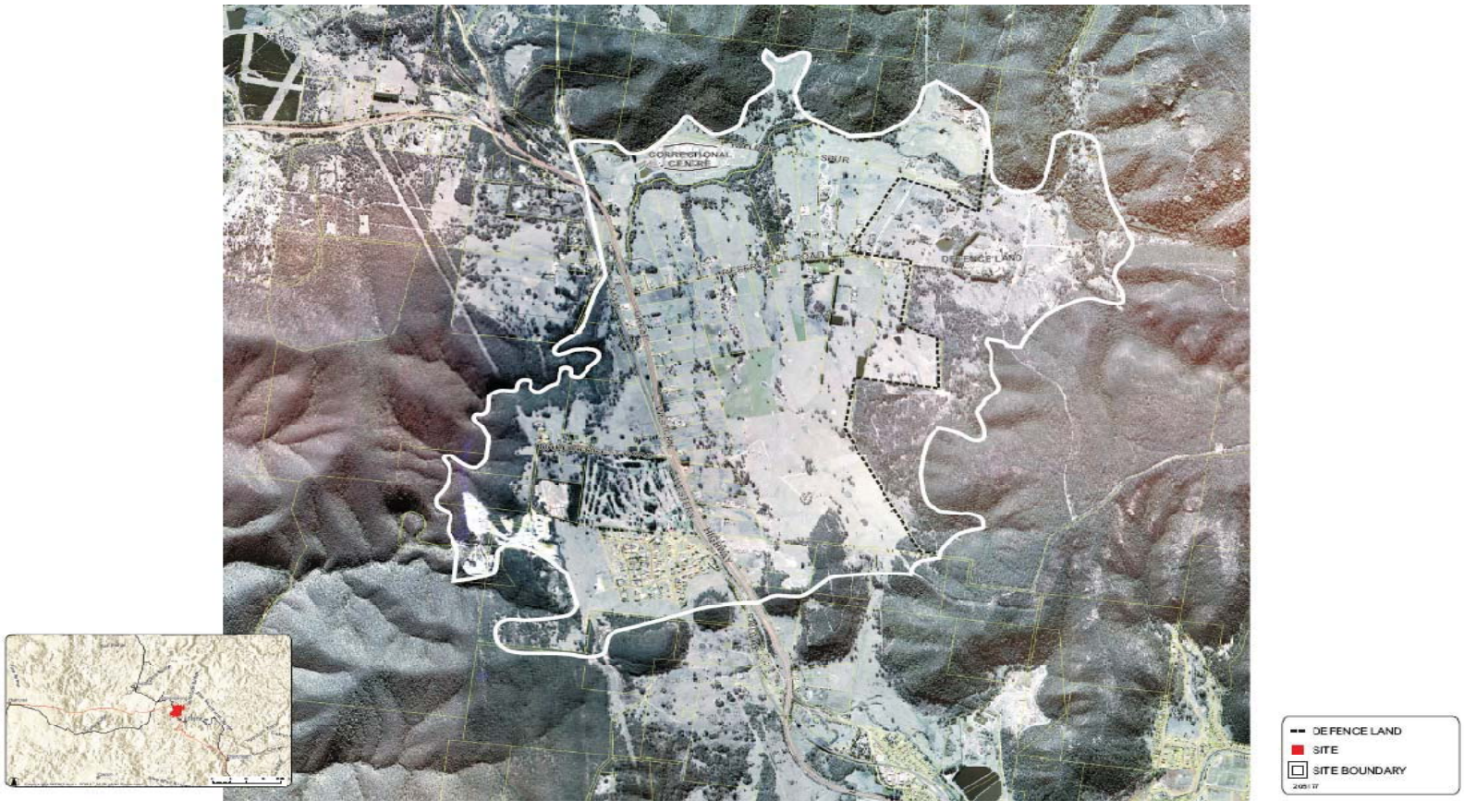
ROLE OF THE MARRANGAROO STUDY AREA

BACKGROUND

In 2005 following a spike in demand for residential housing and an identified need for further suitable employment lands, identified a need for additional urban land (residential, commercial, industrial) in close proximity to services and facilities of Lithgow to provide for future orderly and sustained growth.

The Marrangaroo Study Area was identified as a suitable site for investigation based on its location, ability to provide for a full range of urban land use and its proximity to road infrastructure and relatively flat to undulating topography. The Study Area is located between the urban centres of Lithgow and Wallerawang as shown in Figure 11.

Figure 11. Marrangaroo Study Area



Source: Figure 1 Marrangaroo Structure Plan 2006

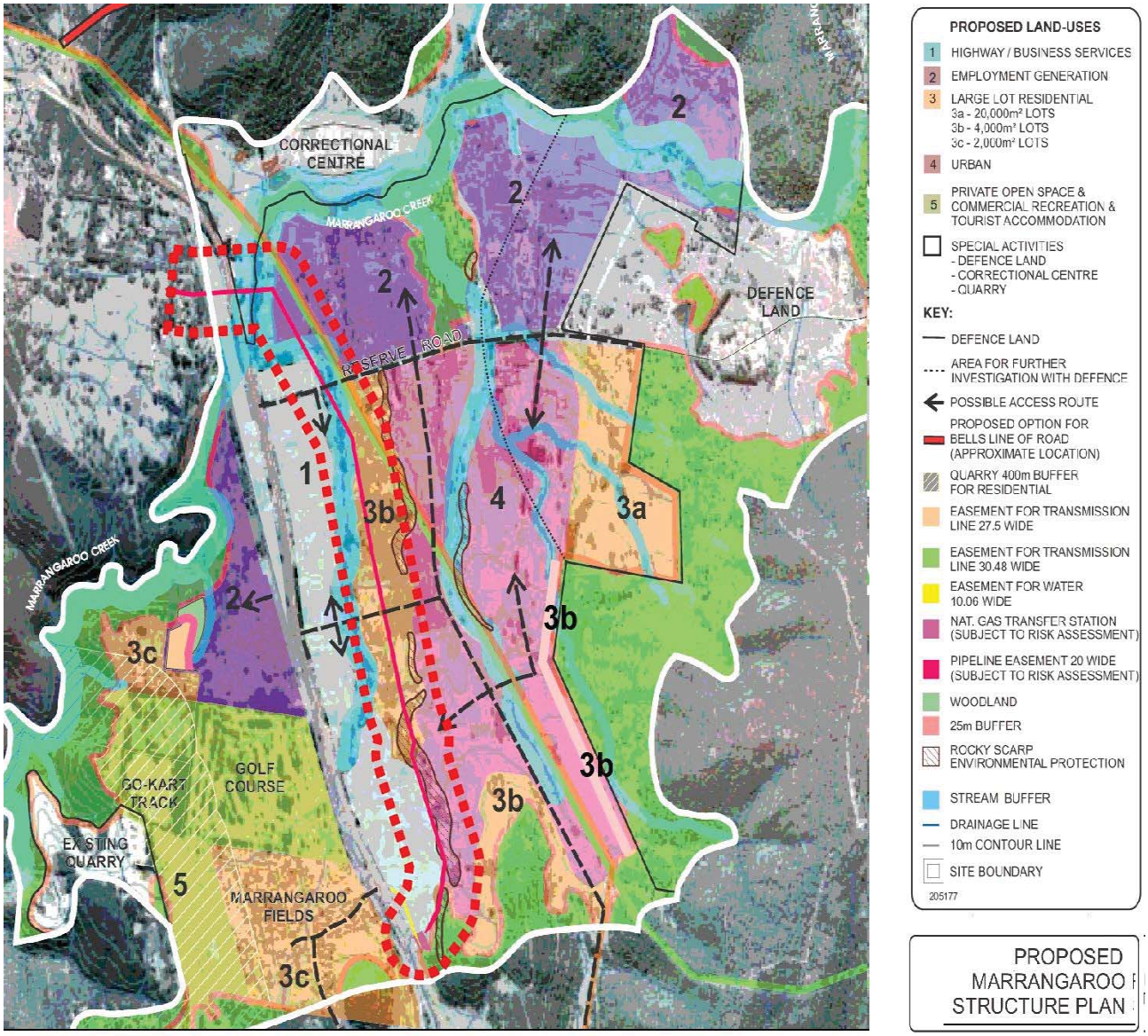
A full Local Environmental Study and Structure Plan was prepared by Geolyse Pty Ltd in 2006. The aim of these studies was to consider the "highest and best use" of the Study Area in order to inform this Strategy and any new Local Environmental Plan.

The Structure Plan provides the following:

- Preferred land uses and their relative location;
- Areas to be conserved and protected from future development;
- Key infrastructure needs and preliminary costings; and
- A staging plan

This Structure Plan as modified in Figure 12 was adopted by Council in February 05 (Min No 07/15) and it was resolved that the matter be further reported to Council to determine whether or not to progress the structure plan through a rezoning proposal following adoption of the Strategic Plan.

Figure 12. Adopted Marrangaroo Structure Plan



Source: LCC Council Minutes Item 12 Policy and Strategy Committee 5/2/07

The Structure Plan provides for five land uses as follows:

- Land Use 1 Highway/Business Service
- Land Use 2 Employment Generation
- Land Use 3 Large Lot Residential (with three different densities)
- Land Use 4 Urban (comprising open space, neighbourhood centres and housing variety)
- Land Use 5 Private Open Space/Commercial Recreation

ASSESSMENT AGAINST RESIDENTIAL SUPPLY AND DEMAND ANALYSIS

The Structure plan has identified an estimated potential residential lot yield of:

- 194 large lot residential allotments; and
- 1530 urban allotments

Source:* Marrangaroo Structure Plan 2006

This supply would add a further 49 years of supply under the assumption of continued demand levels.

If these areas were to be developed the area could accommodate approximately 485 people in the large lot residential area and 3,825 in the urban area, (Marrangaroo Draft Structure Plan, 2006).

The raw supply and demand analysis indicates that there is sufficient existing zoned land within each planning precinct to cater for the continued demand level over the 20 year life of this Strategy. Therefore the immediate rezoning (2012 LEP) to effect the full implementation of the Marrangaroo Structure Plan is not recommended.

Note: the Marrangaroo Structure does identify other urban land uses such as employment lands and recreation/open space and implementation of the Structure Plan in this regard will be separately discussed in those sections of the Strategy.

FURTHER INVESTIGATIONS REQUIRED FOR MARRANGAROO STUDY AREA

The following issues require resolution for the future development of the Study Area and may influence the future concept designs and the identified residential and business highway service land use. Figure 13 maps the location of the gas pipeline and Trunk Receiving Station (TRS), a 400m investigation area adjoining Defence land and those watercourses that have received a preliminary categorisation by the Department of Natural Resources.

1. Risk assessment of the high-pressure natural gas pipeline and Lithgow Trunk Receiving Station (TRS) managed by Agility. The pipeline runs behind properties fronting the Great Western Highway on the eastern side and separates two proposed land uses: a business enterprise corridor and large lot residential land (minimum lot size of 4000 sq m).

Risk is associated with the potential release and ignition of high pressure natural gas from the pipeline or the TRS. Agility have advised that any proposal to increase the current land use or population density within 157

metres (see Figure 13) of these facilities will increase the safety risk to society. A risk assessment will be required when undertaking concept subdivision plans.

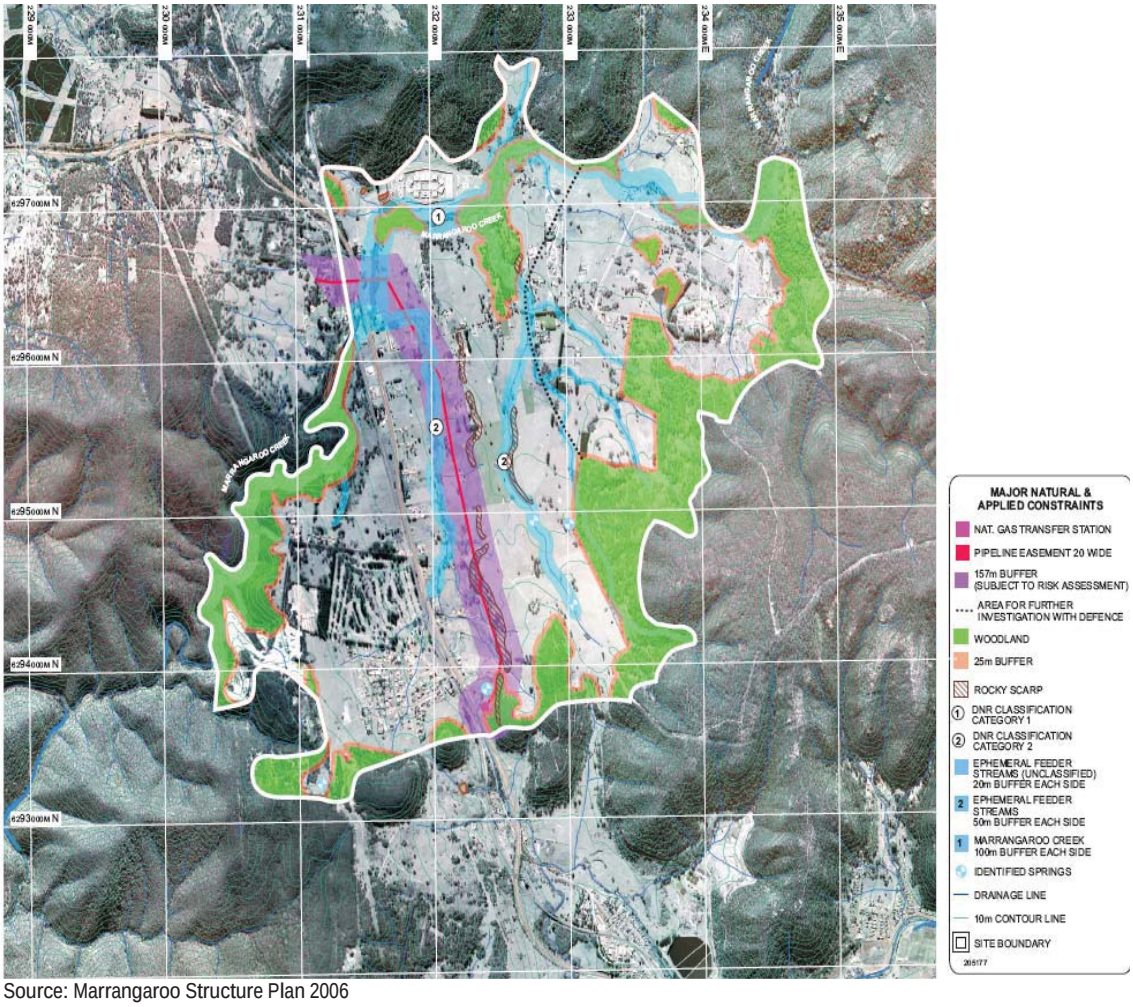
2. Suitable uses adjoining the Department of Defence land in the north east sector of the project area. Uses within a 400 metre investigation arc need to be compatible with noise and vibration generated by Defence activities. Council will seek clarification of the extent and location of noise to assist in determining best and highest land uses adjoining Defence land.

3. Categorising remaining water courses in the Study Area. Further discussions with the Department of Natural Resources and Council are required to implement appropriate objectives and planning buffers to water courses (for both categorised and uncategorised watercourses). It is understood the buffers applied to the watercourses are preliminary and can be finalised when development concepts are available and more detailed flood and ecological studies are provided.

4. Investigating an alternative safe access route for West Marrangaroo residents. The State Emergency Service have identified that in the event the bridge (off the Great Western Highway at Girraween Drive) or the level crossing at Oakey Forest Road were blocked for any length of time, residents in these areas would be 'locked' in as no alternative access is available.

5. Investigate a future link road at the end of Oakey Forest Road cutting between the Quarry and the Go-Kart operation onto currently vacant land (proposed for open space) at the back of Marrangaroo Fields and Windarra Estate. This will create a link between Oakey Forest Road and Marrangaroo Fields providing alternative access should either access point onto the Highway be closed. (Marrangaroo Structure Plan 2006).

Figure 13. Marrangaroo Natural and Applied Constraints



Source: Marrangaroo Structure Plan 2006

JUSTIFICATION OF MARRANGAROO STUDY AREA AS THE NEXT URBAN RELEASE AREA

Notwithstanding that the immediate implementation of the full Marrangaroo Structure Plan is not recommended for the 2012 LEP, this Strategy identifies the Marrangaroo Study area as the preferred as the next urban release area for the Lithgow town centre for the following reasons:

- Development of the area has been assessed in detail with environmental and land use parameters identified, broad infrastructure requirement and costs provided and a range of land uses proposed.

- The Marrangaroo Study Area provides a comparative advantage for a wider range of residential, business and industrial uses to the formerly identified West Bowenfels area because of its flat topography, undulating hills and potential to provide alternative access back into Lithgow that does not rely on the Great Western Highway.

- Development at Marrangaroo is consistent with the recommended Growth Management and Sustainability Principles (Chapter 4) and the residential strategic planning principles.

- The area provides choice of location and is consistent with the values and visions of the community.

- Large areas of flat land within close proximity to the GWH near a higher order service centre with a working population are limited in the LGA.

- Marrangaroo is strategically well located to provide a range of land uses needed in Lithgow to support the local economy.

- The case for protecting Marrangaroo for sustainable settlement is very strong and should be pursued. To date, the lack of pressure for development has meant the area has remained relatively intact (with the exception of main road frontages) with some large holdings remaining. However its strategic location demands action is taken now to ensure development can proceed in an orderly, efficient and effective manner and the best and highest land uses can emerge.

DEFINING THE TRIGGER FOR REZONING FOR RESIDENTIAL LAND USE WITHIN THE MARRANGAROO STUDY AREA

It should be noted that availability of all the supply areas has not been determined. The willingness and capacity of landowners to develop their land is an unknown factor that can ultimately affect the management and staged release of residential lands.

Where current landholders choose to withhold areas from supply, shortfalls may become apparent during the life of subsequent LEP's.

This strategy recommends that Council establish a detailed land monitor to assist with assessing supply and demand into the future. Such monitor will track the take-up of land from the subdivision through to dwelling construction.

It is further recommended that Council arrange to meet with all landowners of land identified as key supply areas under this Strategy to discuss their intentions in relation to future land release and development.

The information gained from the above two actions should better inform the supply of areas for the first review of the 2012 LEP in 2015 and subsequent LEP's.

Notwithstanding the above, this Strategy recommends that Council further investigate the implementation of the Marrangaroo Structure Plan once 50 % take-up of identified supply in the Lithgow precinct is reached.

URBAN RESERVATION LANDS

The 1994 LEP identified a number of areas in the Lithgow, Wallerawang and Portland precincts as Rural (Future Urban) 1(d). The location of these lands is shown on the Settlement Hierarchy Figure 4 in Chapter 4 as Core reservation. The objectives of this zone are;

- To identify land for future urban purposes
- To enable interim development which will not compromise eventual urban development
- To ensure effective disposal of solid and liquid waste
- To maintain the rural appearance of the future urban lands of Lithgow, while awaiting urban development, and

- To ensure that development does not create unreasonable or uneconomic demands for the provision or extension or public services and amenities.

The raw supply and demand analysis indicates that there is sufficient existing zoned land within each planning precinct to cater for the continued demand level over the 20 year life of this Strategy. The infrastructure analysis (Chapter 6) also identifies that infrastructure capacities in the short to medium term are incapable of servicing these areas without significant duplication or augmentation. Therefore immediate rezoning (2012 LEP) to of these lands is not recommended.

The majority of these lands remain suitable for future urban purposes and as such should be again recognised as reservation areas within this Strategy and future LEP's to protect the land supply from inappropriate development activity that may preclude its future highest and best use.

Where lands have been identified as constrained or have been considered to have a more appropriate land use, this strategy makes a recommendation for a zoning change to better reflect the land suitability and capability. This has occurred in the area South of Portland and land south of Magpie Hollow Road in Lithgow.

As indicated in above, the supply of residential lands is highly dependent on the willingness of land owners to bring their land on line. Where this fails to occur in some areas, further alternate urban supply lands may need to be considered to meet any future increase in demand. The establishment of a detailed land monitor and discussions with affected land owners will provide more certainty around these issues.

It will be a function of the LEP to determine how these lands will be zoned to ensure future reservation. The Standard LEP template provides a range of zones that may be used in this regard and careful consideration will be required to be given to ensure that land uses incompatible with urban development are restricted and that an appropriate MLS is applied to prevent inappropriate fragmentation.

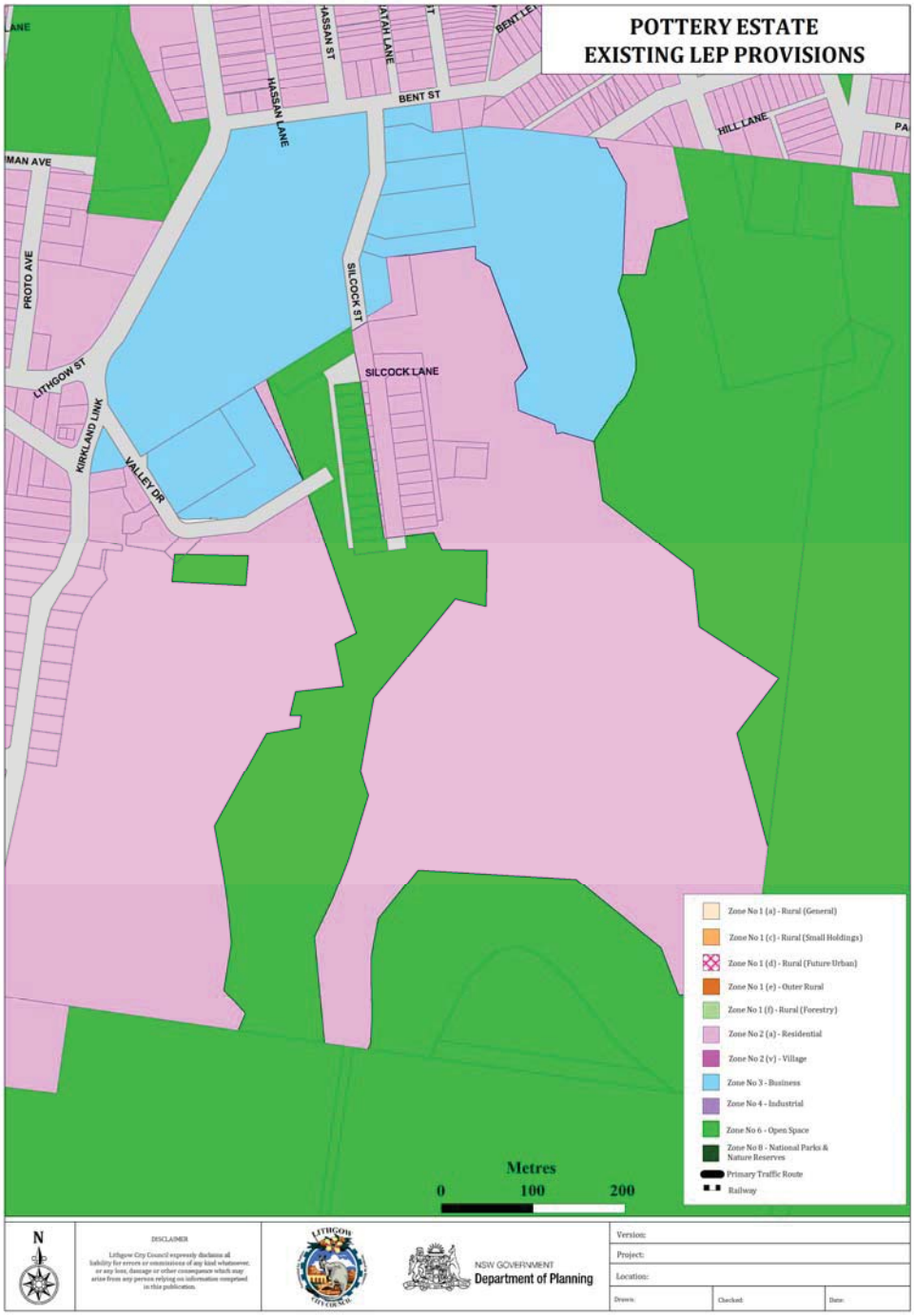
This Strategy recommends a rural zone with a 20ha minimum lot size to areas to be held as strategic future urban land use as identified in the strategic framework plans in Chapter 14.

The LEP should also make provision for any subdivision of these lands to require concept plans to be submitted for the reservation area indicating how the subdivision will fit with the overall development of the land for urban purposes.

POTTERY ESTATE

There is currently 34.2ha of land within the Pottery Estate Study Area that is zoned Residential 2(a) as shown in Figure 14 The current zoning indicates residential, commercial and open space land use.

Figure 14. Existing Zoning Pottery Estate Study Area



BACKGROUND

A large portion of the site has been associated with the industrial development of Lithgow over time, particularly with the opening of the Lithgow Valley Colliery and the Lithgow Pottery and Brickworks in the 1870s.

Following the opening of the coal mine in about September 1872, other uses of the site also took hold. The coal seams were overlaid with clay and shale and this allowed for the commencement of the brickworks and pottery at circa 1876. The mine and pottery works became a significant economic generator for the town. The pottery ceased operation in 1907 and the brickworks in 1945.

There is, therefore, a rich tapestry of heritage and other environmental issues such as, contamination, mine workings, presence of threatened species, steep slopes and riparian areas which affect a large portion of the site.

PREVIOUS REZONING PROPOSAL

A Draft LEP was prepared for the site in 2005. The local environmental plan proposed to rezone lands to alter the location of Business 3 zoned land to the east of Silcock Street to an area south of the existing commercial uses south of Valley Drive and to replace it with a Residential 2(a) zone.

The LEP also proposed minor amendments to the existing Open Space 6 zone to tidy up boundaries, delete unnecessary areas and provide for the historical quoits court and north flowing natural watercourse to be protected by an appropriate Open Space Zoning.

The LEP was stalled following the community and government authority consultation phase due to the requirement for a site auditors report to determine the capability of the site to manage contamination on the area east of Silcock St.

Preliminary interim advice from a site auditor indicated that the area of land to the east of Silcock St could only be signed off at the level for Residential with accessible soil, including garden (minimal home-grown produce contributing less than 10% fruit and vegetable intake), excluding poultry; Day care centre, preschool, primary school; Residential with minimal opportunity for soil access, including units; Secondary school; Park, recreational open space, playing field; Commercial/industrial and/or Other (please specify) Aged care facility subject to validation of remediation work authorised by the site auditor.

Any higher site auditors certificate would be subject to a number of requirements including a undertaking a risk assessment in accordance with relevant guidelines to assess potential risk (if any) residual soil may pose to human health in relation to potential vegetable gardens and poultry under the proposed development and assessing any additional investigation / remediation requirements to the satisfaction of a NSW DECC Accredited Site Auditor.

Due to the Draft LEP seeking a general residential 2(a) zone, the LEP could not proceed unaltered as a result of the interim site auditors report.

A final site auditors report was never issued and the Draft LEP has since lost its status due to the recent planning reforms.

SITE CONSTRAINTS

The extent of the primary constraints on the site have been identified in Figure 15

Figure 15. Pottery Estate – Identified Primary Constraints



Additional to these primary constraints the site has also been identified as being affected by site specific constraints such as soil contamination, mine subsidence and identified habitat sites for the Bathurst Copper Butterfly and parts of the site are affected by State and Local Heritage listings.

A land area of 16.2 ha has been identified as having the highest constraints, being those of riparian corridor, areas of moderate to high biodiversity value, bush fire prone land, problem areas as defined on the declared mine subsidence district map and areas of remnant bushland and moderate to high slopes.

APPROPRIATE ZONING OF EXISTING DWELLINGS IN SILCOCK ST.

Currently as shown in Figure 14 dwelling allotments to the west of Silcock St are affected by the Open Space 6 zone. It is believed this zone was applied to identify lands that were subject to high mine subsidence related risks. These dwellings were historic miners cottages and at the time of the making of the LEP were held in common ownership. The allotments have since been subdivided and the dwellings offered for sale to long term residents.

As the majority of these dwellings are existing and land use into the future it not likely to change, it is the recommendation of this Strategy that these allotments attract a residential zoning to reflect current land use as indicated in Figure 3 Chapter 14. Any mine subsidence issues present can be dealt with appropriately through the Mine Subsidence Act and regular building assessment.

RECOMMENDED FUTURE LAND MANAGEMENT

The Pottery Estate due to its strategic location and the fact that the majority of the site is held in one land holding demands a more strategic approach to its future development and identification of the land suitability and capability. The locational characteristics of the site, being in close walking distance to the CBD and shopping facilities, lends itself to high density residential land use that more comfortably sits with the contaminated state of the land and in particular appropriate forms of Seniors Housing.

The exhibited Draft strategy had recommended the back zoning of the residential lands in this area to an environmental holding zone pending investigations to identify the capability and suitability of the land for urban purposes.

However, it has been argued that the extent and impact of the hazards and constraints of this site cannot be clearly defined until detailed development plans are formulated. It is further argued that there are adequate legislative checks and balances called up by the development assessment process to ensure that land is not developed beyond its capability.

This argument is supported in principle. This site, if properly managed and developed does have the potential to positively contribute to the strategic aims of the land use strategy. Whilst it may be preferable to consider the site capability holistically, it is recognised that this may not be reasonably practicable and back zoning of the entire site may unnecessarily sterilise lands.

The development assessment process would be able to achieve similar results if guided by suitable criteria defined in both the LEP and DCP for the site. The new LEP will require a clause requiring the following matters to be considered in a detailed development control plan for the site:

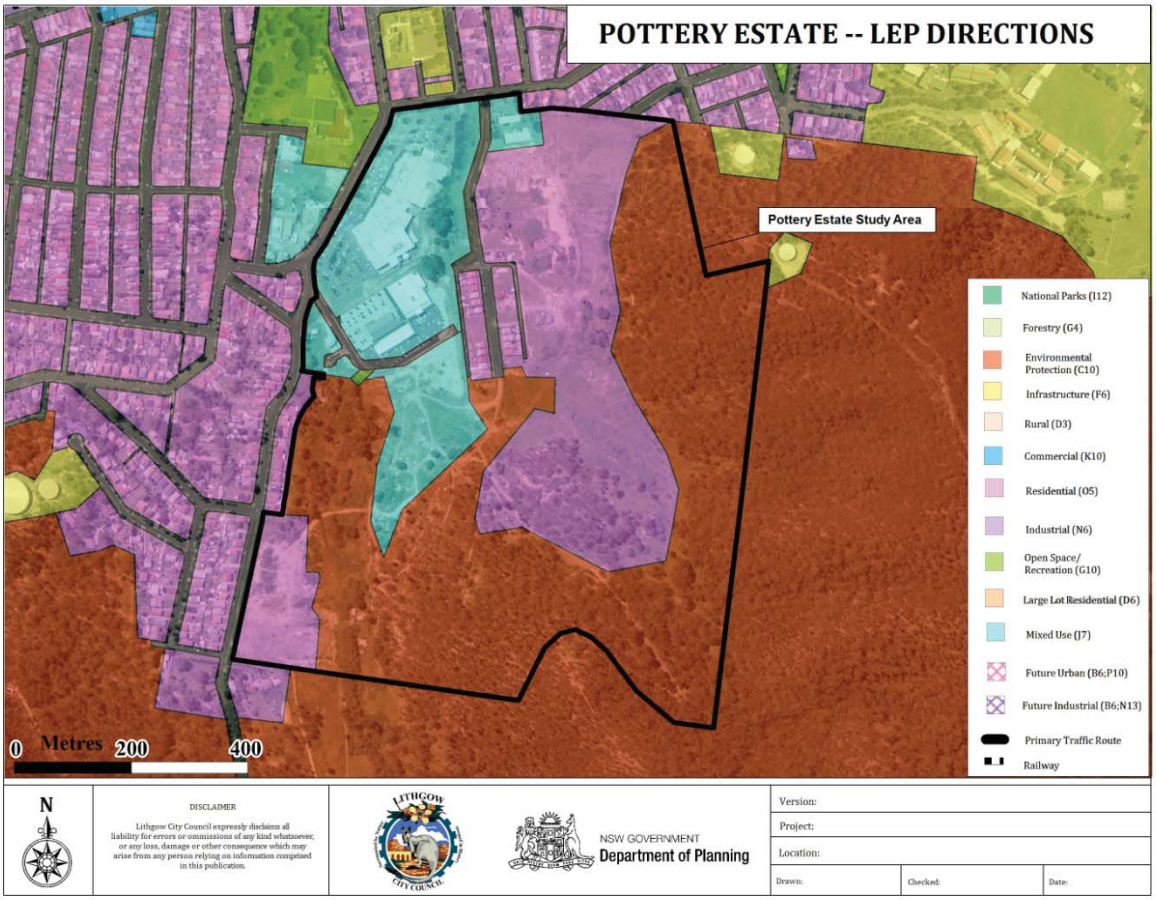
- the layout and design of both vehicular and pedestrian traffic throughout the site;
- the need to integrate the mixed land uses of the site through appropriate design / buffers;
- minimising the impact of development upon the heritage significance of the cultural landscape, including both the built and archaeological heritage items within the site and proposed means of conservation management;
- any areas of land that may be restricted due to the impact of mine subsidence, slope, bushfire, flooding or inundation or any other identifiable hazard;
- investigation and identification of any areas of land affected by any likely sources of contamination and the means to alleviate any risk of injury or harm;
- stormwater and water quality management;
- conservation of natural watercourses;
- protection of any potential habitat of any identified threatened species of flora and fauna, in particular the Purple Copper Butterfly (Paralucia spinifera);
- the servicing of the land; and
- management of public lands.

It is however considered appropriate that the following areas of the site be zoned environmental to manage future land use:

- riparian corridors
- areas of moderate to high biodiversity value
- bush fire prone lands
- problem areas as defined on the declared mine subsidence district map
- areas of remnant bushland
- areas of moderate to high slope.

These areas are shown in Figure 16 below:

Figure 16. Pottery Estate proposed Land Use changes



This approach to land use within this site will provide greater transparency for landowners, community and the development industry.

NOTE: Commercial land use of this site is further discussed in Chapter 12 Employment Lands

MANAGING RESIDENTIAL DENSITY, CHARACTER AND AMENITY

The implementation of the recommended Settlement Hierarchy as defined in Chapter 4 and the likely demand shift towards higher density living due to changing demographics will place additional pressure on the town centres to absorb higher density residential growth. With that growth, comes additional pressure to properly plan and manage impacts upon the existing character and amenity of existing areas. It is not considered appropriate that these issues be addressed purely on a site by site basis as it the cumulative impact of such developments that can impact upon character and amenity.

It is anticipated that Council will have a detailed housing strategy and ageing strategy to inform the first five year review of the LEP and the relevance of the following approach to manage these planning issues can be re-examined against the findings of these Strategies and the stated targets for achieving higher density living opportunities in each precinct at this time.

To ensure that the main town centres retain their character whilst encouraging growth opportunities; it is considered that these areas would benefit from an urban design master plan that could include consideration of, but not limited to, the following:

- Improved streetscape amenity and safety
- Transport networks and local roads
- Pedestrian access connectivity between shops, houses and places of recreation
- Adaptive reuse of heritage buildings
- Open space evaluation
- Bicycle networks.

A planning framework for each of these town centres is provided in Chapter 14

LITHGOW

The uniform residential zone and lack of a supporting Development Control Plan for the Lithgow town centre has not been effective in encouraging a mix of residential density. One reason for this could be that no direction is provided to the development industry as to where this form of development would reasonably be encouraged and where community values and expectations have been balanced through a robust planning process.

This Strategy will therefore recommend the investigation of the application of dual planning tools such as a range of residential zones across the Lithgow town centre to vary land use permissibility and the identification of a range of minimum lot sizes.

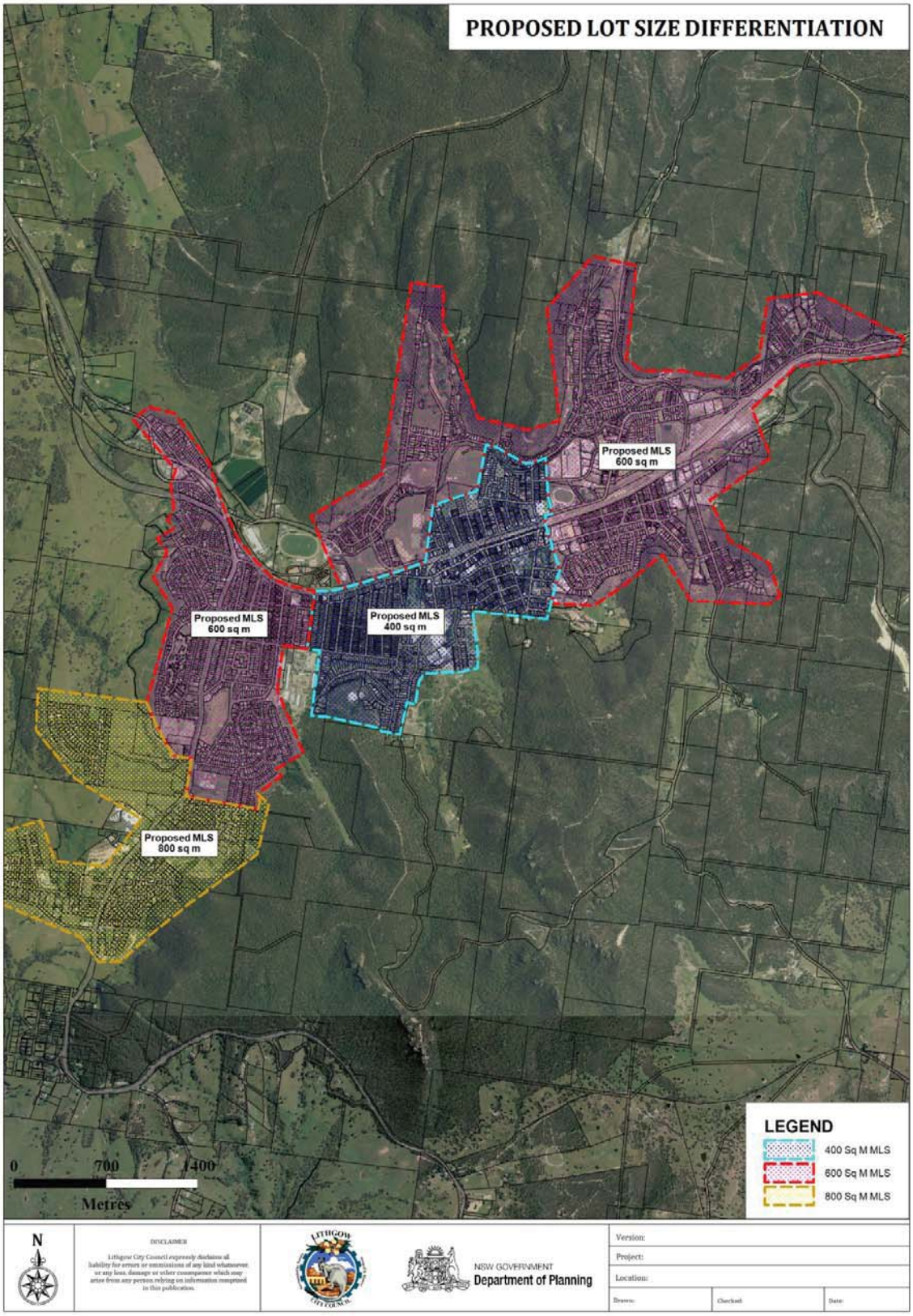
Identification of the zoning boundaries would generally follow the existing development densities as reflected in the existing average lot size as indicated in Figure 6 Such approach will be used to concentrate medium density development in and around the core commercial areas and higher order infrastructure and providing for lower densities towards the town fringes.

An urban assessment will be undertaken in the development of the 2012 LEP to determine appropriate height controls for the residential areas.

The Strategy also recommends that a development control plan be prepared to provide further detail and development standards to address the range of building density and design parameters.

Residential lands in Lithgow are indicated in Figures 3, 4 and 5 in Chapter 14.

Figure 17. Proposed Lot Size Differentiation



WALLERAWANG AND PORTLAND

As there is currently little development pressure for higher density residential development in these town centres it is not considered necessary to apply a range of residential zonings. It is recommended that there be only one general residential zoning supported by a varying lot size map within the 2012 LEP. Detailed development control provisions can be provided through a Development Control Plan for each centre to address the range of building density and design parameters.

The residential areas of these towns are indicated in Figures 13 and 19 in Chapter 14.

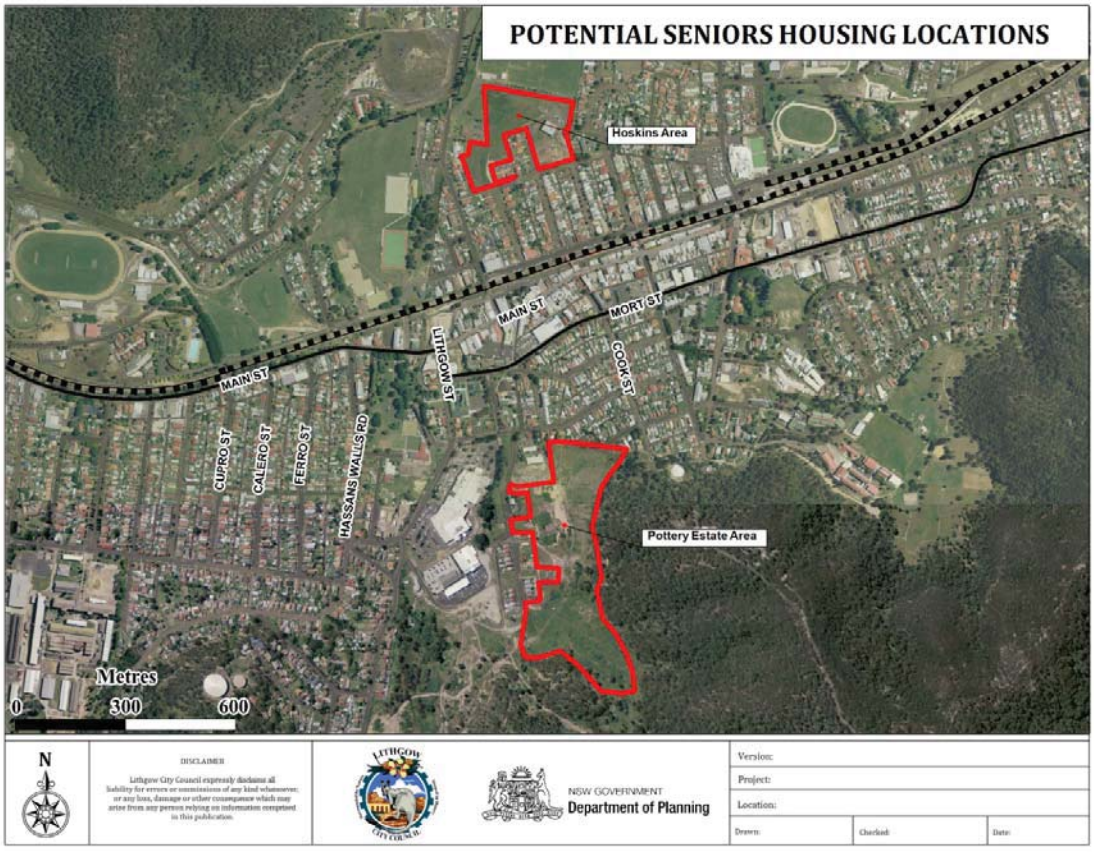
SENIORS HOUSING

Due to the likely significant demand for this form of housing into the future, this Strategy proposes to permit seniors housing where all other forms of housing are permitted.

This approach should provide sufficient flexibility to encourage the private market to provide such housing.

There are two key sites in the Lithgow urban area that lend themselves to this form of development. These areas are the former RSL site and surrounds, and land to the east of Silcock St in the Pottery Estate as shown in Figure 18 below. These areas are located within close proximity to the Lithgow CBD and services, would be consistent with density of this form of housing and each area offers different capabilities for a range of seniors housing from self- care, to assisted care and hostel care.

Figure18. Potential Seniors Housing Locations



HOW WILL RECOMMENDED STRATEGIC DIRECTION AFFECT IDENTIFIED LAND SUPPLY AND FUTURE LAND REQUIREMENTS

The Table below shows the new supply figures following implementation of the recommended strategies and actions against a continuation of current demand levels. It is apparent that the LGA would be well placed in all precincts to accommodate residential growth throughout the life of this Strategy without the need for further land rezoning and release.

Should demand levels change this Strategy has identified sufficient lands within the urban core reservation layer that may come on line to meet new demand.

Table 9. Revised Supply and Demand

Current & Proposed Demand And Supply By Precinct/Land Use			
Zone/Precinct	Current Land Supply	Revised Supply from LUS	Current Dwelling Demand to 2031(20yrs)
Lithgow			
Residential	1352 (46.6yrs)	1352 (46.6yrs)	580
Rural	141 (37.6yrs)	141 (37.6yrs)	75
Large Lot Residential	25 (12.5yrs)	146 (72yrs)	40
Precinct Total	1518	1639	704
Wallerawang			
Rural	103 (79yrs)	103 (79yrs)	26
Large Lot Residential	107 (53.5yrs)	341 (170.5yrs)	40
Residential	396 (66yrs)	190 (31yrs)	123
Precinct Total	606	634	195
Portland			
Rural	99 (66yrs)	99 (66yrs)	30
Large Lot Residential	192 (38.4yrs)	334(70yrs)	95
Residential	801 (133.5yrs)	84(14yrs)	116
Precinct Total	1092	517	244
Rural Nth			
Rural	1930 (241yrs)	1019 (127yrs)	160
Large Lot Residential	11 (5.5yrs)	57(28.5yrs)	40
Village	42 (84yrs)	15(30yrs)	9
Precinct Total	1983	1091	209
Rural Sth			
Rural	1272 (76yrs)	763 (44yrs)	346
Large Lot Residential	247 (22.45yrs)	271 (24yrs)	221
Village	33 (16.5yrs)	4(2.5yrs)	32
Precinct Total	1552	1038	599
Total	6751	4919	1951dwellings

SUMMARY OF KEY ACTIONS

Action 11.1

- Adopt the Growth Management and Sustainability Principles and Settlement Hierarchy as outlined in Chapter 4 of this Strategy and ensure that future urban residential growth does not occur outside of layers A-C as indicated in Table 5 and Figure 4 of Chapter 4.

Action 11.2

- Identify the Marrangaroo Study Area as the LGA's next urban release area and defer zoning until at least the 2016 LEP review. Development of this area to occur generally in accordance with the adopted Structure Plan (Figure 12 Chapter 11). This area to be retained in a rural zone in the Lithgow City 2012 LEP as a holding mechanism for future urban land use as indicated in Figure 5 of Chapter 14.

Action 11.3

- Develop a new suite of residential land use designations for the towns of Lithgow, Wallerawang and Portland in the Lithgow City 2012 LEP to reflect desired future character and density of residential areas as outlined in this Strategy and indicated in the LEP directions figures of Chapter 14.
- Determine appropriate minimum lot sizes to be applied to each new serviced residential land use designation to be applied in the Lithgow City 2012 LEP generally as follows:

    - General Residential 600m^2
    - Medium Density Residential 400m^2
    - Low Density Residential 800m^2

Action 11.4

- Alter the zoning of lands within the areas known as "Pottery as identified in Figure 3 of Chapter 14 in the Lithgow City 2012 LEP.

  Include a provision in the 2012 Lithgow City LEP to require the following, but not limited to, matters to be addressed in a Development Control Plan for the site:
    - the layout and design of both vehicular and pedestrian traffic throughout the site;
    - the need to integrate the mixed land uses of the site through appropriate design / buffers;
    - minimising the impact of development upon the heritage significance of the cultural landscape, including both the built and archaeological heritage items within the site and proposed means of conservation management;
    - any areas of land that may be restricted due to the impact of mine subsidence, slope, bushfire, flooding or inundation or any other identifiable hazard;
    - investigation and identification of any areas of land affected by any likely sources of contamination and the means to alleviate any risk of injury or harm;
    - stormwater and water quality management;
    - conservation of natural watercourses;
    - protection of any potential habitat of any identified threatened species of flora and fauna, in particular the Purple Copper Butterfly (Paralucia spinifera);
    - the servicing of the land; and
    - management of open space and public lands.

- Should these investigations identify any part of the site suitable for higher urban uses, prepare a planning proposal to alter the land use designation accordingly.

Action 11.5

- Alter the zone of the strip of houses either side of Silcock St, Pottery Estate, in the Lithgow City 2012 LEP, from Open Space to a residential land use designation to correct an anomaly of the 1994 LEP.

Action 11.6

- Back zone the existing Rural (Future Urban) 1(d) zones surrounding Lithgow, Wallerawang and Portland to an appropriate rural zone as a holding mechanism for future urban land use beyond the 2012 LEP as indicated in the LEP direction figures in Chapter 14.

Action 11.7

- Retain the land use designation of "Village" for the villages of Rydal, Cullen Bullen, Capertee and Tarana in the Lithgow City 2012 LEP as modified by the recommendations of this strategy.

Action 11.8

- Introduce a new minimum lot size for unserviced allotment s in the village areas of 4000m^2

Action 11.9

- Back zone in the Lithgow City 2012 LEP existing village lands in Portland as identified in Figure 19 of Chapter 14 to reduce pressure on sewage infrastructure and /or to better reflect the carrying capacity of the lands.

- Lands identified for future urban land use beyond the 2012 LEP are identified in Figure 21 of Chapter 14.

Action 11.10

- Alter the village boundary in Capertee as indicated in Figure 42 of Chapter 14.

Action 11.11

- Alter the village boundary in Rydal to provide a more compact form between Bathurst St and Cartwright St as indicated in Figure 30 of Chapter 14.

Action 11.12

- Alter the village boundaries of Tarana to remove undeveloped land to the south and east as indicated in Figure 27 of Chapter 14

Action 11.13

- Prepare a Development Control Plan to provide effective and appropriate land use management guidelines for residential development areas.

Action 11.14

- Prepare and administer a land monitor to track the demand and take-up of residential land supply. Identify appropriate thresholds levels to trigger the investigation of additional urban release areas.

CHAPTER 12 EMPLOYMENT LANDS

STRATEGIC PLANNING DIRECTIONS

The planning principles to be used to guide the development of this Strategy and to inform the future management and development of employment lands in the Lithgow LGA are as follows:

INDUSTRIAL

- Provide for employment lands of an industrial nature in defined zones and where possible within Layer 1 (urban core) or 2 (5km outer limit from town centres) of the adopted Settlement Hierarchy.
- Ensure new green field sites provide adequate supply and flexibility of lot sizes to meet long term demand.
- Ensure all industrial areas are provided with adequate utility and road infrastructure to meet the demands of the intended land use.
- Remove the potential for dispersed industrial development (other than mining and extractive industry) in the rural zones.
- Cluster businesses and industries with similar environmental impacts and business synergies to reduce land use conflicts and improve business efficiencies and identity.
- Ensure industrial development responds to the environmental constraints and opportunities of the site and area in which it is to be developed.
- Ensure that all new industrial development provides adequate separation from sensitive adjoining land uses or where this is not practicable provides sufficient design and technological solutions to minimise any land use conflict.
- Ensure all industrial development is of high urban design and does not detract from the character or visual quality of its setting.

COMMERCIAL /BUSINESS

- Promote and support the defined Lithgow LGA centres hierarchy at both a local and regional level.
- Define and appropriately zone the commercial precincts of all three town centres within the LGA.
- Consolidate commercial activity around the Main St precincts and avoid further fragmentation and expansion of the land mass of commercial areas.
- Resist big box or bulky goods retail in out of centre locations unless it plays a supporting subordinate role to existing centres.
- Retail and commercial development should be well designed to ensure it contributes to the amenity, accessibility, urban context and sustainability of centres.
- Provide for appropriate residential uses within town centres that integrate with and support a primary commercial/retail use.
- Provide for the differentiation of character of commercial development between the commercial precincts through the use of a range of land use planning tools.
- Ensure commercial centres integrate with and support the centre's open space networks and identified cultural precincts.

TOURISM

- Recognise and protect the LGA's tourism assets and ensure their long term sustainability.
- Provide for a range of new opportunities for the utilisation of the LGA's tourism assets including but not limited to eco-tourism and outdoor adventure tourism and sports tourism.
- Ensure that tourism related development and activities do not result in any significant adverse impact on the quality of life, amenity or sense of place enjoyed by the LGA's community.
- Ensure that the scale and form of tourism development will assist in the conservation of the LGA's tourism, natural and primary resource assets.
- Encourage the sensitive development and utilisation of the LGA's public natural bushland, forest and riparian environments for limited passive tourist recreation and accommodation development that does not compromise water quality, the natural resource base or biodiversity.
- Ensure tourism development does not detract from the viability of existing town centres and rural villages.

PLANNING CONTEXT

This chapter will address those lands within the LGA that provide for employment predominantly in the urban context (except for tourism which is discussed LGA wide). Employment lands are divided into three key areas of investigation:

- Commercial/Business Lands
- Industrial Land
- Tourism

NOTE: Primary Production employment land such as agriculture/ mining/extractive industries and power generation are addressed more specifically addressed in the Rural Lands Chapter 9

Historically the Lithgow LGA has relied on major industries such as cement manufacturing, small arms manufacturing, mining and power generation to provide employment. Whilst mining remains the highest employer at 12.2%, retail trade is the second highest employer at 11.6% (ABS Census 2006).

Within the Lithgow LGA employment lands can be found in the three urban centres. There is however, a clear hierarchy of the provision and service level of these lands commensurate with the size and role each centre plays within the LGA.

In each of the three centres commercial activity has developed around the Main St (centre of activity) with easily identified commercial core areas. In Lithgow, an out of centre location for retail occurred at the Valley Plaza in the late 1970s responding to the retail trends of the time for large retail centres anchored by a large supermarket.

The lack of connectivity between this centre and the Main St commercial precinct will, without intervention continue to impact upon the viability of Main St into the future.

Further disintegration of employment lands occurs within the wider rural areas of the LGA due to dispersed activity. The location of isolated and dispersed areas of some industrial uses indicate that Council has historically responded to individual land use demand in the absence of a broader strategic context for industrial development.

There has been strong anecdotal evidence over the past decade to suggest that the lack of industrial employment lands, providing for benefits of clustering of like uses and a bulky goods precinct, is affecting the LGAs ability to facilitate sustainable and diverse growth opportunities and compete with its neighbouring LGAs.

The most common comment coming from both the business and wider community within the Lithgow LGA is that "there is a lack of industrial lands" and as a consequence "Lithgow is "being left behind by its neighbouring LGAs".

PAST STUDIES AND CONSULTATION

The following key planning studies and reports have direct relevance to the discussion of employment lands.

Table 1. Key Planning Studies on Employment Lands

Planning Study/Report	Key Findings
Industrial Land Identification Study – Newplan -2004	• Existing industrial areas do not appear to be providing sufficiently varied opportunities for new enterprises to establish in Lithgow. • Identification of locations for a new industrial and/ or bulky goods cluster would assist in attracting employment generation. Preliminary investigations identified opportunities at Marrangaroo, Wallerawang and South Bowenfels. • A master planning process into the Marrangaroo area should be undertaken due to the attributes for future industrial lands. (This recommendation was a pre-cursor to the preparation of the Marrangaroo Local Environmental Study and associated master plan). • A Retail Employment Study should be prepared including the detailed investigation of the siting of bulky goods and the maximum sustainable floor space that should be made available for retailing.
Wallerawang Industrial Park – Hill PDA - 2010	• Considered the feasibility of Council developing 10ha of the Minerals Processing Park as an industrial park with lots varying in size from 0.5 – 1ha. • The study found that this site has better access, and has fewer constraints than existing industrial precincts. However the financial feasibility for Council to develop would be marginal.
Economic Development Strategy 2010-2014 - LCC	Identified strengths within LGA • Well located with excellent proximity to Sydney and the Central West • Major road and rail infrastructure • Significant clusters of engineering related companies –good potential to grow this sector • A strong and diversified manufacturing sector specialising in machinery and equipment manufacturing, food processing and creative industries • A low cost business environment compared with neighbouring regions • A skilled labour market • Retail and business services for a wide regional catchment • Extensive community services and facilities • A rich and proud cultural history in terms of industry and manufacturing • Great physical charm, in terms of built heritage and environmental attractions • A unique climate which is attractive to selected niche industries Identified Opportunities within the LGA • Create employment opportunities in the healthcare and ageing services sectors • Expand health care services and facilities • Develop targeted employment programs and relevant training • Strengthen the construction and home modification skills base • Advocate to establish an expanded tertiary education presence in Lithgow • Increase occupational opportunities through training courses. Exploit

Planning Study/Report	Key Findings
	relevant industry growth sectors. • Conduct a 'shop local/live local' campaign to stimulate greater spending in the LGA • Advocate for and support research and development in the energy sector for a sustainable future • Provide training and accessible support for companies facing periods of change and transition • Support development of niche industries through clustering and networking • Develop a greater range of care services through clusters and partnerships with health providers • Support development of creative industries to stimulate diversity in the economy and enhance lifestyle • Support home based and small start up businesses by ensuring the provision of suitable infrastructure • Advocate for and encourage the development of higher education facilities • Strengthen tourism by diversifying tourism product and experience • Ensure sustainability of agricultural lands by providing support to specialist agricultural business ventures • Identify gaps and promote opportunities to build upon retailing and set aside land to cater for bulky goods Priority Actions • Leadership and communication • Population stabilisation and sustainable growth • Infrastructure and land availability • Business and industry development • Expansion of business support services • Employment and skills development

Lithgow Business and Retail Strategy – SGS- April 2010	• Recommended a retail hierarchy of
	  • Lithgow –Subregional centre
	  • Wallerawang – Local centre
	  • Portland – Local Centre (Heritage Tourism Precinct)
	• Focus of growth on the Lithgow town centre
	• Restrict the expansion of business uses on the Highways leading into the town centres
	• Should additional retail space at the Valley Plaza occur retail modelling suggests that there will be insufficient demand to support it
	• Limit expansion of areas zoned for Business purposes and consider rezoning of areas West of Calero St and north of the Railway line in Lithgow
	• Link Lithgow Main St with Bridge St Cultural Precinct
	• Allow for development along Burns Lane without on-site parking requirements
	• Develop a whole precinct parking plan
	• Allow for residential uses within the town centre of Lithgow, whilst maintaining opportunity for future retail use
	• Improve signage at town entrances to direct visitors to town centres
	• Differentiate between Lithgow Main St and Plaza areas through zoning and land use permissibility and floor space ratios.
	• Adopt design guidelines for adaptive reuse of old shop fronts in Wallerawang and Portland
	• Provide a community transport service to access the Lithgow town centre
	• Encourage residents to shop locally
	• Encourage local businesses to strive for excellence
	• Promote Lithgow to new residents
	• Support growth in centres as part of a broader economic development objective

Planning Study/Report	Key Findings
Lithgow Cultural Precinct Study – Artscape and Hill PDA Feb 2010	• Aims to provide economic stability and growth through cultural development in the region. The Plan includes a feasibility study into the development of a cultural precinct in Lithgow CBD. • A range of actions were identified: the provision of cultural employment positions; a youth job network to help youth at risk gain education and job skills; new business incentives programs; ensuring Lithgow is connected to the Bells Line of Road Motorway; provision of support works for Indigenous and Disabled communities; and further promoting cultural development. • The new business incentives program, as identified within the Cultural Plan, would be aimed at attracting new businesses to the area. The Cultural Plan notes that this will include identification of industrial lands, the development of a strategy and the promotion of potential developers. • To attract new businesses to Portland a rental subsidy could be offered, along with the development of a strategy to encourage creative/cottage industries and promote Portland as a cultural heritage tourism destination.

Source: LCC

COMMUNITY AND GOVERNMENT CONSULTATION

Consultation carried out in conjunction with the 2007 Local Profile and Strategic Plan identified the following vision and issue areas for employment:

The vision for employment in Lithgow LGA is: developing and embracing diverse job opportunities for all ages and abilities. Those key employment issues identified from community and government consultation include:

- Protecting resources and maximising opportunities for sustainable growth of existing industries.
- Diversifying the economic base of the LGA to provide increased opportunities for employment.
- Overcoming a lack of employment generation land by planning, providing for and locating development on land capable and suitable for its purpose.
- Developing the tourism potential of the LGA.
- The absence of an economic development strategy.
- Minimising land use conflict through well planned development.
- Strengthening the Lithgow Central Business District as the primary centre and reinvigorating Portland and Wallerawang Central Business Districts as secondary centres.
- Attracting clean green industries to the LGA.
- Protecting agricultural land from conflicting and competing land uses, particularly residential land use. (Wallerawang Industrial Park – Hill PDA February 2010)

A jobs summit was held in Lithgow in July 2008. The purpose of the Summit, facilitated by the Western Research Institute, was to answer three key questions:

- Where are we now and where are we going?
- Where do we want to be?
- How will we get there?

The Summit identified that Lithgow needed greater industry diversification into economic, social and environmental sectors that will lead to job growth and sustainability. The Summit also identified various issues and ideas which provided input into Council's Economic Development Strategy.

The Summit identified various ideas and categorised these into 7 themes. The two themes seen as priorities were events and the hub concept. The main challenges with these ideas were identified as a lack of funding and a lack of champions to drive those ideas. The summit recommended that the next steps included Council further investigates options for establishing a hub and facilitates the events idea.

The Western Research Institute analysed the hub idea further and identified the following opportunities:

- Energy Hub/Technology Park;
- Renewable Energy – reuse existing infrastructure;
- Build on existing industries;
- ICT based creative industries;
- Business park creation;
- Music education node;
- Cultural precinct (Hoskins building);
- Cinema/Culture Centre (Bracey's building); and
- Creative incubator.

PLANNING AND LEGISLATIVE FRAMEWORK

Development of employment lands in the Lithgow LGA is currently governed by the following key state and federal planning and regulatory frameworks:

Instrument Name
KEY ACTS
Environmental Planning and Assessment Act
Local Government Act
Protection of the Environment Operations Act 1997
Contaminated Lands Management Act 1997
KEY MINISTERIAL DIRECTIONS (Section 117)
Direction 1.1 Business and Industrial Zones
Direction 1.2 Rural Zones
Direction 1.3 Mining, Petroleum and Extractive Industries
Direction 1.4 Rural Lands
Direction 2.1 Environmental Protection Zones
Direction 2.3 Heritage Conservation
Direction 4.4 Planning for Bushfire Protection
Direction 5.2 Sydney Drinking Water Catchments
KEY STATE ENVIRONMENTAL PLANNING POLCIES
Standard Instrument (LEP) Order 2006
Drinking Water Catchments Regional Environmental Plan No 1 (Deemed SEPP)
Mining Petroleum Production and Extractive Industries 2007
Rural Lands 2008
Infrastructure SEPP (2007)
Shops and Commercial Premises SEPP 22
Exempt and Complying Codes 2008
Major Projects 2005

Please refer to Chapter 3 for more detail.

LOCAL PLANNING PROVISIONS

Relevant Local Environmental Plans are as follows:

- Lithgow City Local Environmental Plan 1994 as amended; and
- Rylstone Local Environmental Plan 1996.

LOCAL ENVIRONMENTAL PLAN - EXISTING ZONING

The following table indicates Industrial land use activity in Lithgow LGA land use zones.

Table 2. Industrial Activity in Lithgow Land Use Zones

Zone	Permitted Industrial Activity with Consent	Prohibited Industrial Activity
Zone No 1(a) Rural (General)	All	None
Zone No 1(c) Rural (Small holdings)	Home industries and light industries.	General industrial, extractive or hazardous industry.
Zone No 1(d) Rural (Future urban)	General Industrial, home industries and light industries.	Extractive or hazardous industry.
Zone No 1(e) Outer Rural	All	None
Zone No 1(f) Rural (Forestry)	Extractive industries	General industrial, light industrial, extractive or hazardous industry.
Zone No 2(a) Residential	Home industries and light industries.	General industrial, extractive or hazardous industry.
Zone No 2(v) Village	General industrial, home industries and light industries.	Extractive, offensive or hazardous industry.
Zone No 3 Business	Home industries and light industries.	General industrial, offensive or hazardous industry.
Zone No 4 Industrial	Extractive industry, general industrial, home industries and light industries.	Offensive or hazardous industry.
Zone No 6 Open space	None	None
Zone No 8 National Parks/Nature Reserves	None	None

Source: Lithgow City LEP (1994) and Rylstone LEP (1996)

The following table indicates Business/Commercial land use activity in Lithgow LGA land use zones.

Table 3. Commercial Business Activity in Lithgow Land Use Zones

Zone	Permitted Commercial Activity with Consent	Prohibited Commercial Activity
Zone No 1(a) Rural (General)	General Stores; bulk stores; animal boarding and training establishments; car repair stations; child care centre; hotel; motel; professional consulting rooms; recreation establishment/facility; refreshment room; retail plant nursery; roadside stall; service station; tourist facilities; warehouse	Bulky goods salesrooms of showrooms; commercial premises; motor showrooms; restricted premises; sex service premises, home occupation (sex services); shops
Zone No 1(c) Rural (Small holdings)	General Stores; child care centre; hotel; motel; professional consulting rooms; recreation establishment/facility; refreshment room; retail plant nursery; roadside stall; service station; tourist facilities; warehouse	Bulk stores; animal boarding and training establishments; car repair stations; commercial premises; home occupation (sex services); motor showrooms; restricted premises; sex service premises; shops

Zone	Permitted Commercial Activity with Consent	Prohibited Commercial Activity
Zone No 1(d) Rural (Future urban)	General Stores; child care centre; hotel; motel; professional consulting rooms; recreation establishment/facility; refreshment room; retail plant nursery; roadside stall; service station; tourist facilities; warehouse	Bulk stores; animal boarding and training establishments; car repair stations; commercial premises; home occupation (sex services); motor showrooms; restricted premises; sex service premises; shops
Zone No 1(e) Outer Rural	General Stores; bulk stores; animal boarding and training establishments; car repair stations; child care centre; hotel; motel; professional consulting rooms; recreation establishment/facility; refreshment room; retail plant nursery; roadside stall; service station; tourist facilities; warehouse	Bulky goods salesrooms of showrooms; commercial premises; motor showrooms; restricted premises; sex service premises, home occupation (sex services); shops
Zone No 1(f) Rural (Forestry)	None	All
Zone No 2(a) Residential	General Stores; bulk stores;; car repair stations; child care centre; commercial premises; hotel; motel; professional consulting rooms; recreation establishment/facility; refreshment room; retail plant nursery; roadside stall; service station; tourist facilities;	Bulk stores; animal boarding and training establishments; motor showrooms; restricted premises; shops (other than general stores);warehouses
Zone No 2(v) Village	General Stores; bulk stores; animal boarding and training establishments; car repair stations; child care centre; commercial premise; hotel; motel; professional consulting rooms; recreation establishment/facility; refreshment room; retail plant nursery; roadside stall; shops; service station; tourist facilities; warehouse	Nil
Zone No 3 Business	General Stores; bulk stores;; car repair stations; child care centre; commercial premises; hotel; motel; professional consulting rooms; recreation establishment/facility; refreshment room; retail plant nursery; roadside stall; shops; service station; tourist facilities; warehouse	Warehouses
Zone No 4 Industrial	Bulky goods salesrooms or showrooms; commercial premises; restricted premises; shops operated in conjunction with other development permitted; all other uses not prohibited.	Shops that are not ancillary to a permitted development
Zone No 6 Open space	Racecourses; recreation areas; refreshment rooms	All
Zone No 8 National Parks/Nature Reserves	Nil	All

The flexible nature of the LEP is illustrated in the above matrix and provides little direction and certainty for the future development location and desired character of employment lands.

SUMMARY OF ISSUES

Table 4. Summary Key Employment Lands Planning Issues

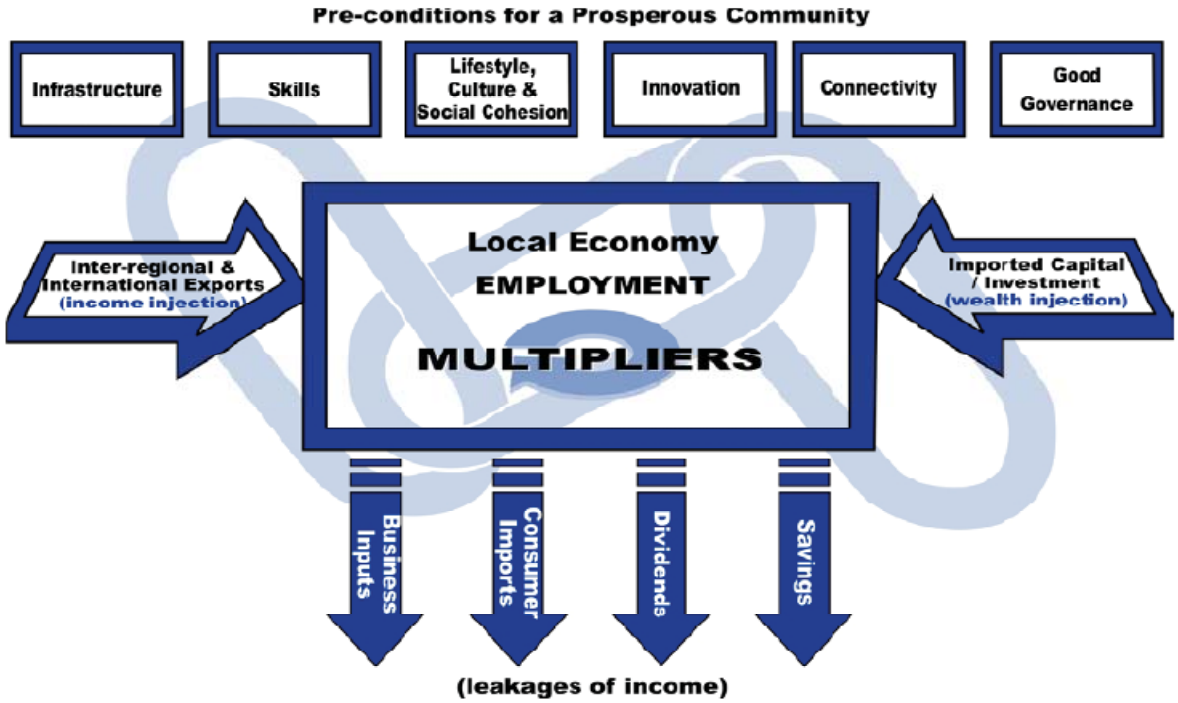
EMPLOYMENT LANDS ISSUES	WHY IS IT AN ISSUE?
Challenges of the Lithgow LGA demographic profile	• The demographic profile of a rapidly aging population affects the LGA's ability to attract and retain business and industry investment as well as maintaining a well balanced and skilled workforce.
Limitations of the existing LEP	• The flexibility of the existing LEP in relation to employment related zones has created an uncertain investment environment and led to fragmentation of lands and land use conflict. • The LEP is not supported by a robust Development Control Plan
Lack of appropriate industrial lands	• There is currently an estimated 32.1ha of available industrial zoned land within the LGA. This represents a supply of 12.8 years based on an estimated demand level of 2.5ha per year. • Each of the existing industrial precincts is heavily constrained and their ability to provide for modern industrial development is limited. • Some of the areas zoned industrial have a higher and better land use capability. • The lack of suitable and serviced industrial land in a clustered estate format inhibits industry and business investment and diversification of the employment base of the LGA.
Land use conflict and ability of existing precincts to meet modern industrial needs	• Many of the existing precincts are located amongst and adjoining residential development. This restricts the ability of the lands to accommodate general industrial land use and does not provide ample areas for expansion. • The likelihood of land use conflict to severely impact upon the operational environment of industrial businesses is high and is a deterrent to large scale investment in these lands.
Catering for bulky goods retail	• The LGA does not have an established bulky goods retail area. The Main Street Commercial precinct cannot provide for this type of retail activity due to lack of access and loading areas and smaller floor spaces of existing business sites. • The establishment of a large out of centre bulky goods location under the current LEP zoning would have the ability to adversely impact upon the viability of the main CBD.
Fragmentation of the commercial centre	• The existing fragmentation of the commercial centre in Lithgow severely impacts upon the viability of the Main St CBD and will continue to do so if the out of centre Lithgow Valley Plaza and Pottery Plaza are able to expand without restriction.
Parking and accessibility	• The ability of Main St businesses to provide on-site car parking is minimal. The current practice of requiring on-site parking may stagnate redevelopment potential.
Planning and providing for tourism	• Council does not currently have a tourism strategy to inform the land use planning for this activity. • Tourism development if not appropriately located and planned may result in the loss of amenity and character of some areas.

DISCUSSION OF ISSUES

CREATING A COMPETITIVE PLACE

Council both as a regulator and a service provider can work towards improving Lithgow as a location in which to work and live. Competitive places need a combination of supporting infrastructure, available skills, lifestyle and cultural assets, connectivity, and an environment that fosters innovation and good governance. These factors are discussed in further detail in the SGS Business and Retail Strategy, April 2010. This relationship in shown in the figure below:

Figure 1. Conceptual Model of Local Economic Prosperity



Source: SGS Business and Retail Strategy – April 2010

Effective land use planning can play a significant role in creating a "business ready and friendly environment".

The Lithgow Economic Development Strategy 2010-2014 identifies the following drivers of economic development for the Lithgow LGA:

- Leadership and communication
- Population stabilisation and sustainable growth
- Infrastructure and land availability
- Business support services
- Employment and skills development

LGA DEMOGRAPHIC AND EMPLOYMENT INFLUENCES

The following characteristics of residents and workers in Lithgow LGA that will influence demand for employment land include:

- There are fewer young people living in the LGA.
- Lithgow has a population which is aging at a relatively faster rate than the NSW average.
- Marginal population growth to 2017 is forecast for Lithgow, after which the population is forecast to decline.
- The largest employer in Lithgow LGA is mining, followed by retail trade, accommodation and food services, public administration and safety, health care and social assistance.
- The majority of workers in Lithgow (84.9% or 5,820 persons) live and work within the LGA.
- 15.1% of total workers live outside the LGA and travel into Lithgow for work, with the majority travelling from the Blue Mountains.
- 24.5% of the resident workforce leaves Lithgow LGA to work, mostly to the Blue Mountains followed by Bathurst.
- Those who travel to the Blue Mountains mainly work in health care, accommodation and food services, retail trade and public administration and safety. Most of those working residents who travel to Bathurst work in manufacturing, agriculture, and education and training.
- Only a very small proportion of working residents travel to Sydney and Penrith.
- The majority of working residents in Lithgow LGA work in mining, manufacturing, retail trade, accommodation and food services, public administration and safety, health care and social assistance.
- Those working residents that leave Lithgow LGA to work mainly work in manufacturing, construction, wholesale trade, transport, postal and warehousing, information media and telecommunications, professional, scientific and technical services, administrative and support services, education and training, arts and recreation services (based on more than 25% of working residents leaving the LGA by industry type).

The above indicates that if the Lithgow LGA can attract businesses in manufacturing, construction, wholesale trade, transport and distribution, education and health care, Lithgow is likely to recapture those residents that currently leave the LGA to work. This would not only increase Lithgow's resident worker containment rate, but would increase the attractiveness of Lithgow for further investment and employment. (SGS Business and Retail Strategy April 2010)

INDUSTRIAL LANDS

LIMITATIONS OF EXISTING LEPS

The current Lithgow LEP adopted a flexible planning approach to land use zoning. It essentially permits with consent light industrial development in a number of zones and all forms of industry within the General Rural zone.

It is apparent that the LEP was adopted to provide broad and flexible planning arrangements for employment development - seemingly in an attempt to encourage employment generating development and increase prosperity for the Local Government Area. Whilst the current LEP does not provide for specific 'employment' locations it 'compensates' by permitting such developments in a wide range of zones. The best examples can be seen in the rural zones of the LGA (particularly the *1(a) Rural (General)* zoning) where *Clause 9* of the *LEP (zone objectives and development control*) provides for flexible zoning arrangements allowing not only a range of

agricultural pursuits, but also providing for light industrial and industrial development as well as a wide range of other employment generating activities.

There have been unforeseen detrimental impacts of this approach, and rather than resulting in the expansion of significant employment developments this 'flexible' approach to land use has stifled employment development.

The failure of the flexible land use approach may be a result of one (or a combination) of the following factors:

- Allowing a random location of employment fails to provide a focal point (or focal points) for investment. Industry groups seeking to make investments may have not readily identified suitable land which has all of the services, facilities and locality characteristics which would normally be expected of employment generating sites (including proximity to mutually beneficial users and facilities).

- A broad scale, flexible approach to land use planning fails to allow appropriate planning and provision of services, including water, sewer, telecommunications and so on. Whilst large land-holdings in rural areas may technically be 'available' for development, the lack of integrated service provision to provide for development results in stagnation of investment. This is in contrast to the Plan Objectives provided in *Clause 2*, particularly *Clause 2(c)(i)* which aims to minimise *'the environmental cost to the community of fragmented and isolated development of rural land which has less than the full provision of services'*.

- Any such developments would lead to a lack of coordinated response in providing appropriate road and transport infrastructure. Disparately located employment developments do not allow for integrated public transport nor provision of suitable access for vehicles (including heavy vehicles) to the highway network.

- Disparately located developments fail to build on existing large employment locations facilities and sectors to 'grow' investment in associated/mutually beneficial industries.

- Perhaps most importantly, a disparate and wide reaching zoning does not provide any surety or protection for land users against land use conflicts. There are numerous examples throughout the Local Government Area where uses have been inappropriately located and resulted in land use conflicts with other uses permitted within the same zone. This is in contrast to the aims of the plan provided in *Clause 2*, particularly *Clause 2(c)(vii)* which *'encourages the separation of conflicting land uses'*.

The current LEP does not provide a designated industrial zone within the towns of Wallerawang and Portland. This is required if these towns are to respond to future development pressure in a sustainable manner and contribute to a more diverse community structure.

The existing Industrial Development Control Plan is obsolete and lends little support or guidance to the LEP to manage future industrial land use.

LAND USE CONFLICT

Land use conflict is evident to varying degrees in all existing industrial precincts. This has arisen predominantly due to being surrounded by residential lands and the fact that no effective buffers are mandated by either the LEP or DCP applying to these lands.

Previous planning decisions to rezone industrial lands in Inch St to residential has led to significant conflict with incoming residents with expectations of residential amenity and the remaining industrial land uses. The nature

of conflict ranges from noise, dust, odour and traffic impacts and in some cases is impinging on the ability of long-term industrial uses to continue normal operations.

The location of industrial lands within residential precincts does not allow intensification or expansion of the industrial land use as there is insufficient distances available for effective buffering and separation of land use.

LACK OF APPROPRIATE INDUSTRIAL LANDS

INDUSTRIAL PRECINCTS IN LITHGOW LGA

There are eight (8) industrial precincts across the LGA, seven of which are located in the Lithgow urban areas and one precinct located at Pinta St Wallerawang. All eight precincts in the Lithgow urban area have a designated industrial zone, where as the Wallerawang Pinta St precinct is zoned village. The precincts are shown spatially in Figures 2 and 3.

Figure 2. Employment Lands Lithgow East Existing Industrial

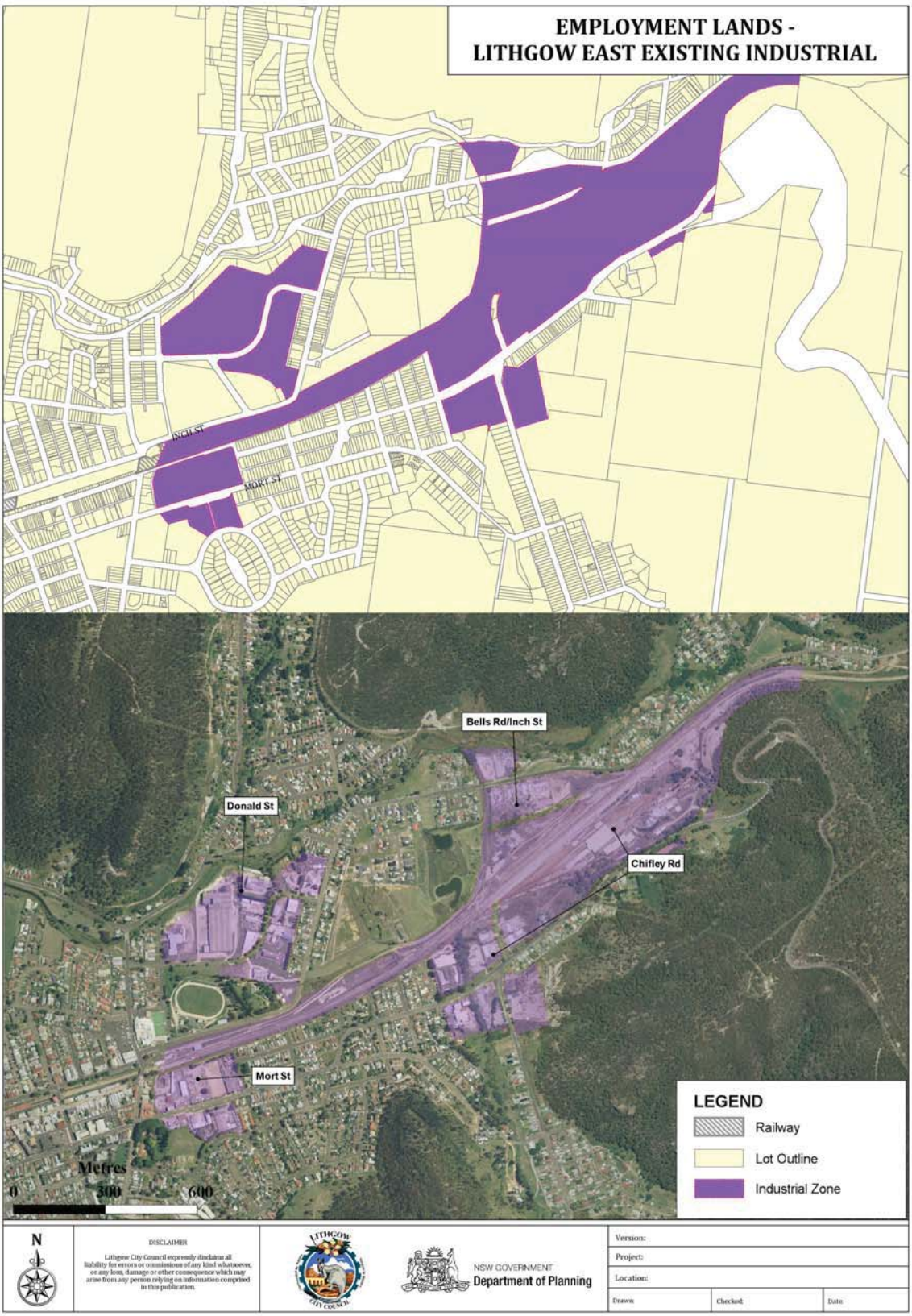
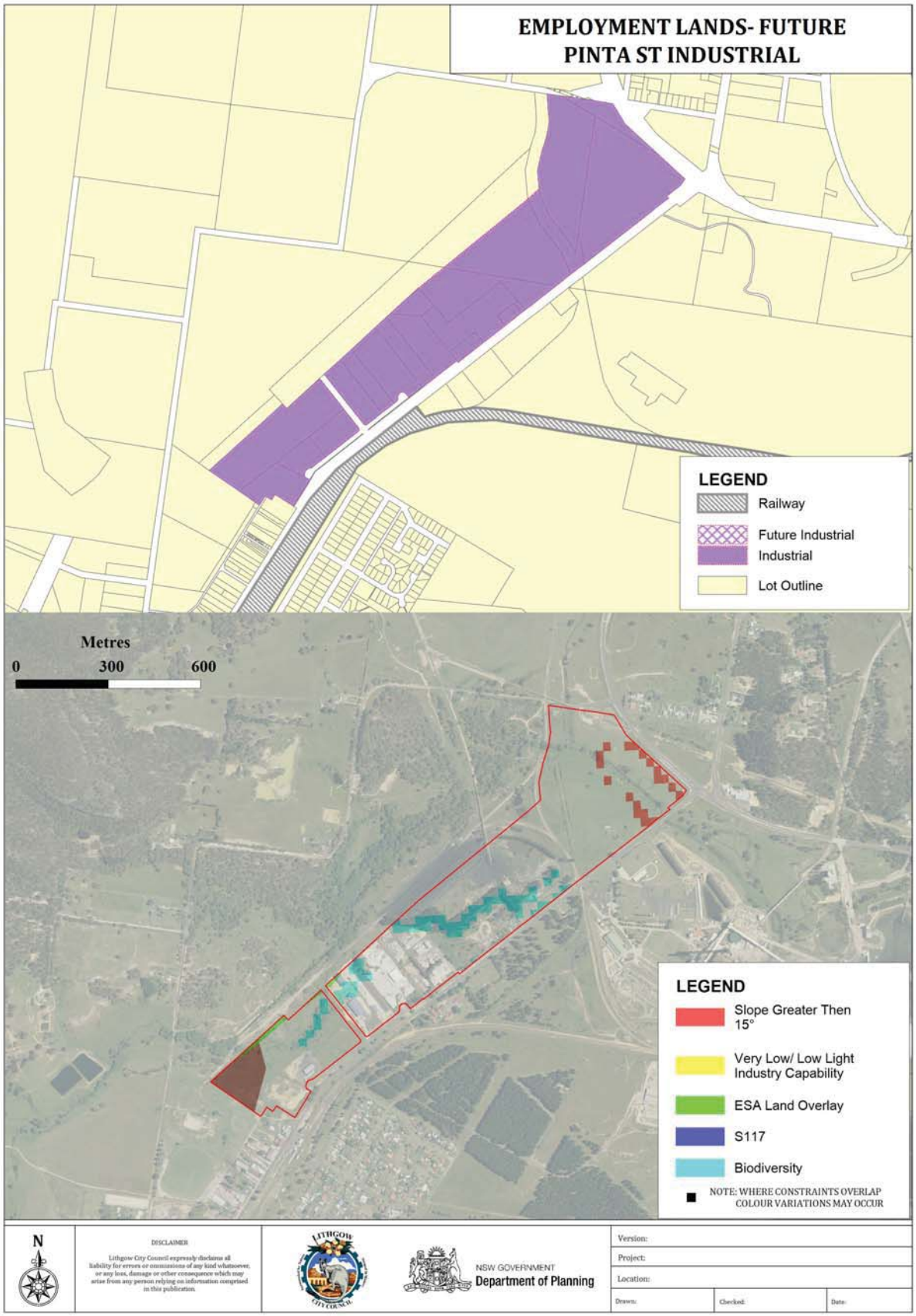


Figure 3. Employment Lands – Future Pinta St Industrial



ABILITY OF EXISTING PRECINCTS TO MEET MODERN INDUSTRIAL NEEDS

Whilst there are numerous industrial precincts in Lithgow LGA, many with sites ripe for redevelopment or with vacant land available, site inspections and further analysis has revealed that most of them are heavily constrained. The main reasons for constrained land in Lithgow industrial precincts include:

- Land use conflicts with adjacent residential development which places practical limits on industrial activities in terms of noise and other potential/perceived amenity impacts.
- Access to the site is circuitous and through variable quality local road networks that may prevent certain vehicles from accessing the site and hence certain industries from locating there.
- Lack of visibility and passing trade due to the precinct's poor location in the middle of residential suburbs.
- The relative distance from the site to major roads.
- Land which is affected by site encumbrances (e.g. flood, contamination, heritage).
- Very long term market prospects due to the need for remediation, heritage listing etc.
- Some sites contain outmoded building stock, the removal or renovation of which would add substantially to the cost of new development.

Source: Wallerawang Industrial Park – Hill PDA 2010, Lithgow Industrial Lands Identification Study, 2004.

Whilst being constrained for industrial land use there are two of the precincts that due to location and/or built form, provide opportunities for adaptive reuse by lending themselves to a higher and better land use. These precincts are the Mort St precinct and the former ADI precinct.

SUPPLY AND DEMAND FORECASTS

The following is a summary of the findings of the Supply and Demand Analysis for Industrial lands provided in Appendix 1.

LAND SUPPLY

The land area indicated in the table below for precincts within Lithgow is less than the area (107ha) zoned for industrial. This is due to approximately 27ha of zoned land forming the rail and road corridors that is unusable for private industrial land use and as such should not be considered as available supply.

Table 5. Existing Industrial Land Supply – Urban Centres

Industrial Supply – Urban Centres			
Location	Land Area	Available Supply	Comment
Inch Street	4.73ha	3ha	Restricted access due to low level overhead bridge and route through residential area. No capacity for development outside of current boundary. Adjoins residential area; potential for land use conflict. Limited to light industrial.
Donald Street	13.66ha	Nil	Limited road access and no capacity for development outside of current boundary. Adjoins residential area. Access through adjoining residential areas limits land use to light industrial.
Mort Street	5.64ha	Nil	No capacity for development outside of current boundary but the site does have good road access. There is an identified opportunity to redevelop the old gas works site; contamination on this site needs to be considered. The Cultural Precinct Study conducted for Eastern Main St has implications for the future direction in land use for this site.
Hartley Valley Road	4.73ha	2ha	No capacity for development outside of current boundary but the site does have good road access.
Chifley Road	12.29ha	3.1ha	No capacity for development outside of current boundary but the site does have good road access and exposure.
CBD West	19.38ha	Nil	No capacity for development outside of current boundary but the site does have good road access.
ADI Site	19.91ha	10ha (approx)	Opportunities for development however there are constraints due to contamination, potential land use conflict and restricted access. These constraints have implication on the future direction in land use for this site.
Wallerawang	44.12ha	14ha	Good transport access and service provision.
Total	124.6ha	32.1ha	Approx 12.8 yrs supply at 2.5ha/yr

ESTABLISHING DEMAND

Establishing demand for industrial land in the Lithgow LGA is difficult for the following reasons:

- Council does not maintain a land monitor tracking the release, take up and change of industrial land and land use within the LGA.
- The flexibility of the LEP enables industrial activity in a number of zones throughout the LGA and therefore demand for zoned industrial land is not reflective of all demand.
- Anecdotal evidence suggests that demand for industrial land has been hindered by the lack of well located and clustered industrial lands providing for modern industrial land use, thereby discounting the validity of using historic development application activity as an indicator of demand.

An indication of potential industrial demand can be gauged from established demand in the other central west centres. This data is displayed below:

Table 6. Potential Industrial Demand

	Current Demand	Predicted Demand 2031
Bathurst	8ha/annum	20ha/annum
Orange	1.6ha/annum	8ha/annum

Another method of calculating demand is by using population driven forecasting and subsequent workforce predictions to calculate required industrial floor space.

Such forecasting was undertaken by HillPDA in the Wallerawang Industrial Park Report, 2010 and the results are summarised below. Further detail is provided in the full Supply and Demand Analysis Appendix 1 and the Wallerawang Industrial Park Report.

The jobs forecasting model suggests that the Lithgow LGA will require an additional 5.8 hectares of industrial zoned land between 2006 and 2021, equivalent to average growth of 0.5ha per annum.

The demand for industrial floor space as shown in the above table, was based on population forecasts from the ABS.

ESTIMATING FUTURE DEMAND

A 1% per annum increase in the population would result in demand for an additional 15ha of industrial floor space between 2006 and 2021, equivalent to additional demand of around 1 hectare per annum.

A 2% increase in population per annum results in additional demand for 25ha or 1.7ha per annum.

Using the above figures and the demand data from other central western councils, it is suggested that a very conservative estimate for industrial demand of 2.5ha per annum be adopted under this Strategy. This will allow for a growth scenario whereby key drivers such as improved rail and road infrastructure, change in government policy to encourage further decentralisation and the implementation of local economic strategies to attract new employment generating development may take effect.

COMMERCIAL LANDS

LIMITATIONS OF EXISTING LEPs

The Lithgow LEP has one business zone and adopts a flexible planning approach that seeks to enable a wide range of business/commercial activities across a number of zones.

This approach to commercial lands has not had the same negative impact as with the industrial lands, due predominantly, to this activity being contained within the established commercial precincts and that demand to date has been able to be accommodated within the primary business zone.

Future increase in development pressure and demand may however see this situation change should the LEP remain unaltered in this regard.

The current LEP does not provide a business zone within the towns of Wallerawang and Portland. This is required if these towns are to respond to future development pressure in a sustainable manner.

The lack of differentiation through either zoning, land use permissibility or floor space controls between the Lithgow Main St business precinct and the Valley Plaza will, without intervention, affect the continued viability of the Main St.

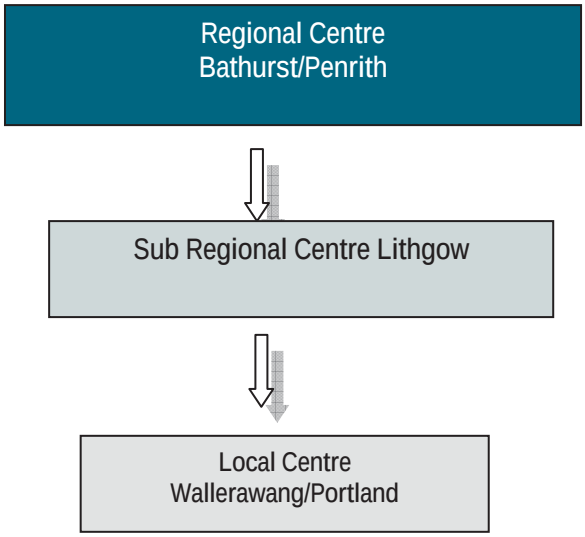
There is no development control plan that supports the LEP in relation to commercial land development. Therefore, little direction is available to guide prospective developers/investors as to the preferred land use, character and built form of the commercial precincts.

All centres would benefit from integrated urban design plans to improve the business environment.

DEFINING THE LITHGOW LGA RETAIL/COMMERCIAL HIERARCHY

The Lithgow LGA retail/commercial hierarchy as defined in the adopted Business and Retail Strategy is indicated in Figure 4

Figure 4. Lithgow LGA Retail/Commercial Hierarchy



FRAGMENTATION OF THE LITHGOW SUB-REGIONAL COMMERCIAL CENTRE

Lithgow is the principal centre within Lithgow LGA, accommodating local government and some state government agencies. The Lithgow Centre consists of two separate precincts, Lithgow Main Street and Lithgow Valley Plaza/Pottery Estate.

Figure 5 illustrates the relative location of these two precincts and Figure 6 illustrates the distance between them. The main street and plaza are separated by land uses that are not likely to ever be converted to retail (a church, school and residences). The separation distance of 500m (as well as the change in grade) means that the plazas will always provide a distinct and different retail experience to the main street. (SGS Lithgow Business and Retail Strategy April 2010).

Figure 5. Relative Location of Lithgow Existing Commercial

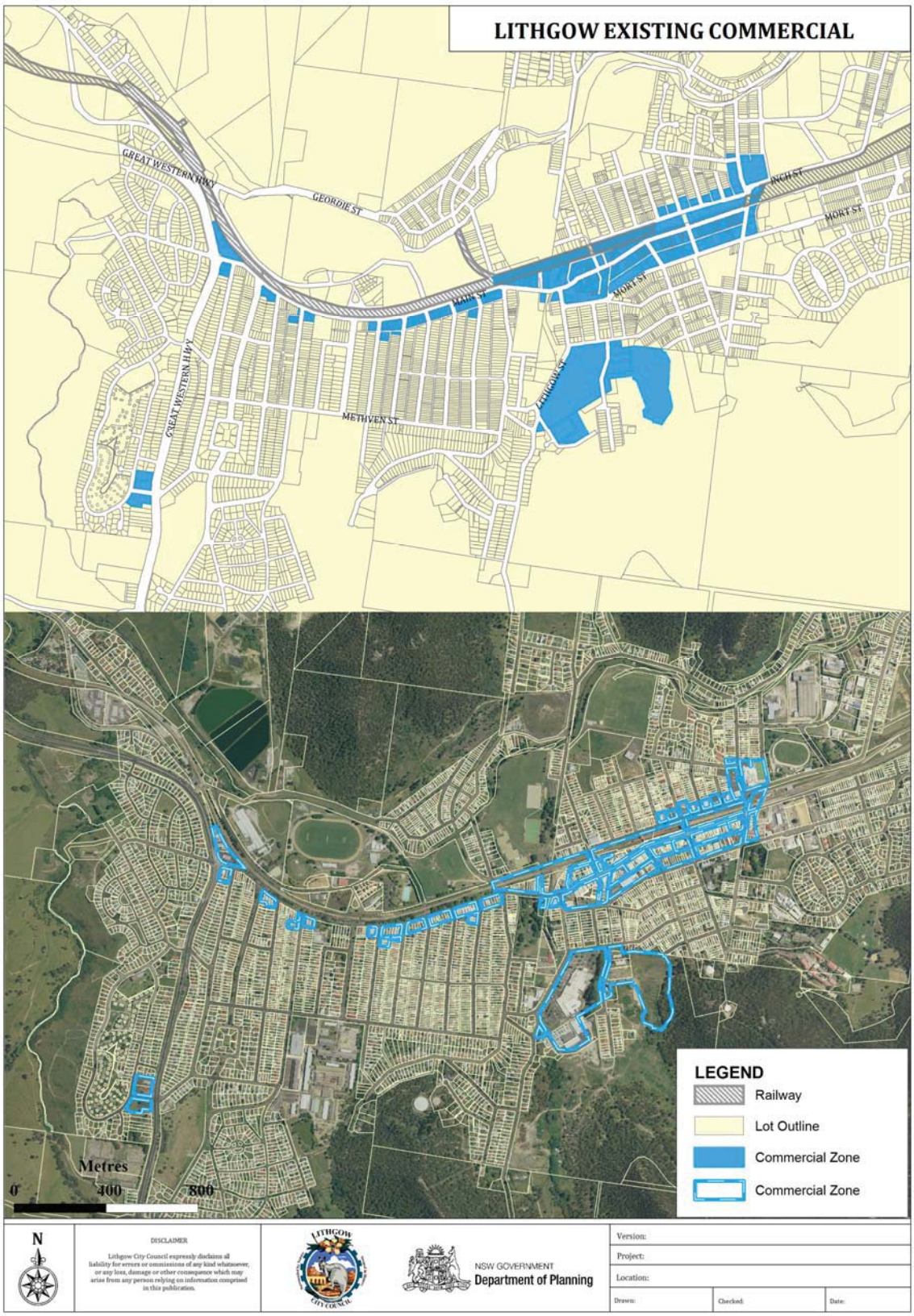


Figure 6. Relative Distance between Lithgow Existing Commercial



There is also fragmentation of the Main commercial precinct due to the linear nature of Main St and the location of the Main Western Railway Line and this has led to this precinct assuming quite different character throughout in terms of the type of commercial activity undertaken.

Since the development of the second out of centre precinct (Valley Plaza) the Lithgow Main St has struggled to retain a high consistent level of occupancy of commercial floor space. Table 7 indicates the change in vacancy rates since 2005.

Table 7. Change in Shop Vacancy Rates since 2005

Year	No of Vacant Shops	No of Occupied Shops	Total number of shops
2005	24	155	179
2008	38	140	182
2009	24	158	182

Source: LCC

To improve the viability of the Main St commercial precinct it will be necessary to consider opportunities for centre consolidation and diversifying activity within the centre.

CATERING FOR BULKY GOODS RETAIL

The community through consultation carried out with the Strategic Plan in 2006 identified that the lack of a designated precinct for bulky goods retail was restricting Lithgow's ability to compete with neighbouring LGAs and was one of the major reasons for shopping outside the local centre.

According to the Bulky Goods Retail Association, bulky goods retailing includes:

- Home entertainment goods
- Furniture, furnishings, floor coverings & electric light fittings
- Household appliances and electrical goods
- Hardware & landscaping supplies
- Bedding, manchester and window coverings
- Automotive parts & accessories
- Other (office equipment, camping, swimming pools, pet supplies, baby goods).

According to the SGS Business and Retail Strategy, bulky goods retail outlets are typically located in low cost buildings in low rent areas. Sites with exposure to high traffic volumes are desired by bulky goods retailers because they enable business promotion. Locations on major arterial roads are therefore preferred. The delivery of stock by large commercial vehicles and the loading and collection of bulky goods by customers requires sites with ease of access.

SGS does however caution that these characteristics of bulky goods are not an adequate basis for justifying an out of centre location.

SGS reports that bulky goods retailing should be located in places capable of serving a broad catchment. The Bulky Goods Retailers Association considers that suitably located premises should serve a catchment of 100,000 residents.

SGS states "given the competitive offer, relatively low population numbers within Lithgow's catchment and modest population growth, it is unlikely the Lithgow will sustainably support a significant volume of bulky goods retailing in the foreseeable future. While Council has recorded some interest for bulky goods development, from a policy perspective it is desirable to strongly discourage any out of centre retailing. This is two-fold in that out of centre retailing generally impacts adversely on centres, and by avoiding sprawling bulky goods retail outlets on the main roads, Lithgow is able to maintain attractive entrances to the town centre."

The Marrangaroo Structure Plan (2006) identified that the linear strip to the east of the Great Western Highway for the development of Highway/Business land use to encourage a mix of compatible uses associated with the use of the Highway, including bulky goods retail.

This location would be consistent with what other town centres such as Bathurst and Mudgee have provided.

The challenge for this strategy is to identify appropriate areas to accommodate this form of retailing without impacting further on the viability of the main commercial precincts.

CAPTURING RETAIL EXPENDITURE

SGS reports that based on the findings of the retail survey it is estimated that 20% of retail spending by residents occurs outside the LGA, primarily in the larger regional centres of Bathurst and Penrith or on-line.

In order to increase retail expenditure within the LGA, SGS have identified that strategies and actions to achieve the following would be required:

- Capture a greater share of residents spend locally.

- Attracting a greater number of tourists and visitors.
- Increasing affluence of the resident population.
- Increasing the population.

Please refer to the Lithgow Business and Retail Strategy for further detail on Council's website.

PARKING AND ACCESSIBILITY OF CENTRES

Parking within each of the business precincts in Lithgow, Wallerawang and Portland is sufficient with a combination of timed on street parking and/or parking areas.

The Lithgow town centre has a number of peripheral parking areas in both public and private ownership as indicated in Figure7.

Figure 7. Lithgow Town Centre Parking



There is significant opportunity to improve the parking areas within the Lithgow town centre, particularly in relation to better lighting, surfacing and shade planting. There is also potential to increase the capacity of these parking areas by a revision of layout and design and into the future the development of structured (multi-storey) parking areas.

The provision of car parking for new developments is controlled by a Development Control Plan that requires all new development to provide on-site car parking sufficient to cater for the proposed use. Where on-site car-parking is not physically practicable Council does give consideration to the proximity of public car-parking areas.

SGS reports that in areas such as Lithgow, where re-development is a marginal financial proposition at best, the conventional approach to the provision of car parking on a site by site basis rather than planning for the whole precinct will have a number of consequences:

- it is likely to slow redevelopment and renewal due to the very high cost of constructing underground car parking
- site consolidation will create large gaps in the retail frontage during the construction period

- the disruption will be prolonged by the requirement for underground parking which can add months to the construction program
- the excavation and additional truck movements will have an impact on the amenity of the street, or if undertaken out of hours, incur further costs
- attaching a car park to the title of an apartment adds considerably to the cost, which erodes affordability.

Both the Lithgow and Portland precincts provide for peripheral traffic circulation via connecting streets which allows the main streets to have relatively low speed and low traffic volume.

Wallerawang town centre does not afford the same circulation being a linear street with commercial activity confined to the western side except for the re-development of the former Railway Station. The former Railway Station car-park does however provide a formal U turn bay that assists traffic circulation. This should be retained and formalised in any future planning of this area.

There is currently no provision for separated bicycle or mobility scooter access or stand areas within the Main commercial precincts. This will, into the future, cause conflict with pedestrians as these modes of transport increase in popularity.

The above issues highlight the need for the following to be prepared to further inform development of the LGA's commercial precincts.

- Comprehensive traffic and parking plan for each centre incorporating pedestrian and cycle access, mobility and urban design issues
- Revised development control provisions in relation to the provision of car-parking.

SUPPLY AND DEMAND FORECASTS

The following is a summary of the findings of the Supply and Demand Analysis for Commercial lands provided in Appendix 1 and the Lithgow Business and Retail Strategy. Please refer to these documents for further detail.

LAND SUPPLY

The Supply and Demand Analysis in Appendix 1has identified the following land supply for commercial activity in each of the three centres of Lithgow, Wallerawang and Portland as shown in Table 8.

Table 8. Commercial Activity in the Local Government Area

Precinct	Land Area	Available retail space	Constraints
CBD	19.21 ha	Less than 10%	The vacancy rate is highest in the area between Eskbank Street and Bridge Street.
Pottery Estate and Valley Plaza	8.09 ha	4% in Valley Plaza and 40% in Pottery Estate An additional 4,055 m2 of retail floor space at Valley Plaza has been approved.	Vacant land adjacent to Pottery estate is zoned residential. Draft LEP considered by Council in 2006 that is pending due to contamination issues of land involved. Subdivision has been approved for commercial purposes.

Precinct	Land Area	Available retail space	Constraints
Railway Parade Precinct	Approx 6ha	Greater than 10%	Fragmented from the CBD by the rail line.
Western Main Road Extension (Hassans Walls Road to the great Western Highway	Approx 6ha	Limited	Characteristics are different from the adjacent CBD precinct. These include a vacant depot; motor cycle retailer; power equipment; service station; tyre repairs; hardware; radio station and a range of food outlets.
Wallerawang	0.8ha	19%	The commercial precinct in Wallerawang meets the demand of existing residents. There is existing vacant land/premises within the precinct that could cater for any additional demand
Portland	1.1ha	22%	The commercial precinct in Portland meets the demand of existing residents. There is existing vacant land/premises within the precinct that could cater for any additional demand

FLOOR SPACE SUPPLY

The Business and Retail Strategy, using retail modelling, further defined this supply by way of available floor space for each centre as indicated in the Table 9.

Table 9. Retail Model Results – Floor space supply by centre

	Expenditure Capture from within the LGA				Floor space Supply by Centre	
Centre	Share of Local Shopping	Share of sub regional shopping	Higher level shopping	Dollar Value	Retail Turnover Density (RTD)($/sqm)	Existing Floor space (sqm)
Lithgow	65%	100%	0%	$169,222,158	$4,000	55,445
Wallerawang	16%	0%	0%	$5,395,366	$2,000	8,000
Portland	16%	0%	0%	$5,593,788	$2,000	11,000
Other - Outside of LGA	2%	0%	100%	$46,105,330	$6,000	n/a

Source: SGS Business and Retail Strategy

DEMAND

Retail demand was also modelled by SGS by estimating a supportable floor space for each centre and comparing against the above identified supply to identify gaps.

NOTE: SGS have used future retail demand as an indicator of total future floor space demand for commercial activity (Refer to Pg 68/9 of Business and Retail Strategy for rationale).

Table 10. Retail Model Results Floorspace demand by centre

Centre	Floorspace demand by Centre			
	Retail Turnover Density (RTD)($/sqm)	Supportable Floor space (sqm)	Existing Floor space (sqm)	Floor space Demand (sqm)
Lithgow	$4,000	47,006	55,445	-8,439
Wallerawang	$2,000	2,698	8,000	-5,302
Portland	$2,000	2,797	11,000	-8,203
Other - Outside of LGA	$6,000	7,684	n/a	n/a

Source: SGS Business and Retail Strategy

The supply and demand analysis has indicated that there is sufficient land and floor space within each commercial centre to accommodate current estimated demand.

To understand potential future demand the following scenarios were tested by SGS who found that:

SCENARIO 1: REDUCED EXPENDITURE 'LEAKAGE'. In this case the amount of escape expenditure was reduced from 20% to 10%, assuming that Lithgow Centre would capture this additional expenditure. Compared with the base case (if escape expenditure was reduced) approximately an additional 6,000 m² of floor space could be supported within Lithgow centre. No change would be experienced within Portland and Wallerawang, as these centres do not offer higher order retailing.

SCENARIO 2: HIGHER PROPORTION OF PEOPLE TRAVELLING TO LITHGOW TO SHOP. If the number of shoppers in Lithgow, travelling from outside the LGA increased from 10% to 20%, it is estimated that an additional 6,000 m² of retail floor space could be supported within the Lithgow centre. This is a similar result to Scenario 1: reduced expenditure leakage.

SCENARIO 3: INCREASING AFFLUENCE OF LITHGOW LGA RESIDENTS. At present the income profile of Lithgow LGA residents is lower than the Australian average. A higher income profile would most likely mean a greater available retail 'spend' within the catchment. If Lithgow LGA residents were to become more affluent, in line with the Australian average income profile, it is estimated that an additional 7,000 m² of retail floor space could be supported within the Lithgow LGA, when compared to the base case.

SCENARIO 4: POPULATION GROWTH TO 25,000. Assuming Lithgow LGA's population were to grow to 25,000 people as Council aims, it is estimated that an additional 11,000 m² of retail floor space could be supported between the centres of Lithgow, Wallerawang and Portland This assumes that the distribution of population remains constant. In this case, there may be a small under supply of floor space within Lithgow, however, excess floor space would remain within Wallerawang and Portland.

TOURISM ACTIVITY

According to the Lithgow Economic and Development Strategy "tourism is becoming of increasing importance for economic growth and has caused governments and industry to engage in aggressive and intense promotional activities in order to develop and increase the effectiveness and quality of the sector".

LITHGOW LGA TOURISM PROFILE

Lithgow LGA is a place endowed with significant natural and cultural resources that can capture the interests of visitors and thus tourism investment:

- A diverse physical geography ranging from flat to gently undulating pastoral landscapes to rugged natural bushland dominated by sandstone cliffs and pagodas, majestic valleys and rare woodland forests, wetlands and ecological communities.
- A strong industrial built heritage including both coal, iron and shale
- A strong rail and road heritage associated with the crossing of the Blue Mountains
- A strong and diverse built heritage within all three town centres, rural villages and hamlets
- Places of Aboriginal Heritage and Significance
- Access to a significant National Park and State Nature Reserves network boasting six major Parks including
  - Blue Mountains National Park
  - Gardens of Stone National Park
  - Wollemi National Park
  - Turon National Park
  - Capertee National Park
  - Marrangaroo National Park
  - Evans Crown Nature Reserve
- Access to a large and significant State Forest Estate.

Areas which have obvious attraction and potential for tourism related development in the rural areas are the surrounds of Lake Lyell, the Hartley Valley and Hartley Vale, Capertee and Wolgan Valleys, Turon and Kanimbla and Megalong Valleys.

The Lithgow Economic Development Strategy 2010-2014 provides detail relating to visitor numbers, stays and economic value. It has also identified the following, but not limited to, niche tourism markets the Lithgow could encourage:

- Caravanning and camping
- Cultural and heritage
- Adventure sports such as orienteering, bushwalking, cycling and mountain-biking
- Bird watching and botanical related activities
- International students study and tourism
- Seniors activities
- Sports related activities.

EXISTING TOURISM INFRASTRUCTURE

The LGA has a range of tourist accommodation options which includes:

- Resorts and Spa Retreats
- Motels
- Group Retreats
- Pub Stays
- Caravan Park and Camping
- Self- Contained Cabins and Farm stays
- Bed and Breakfasts

The LGA also has a range of tourism facilities such as:

- Tourism Information Centre
- Scenic Lookouts
- Tourist Drives
- Museums
- Preserved Historic Villages

LACK OF TOURISM STRATEGY TO IDENTIFY AND SUPPORT FUTURE DEVELOPMENT ACTIVITY

There is currently no specific tourism strategy for the Lithgow LGA that considers existing tourism activities and identifies potential for tourism growth.

This is a significant data gap that will be required to be met to enable future strategic land use planning to adequately cater for this form of development.

As identified by the Department of Planning Practice Note PN 09-006, Council is encouraged to develop an integrated tourism strategy as part of their local planning. Such strategy should consider the following:

- The different types of tourism including:
  - Getaway and stay
  - Family and friends tourism visits
  - Cultural tourism
  - Heritage tourism
  - Eco-tourism
  - Adventure tourism
  - Farm-based tourism
  - Sports-based tourism
  - Education-related tourism
  - Business tourism

- The different types of destinations:
  - Major tourism sites
  - Urban centres
  - Major natural or cultural features
  - Places of interest
- Domestic and international tourists

The Strategy should consider the following strategic issues:

- Opportunities and constraints as a result of existing land and options for additional facilities
- Opportunities and constraints as a result of existing tourist accommodation and options for additional supply
- Opportunities and constraints as a result of infrastructure facilities
- Opportunities and constraints as a result of conservation and natural resource strategies in the areas and options for additional synergies.

CURRENT LEP PROVISIONS

Tourism related development is essentially encompassed in the definition of "tourist facilities" within the 1980 Environmental Planning and Assessment Model Provision adopted by both the current operating LEPs as:

"means an establishment providing holiday accommodation or recreation and may include a boat shed, boat landing facilities, camping ground, caravan park, holiday cabins, hotel, house boat, marina, motel, playground, refreshment room, water sport facilities or a club used in conjunction with any such activities."

This use is permitted with consent in all zones except the Open Space 6 Zone.

The Standard Instrument breaks up this definition into a number of separate definitions in relation to accommodation and recreational facilities.

It will be necessary for the LEP to consider carefully how to encourage tourism related development consistent with the principles adopted by this Strategy.

DISCUSSION OF NEW PLANNING APPROACH

INDUSTRIAL

IDENTIFYING FUTURE LAND SUPPLY

It is proposed to retain the existing industrial precincts as light industrial areas with the exception of the Mort and former ADI precinct where it is recommended that the zoning be modified to enhance the development capability of these precincts and enable a more appropriate mix of compatible land uses with higher urban design qualities.

Further, it is clear from the discussion of issues and the identified constraints limiting the ability of existing industrial zoned lands to respond to future demand, that a new industrial land supply is required.

In order to identify future opportunities to accommodate a modern industrial/business park cluster consideration was given to the following broad locational criteria:

- Sites must be large enough to accommodate modern high floor space clearance industrial buildings in a range of formats – from single floor plate factories to smaller industrial units.
- Site must comprise relatively flat land to accommodate the floor space and access needs of modern industrial buildings.
- Sites should ideally have physical attributes which would enable them to accommodate a wide range of employment generating land uses, that is general industrial, light industrial, Business Park, light manufacturing and warehousing.
- Any pre-existing environmental issues relating to the site (such as flooding/ contamination/heritage) must be manageable.
- Sites should have reasonable separation from established and proposed urban residential areas, so that businesses may be able to reasonably operate without onerous restriction.
- Site should have good access to major transport infrastructure such as highways, main roads and (to a lesser degree) railways, to provide easy access and minimise traffic conflict.

Using the above criteria, the following candidate sites were identified:

Table 11. Candidate Sites for Future Land Supply

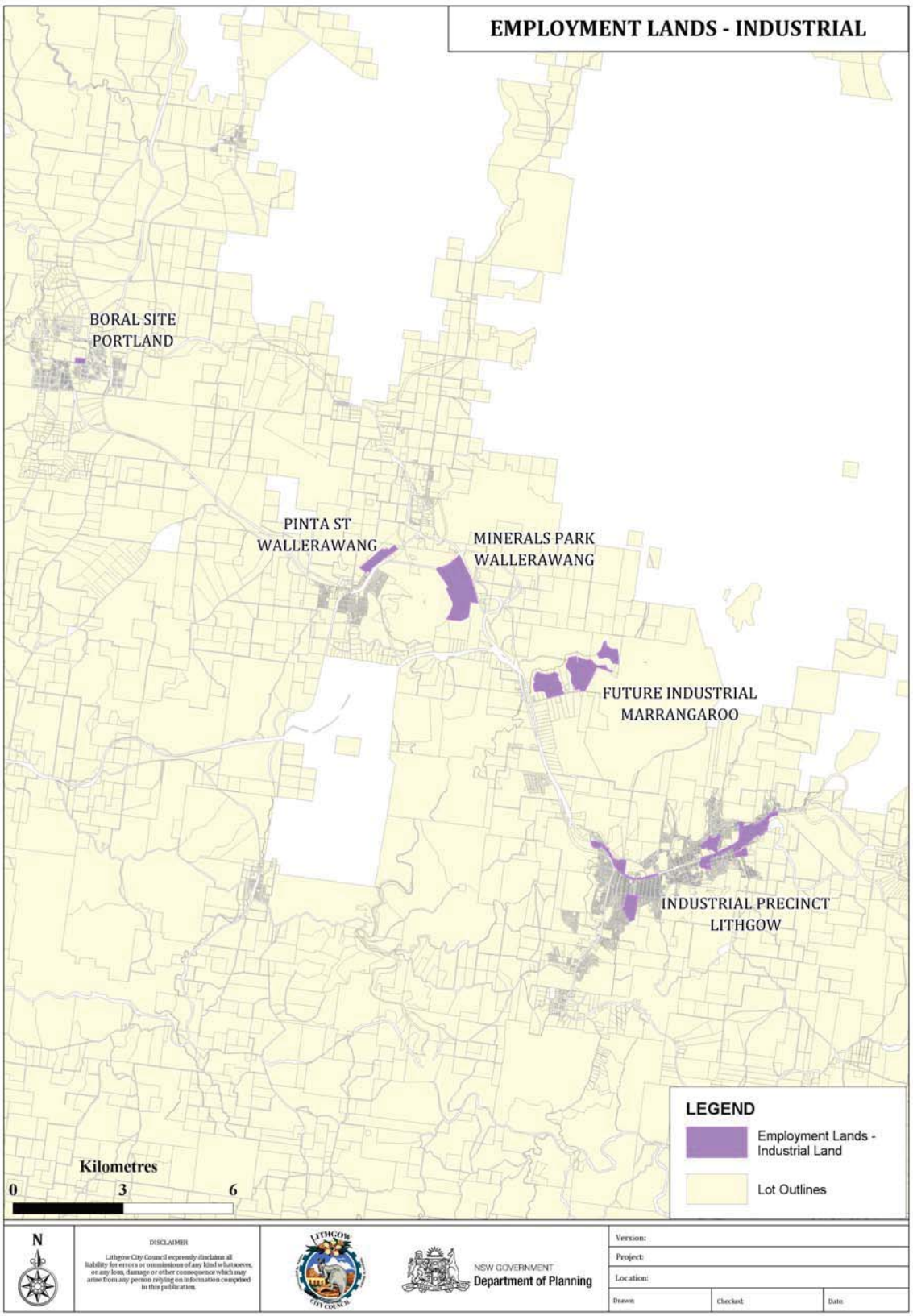
Site Name	Description	Area (ha)	Comment/Potential Land Use
Marrangaroo	Land on the eastern side of Great Western Highway, north of Reserve Road. Currently Zoned General Rural 1(a). Land uses in the vicinity represent a mix of rural residential; institutional (maximum security correctional facility); transport related uses (plant and earth moving machinery); defence training facility; former coal mine; hotel; service station and light and rural industries. Land adjoining the Great Western Highway has development consent for the	122ha	This site forms part of the Marrangaroo Study area that has been identified by the Geolyse Local Environmental Study and Structure Plan as having significant and strategic potential as the next new urban area for Lithgow. The site exhibits good potential for development of an industrial cluster with good main road exposure and ability to co-exist with existing land use. The 122ha is naturally split into three sectors by the presence of natural constraints that will enable staging of the

Site Name	Description	Area (ha)	Comment/Potential Land Use
	development of a small industrial park consisting of two lots, with a further two lots proposed.		land release and enable the efficient and effective extension of services. The areas being bounded by Reserve Road to and the correctional centre and surrounding hills enables the impact of development to be contained and separated from future intensified residential development. The development of this area given appropriate consideration to sound urban design will compliment the future planned residential development of the Marrangaroo Valley. The site is free of the strategic primary constraints used within this Strategy to identify land suitable for urban expansion.
Minerals Processing Park	The site is located adjacent to Delta Electricity's Wallerawang Power Plant. The Lithgow Minerals Processing Industry Park, identified by the Department of Mineral Resources in 1995, strategically provides new opportunities for vertical integration and value adding to the region' s mineral wealth and associated industries. It was seen as a potential site for use an electrometallurgical industrial park which would use significant amounts of electricity. The site is currently zoned General Rural 1(a).	100ha (90ha to be retained for heavy industry)	In May 2008 it was agreed by NSW Department of State and Regional Development in conjunction with the Lithgow Minerals Park Project Committee that 10ha of the 100ha site could be used for other agreed industrial purposes that would not compromise the development of the remaining 90ha. Council in 2010 commissioned a Feasibility Study into developing a 10ha Industrial Park at this location. Refer to Wallerawang Industrial Park Study Council gave "in principle" support to this proposal The site is free of the strategic primary constraints used within this Strategy to identify land suitable for urban expansion
Pinta St Wallerawang	Land on the western side of Main St Wallerawang and to the north of Pinta St. Land developed for industrial purposes by Council in the late 1970's. The site is currently zoned 2(v) Village. Current land uses include engineering/manufacturing/mining support, concrete batching, landscape supplies, plant depots etc.	44.4ha (16ha vacant)	Good potential to retain and expand light industrial land use. Reasonable proximity to Castlereagh Highway. Well placed to cluster engineering support services for power generation and mining industries. Remaining land is low lying but may contribute to future supply given appropriate site modification. The site is free of the strategic primary constraints used within this Strategy to identify land suitable for urban expansion
Boral Site Portland	Land north of Williewa St forming part of the former Portland Cement Works. The site is currently zoned 2(v) Village.	3.8ha	Site provides opportunities for light industrial land use building on the heritage of this site. Redevelopment of the site would be

Site Name	Description	Area (ha)	Comment/Potential Land Use
			required to be in accordance with any site rehabilitation requirements and validation associated with the formal closure plan for the Cement Works operation. Development would be required to be of high urban design due to the central location of the site and its proximity to the commercial centre of Portland. The site is free of the strategic primary constraints used within this Strategy to identify land suitable for urban expansion

The spatial relationship between these sites and to the existing industrial land in Lithgow is indicated in Figure 8.

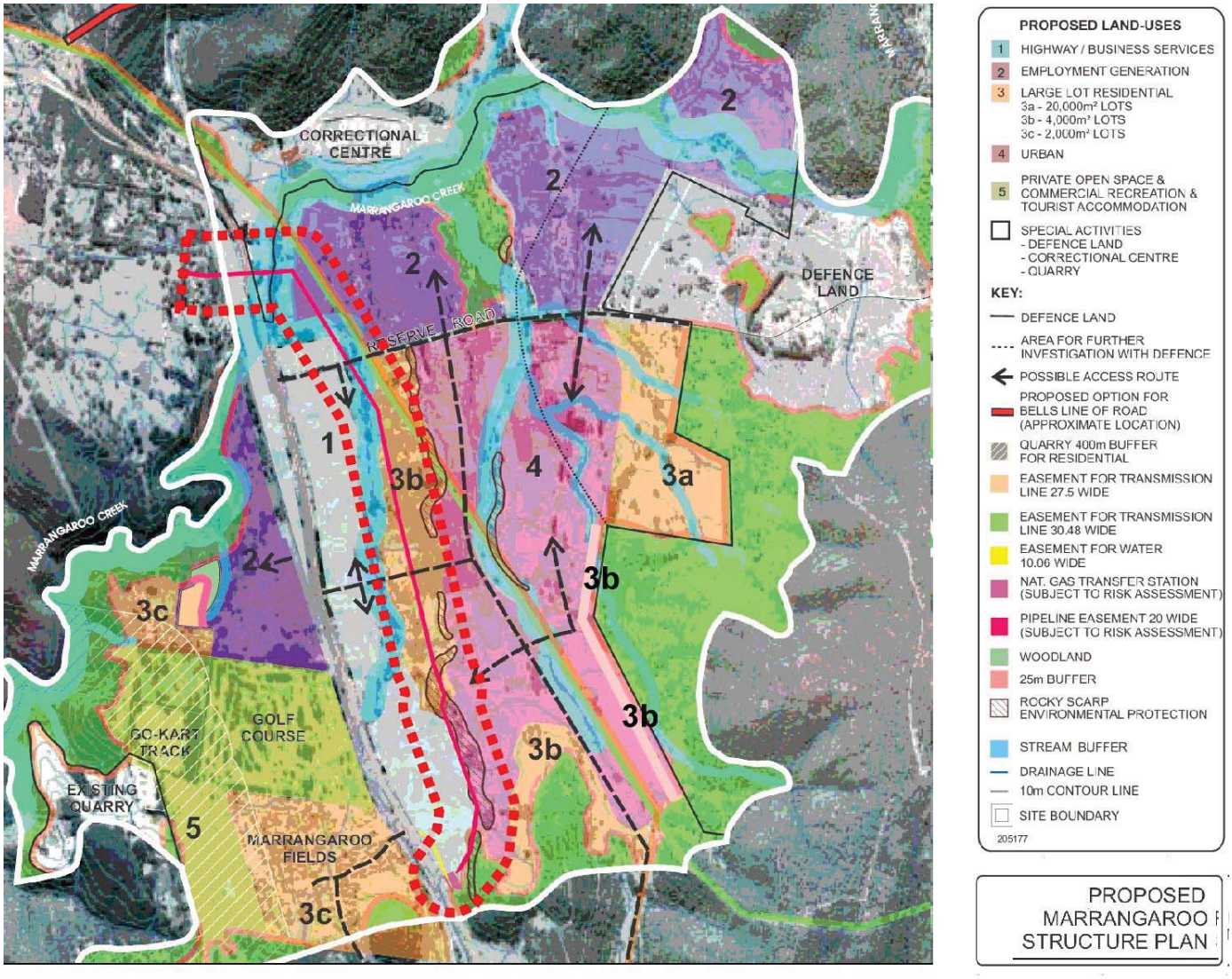
Figure 8. Employment Lands - Industrial



ROLE OF MARRANGAROO

The Marrangaroo Structure Plan, Figure 9 (2006) identified two areas for employment generation within the Marrangaroo Study Area.

Figure 9. Employment Generation within the Marrangaroo Study Area

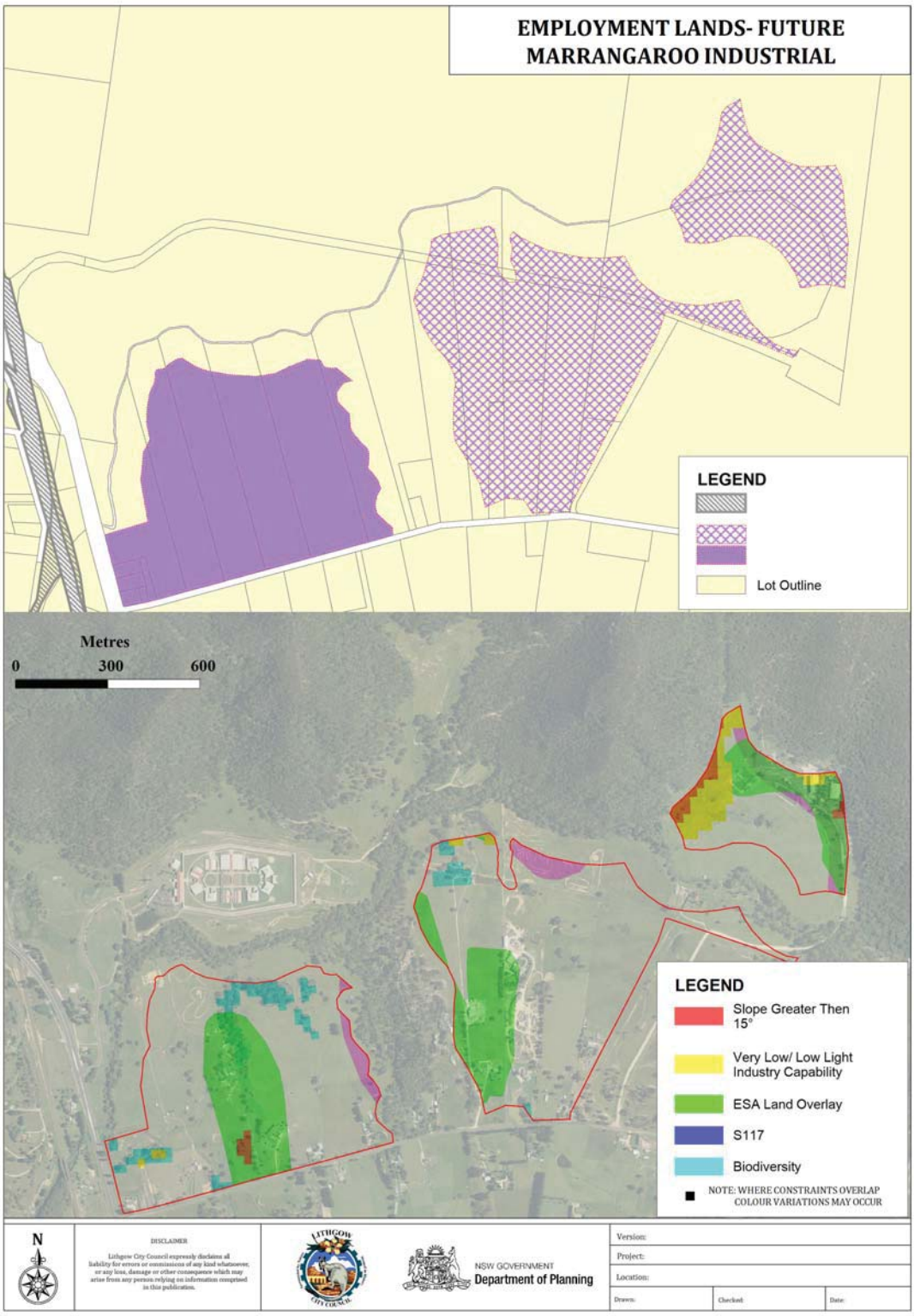


The area to the west of the Great Western Highway has not been given further consideration as future employment lands as the land is currently encumbered by a development consent for subdivision creating 217 standard residential allotments. This consent has been given substantial commencement status and therefore remains in perpetuity. The resultant impact upon land values would in all likelihood prevent consideration for employment lands unless significant demand drivers for employment lands became evident into the future.

This Strategy does however identify all three of the Marrangaroo sites, north of Reserve Road as strategic industrial land sites as indicated in Figure 8 of Chapter 14. Given the uncertainty regarding demand for industrial land, it is recommended that only Stage 1 (40 ha) of this area be followed through with rezoning in the 2012 LEP. This will give sufficient area to encourage the development of a new industrial cluster and encourage the efficient provision of services to the area.

As this land is taken up, the remaining two sections can be rezoned as required to enable further expansion of this area. The identification of these areas within this Strategy as future industrial land sites should provide sufficient indication for landowners and potential investors as to the desired future use of these lands and allow for long term decision making to occur. The land until required will be held in an appropriate rural zone limiting development that would preclude its future desired use.

Figure 10. Employment Lands – Future Marrangaroo Industrial



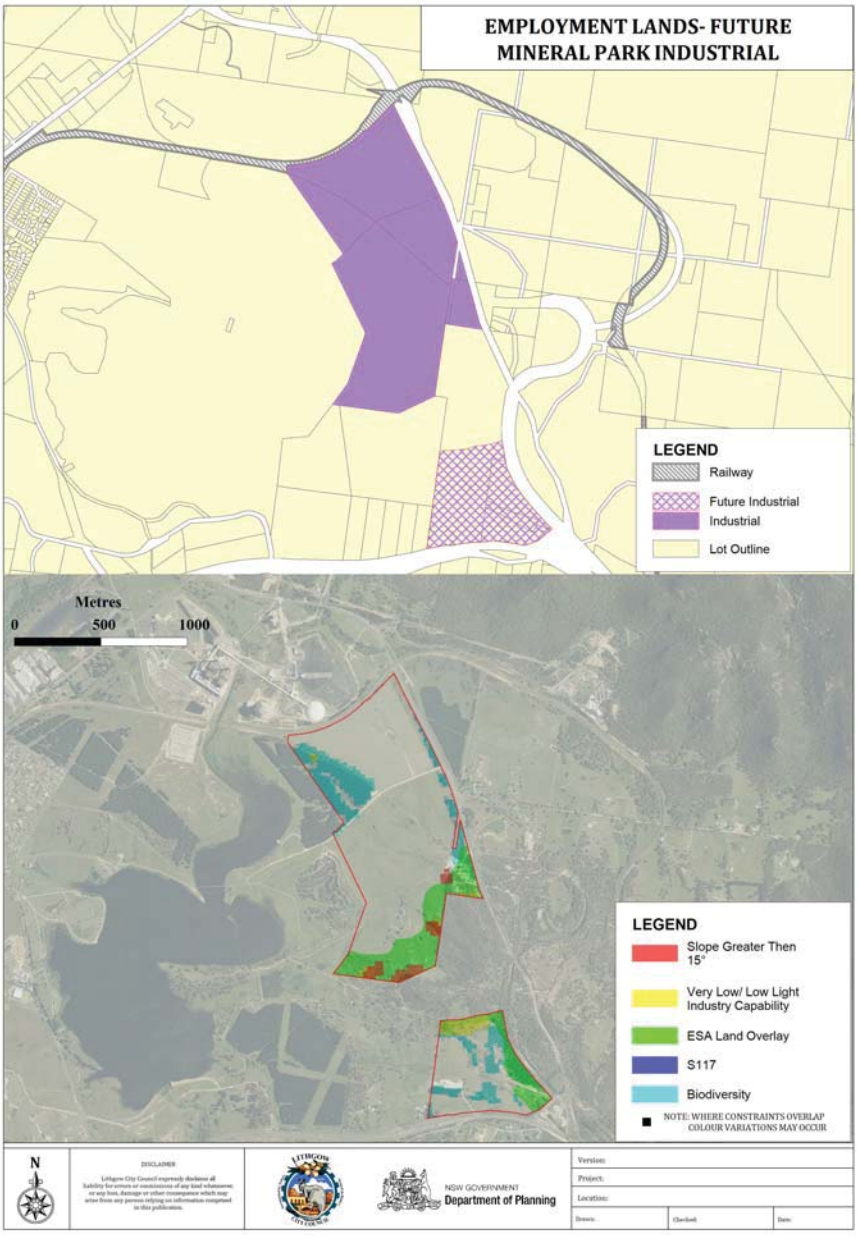
ROLE OF MINERALS PROCESSING PARK

It is recommended that this area be rezoned to reflect the desired future heavy/general industrial land use. The zoning should also encompass the adjoining landscape supply business of Good Earth.

This site will become more strategic into the future given the long term potential for the Bells Line Expressway to link to the Castlereagh Highway in the immediate vicinity of this site.

Consideration should also be given to extending this zone linking through to land already used for non-rural purposes towards the Great Western Highway as identified in Figure 11. However the zoning in this area would not be contiguous as the landscape is interrupted by densely vegetated and steep environmentally sensitive lands that would require protection under another more appropriate environmental zone.

Figure 11. Employment Lands – Future Mineral Park Industrial



IDENTIFYING INDUSTRIAL ZONE IN PORTLAND AND WALLERAWANG

Under the recommended settlement hierarchy of this Strategy, Wallerawang and Portland are identified as town centres. As such these centres require appropriate industrial zonings to enable future industrial land use to be clustered and minimise land use conflict.

It is recommended that the Pinta St Wallerawang site and the two smaller sites in Portland contained within and adjacent to the Boral Site as identified in Figure 12 and 13 respectively be rezoned to enable light industrial land use.

Figure 12. Pinta St, Wallerawang

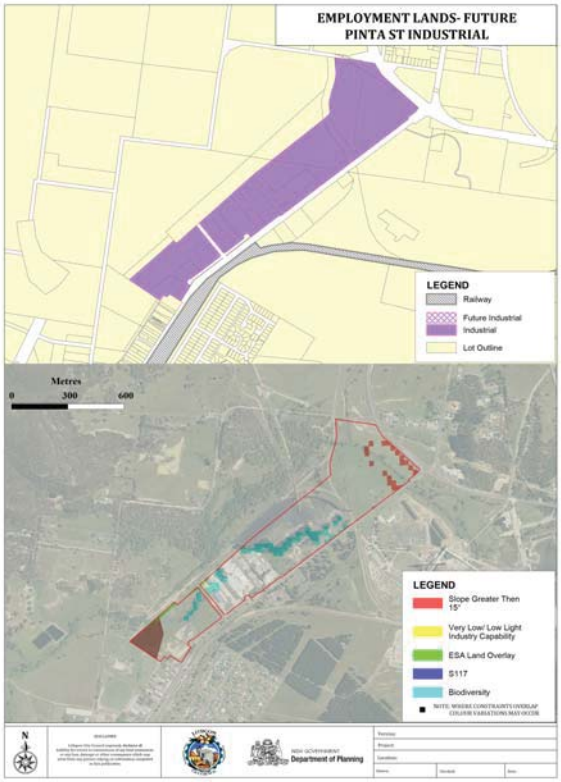


Figure 13. Boral Site Portland



MODIFICATION OF EXISTING INDUSTRIAL ZONES

The analysis of the existing industrial zones within the Lithgow precinct has identified two areas currently zoned industrial that provide opportunities for future land use change. These areas are the Mort St and former ADI industrial precincts as identified in Figures 3 and 4 of Chapter 14.

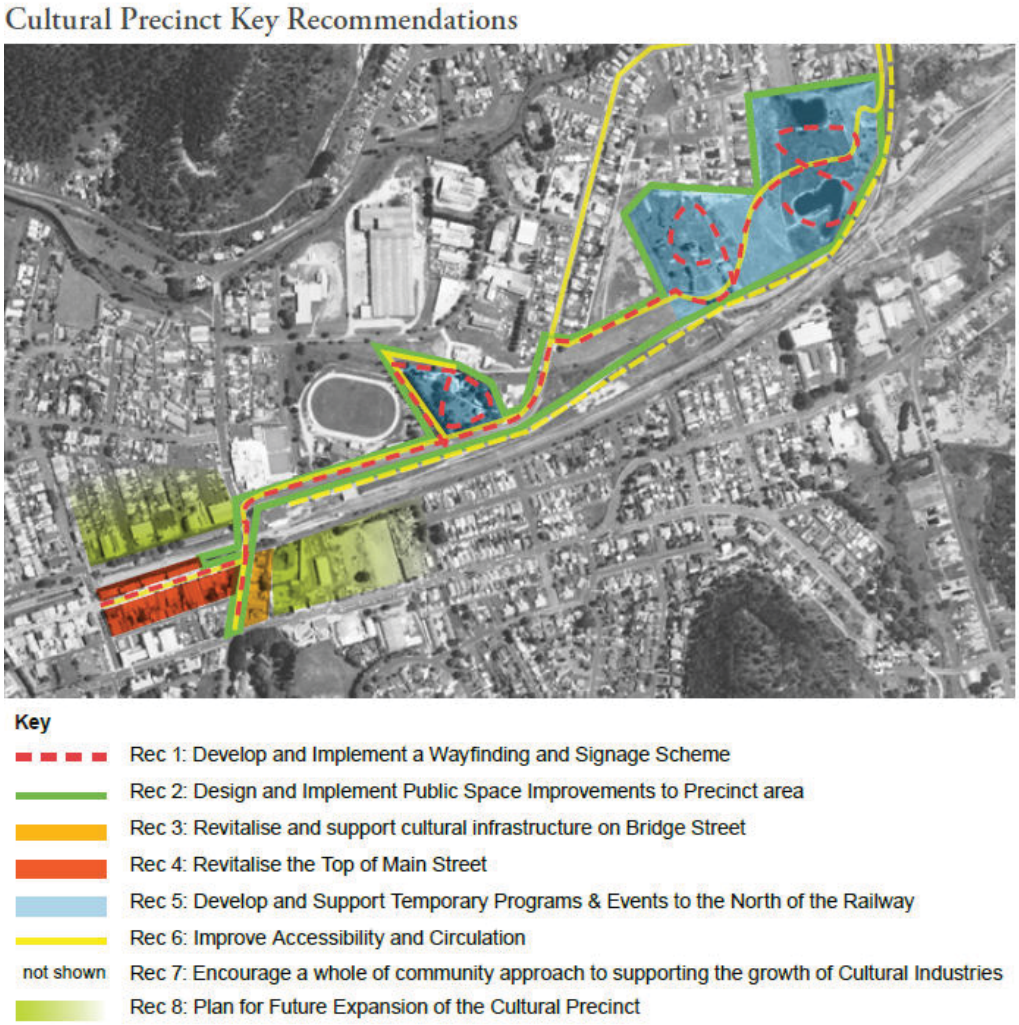
MORT ST PRECINCT

This precinct is located and extends on both sides of Main Road 516 which is the second arterial road linking Lithgow and Sydney. The precinct is in close proximity to the western end of the Commercial centre of Lithgow.

Land use in this area includes a mix of industrial depots, warehouse and storage, car repair stations, service stations and a cluster of heritage and cultural land uses.

The precinct links directly with the cultural precinct identified in the 2010 Lithgow Cultural Precincts Study. The area of the industrial precinct to the north of Mort St including Council's Lithgow Works depot has been identified as a potential future expansion of the Cultural Precinct as shown in Figure14.

Figure 14. Cultural Precinct Key Recommendations



Further, in 2009, the University of Western Sydney identified an interest in creating a remote college campus within the Hoskins Memorial Institute building.

In order to change the character of this area in the future and provide greater synergies with both the established cultural precinct and commercial centres it is recommended that this precinct be rezoned in the 2012 LEP to encourage a more compatible mix of land use. The aim being to support mixed use of high urban design to integrate business, educational, cultural, office and limited retail land use.

FORMER ADI PRECINCT

Despite rationalisation of the site following the closure of ADI, including:

- demolition of some buildings.
- site remediation.
- reconfiguration of the site for the use of the new primary occupant Thales.
- development and approval of a subdivision plan.
- development and adoption of a development control plan to guide future land use consistent with the industrial zoning.

Little interest outside of the establishment of the Timber Fix complex and Children's Furniture DFO has been shown in the re-development of the site.

Given the location and size of the site and its heritage significance it is considered that a more flexible land zoning is required to encourage redevelopment of the vacant areas of the site and adaptive reuse of the some of the remaining buildings.

It is the recommendation of this Strategy that the area of the site not occupied by Thales be rezoned ,as indicated in Figure 3 Chapter 14, to enable a mix of compatible uses commensurate with the contaminated state of the land, and the surrounding land use. A mixed use zone and accompanying provisions should ensure that it does not compete or detract from the retail and business use of the main commercial centre and provides a supporting role. It should not be zoned so as to create another out of centre commercial precinct.

MANAGING LAND USE CONFLICT WITHIN NEW AND EXISTING INDUSTRIAL AREAS

The most effective planning tool to manage land use conflict is zoning and restriction of permissible uses. However, zoning alone cannot manage those land use conflicts that have arisen due to historic settlement pattern and previous poor planning decisions.

BUFFER /SEPARATION – APPLIED DISTANCES

Some conflicts are therefore required to be managed on a site by site basis. An effective tool to minimise land use conflict and achieve acceptable environmental outcomes is the application of buffer areas/separation distances between potentially incompatible uses. This tool is particularly useful where it is necessary to supplement the more strategic planning tool of land use zoning. However a disadvantage of separation distances is that they are very wasteful of land. Every effort should therefore be made to:

- To minimise the land areas required by use of *Best Available Technology Economically Achievable* (BATEA) principles;
- To select sites carefully and consider the possible use of any required buffer zone by other compatible and perhaps less offensive land uses.

UNDERLYING PRINCIPLE

NOTE: The underlying principle in the use of buffer areas/separation distances is that the incoming or encroaching development must provide the buffer/separation distance or other approved means of reducing or removing the conflict.

Where a physical separation is required for developments with off site impacts it will be required to be located on lands in the ownership or control of the owner or operator of the encroaching development.

It is not intended as a means to resolve existing conflict and is not applied retrospectively. These situations must be dealt with as best as possible using existing legislation, and where appropriate, mediation and negotiation.

The generic buffer/separation distances are intended as guide for establishing a physical separation between sensitive land uses such as dwellings and certain activities and developments that may occur in areas where potential conflicts may arise. Such may be used in the following circumstances.

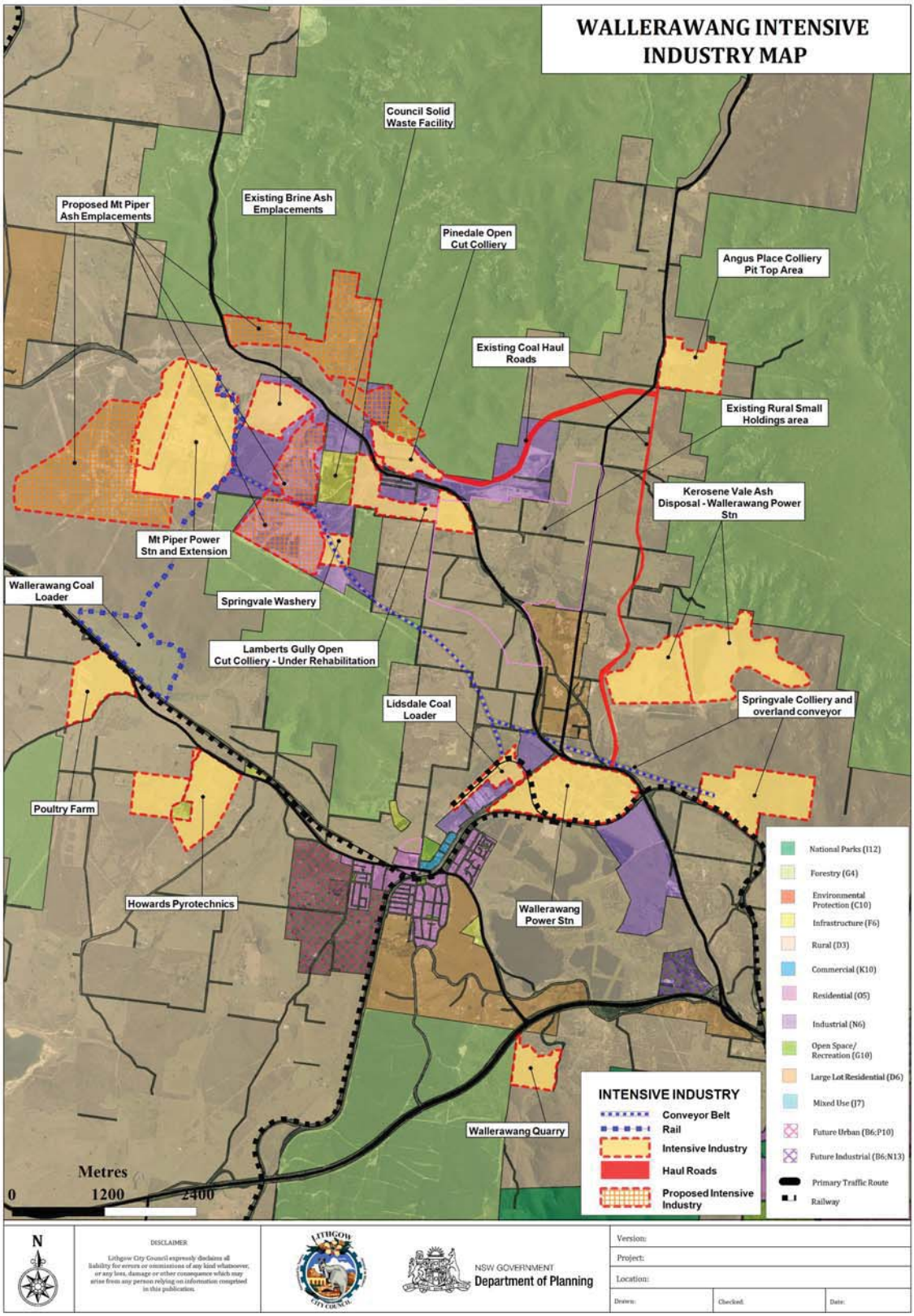
- Where a development may conflict with existing sensitive developments because of emission of odour, noise, vibration, visual impact or other nuisance and may therefore require a separation or other means of reducing the conflict to an acceptable level.
- Where sensitive development is proposed in a location where there is an existing development which may adversely affect it and may therefore need to provide its own separation or other means of reducing or removing the conflict in order to minimise land use conflicts between potentially incompatible land uses.
- Where general guidance is required to assist in site selection and early project feasibility assessments.

The detailed provisions relating to the implementation of the above planning tool will be required to be provided in a Development Control Plan. The DCP would also include the requirement for detailed site and locality context analysis plans to identify potential land use conflict and measures to mitigate such conflict for consideration of any new development.

CONSIDERATION OF HEAVY INDUSTRY PRECINCT (BLACKMANS FLAT)

As highlighted in Rural Lands Chapter 9 the Blackmans Flat area is an area that due to a proliferation of power generation and mining activities and associated infrastructure has significant and unresolvable land use conflicts. Figure 15 demonstrates the extent and location of these activities.

Figure 15. Wallerawang Intensive Industry Map



Note: This figure show the land use strategic framework

Traditionally mining and power generation have been included in the general rural zones and would transfer to the Primary Production Zone of the Standard Instrument.

The area accommodates several land uses that by their nature require separation from other land uses such as mining, value added industry to mining such as briquettes from coal residue, ash disposal and a future waste facility.
Although this area is affected by a number of primary constraints as indicated in Figure 16 it is considered the current disturbed nature and use of this land has diminished its environmental value and would not preclude future industrial land use beyond the current mining and power generation related uses.
Having regard to the current and likely future land use, the strategy had recommended that this area be zoned heavy industry in the new LEP in order to remove any ambiguity regarding the dominant existing and future land use of the area.

This met with opposition from those residents living in the area who wish the area to be zoned village.

This area has never been recognised as a village by any previous planning instrument. The area lacks necessary services and facilities for this area to be considered within the adopted settlement hierarchy as a village. The presence of dwellings is not sufficient justification for the land use zoning to be altered.

The potential for continuing land use conflict is high and therefore no further residential land use beyond what is existing or is subject of a current development approval, should be encouraged in this area.

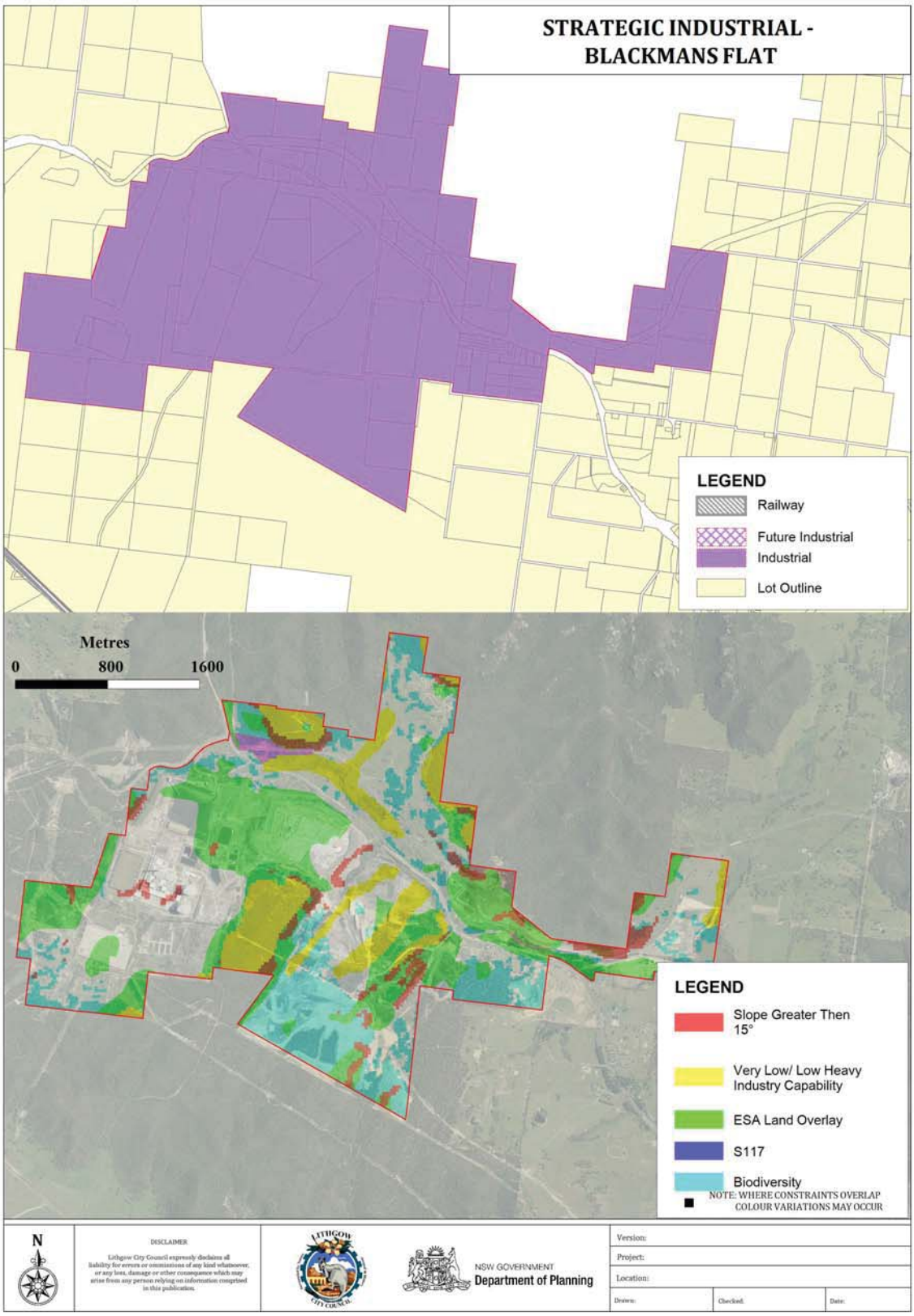
Having regard to the fact that heavy industrial development may also be a permissible use in the primary production zone and that very few new dwelling opportunities are available in the area, it is recommended that the area be retained in the general primary production zone in the new LEP, but be flagged as a strategic site for future industrial land use in the strategic framework as indicated in Figure 16 below. (Note the boundaries of the future industrial area have been slightly altered to remove land to the immediately north of View Street)

It is further recommended that this area have specific controls in the new comprehensive development control plan in order to more appropriately manage land use conflict and encourage compatible land use.

This area would provide the LGA with a future heavy industry area enabling further diversification of the industry base that can coincide with mining activity and power generation activity and prevail once mining in this area has been exhausted.

This Strategy recommendation will not resolve current land use conflict, however this coupled with other recommendations of this Strategy to limit rural lifestyle development and protect environmentally sensitive areas should minimise the potential for further land use conflict to occur.

Figure 16. Proposed Strategic direction for Blackmans Flat



COMMERCIAL

CONSOLIDATION OF COMMERCIAL CENTRES

The Lithgow Business and Retail Strategy have recommended that the commercial centre of Lithgow be consolidated. This can be achieved by rezoning areas that are surplus to the commercial precinct to more compatible land use and differentiating the character and roles of the main commercial precinct and the out of centre Plaza precincts through land use zoning and the use of floor space ratios.
The major change is to apply a mixed use zone over the Lithgow Valley Plaza and Pottery Plaza to enable differentiation of prohibited uses in this area and the Main St commercial precinct. It is proposed to enable bulky goods retail in this area to provide a defined "go to" area for this land use in the LGA.

Following community consultation this area has been expanded to include an area to the west of Lithgow St that sits in and around the public and private recreation areas. This extension of the mixed use zone will:

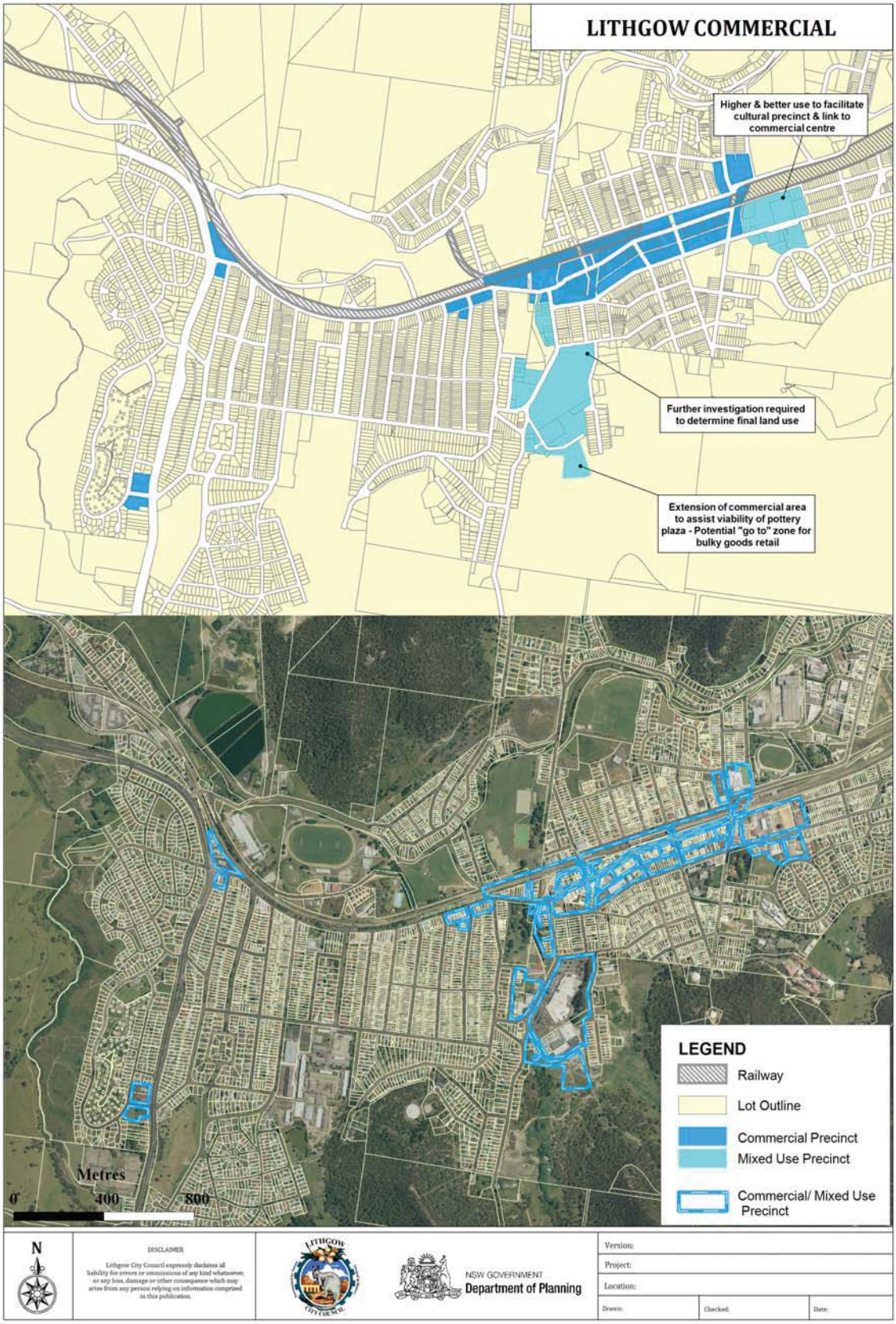
- rationalise zoning in the precinct to encompass existing mixed uses
- enable effective planning for both sides of Lithgow St with like uses, which is currently a high traffic area
- will reinforce a difference between Main St and the Plaza Precinct.

The resultant loss of standard residential zoned land will not significantly alter land stocks for this use. The mixed use zoning will provide for residential development types compatible within a mixed use and high traffic environment.

Further investigation through an urban assessment is required to determine an appropriate floor space ratio to control the density of development in this location. This area must remain differentiated and secondary to that of the Main St core CBD area. The urban assessment will be carried out as part of the development of the new LEP.

The key recommendations of the Lithgow Business and Retail Strategy (as modified by community input) to be taken forward by this Strategy have been identified in Figure 17.

Figure 17. Lithgow Commercial Precincts



PROVISION OF NEIGHBOURHOOD COMMERCIAL AREAS IN LITHGOW

There is currently a business zone located on the Great Western Highway either side of Flint McClelland Drive Lithgow. The purpose of this zone is to provide for highway service needs and to service the day to day needs of the surrounding residential areas. The adopted Business and Retail Strategy recommended the retention of this area to accommodate local retailing in the longer term.

During the exhibition period further consideration was given to land use in the area along Col Drewe Drive South Bowenfels. This area is already developed for a range of land uses such as a private school, church, motel, medical practice and postal distribution centre. The area is currently zoned residential, however the existing agglomeration of commercial land uses are inconsistent with a residential land use zone.

Given the relative distance of the South Bowenfels release area from the town centre, the expected population of this area and the likely future demographic profile, this strategy recommends the area become a neighbourhood business area as indicated in Figure 4 Chapter14.

ROLE OF MARRANGAROO

The Marrangaroo Structure Plan (2006) identified a linear strip to the east of the Great Western Highway for the development of Highway/Business land use to encourage a mix of compatible uses associated with the use of the Highway, including bulky goods retail.

Given current demand and the findings of the Lithgow Business and Retail Strategy it is proposed to identify this area of land within this Strategy as a strategic site as a future enterprise corridor. It is not proposed to move this forward in the considerations of the 2012 LEP due to the level of uncertainty regarding the demand for such land use and that it would be inconsistent with other recommendations of this Strategy to consolidate the commercial centres to create a more vibrant business environment for existing centres.

The land will be protected from inappropriate land use which would preclude this future opportunity within the LEP.

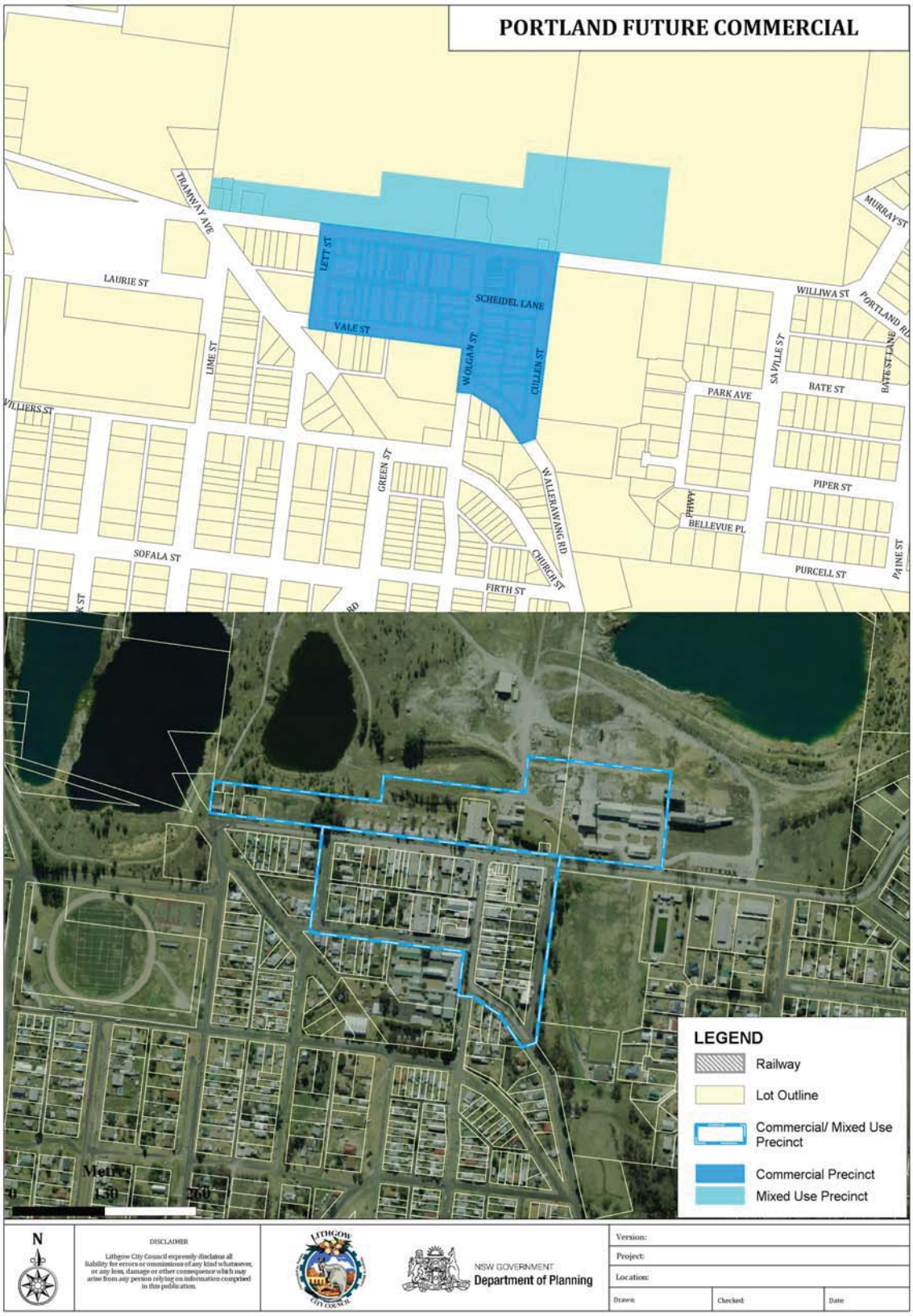
IDENTIFYING COMMERCIAL ZONE IN PORTLAND AND WALLERAWANG

PORTLAND

In order to give recognition of the status of Portland in the recommended Settlement Hierarchy and to facilitate the future viability of this centre, this Strategy recommends the rezoning of the identified commercial precinct of the town in the 2012 LEP. The area for this zone is indicated in Figure 18. This is consistent with the recommendations of the 2010 Lithgow Business and Retail Strategy.

A further area has also been identified in the Boral Site for mixed use business area to stimulate activity in this site and encourage adaptive reuse of the significant heritage buildings.

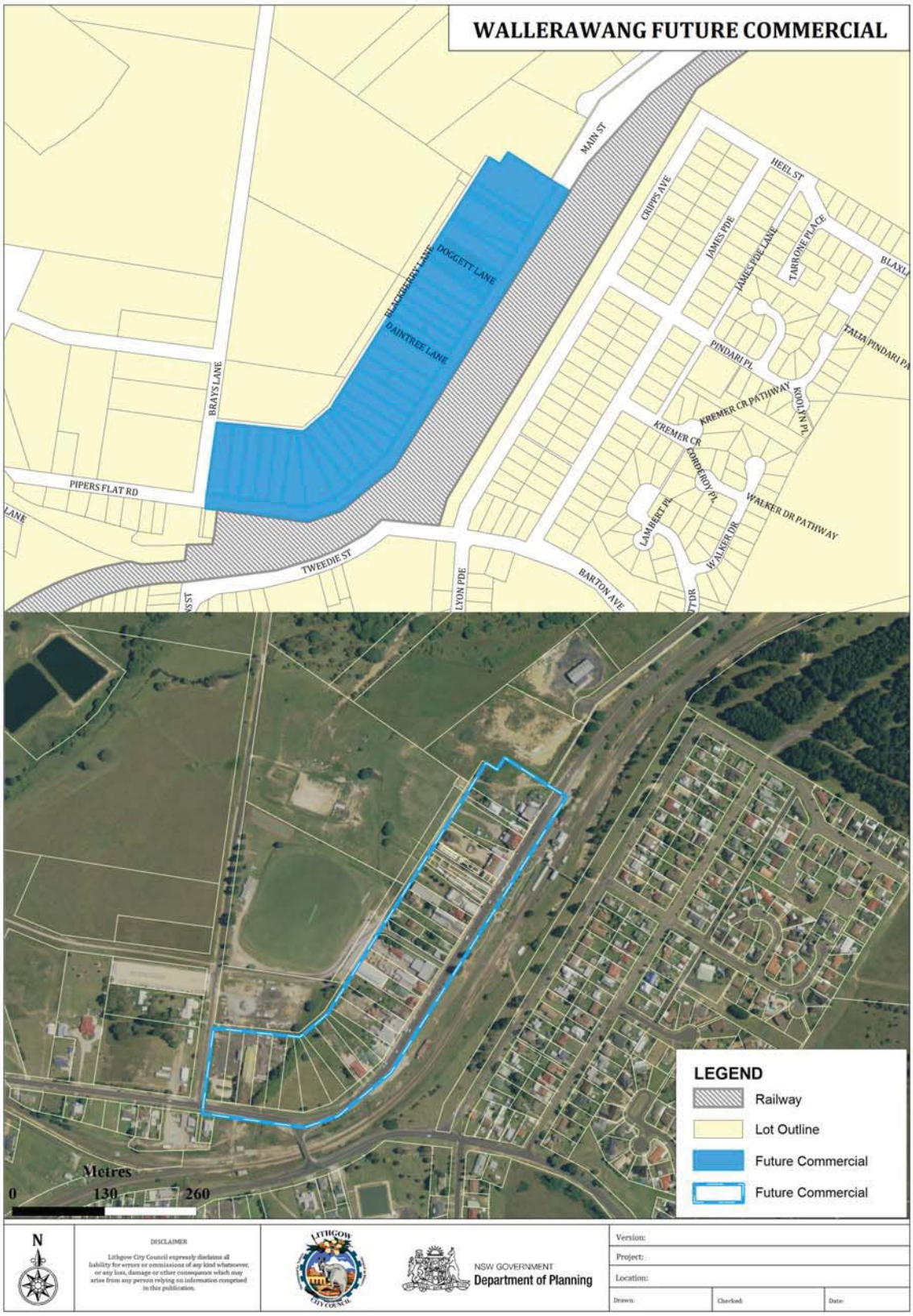
Figure 18. Portland Future Commercial



WALLERAWANG

In order to give recognition of the status of Wallerawang in the recommended Settlement Hierarchy and to facilitate the future viability of this centre this Strategy recommends the rezoning of the identified commercial precinct of the town in the 2012 LEP. The area for this zone is indicated in Figure 19. This is consistent with the recommendations of the 2010 Lithgow Business and Retail Strategy.

Figure 19. Wallerawang Future Commercial



TOURISM

In the absence of a Tourism Strategy to inform this Strategy, it is recommended that land use provisions remain as flexible as possible to encourage and facilitate appropriate forms of tourism related development. Such should however, be consistent with the Growth Management and Sustainability Principles (chapter 4) and tourism land use planning principles outlined in this Strategy.

However, it is considered that the LEP should consider the following:

- Limiting intensive accommodation types to the urban and village areas where such is not directly related to eco-tourism
- Ensuring that the rural villages enable a range of tourism support land uses such as restaurants/cafes/ service stations etc.
- Identifying areas of agglomeration of tourist related development and consider an appropriate tourism precinct zone or detailed development control plans to guide development in areas around Lake Lyell and the Emirates Resort, Wolgan Valley.

SUMMARY OF KEY ACTIONS

INDUSTRIAL

Action 12 .1

- Retain existing industrial zoned lands for industrial land use in the Lithgow City 2012 LEP modified by separate actions of this Strategy.

Action 12.2

- Apply an industrial zoning to the 100ha site known as the "Minerals Processing Park" in the Lithgow City 2012 LEP as indicated in Figure 13 of Chapter 14.

Action 12.3

- Identify the site on the corner of Great Western Highway and Castlereagh Highways as indicated in Figure 15 of Chapter 14 as a strategic employment lands site for consideration in future reviews of the LEP beyond the 2012 LEP.

Action 12.4

- Implement the recommendations of the adopted Marrangaroo Structure Plan by:

1 Rezoning land (approx 40ha) to the north of Reserve Road for general industrial land use in the Lithgow City 2012 LEP.
2 Identifying two further areas to the north of Reserve Road as future strategic industrial sites beyond the 2012 LEP as indicated in Figure 9 of Chapter 14.
3 Identify the corridor along the eastern side of the Great Western Highway as a strategic site for future use as an enterprise corridor beyond the 2012 LEP.

Action 12.5

- Rezone the land to the east of Pinta St Wallerawang for general industrial land use in the Lithgow City 2012 LEP to formalise the existing industrial land use as indicated in Figure 13 of Chapter 14.

Action 12.6

- Rezone part of the south east corner of the Boral site at Portland for industrial land use in the Lithgow City 2012 LEP as indicated in Figure 19 of Chapter 14.

Action 12.7

- Rezone land on located on the corner of Williewa and Saville Street Portland for light industrial land use in the Lithgow City 2012 LEP.

Action 12.8

- Prepare a Development Control Plan to provide effective and appropriate land use management guidelines for industrial development areas.

Action 12.9

- Introduce provisions for land separation/buffer distances within the Lithgow City 2012 LEP and/or DCP to supplement zoning and land use provisions.

Action 12.10

- Prepare and administer a land monitor to track the demand and take-up of industrial land supply. Identify appropriate thresholds levels to trigger the investigation of additional release areas.

Action 12.11

- Retain the area known as Blackmans Flat in the 2012 LEP as a rural zone.

- Identify the area known as Blackmans Flat as a strategic heavy industrial area beyond the 2012 LEP the extent and nature of this proposed land use to be determined with affected land holders and stake holders.

COMMERCIAL/BUSINESS

Action 12.12

- Modify the zoning of the Mort St industrial precinct to provide for a mixture of compatible land uses in the Lithgow City 2012 LEP as indicated in Figure 3 of Chapter 14. The LEP provisions to ensure that uses within this area support the commercial precinct and do not compete or detract from the business and commercial viability of the Main Street commercial centre.

Action 12.13

- Modify the zoning of the site known as the "former ADI site" to provide for a mixture of compatible uses in the Lithgow City 2012 LEP as indicated in Figure 3 of Chapter 14. The LEP provisions to ensure that uses within this area do not compete or detract from the business and commercial viability of the Main Street commercial centre.

Action 12.14

- Implement the recommendations of the Lithgow Business and Retail Strategy in the Lithgow City 2012 LEP as follows:

    - Retain and consolidate the principal commercial centre of Lithgow by rezoning surplus commercial lands as indicated in Figure 3 of Chapter 14.
    - Apply a different commercial zone to the Lithgow Valley Plaza, Pottery Plaza and adjacent lands as indicated in Figure 3 of Chapter 14 to enable differentiation of prohibited land uses within this area and the Main St commercial precinct.
    - Introduce floor space ratios in the LEP to limit the potential for expansion of the Valley and Pottery Plazas out –of centre sites.
    - Identify and appropriately zone the commercial centre of Wallerawang as identified in Figure 13 of Chapter 14.
    - Identify and appropriately zone the commercial centre of Portland as identified in Figure 19 of Chapter 14.

Action 12.15

- Modify the commercial zonings within the area known as "Pottery Estate" to extend the commercial zone to the south of the existing Pottery Plaza as indicated in Figure 3 of Chapter 14 and apply an equivalent zone and FSR to that of the Lithgow Valley Plaza and Pottery Plaza.

- This area to be identified in a DCP as the preferred location for bulky goods retail.

Action 12.16

- Prepare a Development Control Plan to provide effective and appropriate land use management guidelines for commercial development areas.

TOURISM

Action 12.17

- Prepare a tourism strategy for the Lithgow LGA

Action 12.18

- Limit the development of intensive tourism accommodation such as hotel and motel accommodation and serviced apartments to urban areas in the Lithgow City 2012 LEP where such is not directly related to eco-tourism.

Action 12.19

- Identify areas of agglomeration of tourist related development or potential for such development and consider introducing a tourist zone over these areas, particularly Lake Lyell and surrounds and Emirates Resort, Wolgan Valley, in the Lithgow City 2012 LEP.

Action 12.20

- Ensure that rural villages provide for a range of tourism support land uses such as restaurants/cafes/ service stations etc.

CHAPTER 13 OPEN SPACE AND RECREATION LAND USE

STRATEGIC PLANNING DIRECTIONS

The planning principles to be used to guide the development of this Strategy and to inform the future management and development of open space lands in Lithgow LGA are as follows:

- Effective Planning - ensure that provision of recreation and open space opportunities accurately reflect current and predicted future community needs
- Encourage effective and efficient identification and use of recreation, sport and open space infrastructure
- Recognise different economic, cultural and social values of particular communities across the LGA and provide open space accordingly
- Ensure that all new and where possible existing recreation and open space facilities, are accessible to the majority of residents in a safe and equitable manner and area equitably distributed across the LGA
- Ensure that recreation and open space facilities and activities have minimal impacts on surrounding land uses and the environment

PLANNING CONTEXT

Lithgow City Council has a considerable open space network that combined with surrounding National Parks, State Forests and private recreational facilities provides a diverse range of recreational opportunities for both the local population and wider community.

The key issue to be considered by this strategy is the overall strategic management and direction for the procurement, development, management, maintenance and function of open space within the Lithgow LGA.

PAST STUDIES AND COMMUNITY CONSULTATION

Council commissioned consultants Ross Planning to complete an Open Space and Recreational Needs Study(OSRNS) in July 2010.

The Draft Study was presented to Council for consideration March 2011. The key findings and recommendations of the study, together with the results of consultation will be utilised to inform this Land Use Strategy as it relates to Open Space and Recreation.

It is intended to publicly exhibit the OSRNS with the Land Use Strategy with the adopted recommendations and actions used to inform the new Local Environmental Plan for the LGA and the supporting development control plan(DCP).

The aim of the consultation process undertaken for the OSRNS, was to gain an understanding of the wants, needs and desires for open space in the community. Broadly, consultation included:

- Councillors and Council Officers
- General community through community surveys, workshops and through general discussions at key locations(retail centres and in parks), additional consultation occurred with key target groups such as young people and active adults
- Sport and recreation providers – sport club specific survey, sports forum and interviews/discussions

The findings from the community consultation included the following responses:

- Good range of sporting opportunities
- Need for an indoor heated pool was highest priority amongst required facilities
- High satisfaction rating in relation to number of parks, their maintenance and cleanliness
- Need to further promote and develop walking and cycling opportunities
- Need for equity in management, maintenance and upgrade of facilities'
- Limited play opportunities in smaller communities
- Limited play opportunities for young people

PLANNING AND LEGISLATIVE FRAMEWORK

The two main areas of legislation that form the management framework for Council in terms of open space are:

LOCAL GOVERNMENT ACT, 1993

Clause 36 of the Local Government Act, 1993 sets out the need and requirements for the preparation of Plans of Management for each parcel of community classified open space within the LGA.

Broadly, Council is required to:

- Classify all public lands as either community land or operational land. Operational land generally has a more commercial focus or minimal direct community access.
- Maintain a register of all public lands.
- Prepare Plans of Management that cover all community classified land.

Although there are a number of categorisations of community land, Section 36 (4) of the Act states that the core objectives for management of community land categorised as General Community Use are:

(a) To promote, encourage and provide for the use of the land, and to provide facilities on the land, to meet the current and future needs of the local community and of the wider public:

(i) In relation to public recreation and the physical, cultural, social and intellectual welfare or development of individual members of the public; and
(ii) In relation to purposes for which a lease, licence or other estate may be granted in respect of the land.

LITHGOW CITY LOCAL ENVIRONMENTAL PLAN (LEP) 1994 & RYLSTONE LOCAL ENVIRONMENTAL PLAN 1996

Essentially, both LEP's contain one open space zoning - Zone No 6 Open Space, that by its nature has a number of limitations. These limitation devolve from:

- The lack of differentiation of public and private open space;
- Allocation of different land uses within the zone which allows non specific recreational land uses to be zoned open space (eg flood prone areas, utility installations); and
- the broadness of the role and functionality of open space (eg conservation versus active sporting venues).
- Its application only to the urban areas of Lithgow

The objectives of this zone are:

(a) to identify land which is owned, controlled or managed by the Council, is proposed for open space or public recreation purposes or is privately owned and used for recreational purposes,
(b) to maximise the value of community land and promote its multiple use to satisfy the diverse recreational needs of the community,

(c) to enable development, including clubs, only if associated with, ancillary to, or supportive of recreational uses,
(d) to offer opportunities for recreational pursuits within residential neighbourhoods,
(e) to provide opportunities to enhance the total environment of Lithgow,
(f) to retail significant features and ensure that the visual impact is not necessarily reduced,
(g) to ensure that water quality is maintained in watercourses and wetlands, and
(h) to maintain or enhance the ecological biodiversity of watercourses and wetlands.

The Lithgow LEP, also contains a zoning for National Parks and Nature Reserves which obviously have an open space and recreational benefit to the community of Lithgow. The objectives of the zone are:

(a) to identify land managed by the National Parks and Wildlife Service, and
(b) to preserve existing natural areas, aboriginal sites and historic sites, while allowing compatible development.

There is no formal legislative requirement for the amount and scope of open space within an LGA. This is further considered in the next section.

SUMMARY OF ISSUES

Table 1. Summary Key Open Space and Recreation Lands Planning Issues

OPEN SPACE AND RECREATIONAL ISSUES	WHY IS IT AN ISSUE?
Managing supply and demand of open space and recreational lands	• The LGA currently has an abundance of land within the open space network with reasonable distribution in the existing urban centres. Council does not have the ability to embellish and bring all this land into functional to meet desired service levels. • A rationalisation of the supply and demand of open space is necessary as quality of land is more important than quantity. • There is need to plan for the provision of new open space land in newly developing areas to ensure that it integrates and improves the open space network. • The lack of a development contributions plan that adequately identifies the need and type of open space required for new developments has led to the provision of inappropriate lands with little functional use.
Identifying and meeting changing community needs	• Open space planning needs to keep pace with and respond to the changing needs and of the community as a result of aging and other demographic indicators such as household size and income. • Trends for recreational activity also change over time and many structured sporting and recreational activities are experiencing a decline in participation rates in favour of adventure play and walking.
Managing accessibility and equity	• Open space planning needs to consider accessibility and ensure a reasonable spatial distribution within urban centres whilst providing for community meeting places in the outlying rural village and localities.
Providing a management framework	• Council relies heavily on the community to partner in the provision and maintenance of the open space network. • The lack of formal guidance in this area may lead to inequitable access to areas and facilities and disadvantage certain groups in the community.

DISCUSSION OF ISSUES

MANAGING SUPPLY AND DEMAND

The findings of the OSRNS in relation to supply and demand of open space are summarised below. The full analysis can be reviewed in Appendix 1.

The gap analysis for supply and demand for open space is based on the following assumptions:

- a standard of 4 ha per 1,000 people, comprising 2.5ha for Sports Parks and 1.5ha for Recreation Parks
- population data from Lithgow City Council
- the analysis focuses only on those park types which form part of the established open space network. Other urban open space areas such as waterways, environmental parks, roadside stops, land primarily used for utility purposes and vacant or undeveloped parks have not been included
- analysis excludes specialised sports parks (although these have been considered at a broad level)
- no account has been taken of private sport and recreation facilities (although these have been considered at a community level).

Table 2. Open Space – Supply and Demand

Planning Precinct	Recreation - Local	Recreation - District	Sport	Total
Lithgow	-4.78	5.18	12.58	12.98
Portland	3.25	-1.07	1.42	3.61
Wallerawang	0.03	39.52	0.56	40.1
Rural North	-1.54	-1.24	-5.83	-8.6
Rural South	-1.5	-1	-4.66	-7.16
Total	-4.54	41.39	4.07	40.92

Based on the desired standards of service (DSS) for quantity of land, Council generally has an oversupply of open space. However, this is an elementary analysis as it does not consider the range, access or quality of the existing supply, nor more importantly, the location of land.

Overall, Council has many more parks than it requires from a catchment perspective. This is often the case as land comes into Council's possession and is developed as parkland without the land meeting the desired standards.

The assessment is solely based on functioning open space; that is, it has excluded all other land in Council's open space layer that is not yet developed into a park, or land that has a dual utility function (detention basins, telecommunication easements etc).

OPEN SPACE DEMAND & SUPPLY SUMMARY

- Council generally has an abundance of land used for, or capable of being used for, open space.
- Council has more parks than it requires on a catchment basis. The opportunity exists to consider disposal of open space land that is surplus to requirements.

- The LGA has a significant amount of land that is currently being considered as open space, however the priority recommendations of the Draft OSRNS should be adopted to ensure the available supply is suitable to meet demand in both function and form.
- The quantity of land available for recreational needs is likely to be sufficient for the foreseeable future.
-

SPATIAL DISTRIBUTION OF OPEN SPACE IN URBAN CENTRES

The figures below demonstrate that there is a reasonable distribution of open space within the three major urban centres of the LGA.

Figure 1. Open space in Lithgow with 500m radius around recreation parks

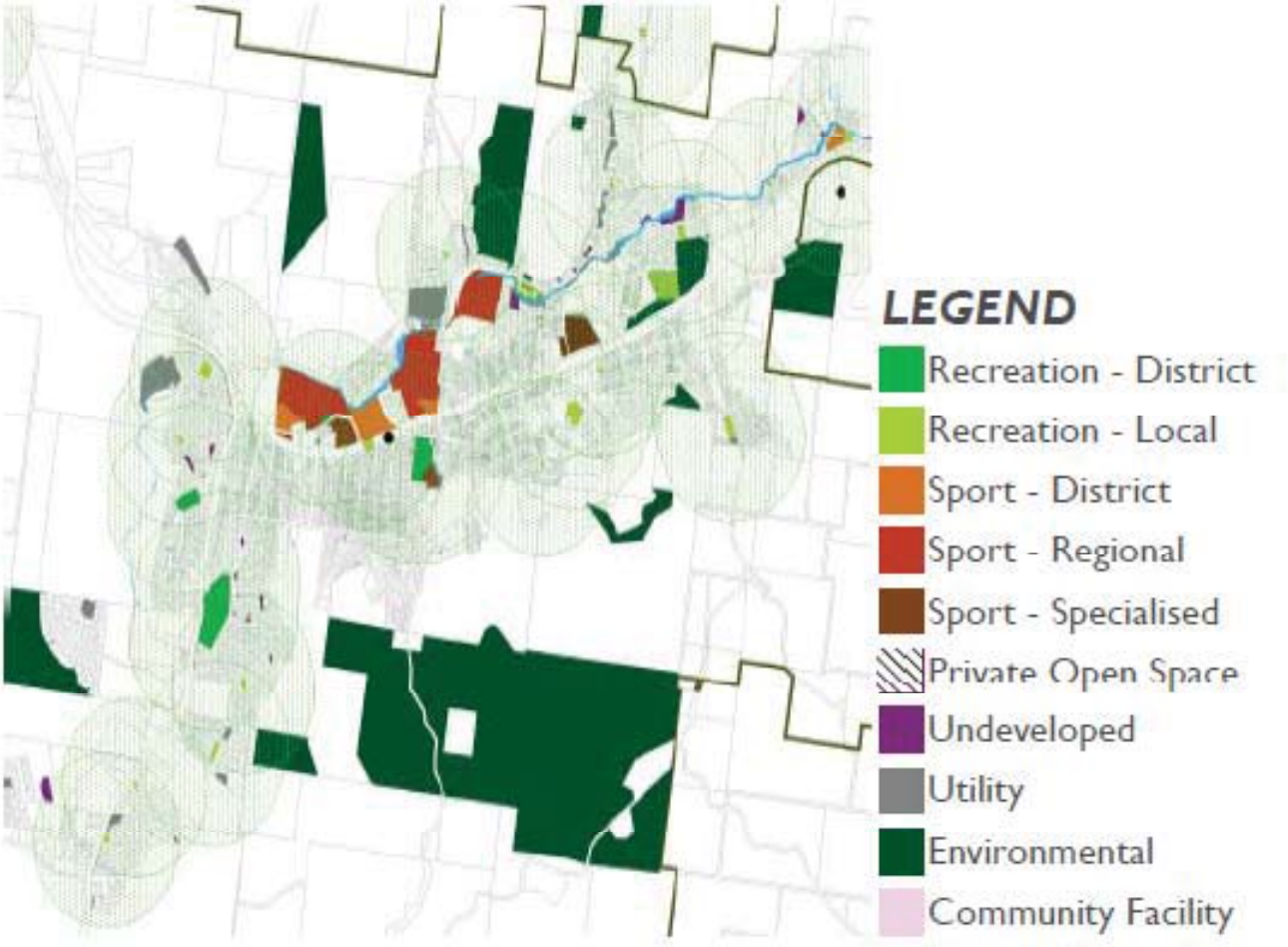


Figure 2. Open space in Portland with 500m radius around recreation parks

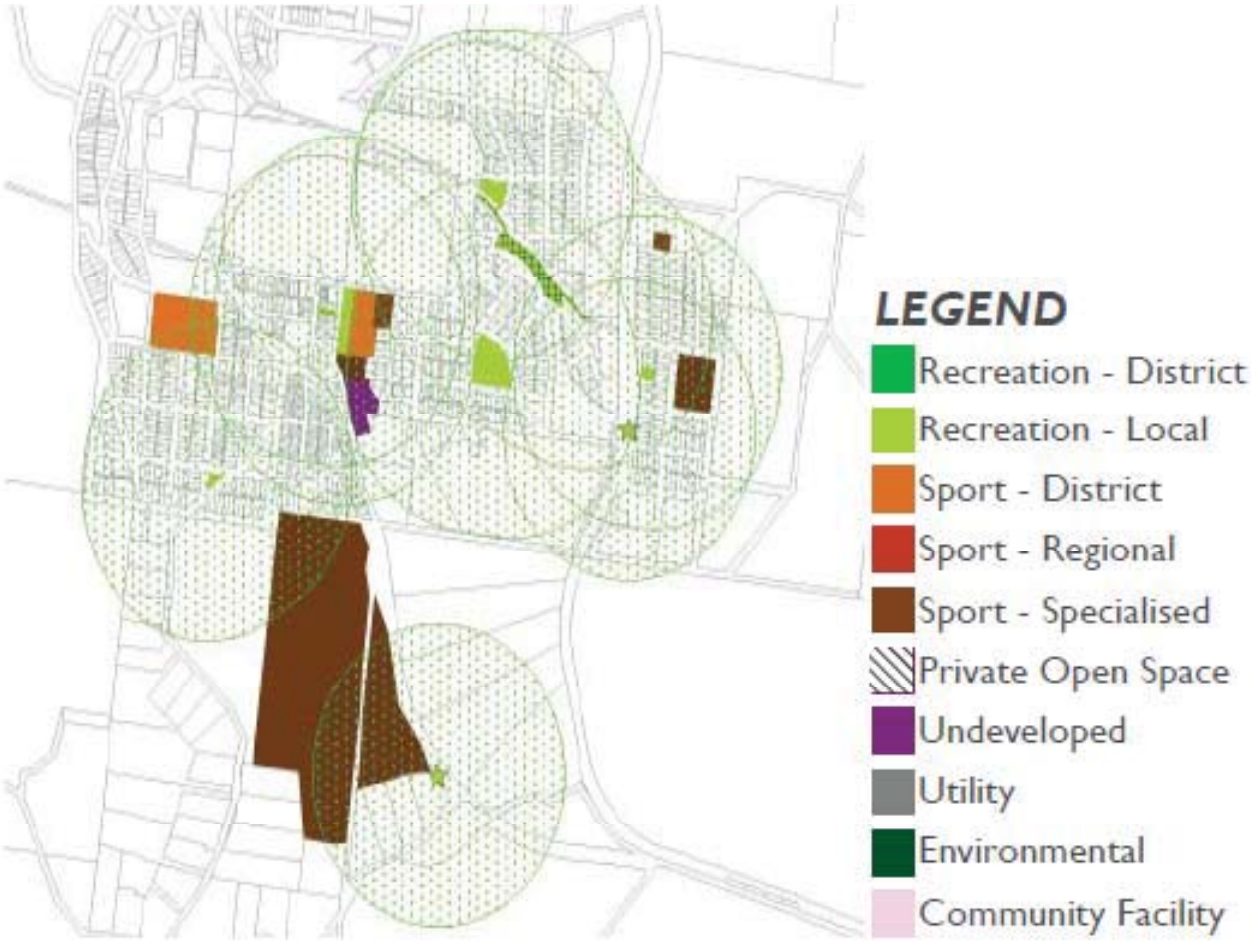
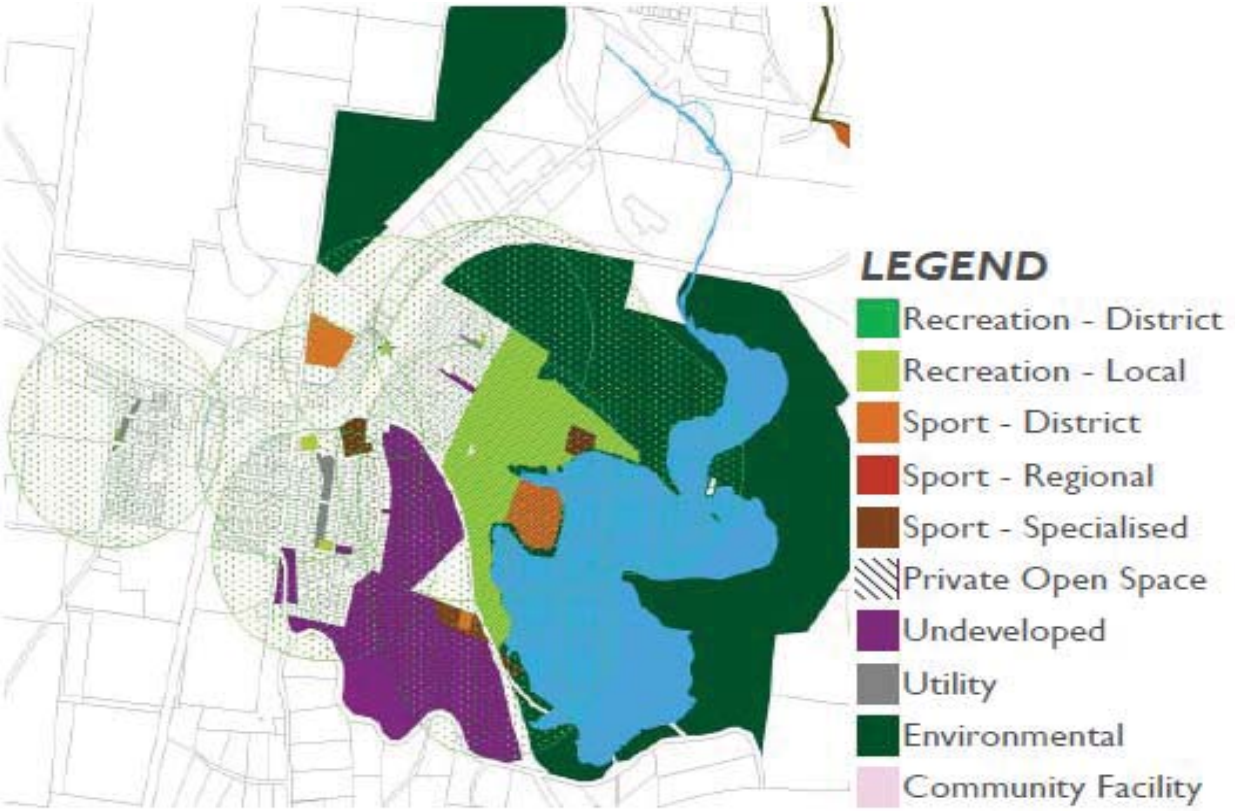


Figure 3. Open space in Wallerawang with 500 m radius around recreation parks



CHANGING COMMUNITY NEEDS

Understanding population size, growth and demographic characteristics is fundamental to responding to community needs and providing open space and recreational facilities and programs relevant to a community.

Spatial and demographic variations in the population, such as concentrations of older residents or youths, may impact on sport and recreation facility provision or management arrangements. Estimated population projections and demographic changes, also assist in quantifying likely future demand and in prioritising land and facility development.

There is not expected to be significant population growth for the LGA over the life of this strategy. However, this lack of growth, and the aging of the existing population will impact demand for open space and recreational services and facilities. Council has undertaken significant planning in order to better understand and prepare for these impending changes in demand that will be generated by our aging community over the life of this strategy.

An older population is more likely to seek unstructured recreation and physical activity pursuits such as walking, swimming and social clubs. A significant proportion of this cohort (65+) will put pressure on Council to implement and continue to extend its footpaths and trails network particularly ;linking residential areas with parks and senior oriented venues

ACCESSIBILITY AND EQUITY

With an older population and higher proportion of low income earners, the provision of low cost and easily accessible recreation and physical activity opportunities is and will be imperative across the region.

The development and concentration of facilities within the main urban centres where population thresholds are higher and accessibility greater, will assist in meeting the demands of social equity. However, opportunities for the provision of a limited range of facilities within the more remote communities of the LGA still needs to be realised to provide clustered community open space opportunities.

DISCUSSION OF NEW PLANNING APPROACH

PROVIDING A MANAGEMENT FRAMEWORK

In considering the current and future direction for the provision of open space, Council should strive to provide an open space network that:

- Provides opportunities for recreation and sporting parks in line with current and emerging community needs
- Provides a diverse range of activity opportunities and landscape settings to encourage healthy lifestyles and maximise opportunities for engagement in physical activity
- Provides safe, attractive places and equitable and convenient access to recreation, sport and open space infrastructure
- Ensures spaces and facilities support the ongoing viability of community user groups and have the capacity to adapt to changing needs over time.

The Open Space and Recreational Needs Study will be placed on exhibition with this Land Use Strategy and further recommendations will be built into the final Land Use Strategy.

SUMMARY OF KEY ACTIONS

Action 13.1
- Implement the adopted recommendations of the 2010 Open Space and Recreational Needs Study.

Action 13.2
- Prepare a list of public lands identified as surplus to the Open Space Network and include for reclassification in the Lithgow City 2012 LEP to enable consideration for future disposal or additional land use.

Action 13.3
- Develop a set of land use designations in the Lithgow City 2012 LEP to identify, protect and appropriately manage the LGA's open space network having regard to the identified classification/primary function of the land as informed by the 2010 Open Space and Recreational Needs Study.

Action 13.4
- Prepare an overarching Community Lands Plan of Management for all lands within the open space network and recreational parks.

Action 13.5
- Develop a concept master plan for all district level recreational parks and town parks.

Action 13.6
- Develop a management plan and concept master plan for major crown land reserves for which Council is Reserve Trust Manager to integrate their development into future planning and functioning of the open space network.

Action 13.7
- Develop provisions for open space planning in the 2012 DCP that address, but not limited to, the following:

    - Linking of the open space network to and from desired points of destination.
    - Accessibility for pedestrian and cycling traffic.
    - Passive surveillance of land within the open space networks.
    - Provision of land and facilities in a variety of open space settings capable of adapting to changing trends and community needs.
    - Provision of future open space at the desired standards of service identified in the 2010 Open Space and Recreational Needs Study.
    - Protection of natural resources and areas of high environmental or cultural value.
    - Planning of open space areas with dual functions such as drainage, utility provision and access to consider their primary role.

Action 13.8
- Develop Saville Park Portland as a district level recreation park.

Action 13.9
- Develop an Adventure Park in the town of Lithgow .

Action 13.10
- Provide for adventure play for older children in Lithgow (Endeavour Park), Portland (Saville Park) and Wallerawang (Charles Darwin Park).

CHAPTER 14 STRATEGY IMPLEMENTATION FRAMEWORK

INTRODUCTION

This chapter provides the strategic directives for the LGA in the areas of:

- Growth Management
- Land Use Planning
- Infrastructure provision
- Environmental Protection and Natural Resources
- Heritage Protection and Management

A consolidated list of the recommended strategies and actions are outlined in Table 1 on pg 3, and are presented in the following format:

Strategy	Action	Responsibility	Timeframe
Further refine the overarching strategies and growth management and sustainability principles outlined in Table 1 of Chapter 4 into more workable implementation strategies	Outlines the work that needs to be done to achieve the implementation strategy	Identifies the lead authority responsible for doing the work	Indicates the indicative timeframe in which the action is to be implemented. Short 0 – 2yrs Medium 2 – 5yrs Long 5 yr+

This part also seeks to bring together the findings of the Local Profile, Issues Analysis and recommendations of this Strategy for each of the planning precincts and their key settlement areas in the following way:

- SWOT analysis for each of the planning precincts which identifies in a broad sense the planning dynamics of the precinct and the opportunities present.
- An implementation framework for each precinct presented spatially including:
    - A plan showing the existing zoning of each planning precinct.
    - An LEP direction plan for each planning precinct and key settlement areas within that indicates the proposed land use changes and directions to be implemented and/or further considered in the 2011 LEP.
    - A strategic directions plan that indicates the directions of the strategy that are deferred beyond the 2011 LEP. This plan represents the desired future land use and structure of each planning precinct that may be achieved in incremental stages over the 20 year life of the Strategy.

NOTE: The LEP directions plans are not to be read as Draft LEP plans. The plans produced indicate a family of zones for particular areas and are to facilitate community and government authority understanding of the recommendations of the Strategy in a spatial format. The identification of specific land use zones and boundaries is a function of the Draft LEP process.

DRAFT

The approach adopted for each of the planning precincts has been determined having regard to the directions, principles and recommended strategic actions identified in the preceding chapters of this document.

NOTE: The overview primary constraints layer identifies those lands within the planning precincts affected by: Environmental sensitivity(high to very high), Biodiversity(high to very high), Section 117 Directions, SLWCA(low to very low capability), High agricultural capability(class 1-3), Low Land capability(class 7 & 8), Slope >15º. Where constraints overlap, colour variations may occur. More detailed constraints analysis at a more refined detail for each land supply area within the precincts is provided in Appendix 1.

DRAFT

STRATEGY RECOMMENDATIONS

Table 1. Recommendations of the Lithgow Land Use Strategy 2010-2030

RECOMMENDATIONS OF THE LITHGOW LAND USE STRATEGY 2010-2030 GROWTH MANAGEMENT

Strategy	Action	Responsibility	Timeframe
Plan and manage growth in a sustainable manner for the future benefit of the Lithgow LGA community	• Consider and apply the principles of Sustainable Development to all land use planning decisions • Adopt the growth management and sustainability principles outlined in Chapter 4 and apply to underpin all future land use planning decisions • Adopt the planning principles outlined in this Strategy and apply to all future land use planning decisions • Adopt a target population growth rate of between 0.5% and 1%	Council	Ongoing
Identify a hierarchy of settlement for the LGA	• Adopt and apply the settlement hierarchy as detailed in Table and Figure 3 Chapter 4 and outlined below: Large Town/Regional Centres Bathurst/Penrith Small Town/LGA District Centre Lithgow Small Towns Wallerawang and Portland Villages Cullen Bullen, Capertee, Rydal Hamlets Tarana, Hartley, Clarence, Dargan, Glen Davis, Glen Alice, Ben Bullen, Bogee, Hampton, Sodwalls, Lowther, Good Forest, Hartley Vale	Council and Government Agencies	Ongoing

Strategy	Action	Responsibility	Timeframe
	Isolated Dwellings Wider Rural Areas of North and South precincts • Adopt and apply a clustered planning approach to future growth in the Lithgow LGA aligned with the adopted settlement hierarchy as indicated in Table 5, Figure 4 Chapter 4		
Recognise and strengthen the role of each town, village, hamlet and rural area commensurate with its place in the adopted settlement hierarchy.	• Control the growth of settlements and rural areas by using zoning, rural minimum lot sizes and sunset clauses to phase out current unsustainable rural planning provisions. • Minimise further rural lifestyle development opportunities outside of the defined 15km maximum outer limit, layer 3 figure 4 as outlined in Chapter 4. • Identify future urban growth areas within the defined urban core as indicated in Figure 4 Chapter 4. • Prepare a suite of land use zones for the towns of Wallerawang and Portland	Council	Short (2011 LEP) Short (2011 LEP) and ongoing Long Short (2011 LEP)
Provide for the economic growth of the LGA	• Implement the recommendations of the 2010-2014 Economic Development Strategy • Implement the recommendations of the 2010 Business and Retail Strategy • Protect the primary and natural resources upon which the LGA economy relies	Council, Government Agencies and Community Council, Government Agencies	Ongoing
Provide for the social and cultural growth of the LGA	• Provide for an appropriate mix of housing opportunities and form in both urban and rural settings • Provide sufficient land allocation for population growth over time	Council Council and Government Agencies	Short (2011 LEP) Medium and ongoing

Strategy	Action	Responsibility	Timeframe
	• Prepare and implement a LGA Ageing Strategy • Integrate the findings of the Community Strategic Plan 2021 into land use planning documents and decisions. • Implement the adopted Lithgow Cultural Precincts Study	Council and Government Agencies Council Council/Government Agencies and Community	Short Medium and ongoing Ongoing
Ensure the Lithgow Land Use Strategy remains relevant over time and gives consideration to the changing needs of the community	• Conduct 5 yearly reviews of the document, following receipt of Census Population and Housing data	Council	Ongoing
Ensure that land is released in an effective and efficient manner	• Prepare a land monitor to track demand and take-up of all land use zones • Prepare a land release program to guide the future release of urban lands	Council and Government Agencies	Short and ongoing Medium

DRAFT

RECOMMENDATIONS OF THE LITHGOW LAND USE STRATEGY 2010-2030 LAND USE PLANNING

Strategy	Action	Responsibility	Timeframe
Develop a new suite of land use zones to implement the planning framework of the Lithgow Land Use Strategy 2010-2030	• Prepare a Standard Instrument LEP with a suite of land use zones to formalise the LEP directions identified in Figures 3, 4, 5, 6, 13, 14, 19, 20, 24, 27, 30, 33, 36, 39 and 42 in Chapter 14 and outlined in the summary of actions in all Chapters of Part 3 Lithgow Land Use Strategy 2010-2030	Council and Department of Planning (DoP)	Short (2011) LEP
Ensure the growth of rural lifestyle development in the primary rural zone is minimised and remains secondary to urban residential growth	• Introduce a minimum lot size in the new LEP for the erection of a dwelling in the primary rural zone of 400ha • Remove and extinguish all existing holding dwelling provisions in the new LEP • Introduce a 2 year sunset clause in the LEP to phase out dwelling opportunities in the primary rural zone for concessional allotments and allotments created or proposed to be created by subdivision of lots between 40-400ha as outlined in Chapter 9	Council and DoP	Short (2011 LEP)
Ensure that sufficient land is identified for future growth opportunity beyond the 2011 LEP	• Identify the Marrangaroo Study Area as the LGA's next urban release area and defer zoning until at least the 2016 LEP review. Development of this area to occur generally in accordance with the adopted Marrangaroo Structure Plan. • Carry out the further investigations required to inform the future development of the Marrangaroo Study Area as identified in Chapter 11. • Identify the existing Rural (Future Urban 1(d)) lands surrounding Lithgow, Wallerawang and Portland as strategic urban lands and protect from inappropriate fragmentation or land use that would diminish their future urban capability • Identify lands shown in Figure 9 in Chapter 14 as strategic industrial land and protect from inappropriate fragmentation and development that would diminish their desired future use	Council and DoP	Long

Strategy	Action	Responsibility	Timeframe
	• Identify the site on the corner of Great Western Highway and Castlereagh Highways as indicated in Figure 9 in Chapter 14 as strategic employment lands • Identify the corridor along the eastern side of the Great Western Highway as a strategic site for future use as an enterprise corridor • Identify opportunity areas for urban and rural lifestyle development to align with the adopted Settlement Hierarchy as indicated in Figure 5 in Chapter 4.		
Minimise the potential for land use conflict to impact upon the social, economic and environmental quality of the LGA	• Limit living opportunities in the primary production zone • Limit the range of permissible uses within the primary rural zone to those compatible with sustaining the natural primary resource base • Locate large lot residential lands so as to minimise land use conflict at the interface with the primary rural or environmental land use • Identify and apply appropriate land use buffers (Minimum 500m) to all identified resource, forestry, national parks and DECC estate • Allow for a range of compatible uses in each zone consistent with its primary purpose • Prepare land use controls to provide effective buffers from potential incompatible uses including those that hold Environment Protection licences within zones and at the interface with adjoining zones	Council and DoP	Short (2011 LEP)
Recognise and protect the biodiversity resources of the LGA	• Consider applying environmental management/conservation zoning or overlays to the significant environmentally sensitive areas of the LGA as identified in the ESA mapping to control land use • Develop assessment criteria to consider the impact of development upon environmentally sensitive areas and the LGA's base biodiversity	Council and DoP	Short (2011 LEP)

Strategy	Action	Responsibility	Timeframe
Ensure that development upon flood prone areas recognise the level of flood hazard	• Limit new development on flood liable lands so that it does not increase the existing flood risk • Develop appropriate LEP and DCP land use control provisions to guide development upon flood liable lands • Prepare a floodplain risk management plan	Council and Government Agencies	Short (2011 LEP) Medium

Ensure that development takes into consideration the impact upon water quality	• Apply the Strategic Land and Water Capability Assessment to determine land use zones, permissibility and land use controls within the Sydney Drinking Water Catchment
	• Introduce the following minimum lot sizes for the erection of a dwelling upon unserviced lands:
	  • 2ha – Large lot residential
	  • 4000sq m – Village/Urban
	• Develop appropriate DCP provisions to minimise the impact of development upon water quality
		Council and SCA	Short (2011 LEP)

Ensure that there is adequate provision for tourist facilities	• Prepare and implement a Tourist Strategy for the Lithgow LGA • Limit the development of intensive tourism accommodation such as hotel and motel accommodation and serviced apartments to urban areas where such is not directly related to eco-tourism • Identify area of agglomeration of tourist development or potential for such development and consider introducing a tourist zone • Ensure that the rural villages provide a range of tourism support land uses such as accommodation, restaurants/cafes/service stations etc that does not attract from the rural character and amenity of the area	Council Council and DoP	Short Short (2011 LEP)
Ensure that the LGA has an efficient and effective open space network providing for both passive and active recreational activity	• Implement the adopted recommendations of the 2010 Open Space and Recreational Needs Study • Apply appropriate land use zones to identify, protect and appropriately manage the LGA's open space network having regard to its primary classification/function.	Council and Community	Short (2011 LEP)

Strategy	Action	Responsibility	Timeframe
	• Reclassify identified public lands identified as surplus to the open space network • Prepare and overarching Community Lands Plan of Management for all public community lands within the open space network including recreational parks.		Short
Prepare detailed management guidelines for land use within the LGA	• Prepare a Development Control Plan to support the LEP through the provision of appropriate land use management guidelines and best practice • Adopt and implement all key planning actions identified in the chapters of Part 2 and 3 of this Strategy	Council Council and Government Agencies	Short (2011 DCP) Ongoing
Ensure that the LEP and DCP remain relevant over time and meet changing community needs	• Conduct a five yearly review of the LEP and three yearly review of the DCP	Council	Medium and Ongoing

RECOMMENDATIONS OF THE LITHGOW LAND USE STRATEGY 2010-2030 INFRASTRUCTURE PROVISION

Strategy	Action	Responsibility	Timeframe
Ensure the LGA is provided with essential infrastructure	• Continue to investigate a reliable and secure bulk water supply for the Lithgow LGA to reduce dependency on the Fish River Water Supply Scheme • Identify and protect the catchment of Farmers Creek Dam from land degradation and inappropriate land use. • Continue to lobby State and Federal Governments for the upgrade of the Great Western Highway and development of the Bells Line Expressway • Continue to work closely with Sydney West Area Health Service to retain and attract medical services and facilities	Council and Government Agencies	Short and ongoing Short (2011 LEP) Ongoing
Align future growth and development with the provision of both social and physical infrastructure	• Ensure development does not occur at a rate, or within locations that would be to the detriment of the existing community • Prepare and implement a Land Monitor to review the take-up of	Council	Ongoing

Strategy	Action	Responsibility	Timeframe
	urban areas against infrastructure capacity	Council	Short and ongoing
	• Prepare an servicing/infrastructure strategy for the Marrangaroo Study Area and Minerals Processing Park	Council	Short
	• Pull back the supply of urban lands within the town of Portland to align with the capacity of the Sewage Treatment Plant	Council	Short (2011 LEP)
	• Stagger the release of subdivision certificates within the South Bowenfels Study Area to the provision of water and sewer infrastructure augmentation works	Council	Short to Medium
	• Prepare a Development Servicing Plan for the provision of water, sewer and stormwater infrastructure for the LGA	Council	Short
	• Prepare a Development Contributions Plan that includes provision of community facilities, urban and rural roads, pedestrian and cycling transport infrastructure	Council	Short
	• Prepare a LGA transport strategy to consider existing and future transport needs including, regional and local roads, pedestrian and cycling and public transport needs	Council	Short to Medium
Ensure that all development is adequately serviced with water and effluent disposal	• Ensure all new urban development within Layers A and B of the Settlement Hierarchy are connected to reticulated water and sewer	Council	Ongoing
	• Develop appropriate policies and development standards to regulate the provision of adequate on- site provision of water and effluent disposal	Council	Short (2011 LEP and DCP)
Limit development in the primary rural zones to areas with adequate road access	• Prepare a road hierarchy to support the adopted LGA Settlement Hierarchy	Council	Short
	• Ensure that there are adequate levels of access to the villages and rural localities commensurate with their role in the settlement hierarchy		Ongoing

Strategy	Action	Responsibility	Timeframe
Consider the environmental impacts of infrastructure provision	• Implement a land use separation distance (buffer) from all sewage treatment plants, sewage pumping stations, water treatment plants, water reservoirs and landfill sites • Continue to prepare the 2010 Waste Management Strategy to transition to a centralised waste disposal facility at Blackmans Flat	Council	Short (2011 LEP) Short

DRAFT

RECOMMENDATIONS OF THE LITHGOW LAND USE STRATEGY 2010-2030 ENVIRONMENTAL PROTECTION AND NATURAL RESOURCE MANAGEMENT

Strategy	Action	Responsibility	Timeframe
Recognise and protect the biodiversity values of the LGA	• Direct settlement and rural living opportunities away from identified environmentally sensitive areas • Consider applying environmental management/conservation zoning or overlays to the significant environmentally sensitive areas of the LGA as identified in the ESA mapping to control land use • Limit land use permissibility in areas of environmental sensitivity to minimise loss or reduction in value • Apply the appropriate environmental conservation zone to all National Parks, State Conservation Parks and Nature Reserves within the LGA • Prepare a biodiversity strategy for areas identified by Environmentally Sensitive Areas mapping as moderate to high biodiversity • Implement the actions of the relevant Recovery Actions Plans that apply within the LGA that list Lithgow City Council as the responsible body	Council and DoP Council/Government Agencies in partnership with the community	Short (2011 LEP) Medium to Long as resources permit Ongoing
Provide appropriate resources to increase awareness and involvement in identifying, protecting and enhancing biodiversity	• Prepare fact sheets identifying the LGA's biodiversity to be included in development application kits • Prepare development control provisions to assist the community to prepare Assessments of Significance as required by the Threatened Species Conservation Management Act	Council and Government Agencies	Short and ongoing Short (2011 DCP)
Ensure development contributes to achieving the water quality and river flow objectives of the relevant catchment management authorities	• Ensure new development is located so it does not have a detrimental impact upon nearby watercourses and incorporates measures to protect the riparian areas • All development is to utilise best practice for soil and water	Council and Government Agencies	Short (2011 LEP and DCP)

Strategy	Action	Responsibility	Timeframe
	management to minimise impact both on and off the development site • Development within the Sydney Drinking Water Catchment is to achieve a neutral or beneficial effect on water quality • Ensure domestic and other forms of effluent disposal does not have a adverse impact upon water quality and is in accordance with the NSW Environment and Health Protection Guidelines for On- site Sewage Management for Single Households		
Ensure bush fire risk is considered in all land use planning decisions	• Limit the intensification of settlement and rural living opportunities in bush fire prone areas • Ensure that all future development adheres to the principles and requirements of Planning for Bushfire legislation • Ensure the community is aware of the bushfire risk of the LGA • Provide information on the Emergency Services Disaster Management and Response Plan	Council Council, Rural Fires Service Council	Short (2011 LEP) Ongoing Ongoing
Identify the flooding of land as a constraint to future development	• Continue to identify flood liable land as the 1% flood level identified in the Kinhill Flood Study 1991 • Develop a flood policy and development control provisions to guide future development upon flood liable lands • Ensure that localised flooding is taken into account when assessing DA's on sites affected by watercourses or have access over watercourses • Prepare a flood plain risk management plan to accord with the 2005 Floodplain Development Manual and NSW Flood Prone Land Policy and modify land use controls accordingly • Provide information on the Emergency Service Disaster Management and Response Plan	Council Council/Government Agencies	Ongoing Short (2011 LEP and DCP) Short to Medium as determined by progress of current flood mitigation works and resources
Avoid inappropriate development on areas of land contamination	• Manage the identification and development of contaminated land in accordance with the principles and requirements of State Environmental Planning Policy 55 Managing Land Contamination	Council and Government Agencies Council and DECC	Ongoing Ongoing

Strategy	Action	Responsibility	Timeframe
	• Prepare a register of known contaminated sites and sites that are potentially contaminated due to past land use		
Ensure development has a minimal impact on the natural and modified scenic landscape of the Lithgow LGA	• Incorporate the preservation of landscape as an objective of land use zones and controls • Develop development control provisions to guide the siting and design of development and/or buildings on the rural landscape and interface with the urban centres • Undertake a landscape assessment study to identify the scenic protection areas and landscape values within the LGA • Ensure that all development that may have a significant impact on the landscape quality and values prepares a detailed cultural landscape assessment as part of the Statement of Environmental Effects	Council Council Council and proponents	Short (2011 LEP and DCP) Short to Medium as resources permit Ongoing

DRAFT

RECOMMENDATIONS OF THE LITHGOW LAND USE STRATEGY 2010-2030 HERITAGE PROTECTION AND MANAGEMENT

Strategy	Action	Responsibility	Timeframe
Ensure that items of heritage significance are identified and protected	• Implement the recommendations of the City of Lithgow Heritage Study (1996-2000) except as modified by the 2010 Heritage DCP Study • Implement the recommendations of the 2010 Heritage DCP Study • Provide planning controls to list items of individual heritage significance and a number of small heritage conservation areas as identified by the two aforementioned studies • Provide detailed development guidelines within a Development Control Plan to facilitate heritage management and development assessment	Council	Short (2011 LEP and DCP)
Identify and protect cultural landscapes	• Undertake a cultural landscape assessment study of the LGA	Council	Short to Medium as resources permit
Provide incentives to protect heritage values	• Continue to provide a Heritage Advisory Service and Local Heritage Fund	Council and DoP	Ongoing
Identify and protect the Aboriginal Heritage Significance of Lithgow LGA	• Undertake an Aboriginal Heritage Study and implement recommendations • Continue to identify items of Aboriginal Heritage significance through the use of the Aboriginal Heritage Information Management System and consultation with the local aboriginal groups as determined by Council's Aboriginal Consultation Policy	Council and DECC	Short to Medium as resources permit Ongoing
Provide appropriate resources to increase awareness and involvement in identifying, protecting and enhancing heritage values in the LGA	• Establish a Local Heritage Committee • Prepare fact sheets and handouts for community and interested groups • Promote local heritage through cultural tourism	Council in partnership with the community	Ongoing

Lithgow Precinct

Precinct Overview		
SWOT		
Existing LEP Provisions	Lithgow Urban	Fig 1
	Lithgow Precinct	Fig 2
New LEP Directions	Lithgow East	Fig 3
	Lithgow South	Fig 4
	Marrangaroo	Fig 5
	Lithgow Precinct	Fig 6
Strategic Framework Plans	Lithgow East	Fig 7
	Lithgow South	Fig 8
	Marrangaroo	Fig 9
Constraints Map	Lithgow Precinct	Fig 10

DRAFT

LITHGOW PRECINCT





Precinct Area	Lithgow urban and outer urban area
Population	11 492 (figure includes Marrangaroo)
Landscape Characteristics	The urban area of Lithgow is very clearly defined by the natural boundaries created by the topography of the valley. The area is characterised by a consolidated urban core in and around the Main Street and older area housing precincts, framed by heavily vegetated and scenic escarpments to the north, south and east. The urban area has developed in a lineal pattern centred on the railway line east/west and the Great Western Highway north/south.
Dominant Land Uses	The main urban area is dominated by residential housing from varying periods, with the commercial precinct centred on Main St and the Lithgow Valley and Pottery Plaza off Lithgow St. There are pockets of industrial land use located in the urban precinct; these areas house major employers such as Ferrero Australasia in Barton St and Thales in the old Small Arms Factory site off Martini Pde to name a few. Lithgow is the highest order settlement in the LGA settlement hierarchy, meeting the primary educational, health, social and recreational needs of the wider community.
Future Directions	New residential opportunities within the valley will be concentrated in the Sth Bowenfels area, with future urban development directed toward Marrangaroo (eastern side of the Great Western Highway). Urban consolidation will be encouraged to maintain vibrancy in the city centre and opportunities for seniors living. Consolidation of the commercial core will be encouraged, centred on Main St and the existing Valley & Pottery Plaza.





Table 1. Lithgow Strategic Analysis (SWOT)

LITHGOW	
Strength	**Opportunities**
• Proximity to the Sydney Basin • Transportation links • Established higher order retail and commercial precinct for the LGA • Capacity for residential growth within close proximity to the CBD. • Capacity to provide for choice in residential land use and housing type. • Established cultural and built heritage values • Integral nature of the commercial heritage precinct • Relatively low land cost in relation to areas nearer to Sydney – providing potential to encourage investment • Geographical assets and natural environment • Access to passive and active open space	• Established rail and road infrastructure, with ongoing works to improve road linkages to the Blue Mountains and Sydney as well as confirming the corridor for the Bells Line Expressway. • Existing businesses and industries which can provide an impetus for investment, particularly relating to mining and power generation. These existing employers also provide a skill-set to the community • Provide linkages between open space areas for walking and cycling • Development of opportunities to encourage pedestrian exploration of Lithgow • Urban sustainability • Emerging sectors of the economy including aged care/health and tertiary education
Weaknesses	**Threats**
• Fragmentation of retail and commercial areas • Land use conflict with existing industrial lands • Lack of appropriate opportunities for new industrial development within proximity to the CBD • Underdeveloped open space and recreational areas • Proximity to larger regional centres which draws on retail spend • Lack of access to public transport • Reliance on private motor vehicle	• Ability to secure water supply to sustain 1% targeted population growth • Ability to augment sewage infrastructure to cater for new residential development • Climate Change • Need to upgrade rail and road infrastructure, with ongoing works to improve road linkages to the Blue Mountains and Sydney as well as establishing the corridor for the Bells Line Expressway. • Land use conflict • Inability to secure serviced industrial land to provide ongoing supply for this type of land use

Figure 1. Lithgow Urban Existing LEP Provisions

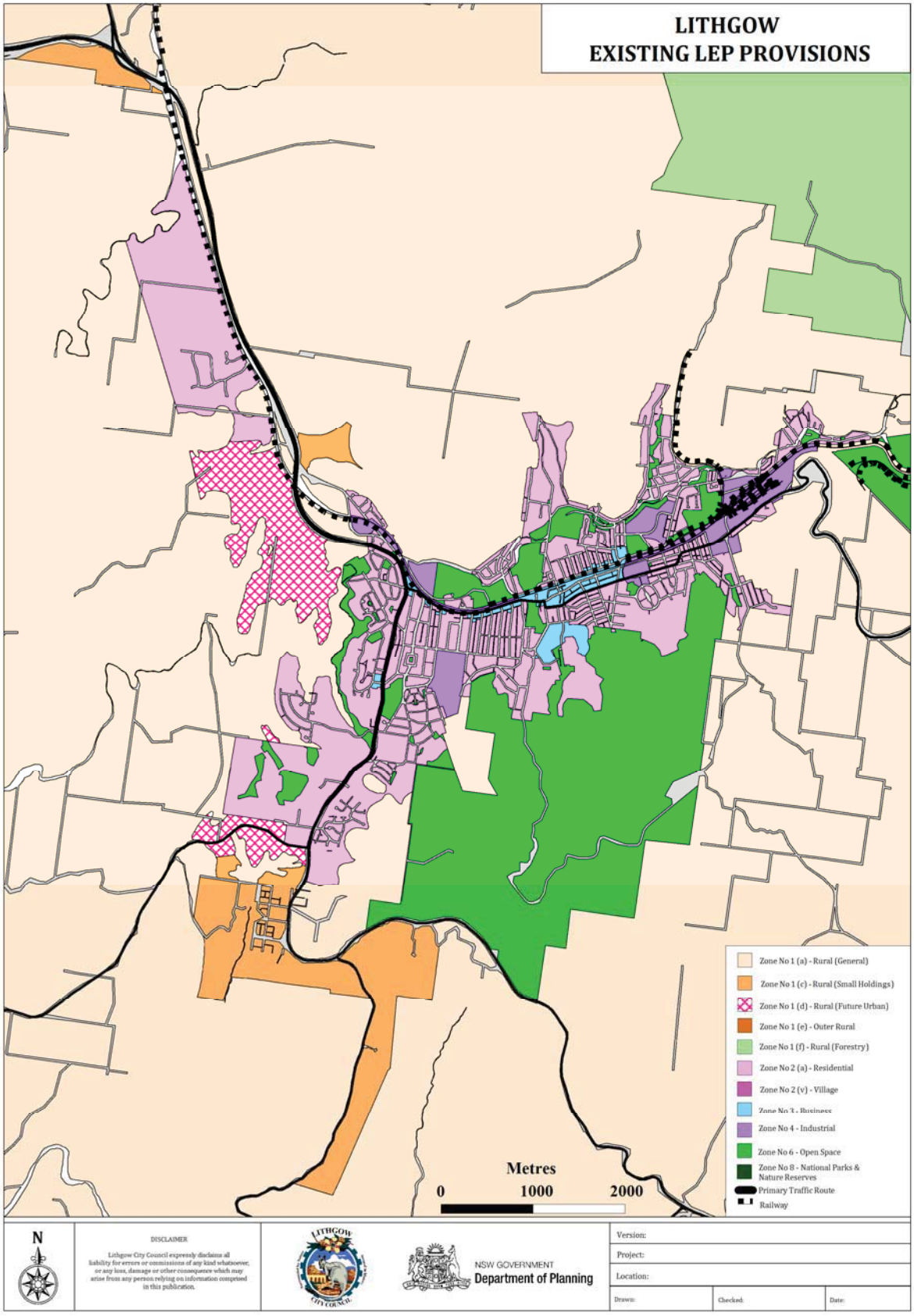


Figure 2. Lithgow Precinct Existing LEP

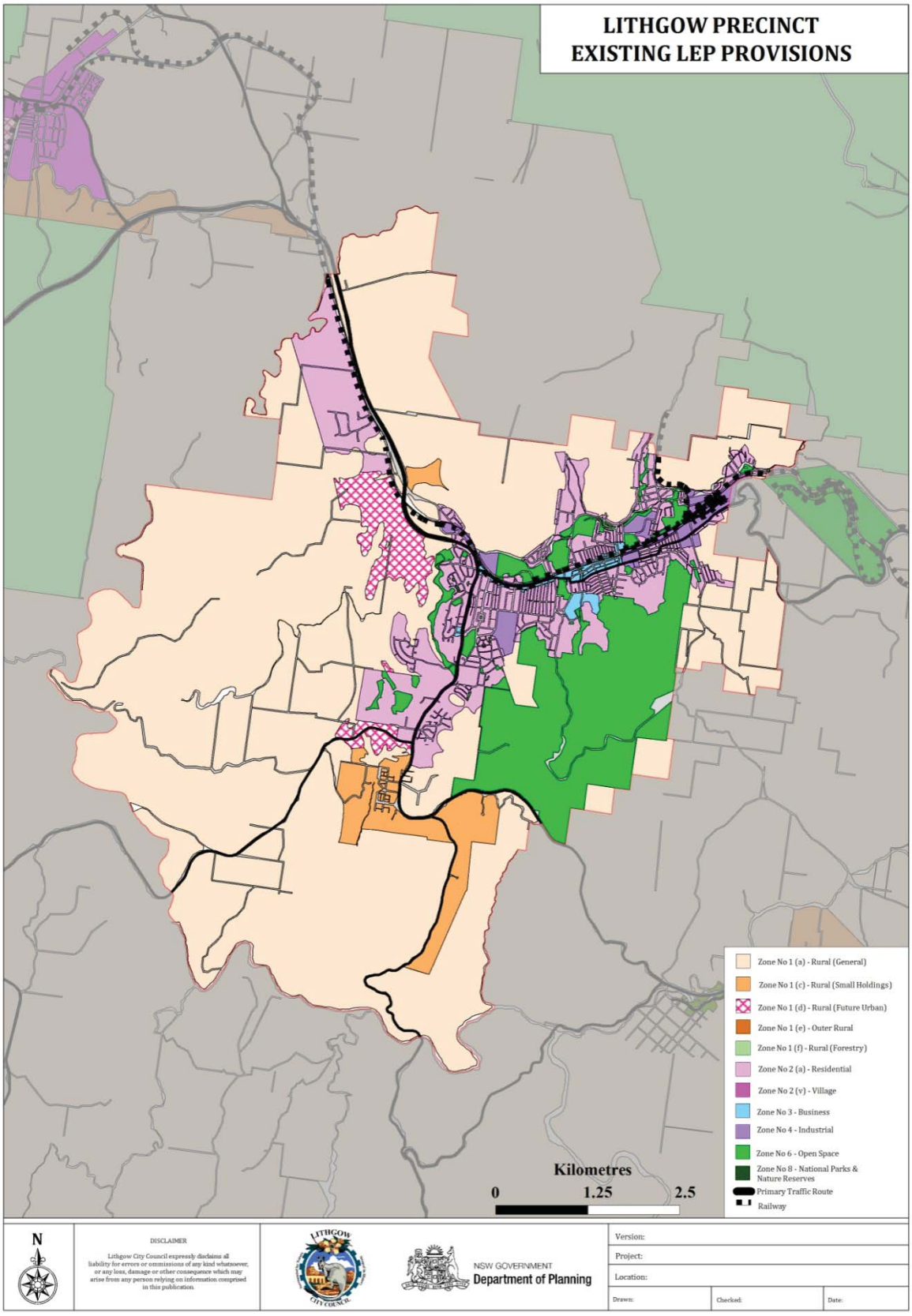


Figure 3. Lithgow East New LEP Directions

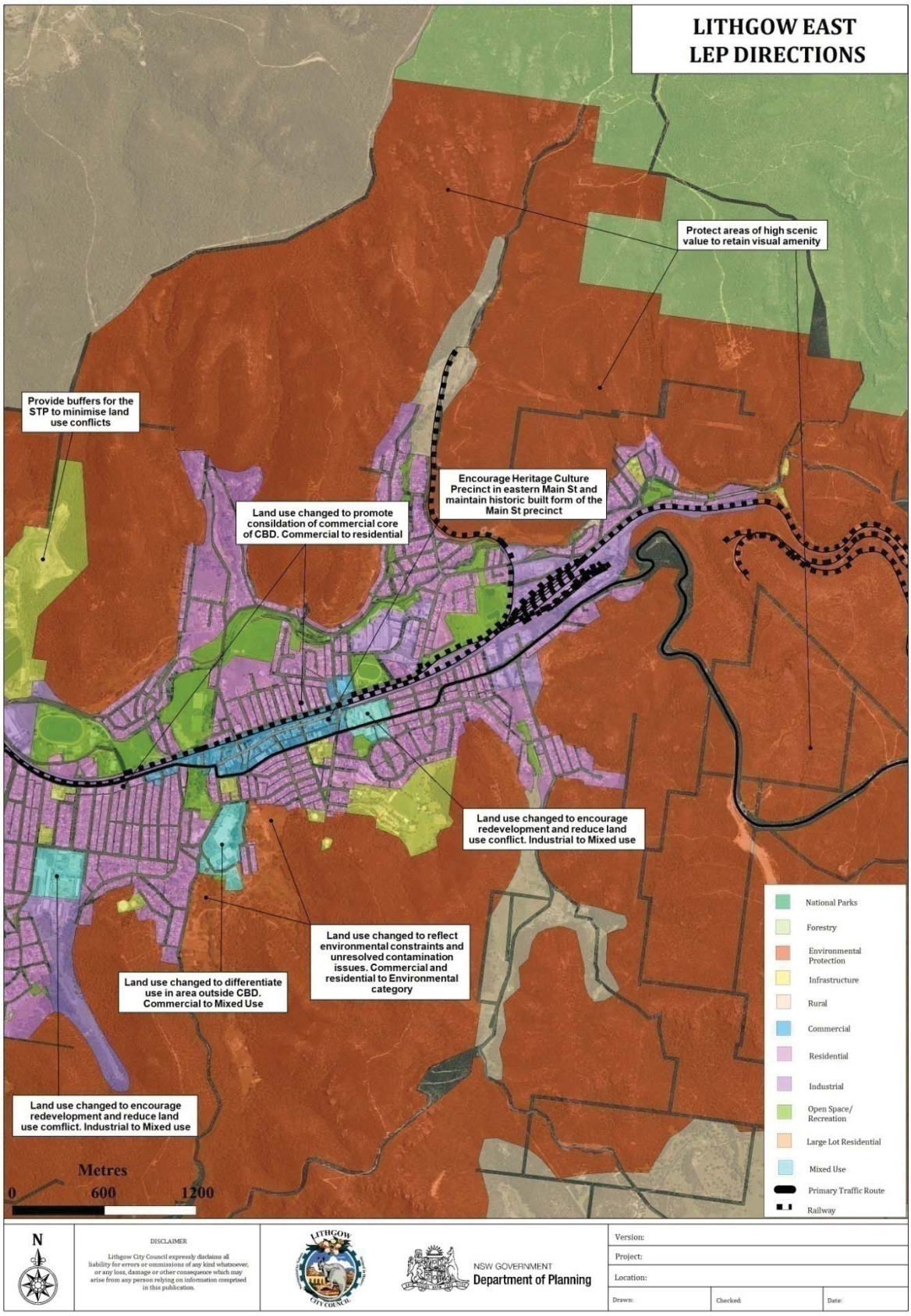


Figure 4. Lithgow South New LEP Directions

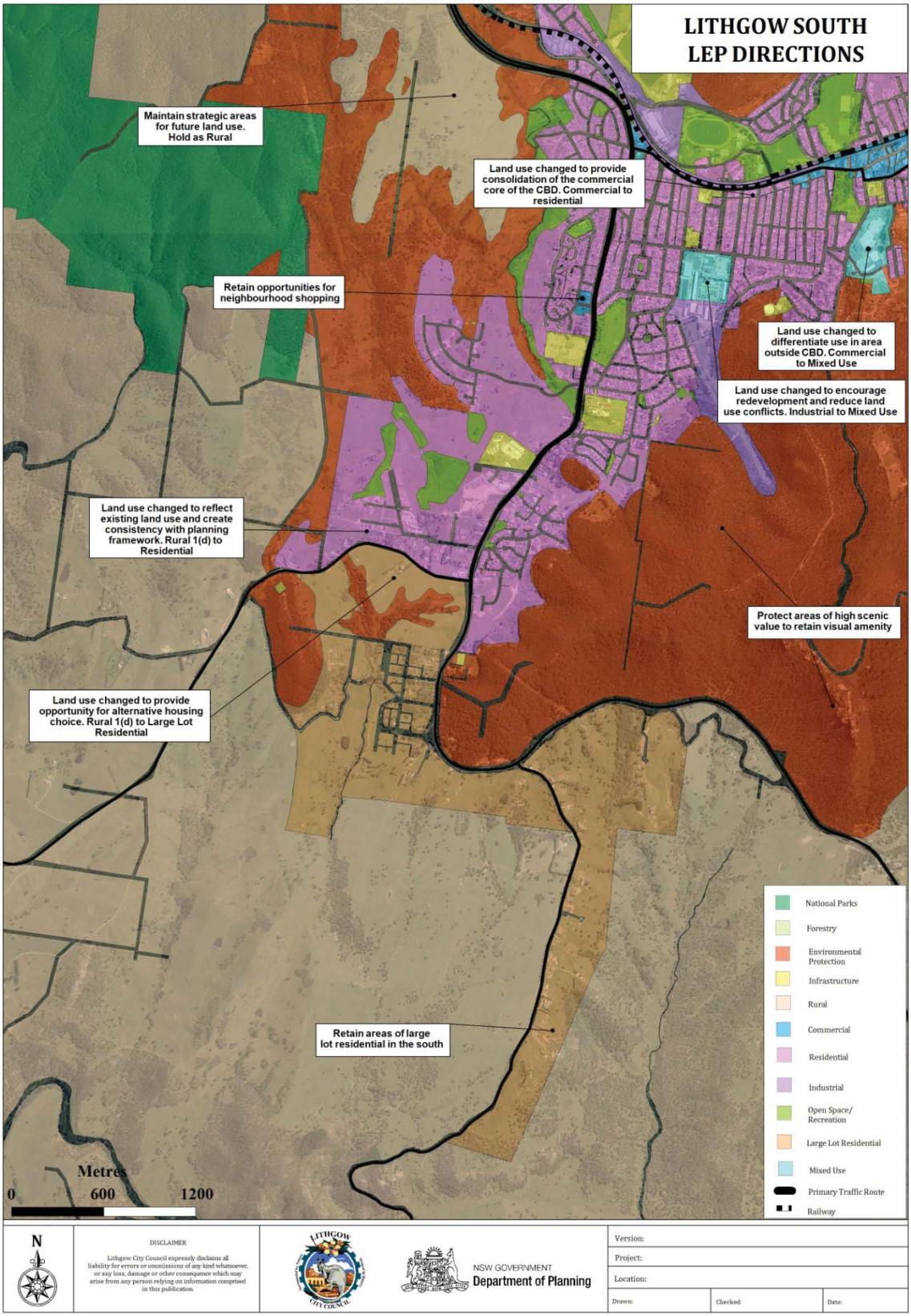


Figure 5. Marrangaroo New LEP Directions

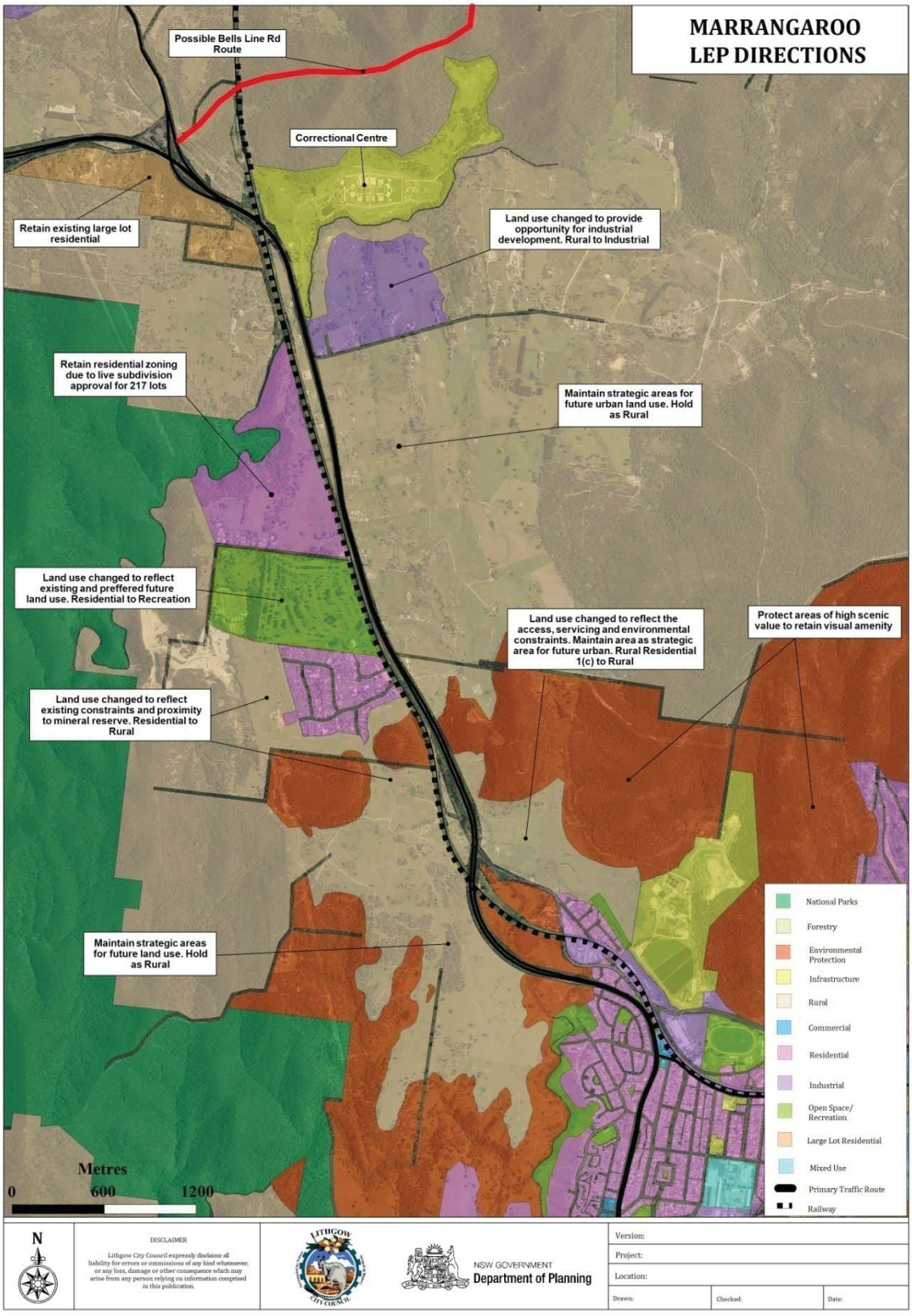


Figure 6. Lithgow Precinct New LEP Direction

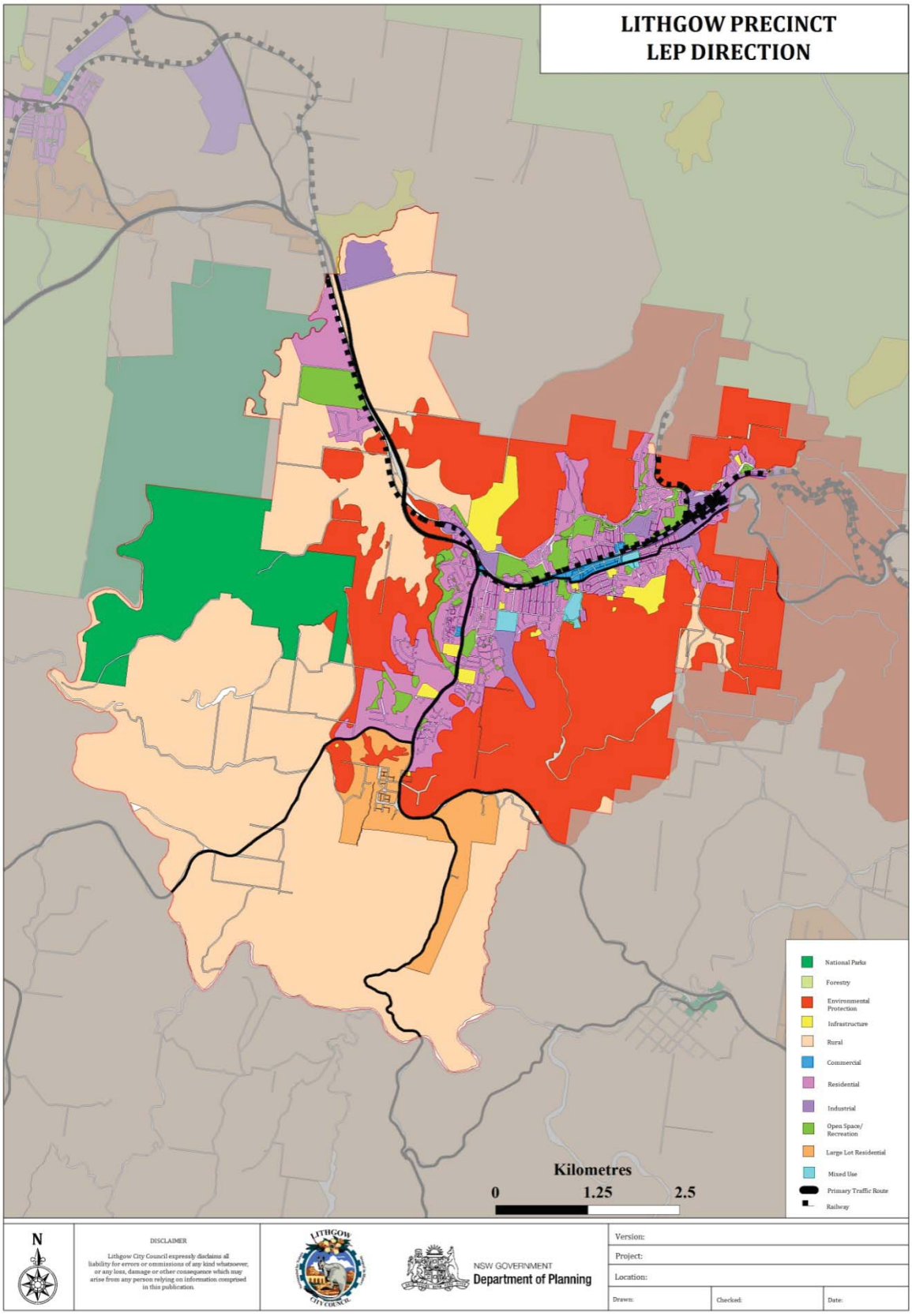


Figure 7. Lithgow East Strategic Framework Plan

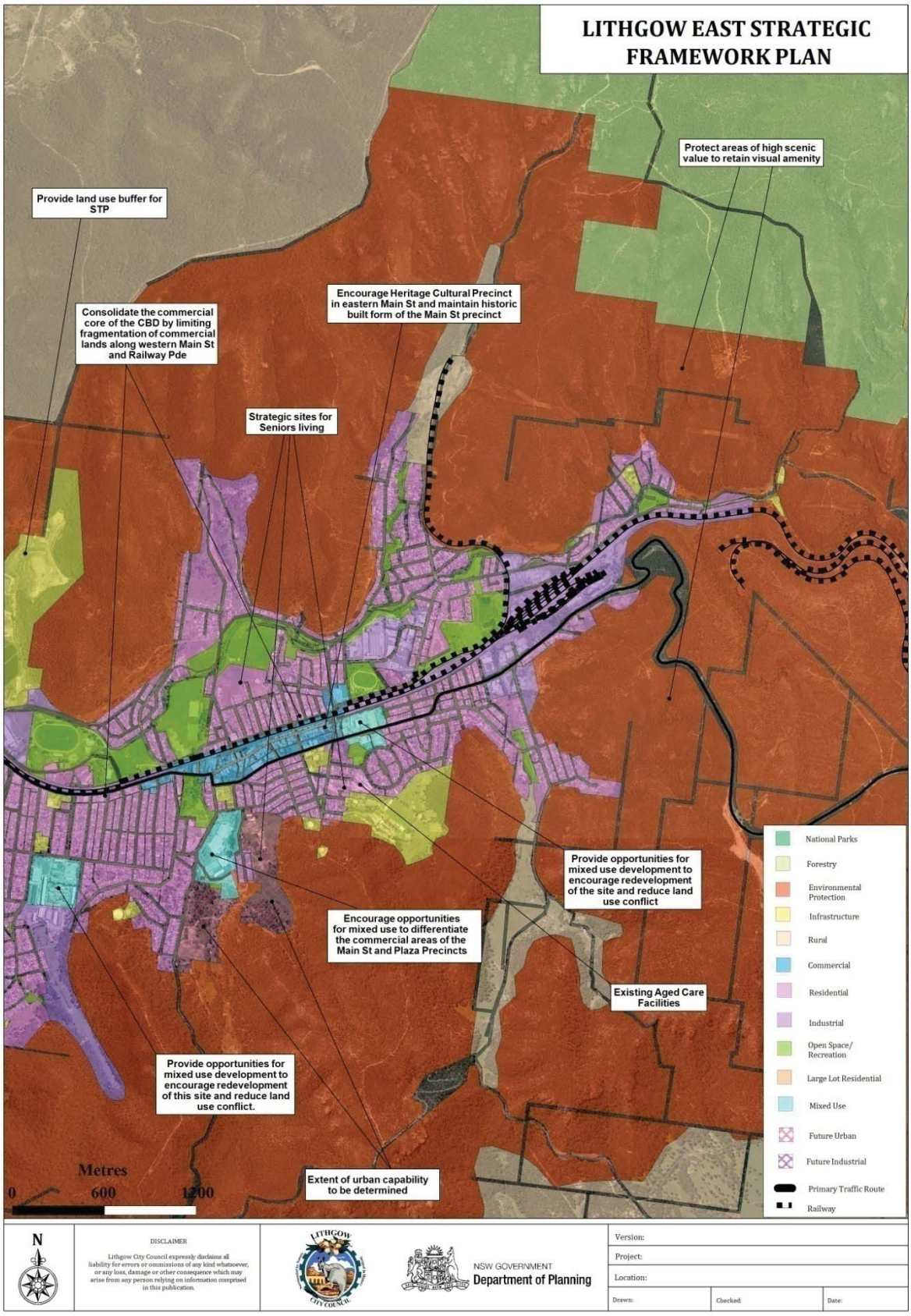


Figure 8. Lithgow South Strategic Framework

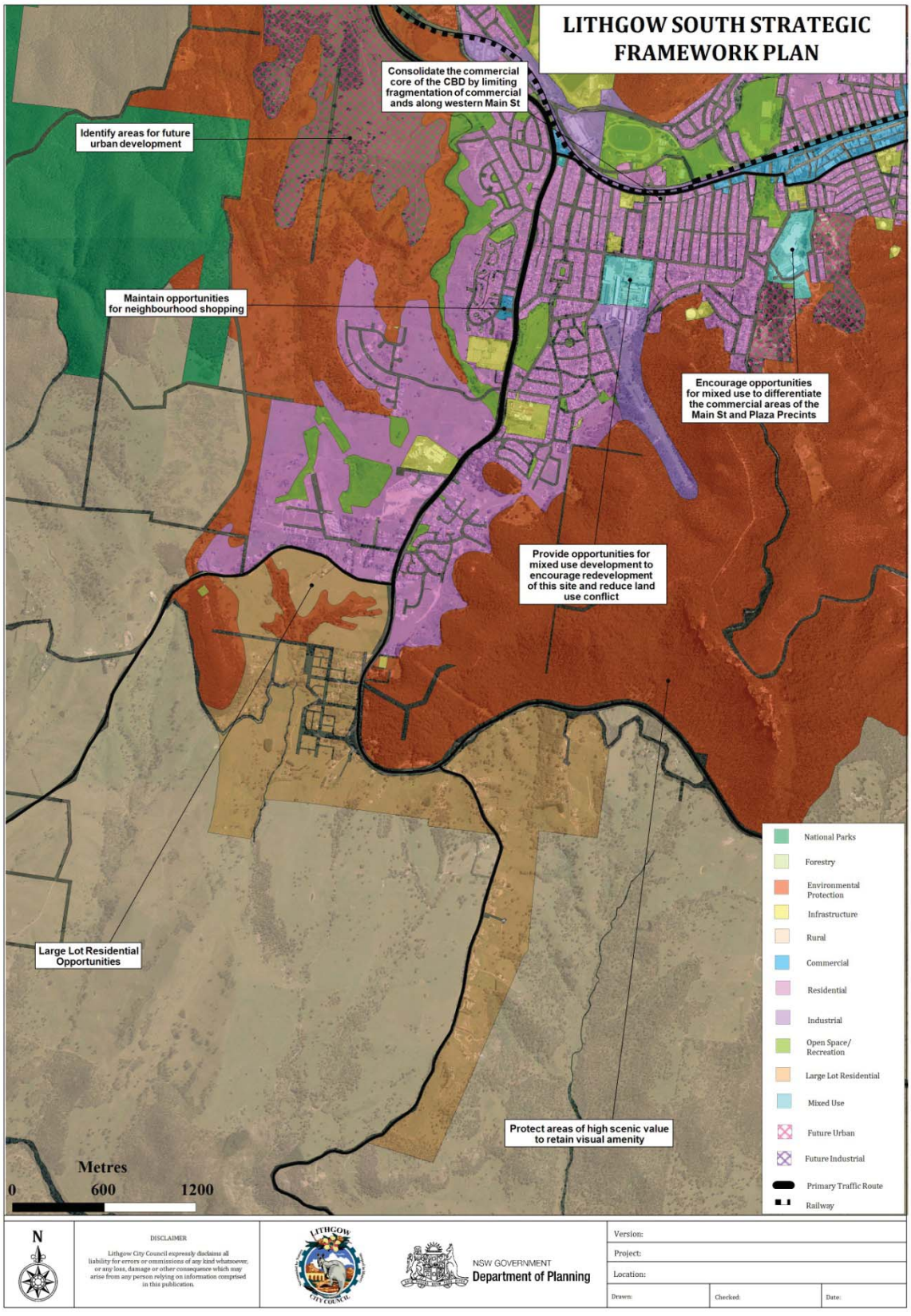


Figure 9. Marrangaroo Strategic Framework Plan

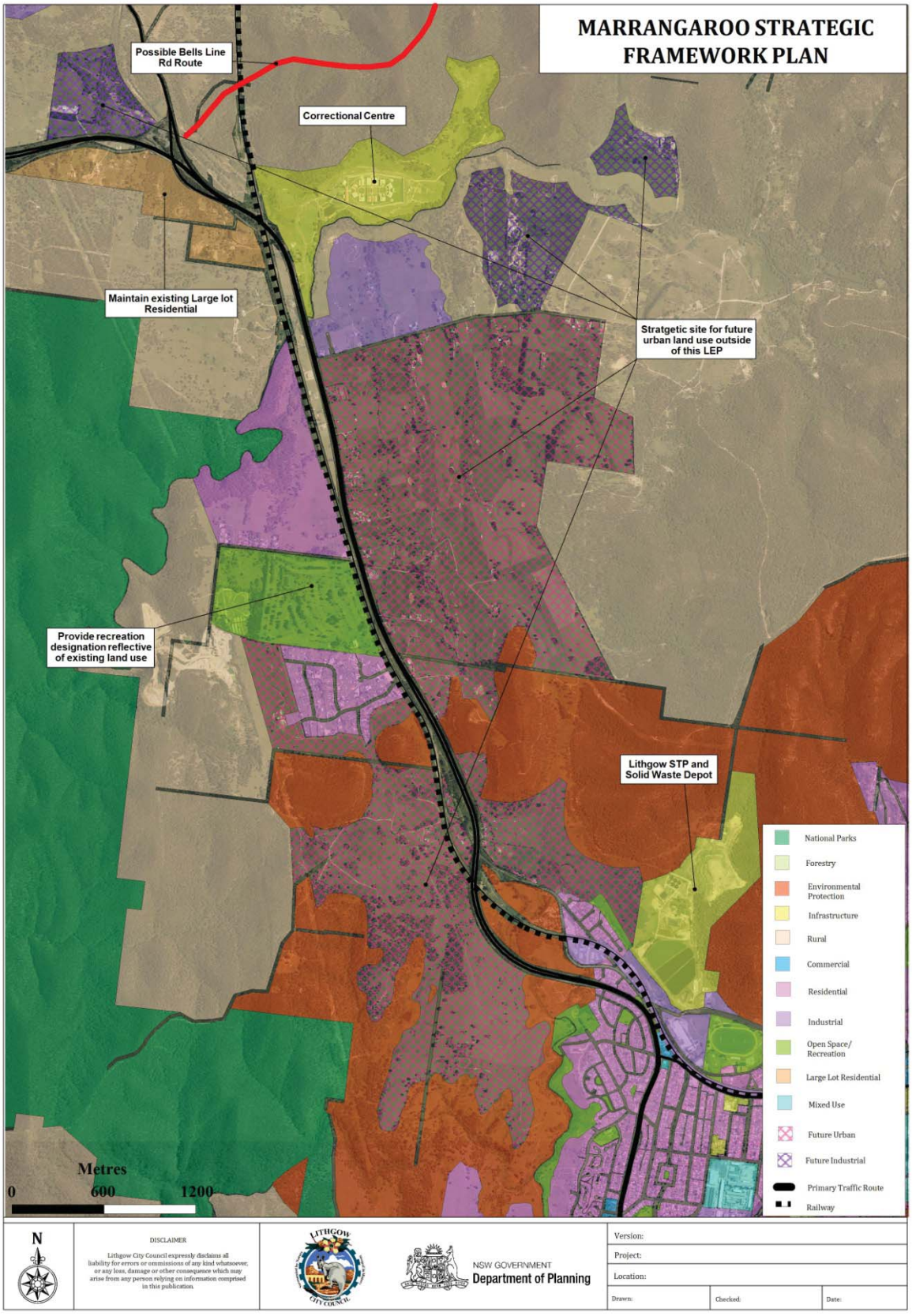
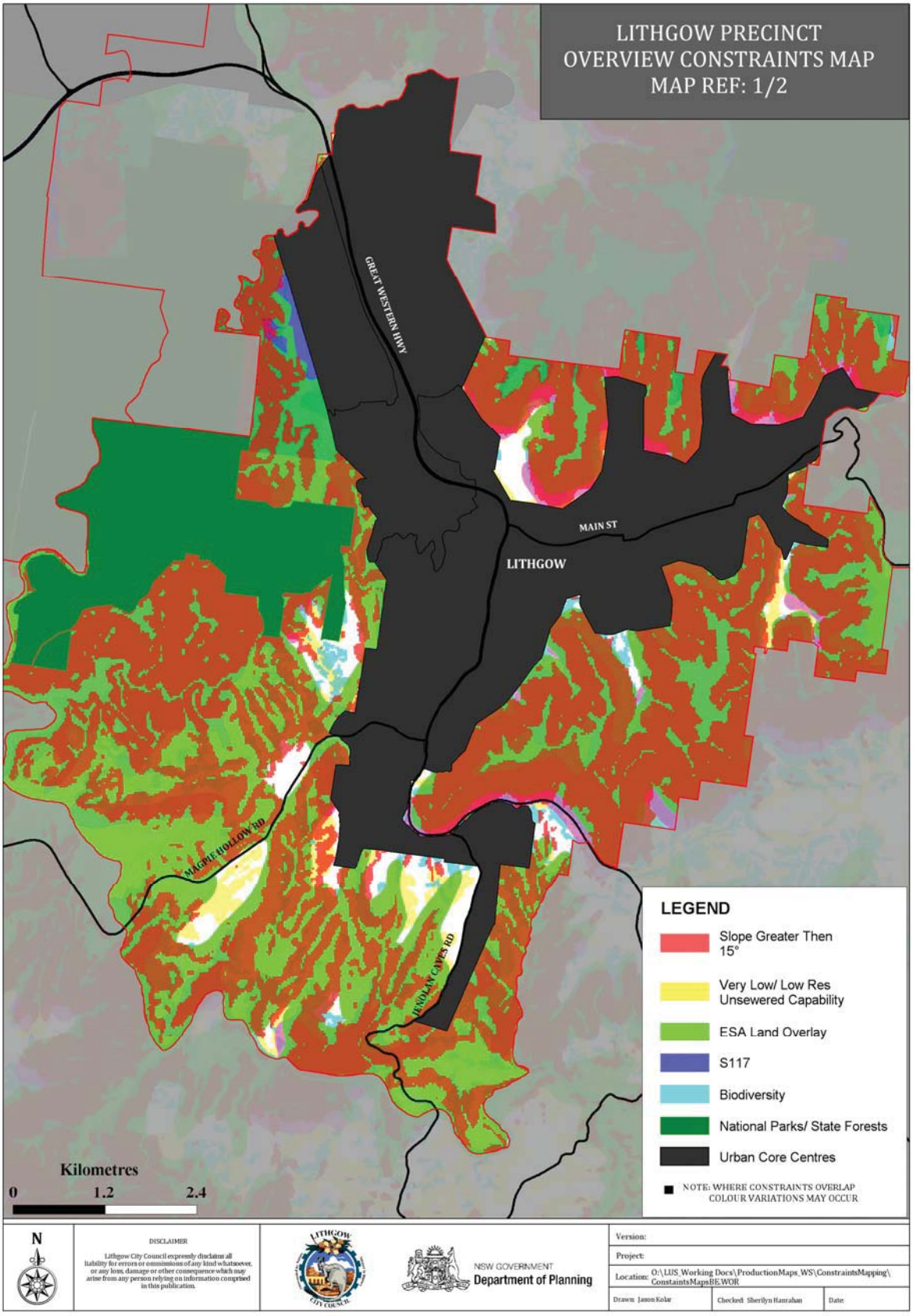


Figure 10. Lithgow Precinct Overview Constraints Map



Wallerawang Precinct

Precinct Overview		
SWOT		
Existing LEP Provisions	Wallerawang Urban	Fig 11
	Wallerawang Precinct	Fig 12
New LEP Directions	Wallerawang Urban	Fig 13
	Wallerawang Precinct	Fig 14
Strategic Framework Plans	Wallerawang Urban	Fig 15
Constraints Map	Wallerawang Precinct	Fig 16

DRAFT

WALLERAWANG PRECINCT





Precinct Area	Wallerawang and Lidsdale urban and outer urban area
Population	2 090
Landscape Characteristics	The Wallerawang township developed around the main western railway line and devolved around the coal, lime and power generation industries. The township is constrained by natural development boundaries which include Lake Wallace and Wallerawang Power Station to the east, rural residential Development, State Forest and the Great Western Highway to the south and low lying flood plain and sewerage treatment plant to the north west. The area to the west of the existing township is developing as an area for industrial landuse, with the establishment of the Howard Pyrotechnics Factory, Poultry Farm and approval for the new rail coal loader. The existing Lidsdale village area is situated to the north of the township and provides a natural outer limit to urban development for the precinct.
Dominant Land Uses	The main residential precinct of the township has evolved on the southern side of the railway line and is fringed by rural residential lots. A newer residential area to the west of the township is evolving with land earmarked in this vicinity for future urban use. The Lidsdale village to the north is primarily an outer urban area of the Wallerawang township. The commercial core of the township is concentrated on the northern side of Main St between the black bridge and Top Hotel. The industrial precinct is located to the east of the township also on the northern side of Main St in the Pinta St area. The Lake Wallace recreational area together with the Wallerawang Indoor Sports Stadium, are major contributors to Council's recreational and open space network across the LGA. Wallerawang is regarded as a secondary settlement to Lithgow in the LGA settlement hierarchy. The township meets a limited range of the primary educational, social and recreational needs of the local community.
Future Directions	The future direction for the Wallerawang township revolves around consolidation of the town centre, and providing land use structure cognisant of existing and future land use. The designation of large lot residential to the outer fringe of the urban area is to be investigated in the Lidsdale and the Barton Ave areas. The future land use designation of the rural residential area north of the Lidsdale village is to be investigated having regard to the heavy industrial nature of surrounding land uses and environmental constraints of the area.





Table 2. Wallerawang/Lidsdale Strengths and Opportunities

WALLERAWANG/LIDSDALE	
Strengths	**Opportunities**
• Accessible by rail and road • Established retail and commercial precinct within Wallerawang that meets the day to day needs of residents • Within close proximity to the Lithgow CBD which provides higher order services • Existing employment opportunities within established industries based around mining and power generation • Capacity for development within the towns existing boundaries • Availability of a range of residential land uses • Upgrading of the sewage treatment plant • Residential growth within close proximity to the CBD – access and sustainability advantages • Established cultural and built heritage values	• Possible expansion of retail/employment precinct if required • Potential for further industrial development in the area and subsequent associated industrial and commercial spinoffs • Capacity for infill development • Opportunities to develop and link open space and recreation areas with residential land use • Opportunities for growth in areas of cultural heritage and tourism • Capitalise on construction activity associated with the proposed expansion of Mt Piper Power Station • Development of tourist related development in and around Lake Wallace • Large lot residential living opportunities providing alternative lifestyle options to standard residential • Opportunities for the development of short term accommodation options to meet the demand created by itinerant workers
Weaknesses	**Threats**
• Over supply of retail and commercial space indicative of the high level of vacancies • Fragmentation of land due to industrial development occurring in rural lands • Impacts on amenity by existing industrial/power generating development • Land constraints as a result of location of industry, railway, slope and topography etc. • Lack of higher order services and reliance on Lithgow urban area • High reliance on private vehicles for transport • Limited public transport • High proportion of vacant retail/commercial space	• Ability to secure water supply to sustain 1% targeted population growth • Ability to augment sewage infrastructure to cater for new industrial and residential development • Climate Change • Land use conflict • Inability to secure serviced industrial land to provide ongoing supply for this type of land use • Aging population

Figure 11. Wallerawang/Lidsdale Existing LEP Provisions

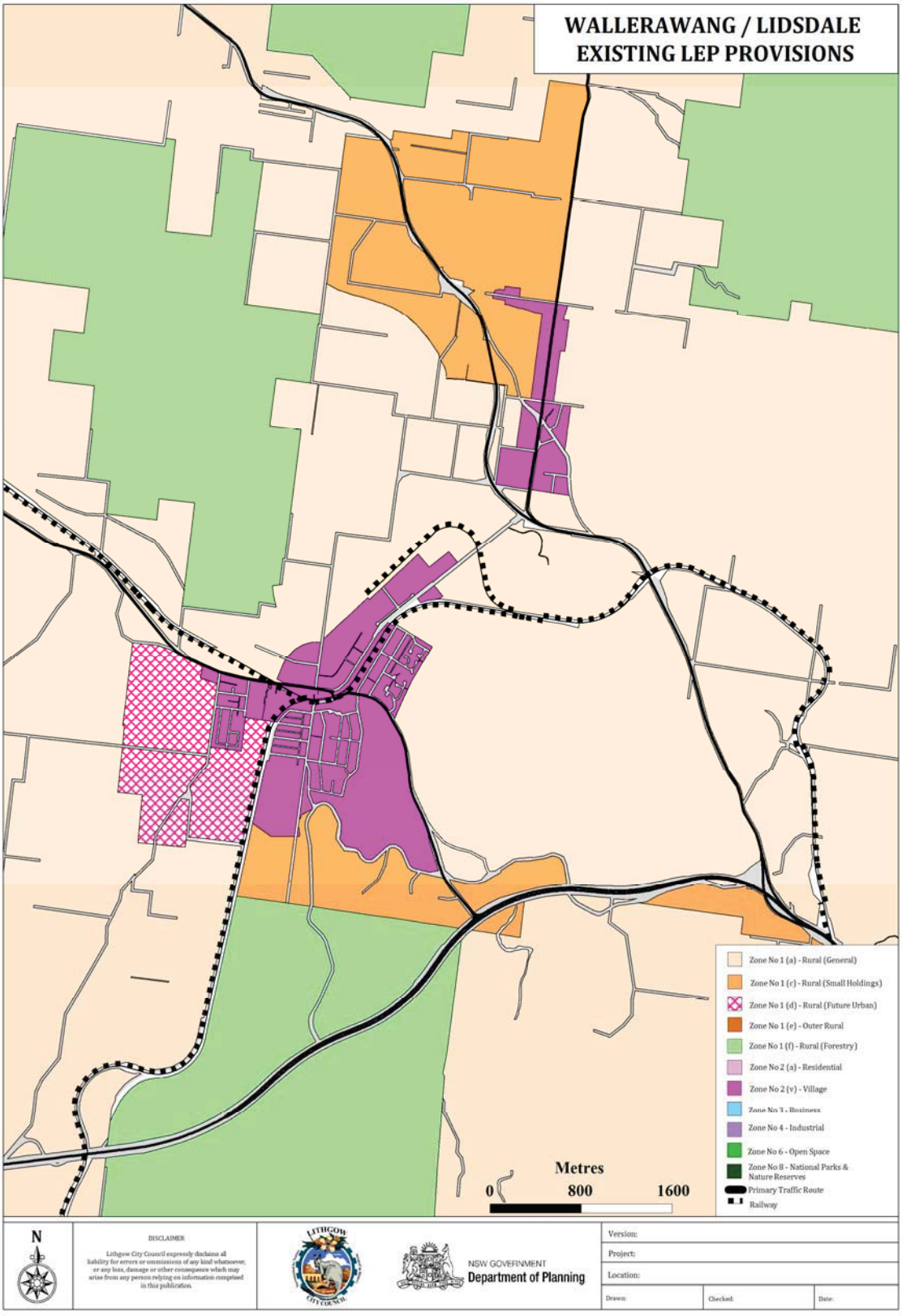


Figure 12. Wallerawang Precinct Existing LEP Provisions

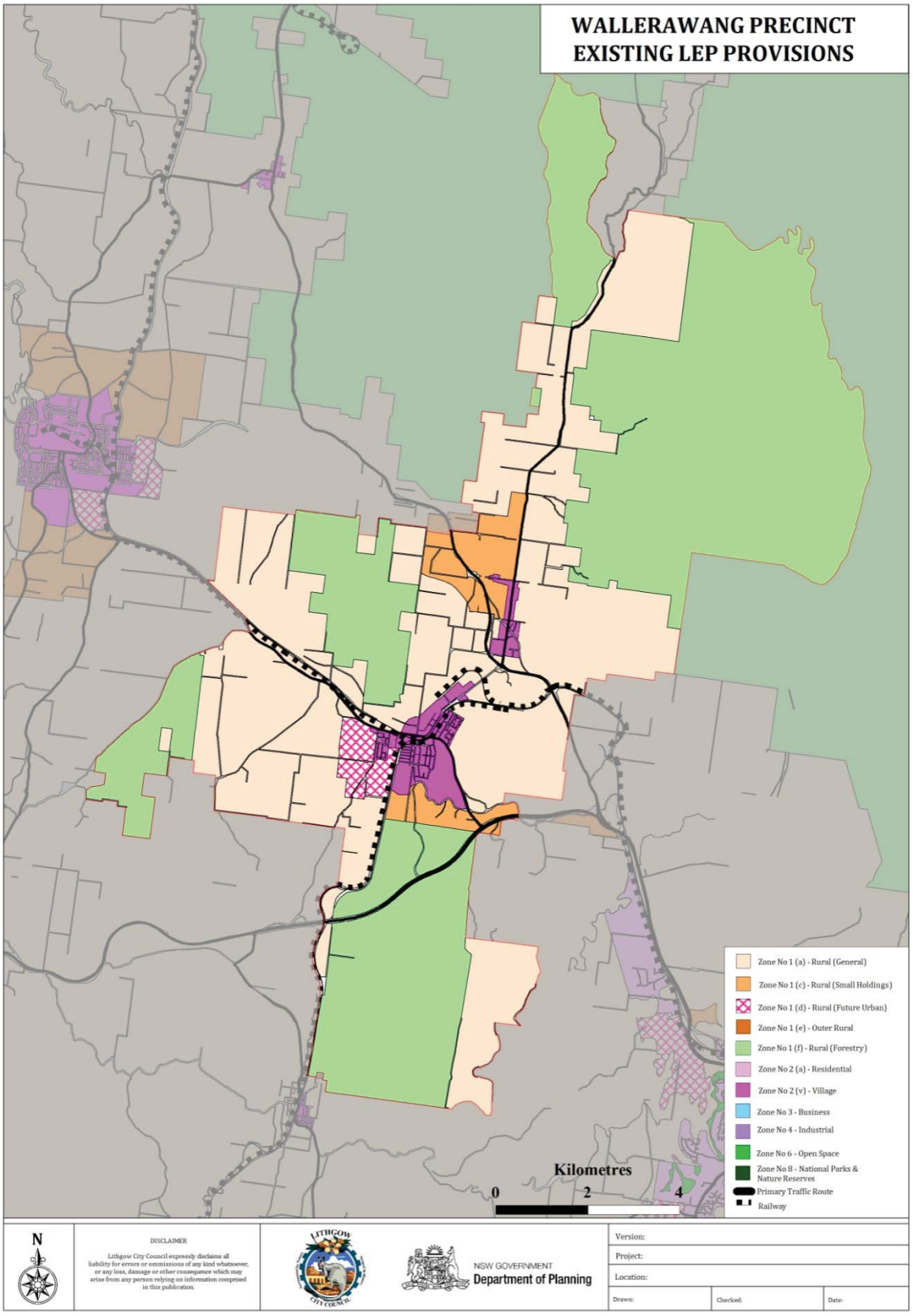


Figure 13. Wallerawang/Lidsdale LEP Directions

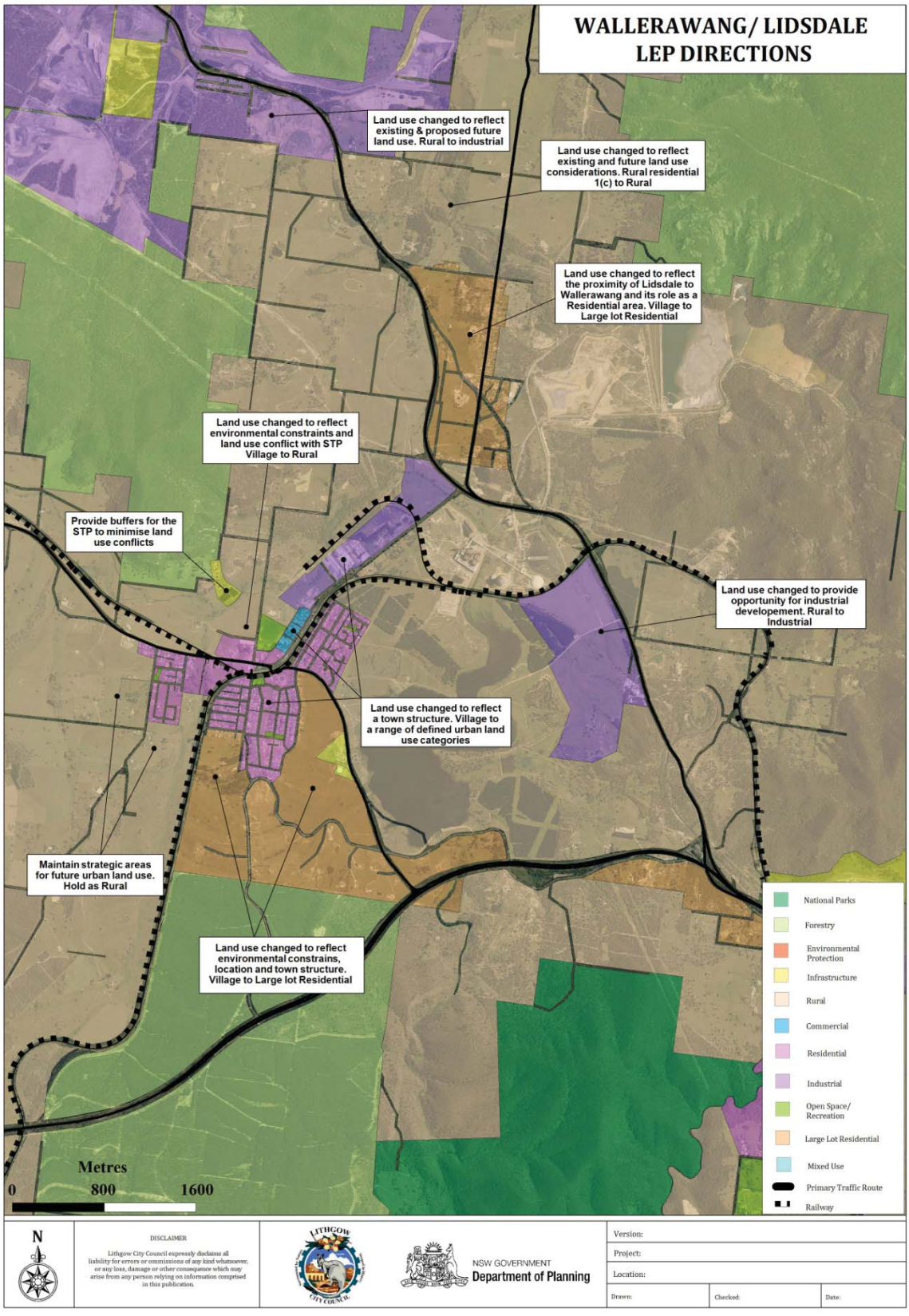


Figure 14. Wallerawang Precinct New LEP Directions

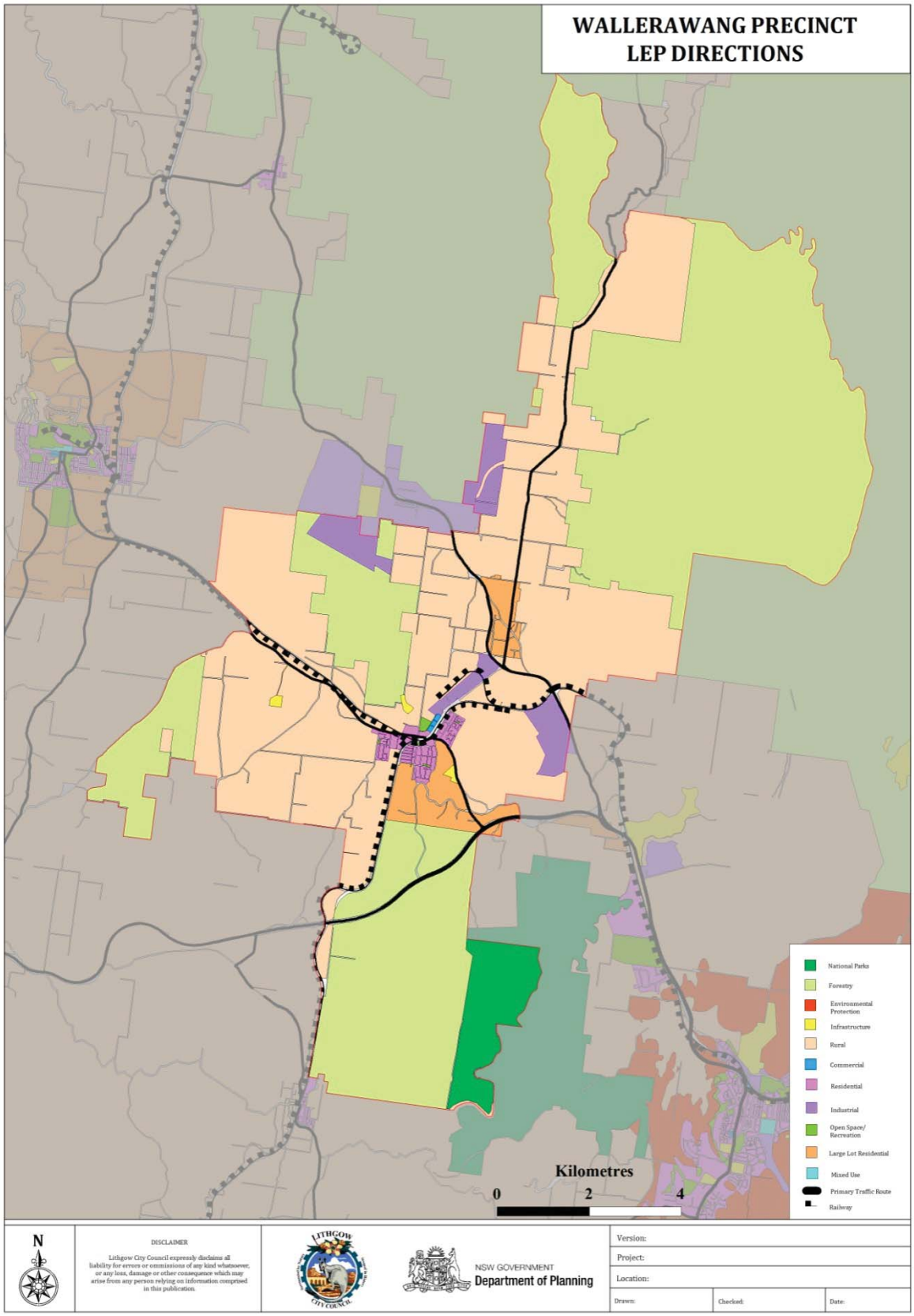


Figure 15. Wallerawang Strategic Framework Plan

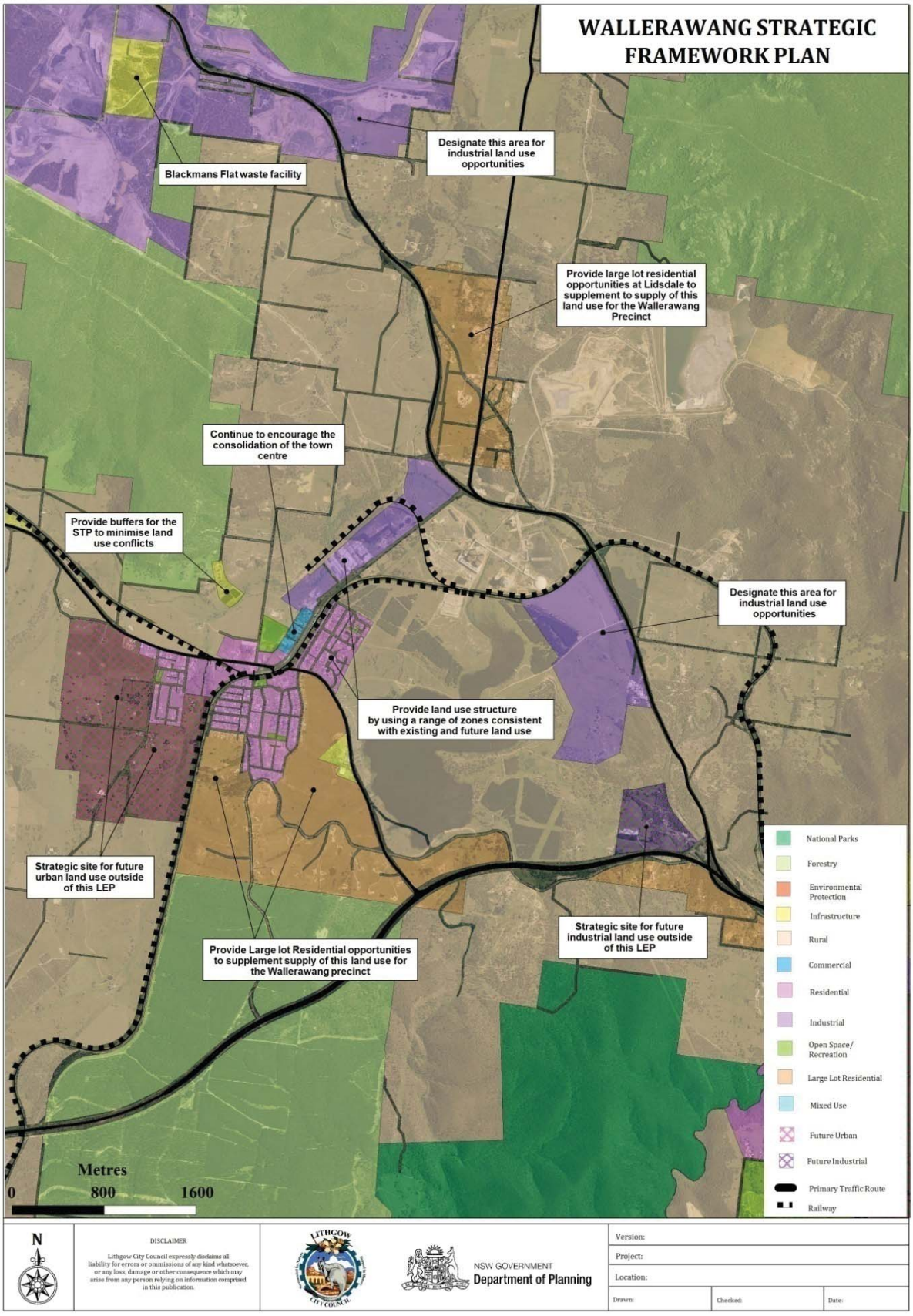
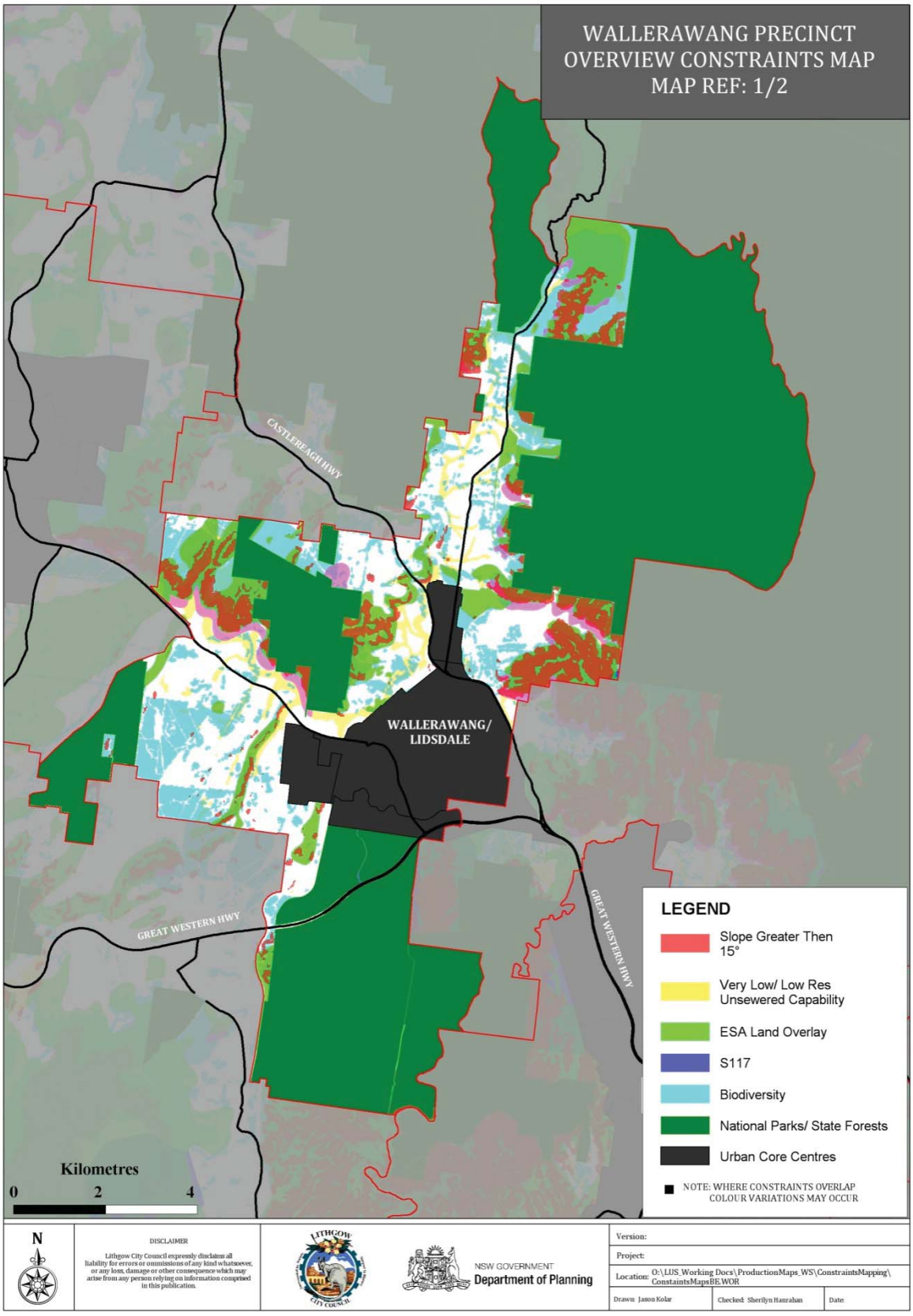


Figure 16. Constraints Overview Wallerawang Precinct



Portland Precinct

Portland Overview		
SWOT		
Existing LEP Provisions	Portland Urban	Fig 17
	Portland Precinct	Fig 18
New LEP Directions	Portland Urban	Fig 19
	Portland Precinct	Fig 20
Strategic Framework Plans	Portland Urban	Fig 21
Constraints Map	Portland Precinct	Fig 22

DRAFT

PORTLAND PRECINCT





Precinct Area	Portland urban and outer urban area
Population	2 213
Landscape Characteristics	Portland developed primarily as a result of the limestone quarries and cement works. The precinct is dominated by environmentally sensitive lands. Large expanse of State Forest and crown land are located to the west of the urban township.
Dominant Land Uses	The township of Portland is defined by a dominant commercial and retail precinct with a middle ring of residential land use. The urban fringe and outskirts of the township contain a mix of rural residential living as well as mixed use agriculture and "hobby farms". The west side of the township is primarily forested, dominated by rural pursuits. The area to the east is also predominantly rural in nature. The township itself has a distinctive industrial "feel", that is characterised by the remaining infrastructure and buildings associated with the now defunct Portland Cement Works and quarry. The cement works site occupies a prominent location central to the town off Williwa Street. Portland is regarded as a secondary settlement to Lithgow in the LGA settlement hierarchy. The township meets a diverse range of the primary educational, health, social and recreational needs of the local community.
Future Directions	Maintain the character of the commercial precinct through the application of land use designation cognisant of existing and future land use, together with the recognition of the heritage values of the area and their need for protection through the introduction of heritage conversation area planning. Promote cluster planning within the precinct to allow for the development of critical mass within the urban township, and to maintain and preserve rural amenity on the urban fringe. Maintain adequate lands for future urban land use if and when required.





Table 3. Portland Strengths and Opportunities

PORTLAND	
Strengths	Opportunities
• Established cultural and built heritage values • Integral nature of the commercial heritage precinct • Access to and range of community infrastructure and open space • Attractive setting with rural amenity • Lifestyle choice and a range of residential development types (i.e. residential village or rural-residential areas) • Proximity to main centres of Lithgow and Bathurst • Proximity to employment • Established retail and commercial area • Strong arts and cultural focus	• Capacity for residential growth in relatively unconstrained areas • Capacity for infill development Opportunities for growth in cultural heritage and tourism • Opportunities for growth in areas of cultural heritage and tourism • Opportunities to develop and link open space and recreation areas with residential land use • Capitalise on construction activity associated with the proposed expansion of Mt Piper Power Station • Opportunities for the development of short term accommodation options to meet the demand created by itinerant workers and short term visitation.
Weaknesses	Threats
• Limited capacity of the sewage treatment plant • Reliance on Fish River Water supply • Limited storm water management system • Over supply of residential lands • Over supply of rural lifestyle lands • Population growth in rural areas resulting in possible land fragmentation and decrease in critical mass as well as impact from urban sprawl • Dependent on other centres for high order retail, commercial and social services • High reliance on private vehicles for transport • Limited public transport • High proportion of vacant retail/commercial space • Quality of road infrastructure in some areas	• Ability to secure water supply to sustain 1% targeted population growth • Ability to augment sewage infrastructure to cater for new residential development • Climate Change • Land use conflict • Inability to secure serviced industrial land to provide ongoing supply for this type of land use • Aging population

Figure 17. Portland Existing LEP Provisions

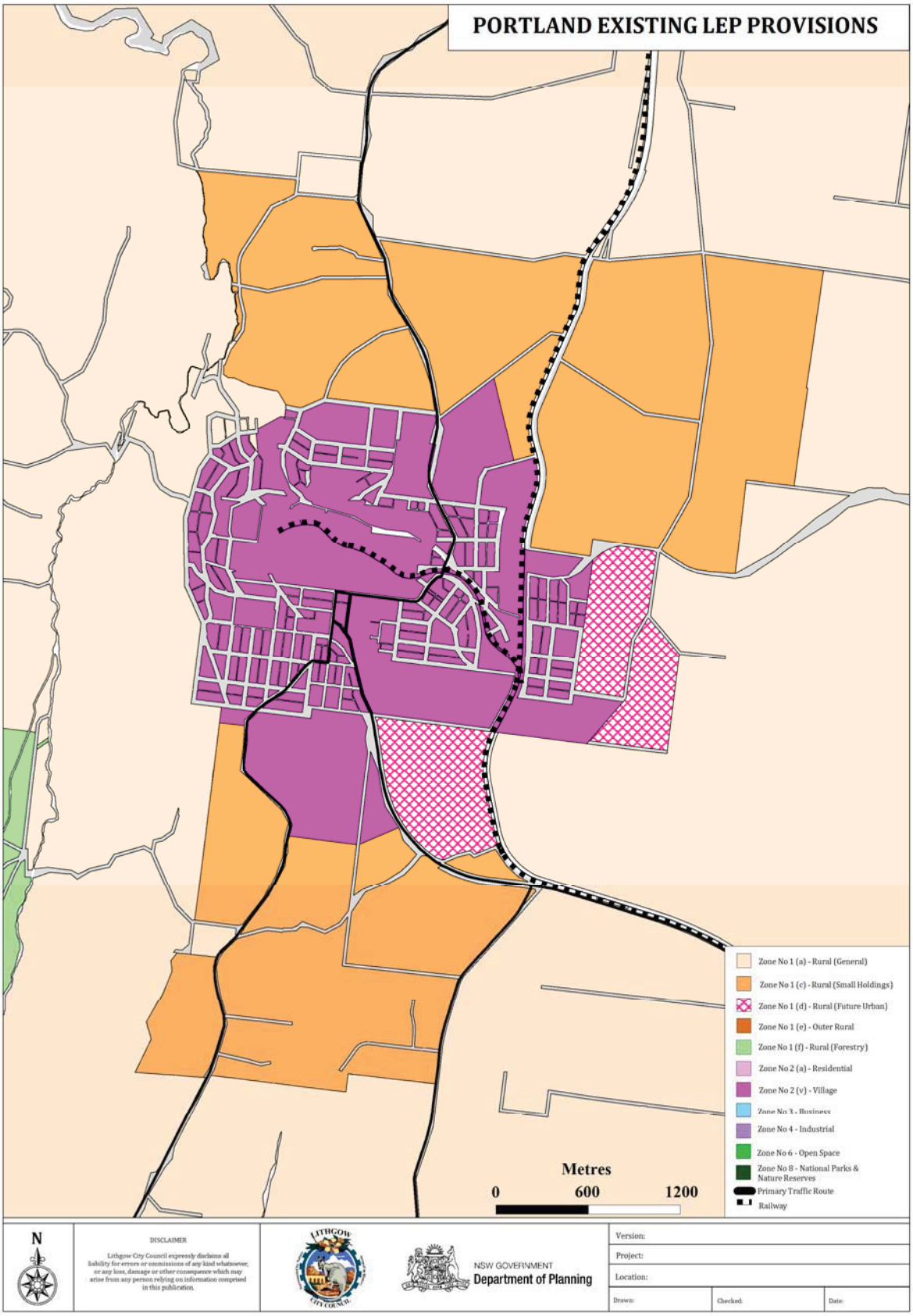


Figure 18. Portland Precinct Existing LEP Provisions

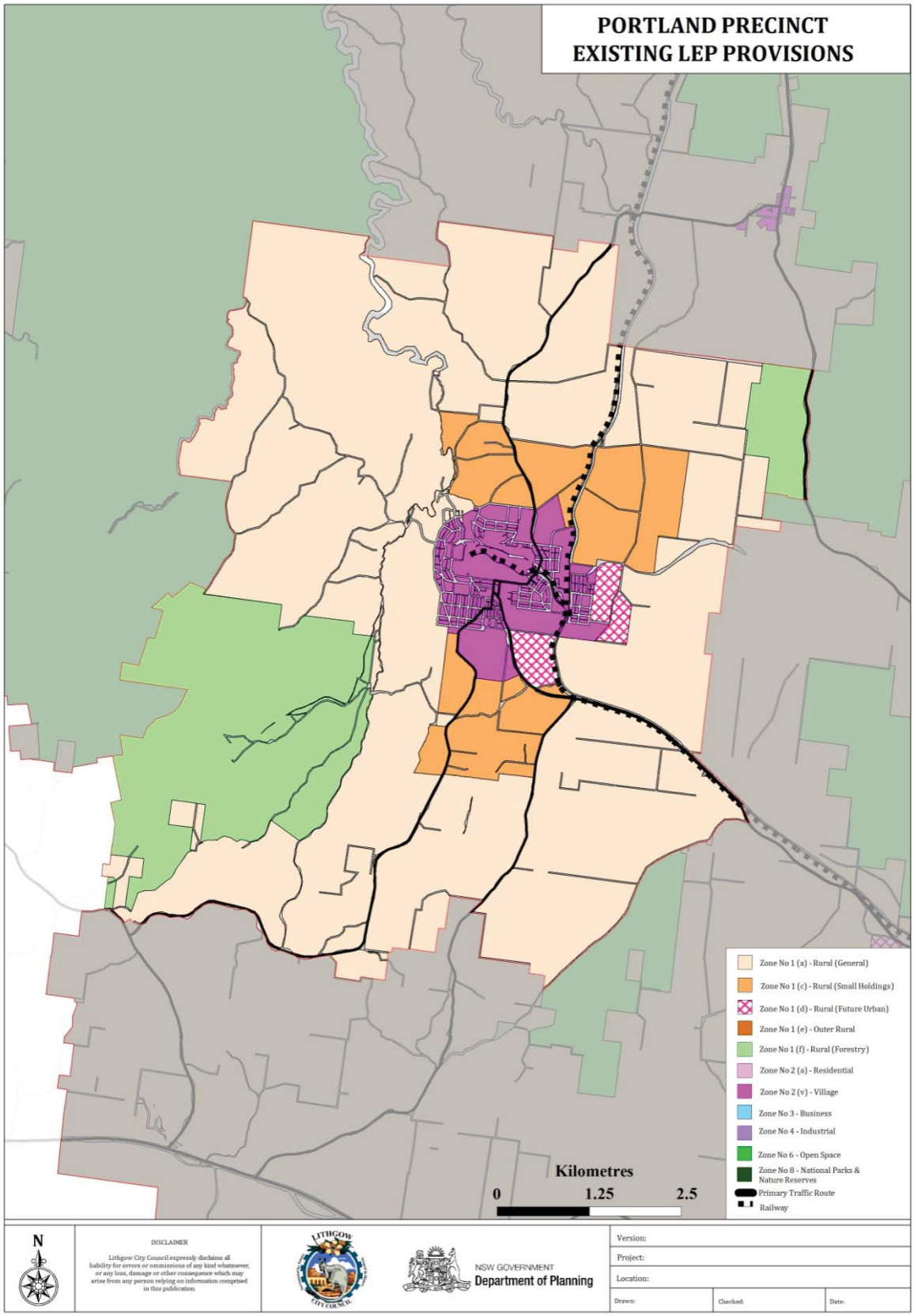


Figure 19. Portland New LEP Directions

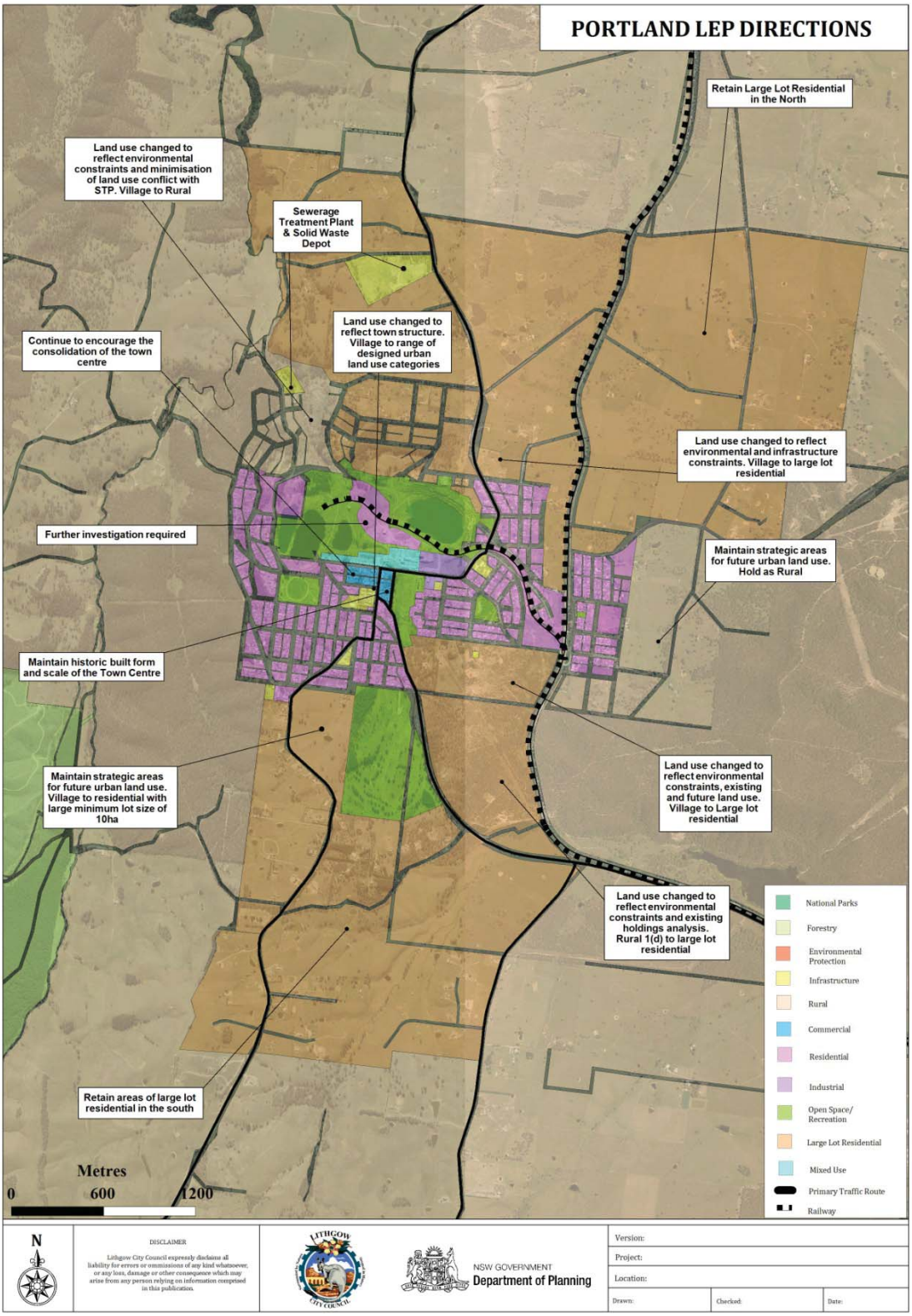


Figure 20. Portland Precinct New LEP Directions

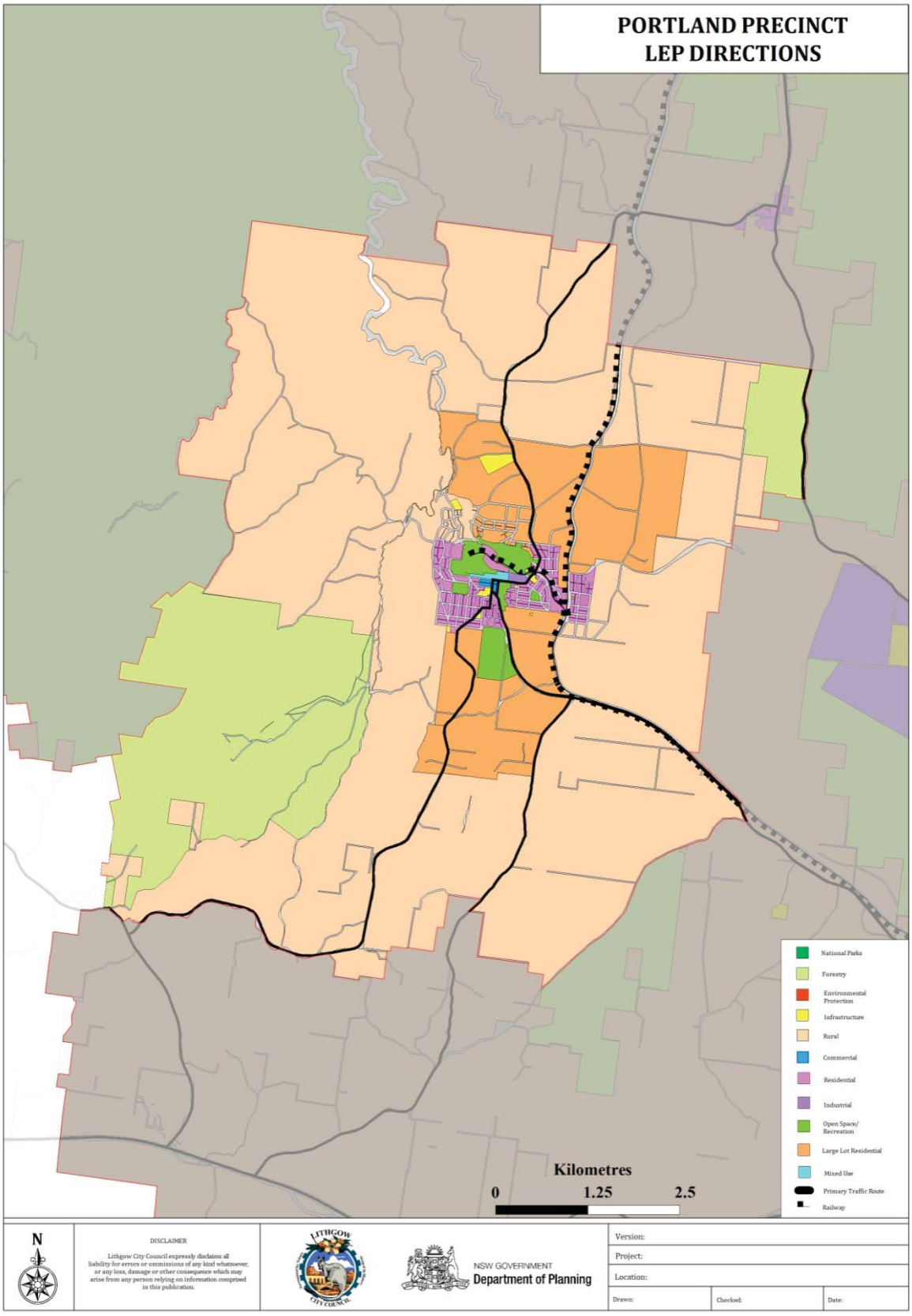


Figure 21. Portland Strategic Framework Plan

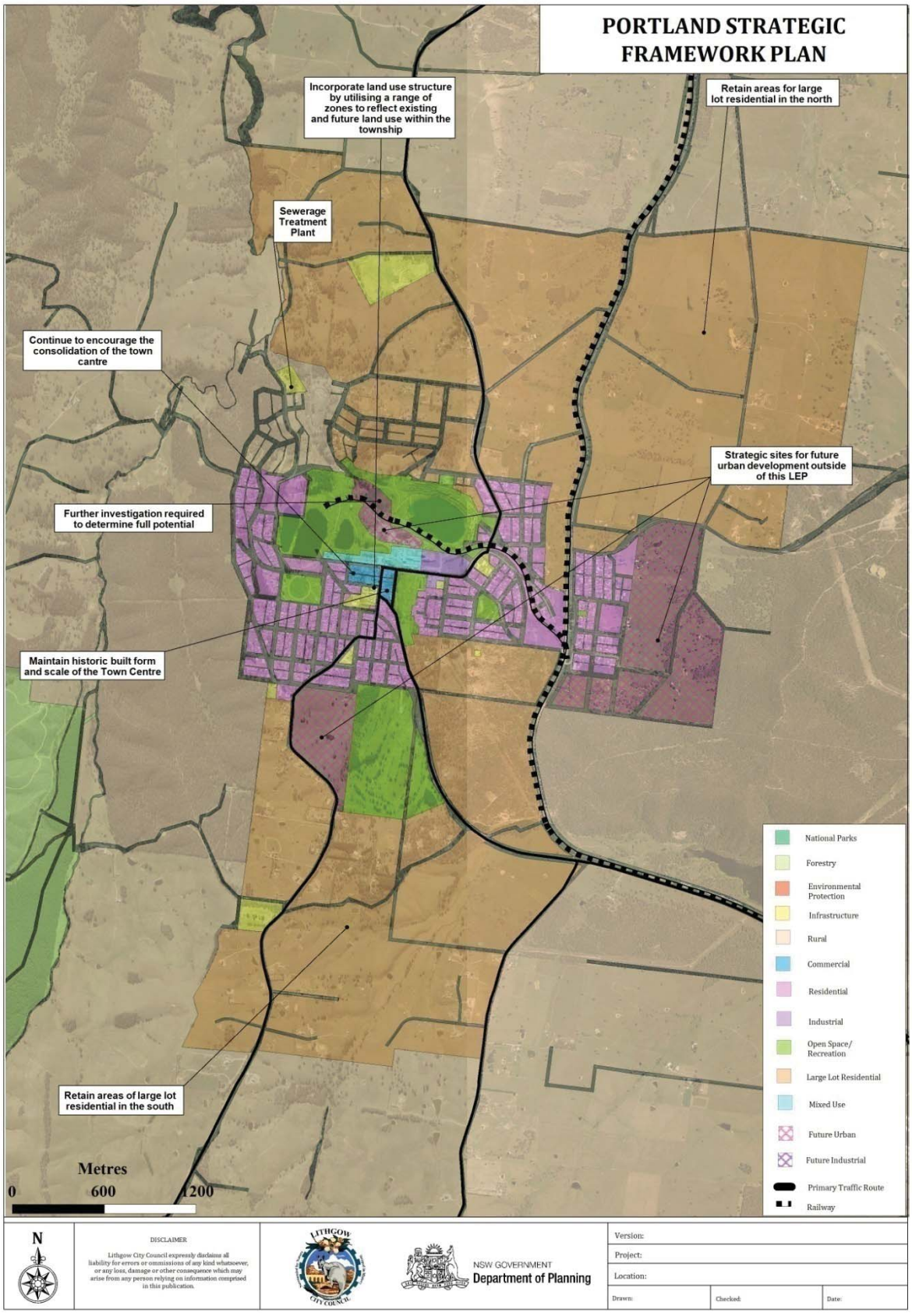
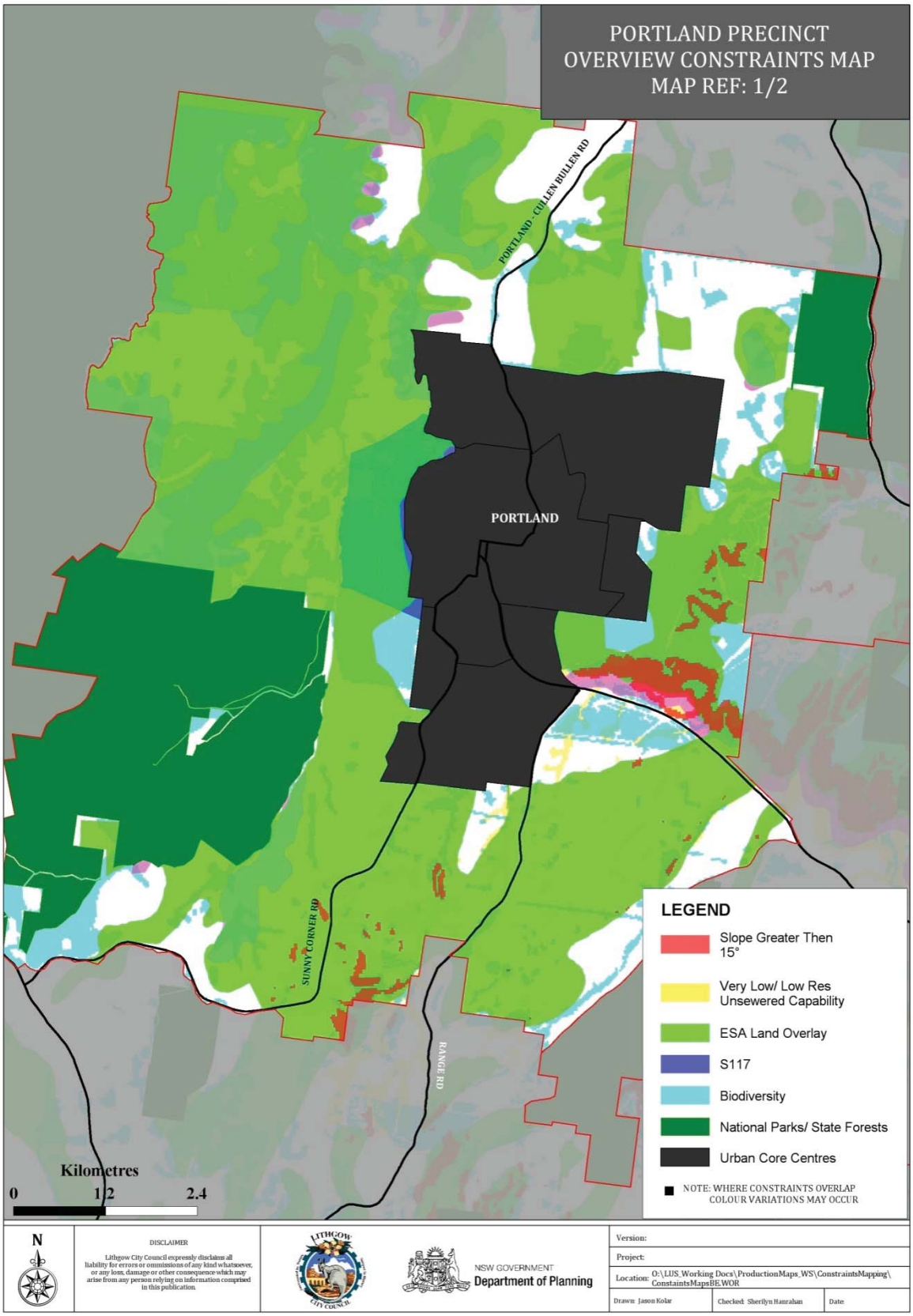


Figure 22. Portland Precinct Overview Constraints



Rural South Precinct

Overview
SWOT
Existing LEP Provisions Rural South Fig 23
New LEP Directions Rural South Fig 24
Constraints Map Rural South Fig 25

Tarana
Overview
Existing LEP Provisions Fig 26
New LEP Directions Fig 27
Strategic Framework Plan Fig 28

Rydal
Overview
Existing LEP Provisions Fig 29
New LEP Directions Fig 30
Strategic Framework Plan Fig 31

Hartley
Overview
Existing LEP Provisions Fig 32
New LEP Directions Fig 33
Strategic Framework Plan Fig 34

DRAFT

RURAL SOUTH PRECINCT



Precinct Area	Outer rural area
Population	767
Landscape Characteristics	The southern precinct is characterised by areas of high scenic quality and contains many examples of significant cultural heritage. The area is also characterised by large tracts of environmentally sensitive lands with a large percentage of the area contained within the boundary of the Sydney water catchment, administered by the Sydney Catchment Authority.
Dominant Land Uses	Land ownership in the precinct is particularly fragmented with 82% of holdings having an area of 100ha or less. The area is therefore dominated by rural land use coupled with a rural lifestyle dwelling. The precinct also contains lands designated as State Forest and National Park in the south west.
Future Direction	Investigate the implementation of a new minimum rural allotment size to assist in the protection of areas of environmental sensitivity and high biodiversity and Sydney water catchment, while still providing for limited rural lifestyle opportunities in line with the LGA settlement hierarchy. Provide opportunities to capitalise on the high scenic quality of the areas through the encouragement of tourist related development and industries. Concentrate areas of small lot rural lifestyle development within existing identified clusters. Minimise opportunities for the provision of dispersed and isolated rural lifestyle dwellings.

Table 4. Rural South Precinct Strengths and Opportunities

RURAL SOUTH	
Strength	Opportunities
• Transportation links via the Great Western Highway and Jenolan Caves Rd • Capacity for growth within the Little Hartley clustered rural lifestyle areas • Established cultural and built heritage values within the village and rural areas • Natural environmental assets and designation of national parks • Access to passive open space • Mineral assets • Primary education establishment at Hampton. • Access to services and facilities within the villages that meet the day to day needs of residents	• Development of opportunities to encourage exploration of Lithgow LGA by visitors • Environmental sustainability • Preservation of the natural assets of the area through the adoption of sound strategic planning principles • Existing businesses and industries which can provide an impetus for investment, particularly relating to cultural industries and tourism. • Consolidating the opportunities for development to retain and enhance the rural character of the area.
Weaknesses	Threats
• Dispersed nature of the precinct and land fragmentation • Land use conflict • Standard of road infrastructure in some areas • Proximity from larger urban centres and distance from full range of services and infrastructure • Low population thresholds • Lack of access to public transport • Reliance on private motor vehicle • Land capability for rural sustainability • Social exclusion • Access to technology • Access to emergency services • Lack of community focused recreational facilities	• Ability to secure water supply to sustain population • Potential land use conflict • Unsustainable development and land fragmentation • Aging population • Climate change • Bush fire • Environmental degradation through development, poor rural management practices and natural processes • Loss of visual amenity through development • Loss of cultural and built heritage through development

Figure 23. Rural South Existing LEP Provisions

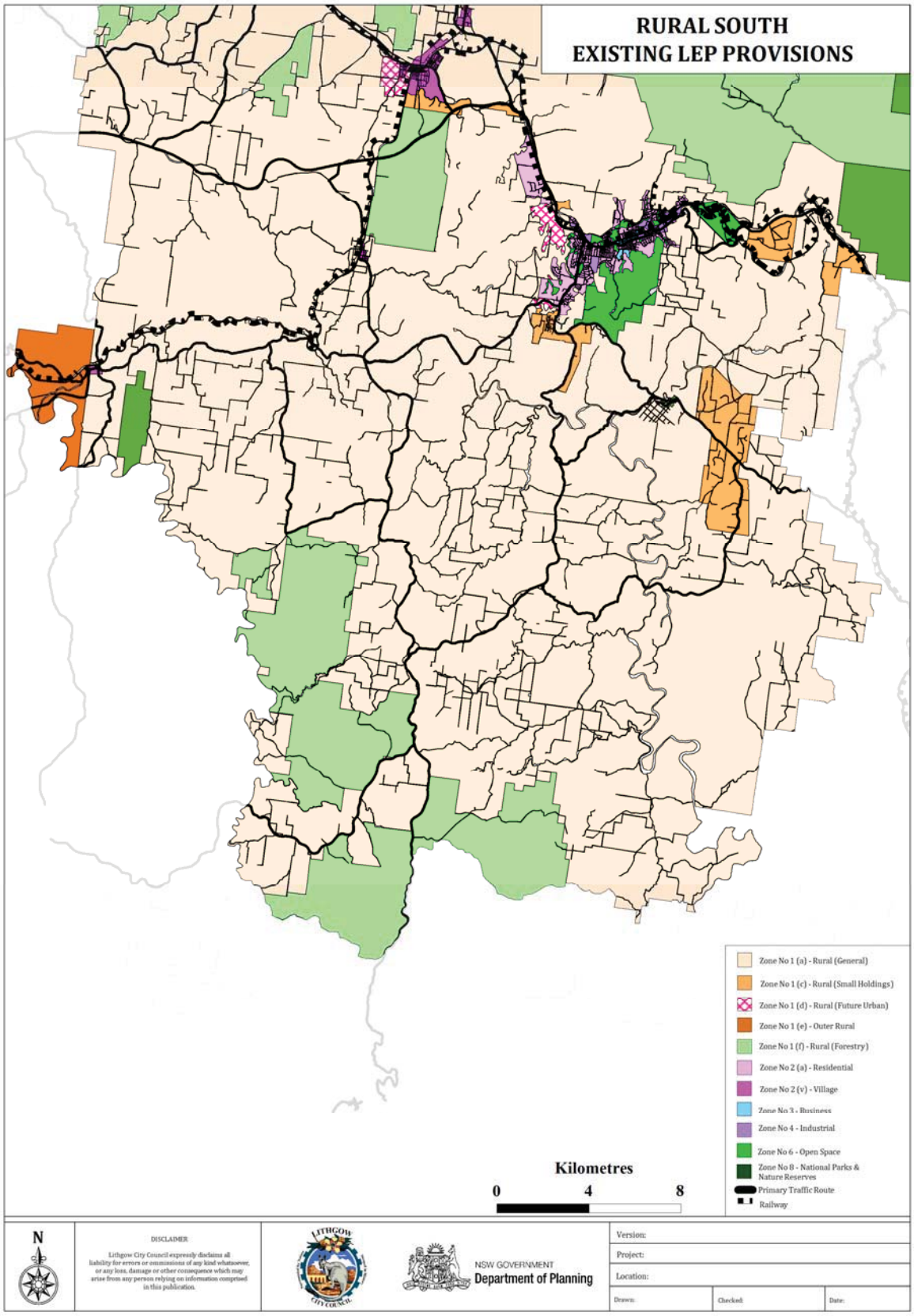


Figure 24. Rural South New LEP Directions

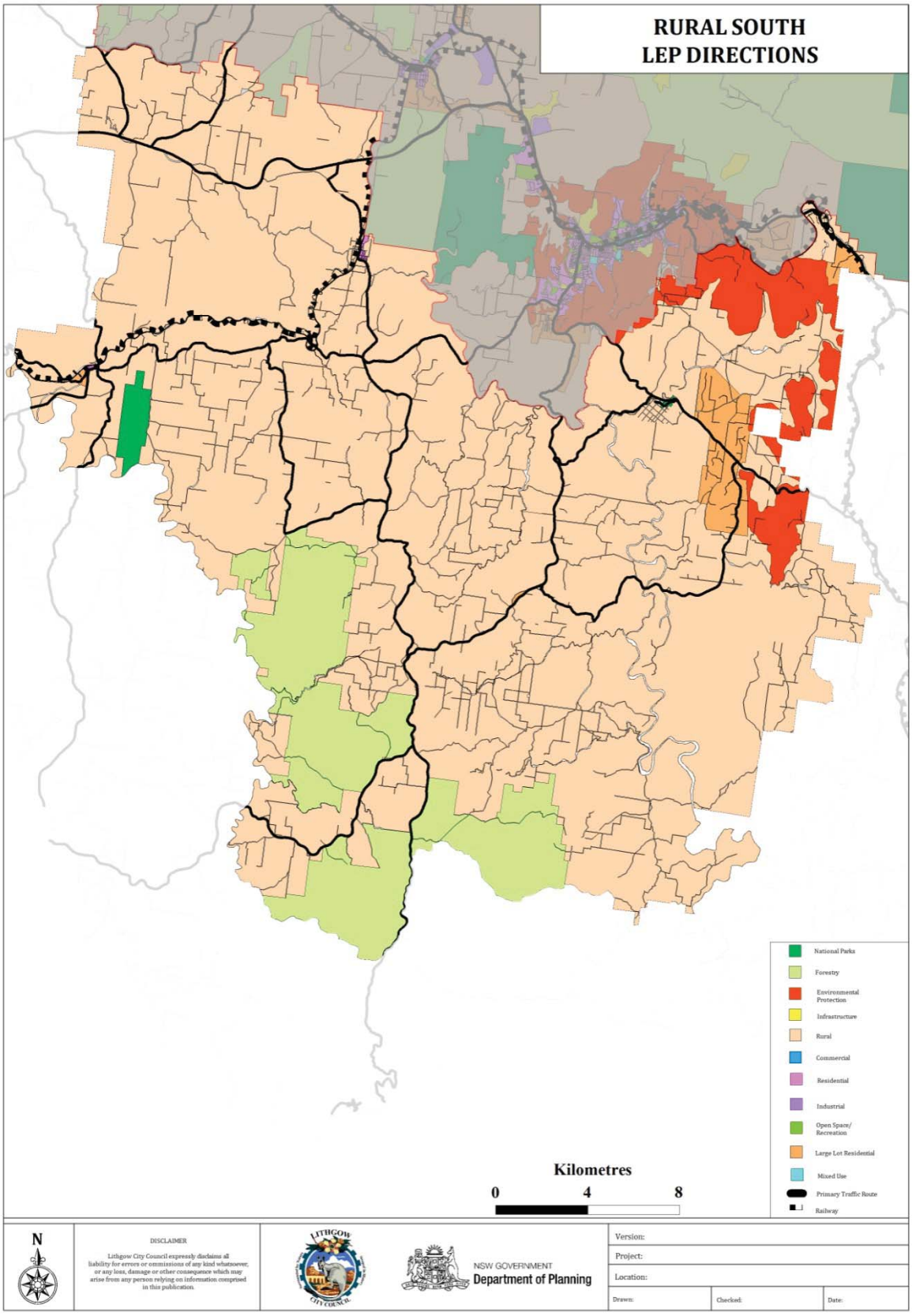
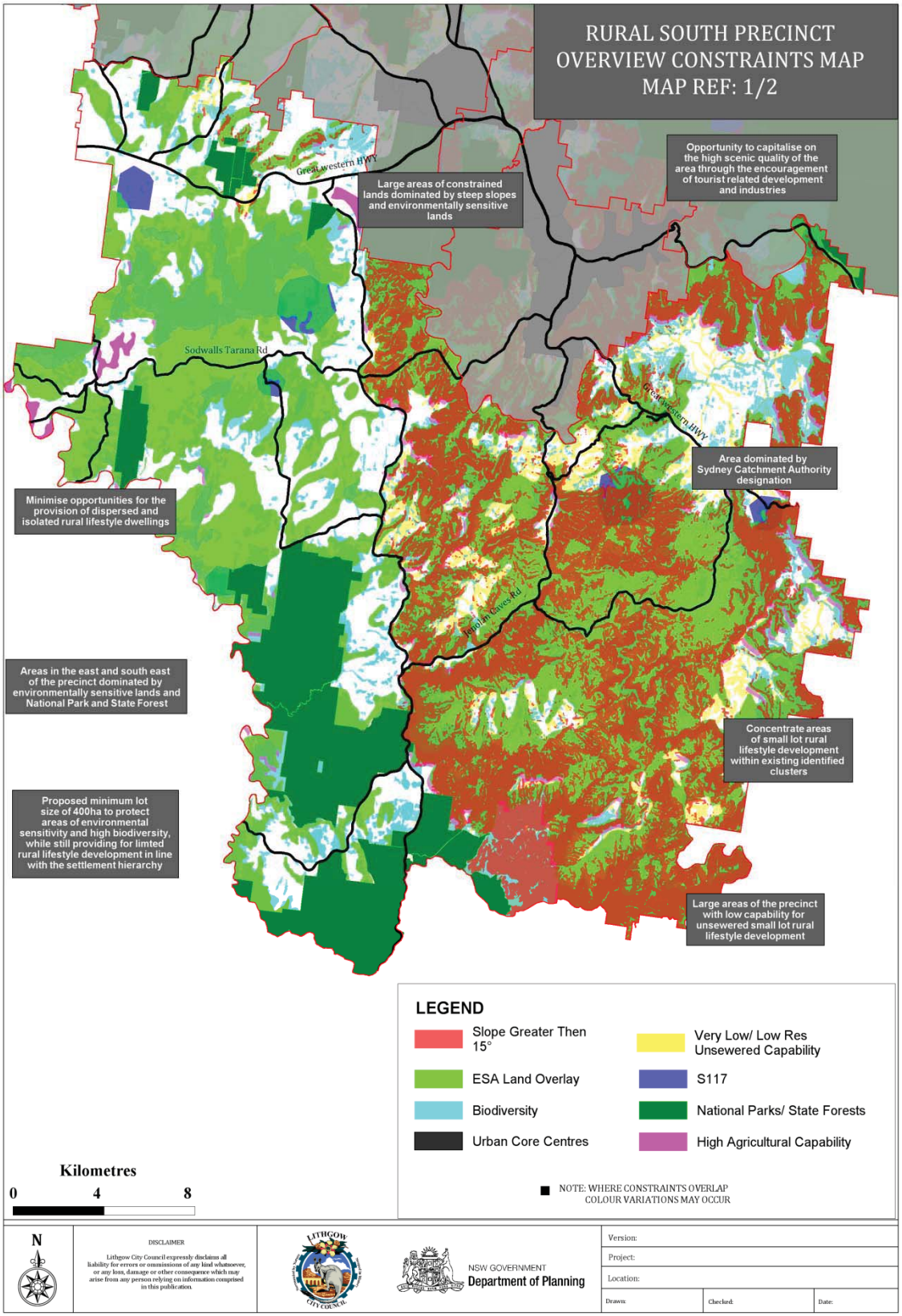


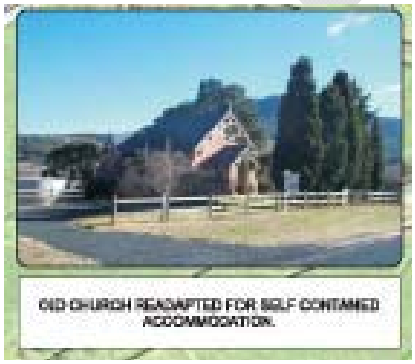
Figure 25. Rural South Precinct Overview Constraints Map

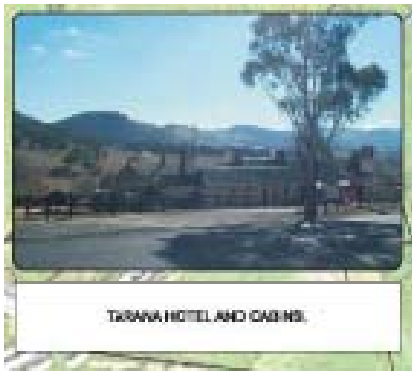


TARANA - Overview



Precinct Area	Tarana village area
Population	184
Landscape Characteristics	The landscape characteristics of the hamlet of Tarana are dominated by the main western railway line to the north, and a series of local roads in all directions, that provide linkages to the larger urban centres of the LGA. It is this transport network that gives form and definition to the settlement.
Dominant Land Uses	The area surrounding the hamlet is dominated by rural and agricultural land use, with the settlement itself containing a hotel, café, railway station and a mix of new and old housing.
Future Direction	Consideration should be given to the consolidation of the existing settlement area along Mutton Falls Road, with land use designation to reflect existing and future land use. Large lot residential opportunities be considered to the south west of the existing settlement, consistent with the existing holding pattern.


OLD CHURCH READAPTED FOR SELF CONTAINED ACCOMMODATION.


TARANA HOTEL AND CABINS.

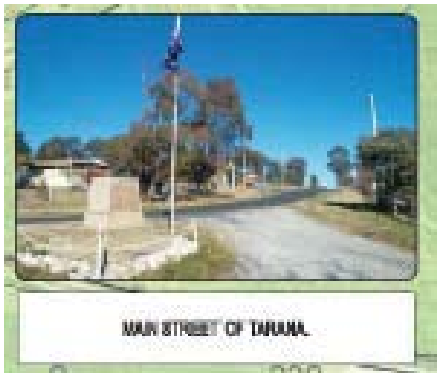

MAIN STREET OF TARANA.

Figure 26. Tarana Existing LEP Provisions

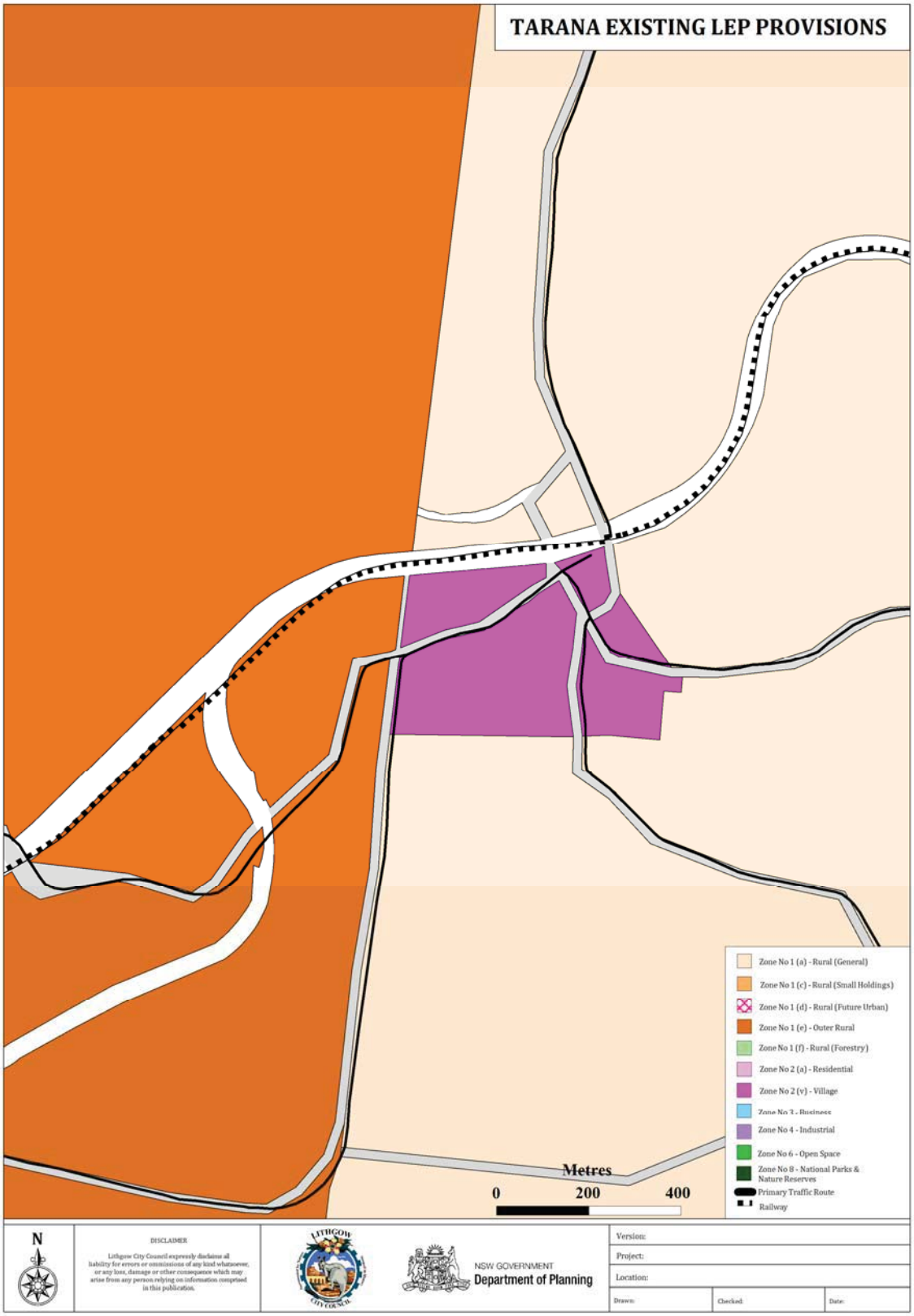


Figure 27. Tarana New LEP Directions

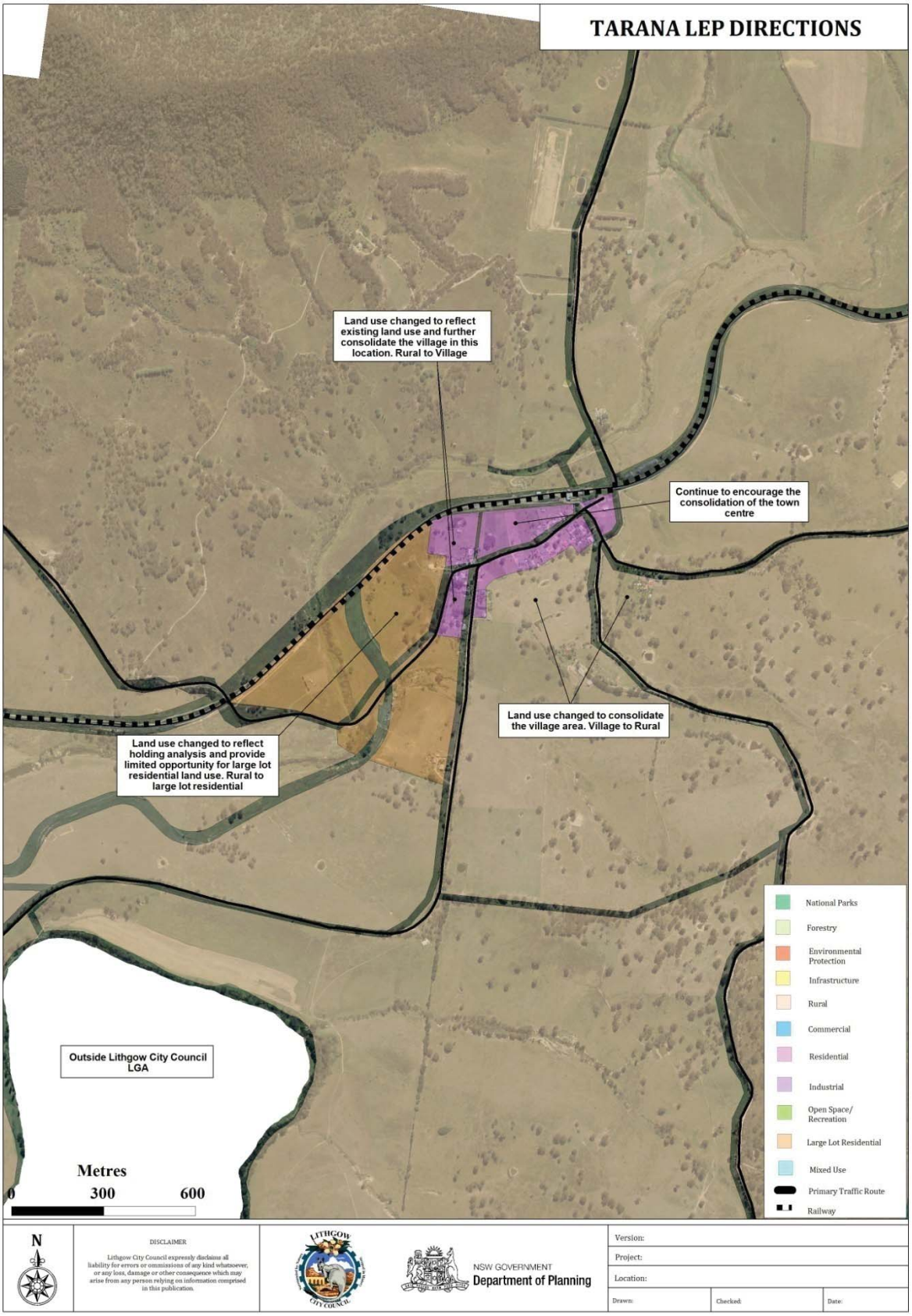
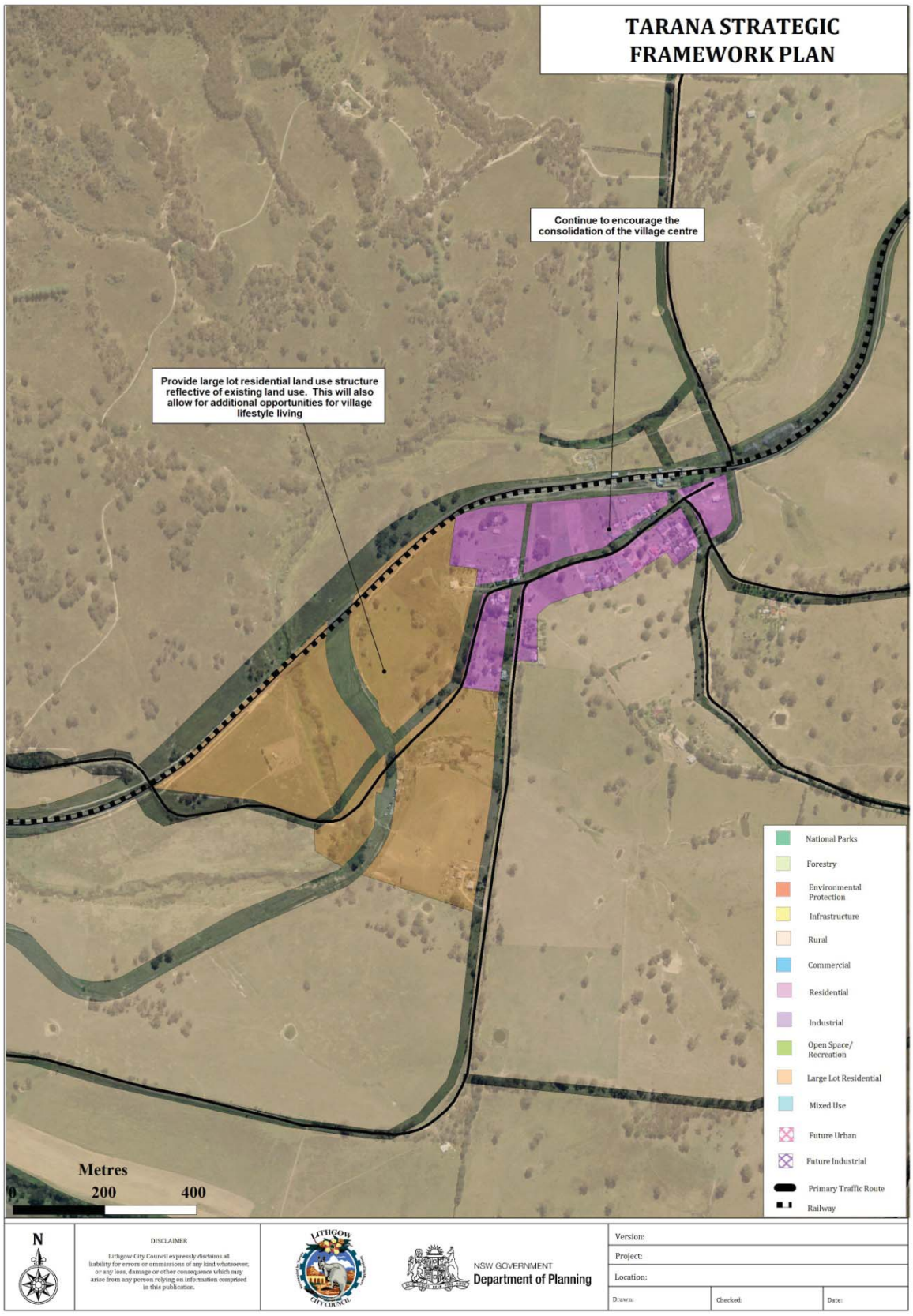


Figure 28. Tarana Strategic Framework Plan



RYDAL - Overview





Precinct Area	Rydal village area
Population	609
Landscape Characteristics	The village of Rydal is divided east/west by the main western railway line. The Bathurst Rd provides transport links to the larger urban centres of the LGA. The village settlement has been concentrated to the east of Bathurst Rd. The western side of the village contains areas of low lying constrained land, with the Lidsdale State Forest bordering the village to the north east.
Dominant Land Uses	The surrounding area is dominated by rural and agricultural land uses. Bathurst St is the main focus of village activities containing the Royal Hotel, Union Church, Library which is housing in the refurbished Railway Station building, conference centre in refurbished school buildings, as well as a mix of general housing. The village of Rydal is characterised as a middle order centre in terms of the LGA settlement hierarchy. The village provides valuable benefits to the surrounding rural areas in terms of centralisation for community gatherings and events and socialisation opportunities.
Future Direction	Continue to encourage the consolidation of the village centre and maintain the historic built form and scale that characterises the area. Provide opportunities for village expansion to the north of the existing village off Cartwright St. Protect the rural amenity of the surrounding area outside the village. The village also has opportunities for tourism based development.



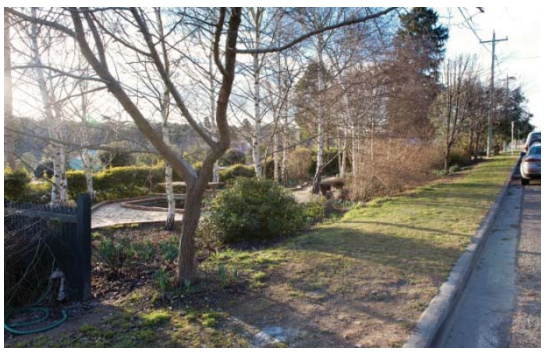


Figure 29. Rydal Existing LEP Provisions

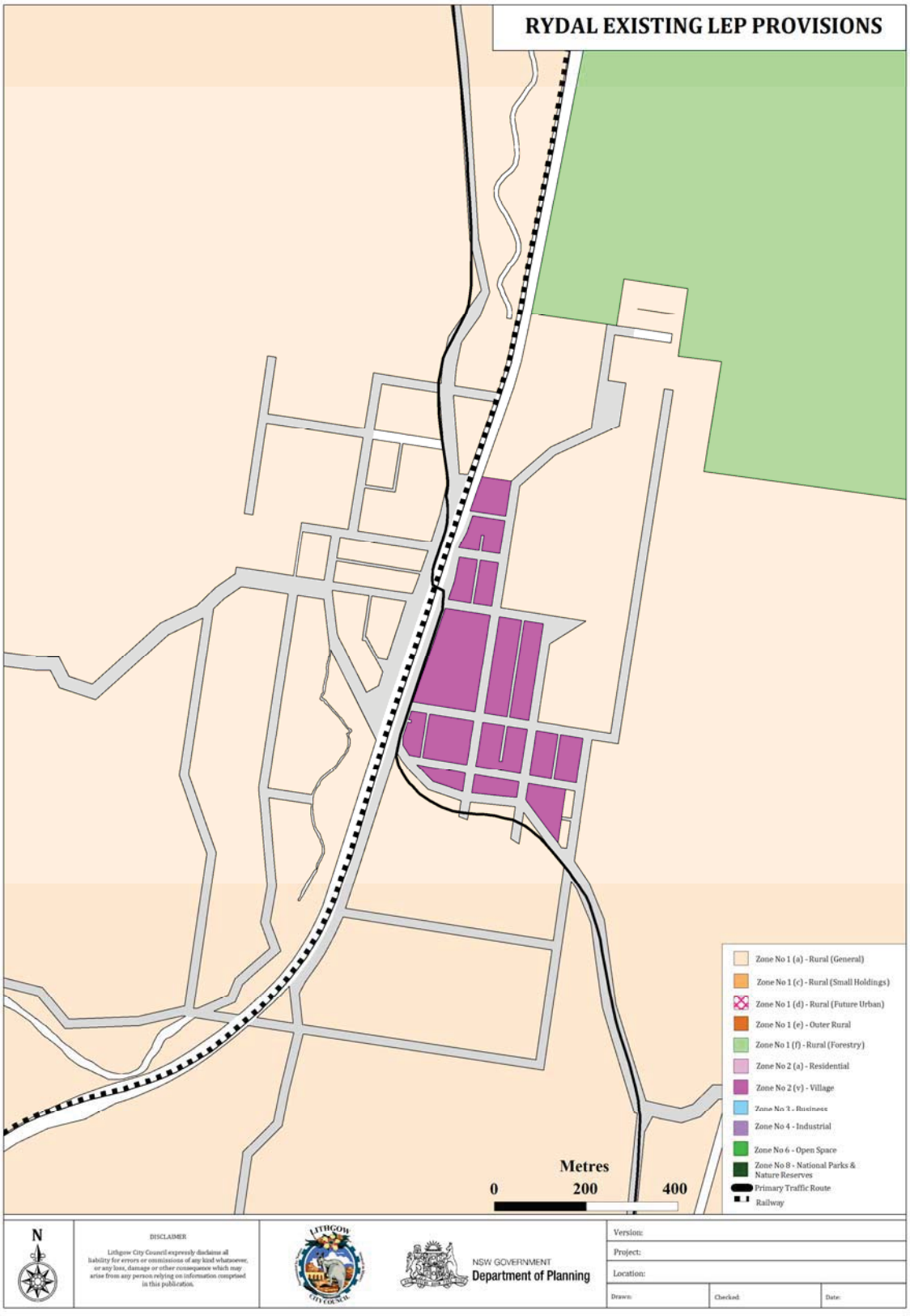


Figure 30. Rydal New LEP Directions

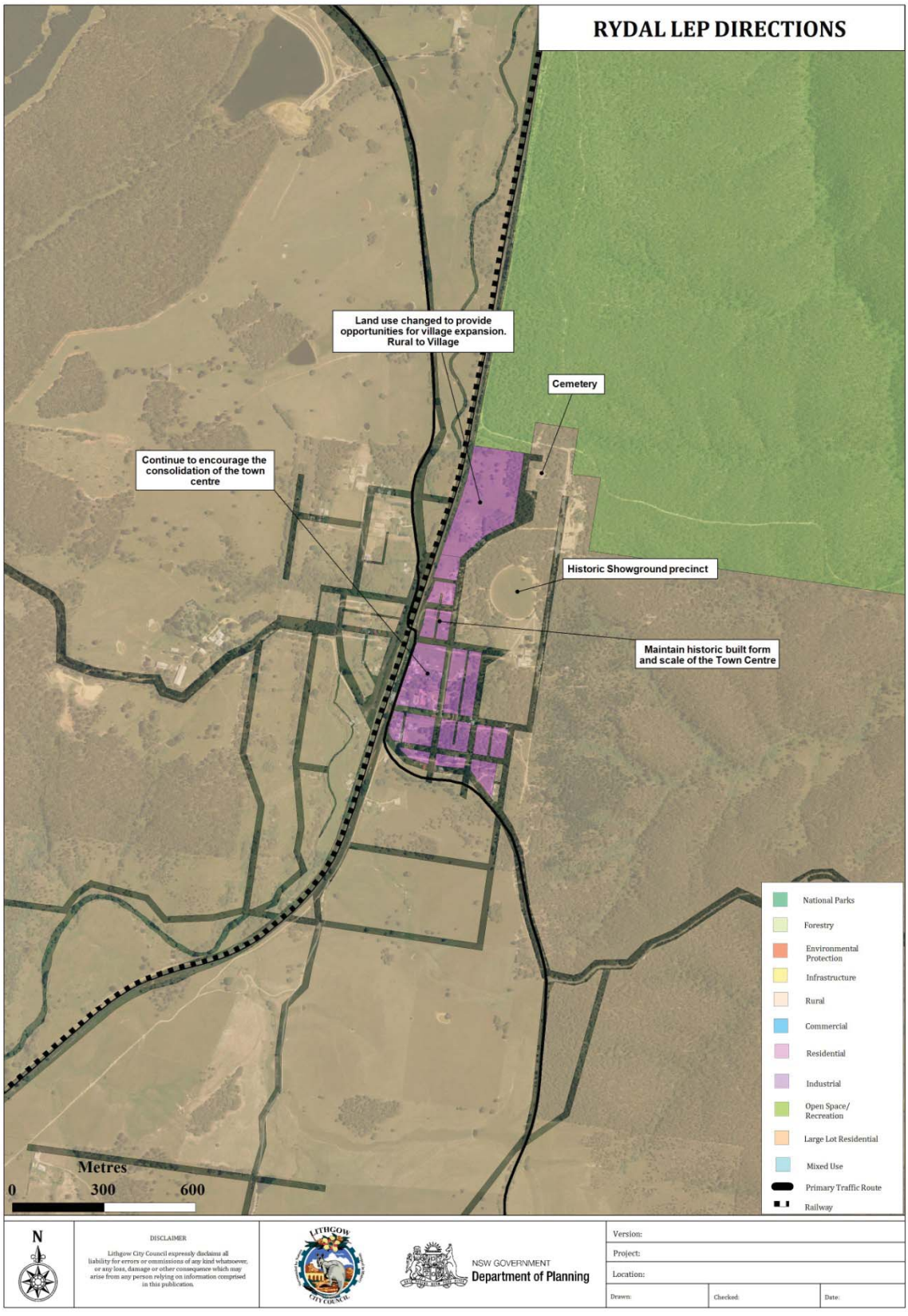
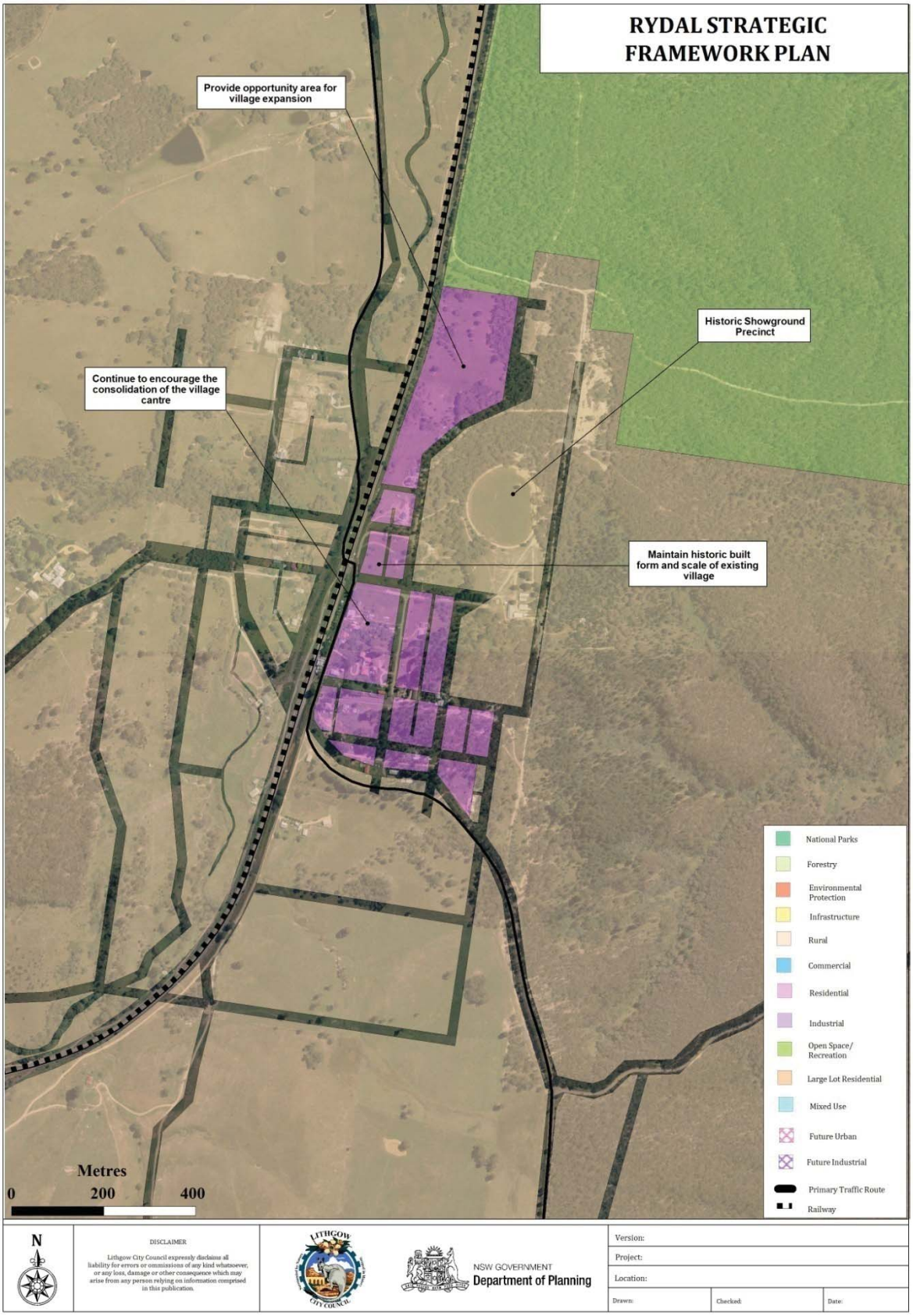


Figure 31. Rydal Strategic Framework Plan



HARTLEY - Overview




Precinct Area	Hartley clustered rural lifestyle area
Population	498
Landscape Characteristics	The Hartley precinct is contained with the rural south of the LGA and is characterised by areas of high scenic quality, dominated by the escarpments of the Hartley Valley to the east, including Mt York, Hassans Walls to the North and Megalong to the south east. The area is recognised for its heritage and scenic amenity. The area contains large tracts of environmentally sensitive lands including large areas with slopes great than 15^{o}, devoid of vegetation and containing poor soil. The Hartley area is also contained within the designation of the Sydney Catchment Authority, and therefore a high degree of accountability is conferred on development to ensure no effect of water quality within the catchment.
Dominant Land Uses	The area is dominated by rural residential land use south of the Great Western Highway off Baaners Lane and Cox's River Rd, and north off Browns Gap Rd and Ambermere Drive. The area is surrounded by rural and agricultural land use with the Ryolite Quarry located to the south west of the locality. The Hartley Historic Village which is managed by National Parks and the Little Hartley Historic Village and Hartley Vale village, are integral tourism drivers in the area. A number of commercial activities are located in the area and include galleries, tea rooms, cafes and produce stores, together with other rural type home businesses such as plant nurseries.
Future Direction	Consolidate opportunities for small lot rural lifestyle development within existing boundaries. Maintain the built form and scale of the Little Hartley, Hartley Village and Hartley Vale areas and further develop the implementation of heritage conservation precincts for the Little Hartley and Hartley Vale areas. Protect areas of high scenic quality to retain the visual amenity of the locality. Investigate the development of a community cluster (subject to the completion of the GWH deviation) within the Little Hartley village area.




Figure 32. Little Hartley Existing LEP Provisions

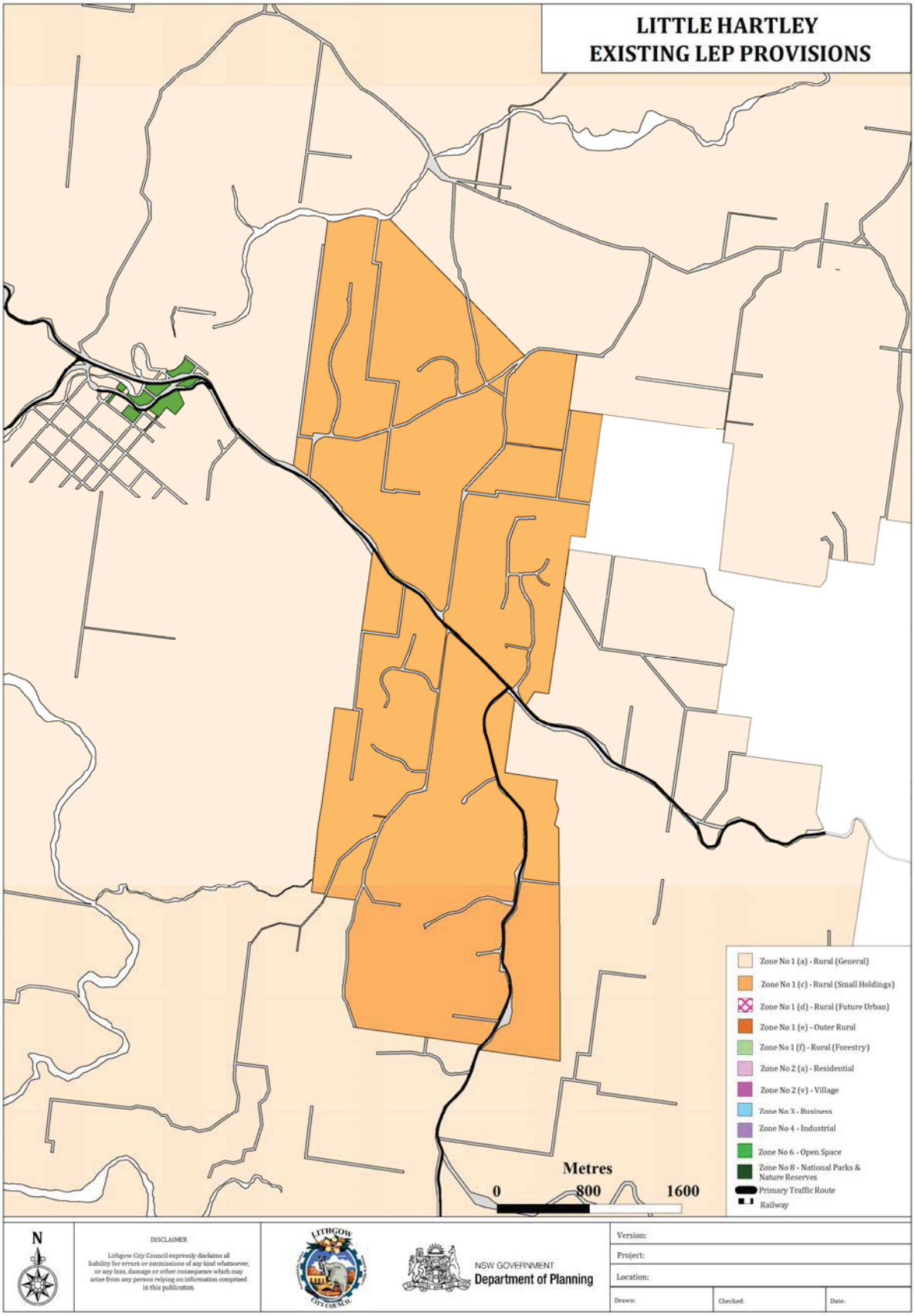


Figure 33. Hartley New LEP Directions

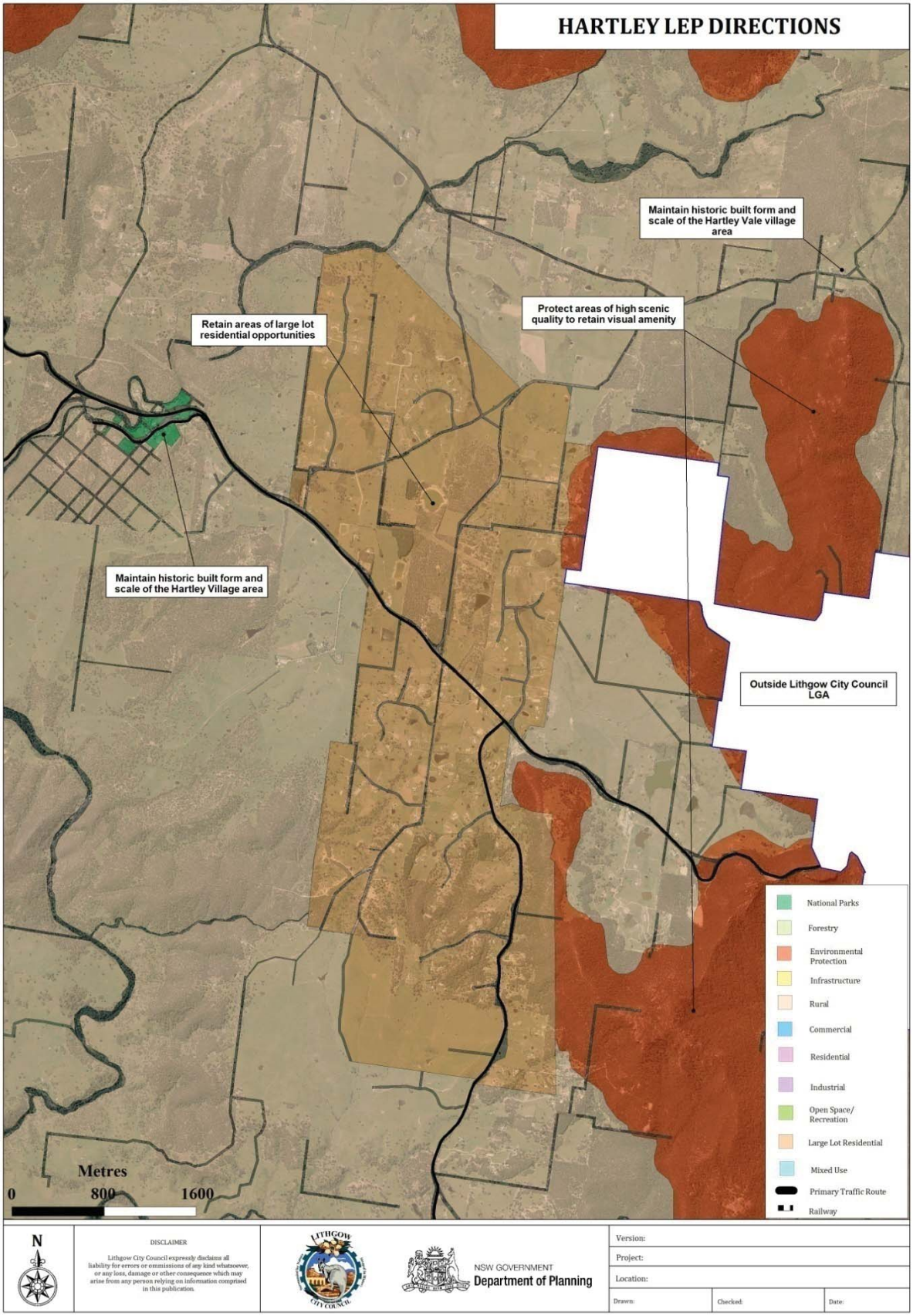
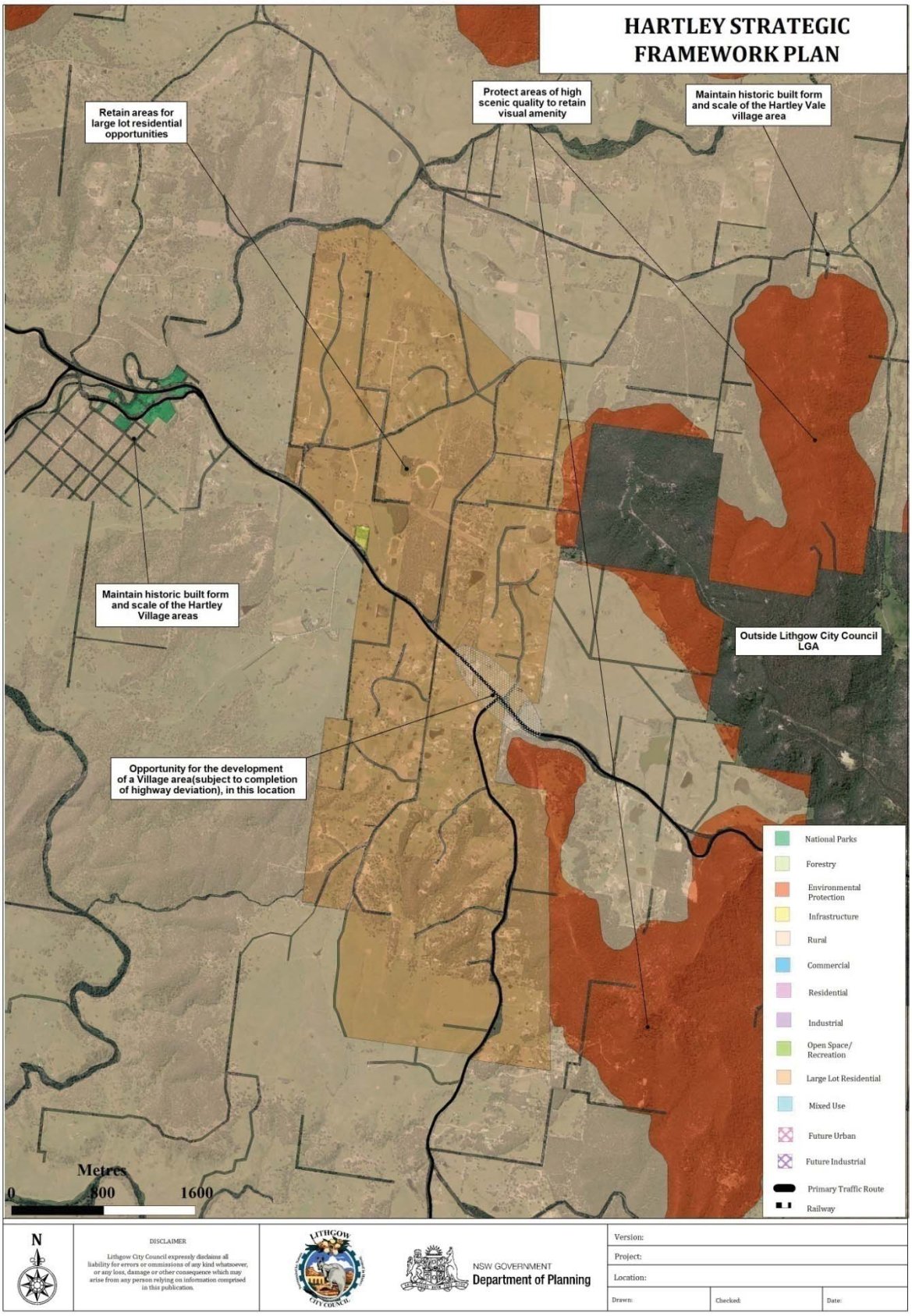


Figure 34. Hartley Strategic Framework Plan



Rural North Precinct

Overview
SWOT
Existing LEP Provisions Rural North Fig 35
New LEP Directions Rural North Fig 36
Constraints Map Rural North Fig 37

Cullen Bullen
Overview
Existing LEP Provisions Fig 38
New LEP Directions Fig 39
Strategic Framework Plans Fig 40

Capertee
Overview
Existing LEP Provisions Fig 41
New LEP Directions Fig 42
Strategic Framework Plans Fig 43

DRAFT

RURAL NORTH PRECINCT - Overview



Precinct Area	Outer rural areas
Population	
Landscape Characteristics	The northern precinct is dominated by areas of National Park and State Forest. Large areas of the precinct are constrained by environmentally sensitive lands and areas of high biodiversity. The precinct contains the settlements of Glen Davis and Glen Alice and the villages to Cullen Bullen and Capertee.
Dominant Land Uses	The northern precinct is rich in mineral wealth and areas of high scenic quality. While it is recognised that rural pursuits are the most dominant land use in the precinct, the area contains a number of coal mines including but not limited to Airly, Invincible and Cullen Valley Mine. The area is a prime tourist destination offering unique visitor opportunities.
Future Direction	It is important to protect the unique characteristics of the area for resident visitors, while maintaining access to important natural resources. Providing large minimum rural lot size will assist in protecting areas of environmental sensitivity, while reducing the potential for land use conflict with National Parks and mineral related development.

Table 5. Rural North Strengths and Opportunities

RURAL NORTH	
Strength	**Opportunities**
• Transportation links via the Castlereagh Highway east and west • Capacity for growth within Capertee village. • Established cultural and built heritage values within the village and rural areas • Natural environmental assets and designation of national parks • Access to passive open space • Mineral assets • Primary education establishments at Capertee, Cullen Bullen and Glen Alice • Law enforcement at Capertee • Access to services and facilities that meet the day to day needs of residents	• Existing tourist businesses which can provide an impetus for further investment and growth in this sector of the economy • Development of opportunities to encourage exploration of Lithgow LGA by visitors • Environmental sustainability • Development of existing industrial businesses, particularly mining related developments, to provide an impetus for investment and growth in this sector of the economy. • Preservation of the natural assets of the area through the adoption of sound strategic planning principles
Weaknesses	**Threats**
• Dispersed nature of the precinct and land fragmentation • Land use conflict • Standard of road infrastructure in some areas • Proximity from larger urban centres and distance from full range of services and infrastructure • Low population thresholds • Lack of access to public transport • Reliance on private motor vehicle • Land capability for rural sustainability • Social exclusion • Access to technology • Access to emergency services • Lack of community focused recreational facilities	• Potential land use conflict • Unsustainable development and land fragmentation • Aging population • Climate change • Ability to secure water supply to sustain population • Bush fire • Environmental degradation through development, poor rural management practices and natural processes • Loss of visual amenity through development • Loss of cultural and built heritage through development

Figure 35. Rural North Existing LEP Provisions

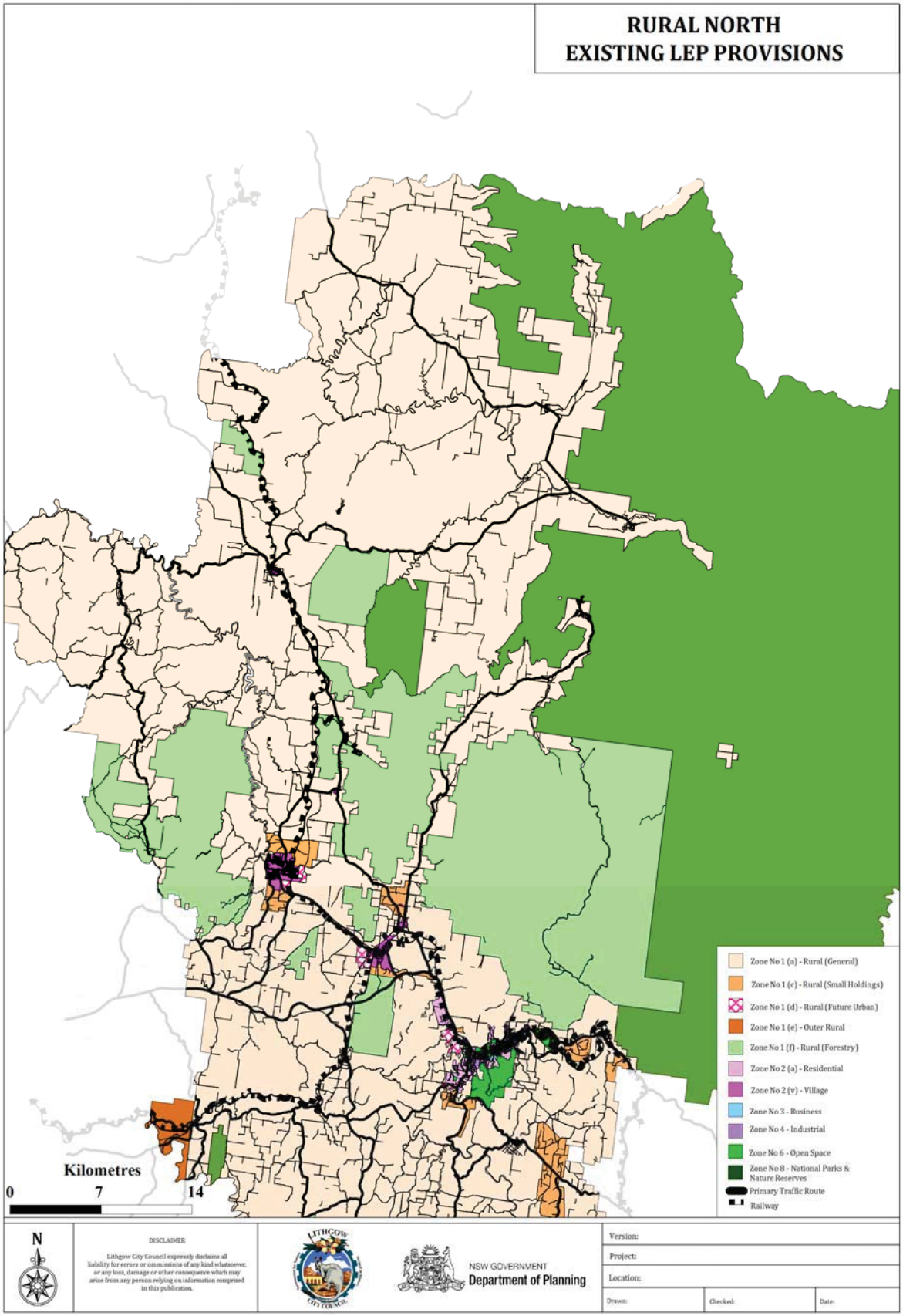


Figure 36. Rural North NEW LEP Directions

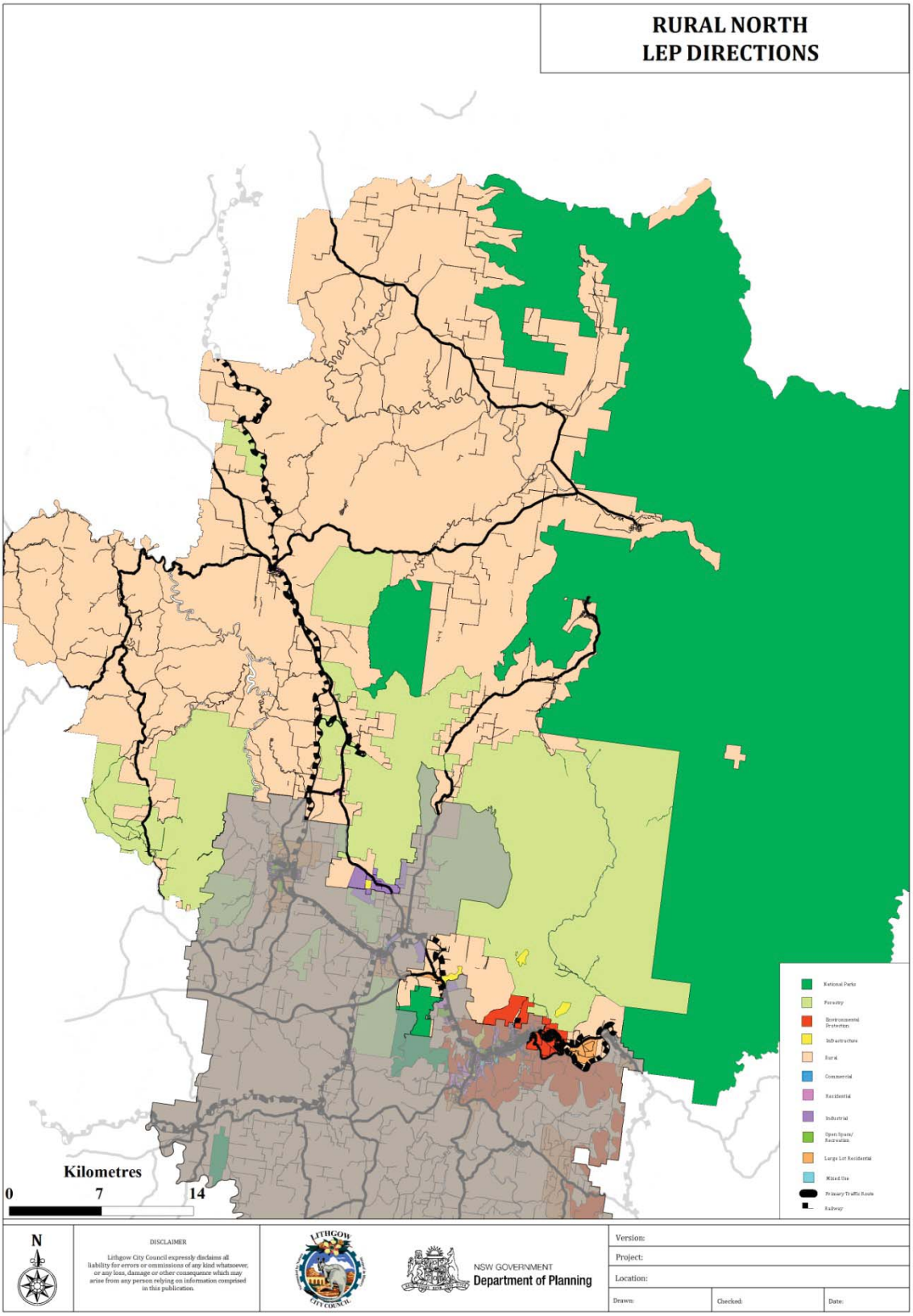
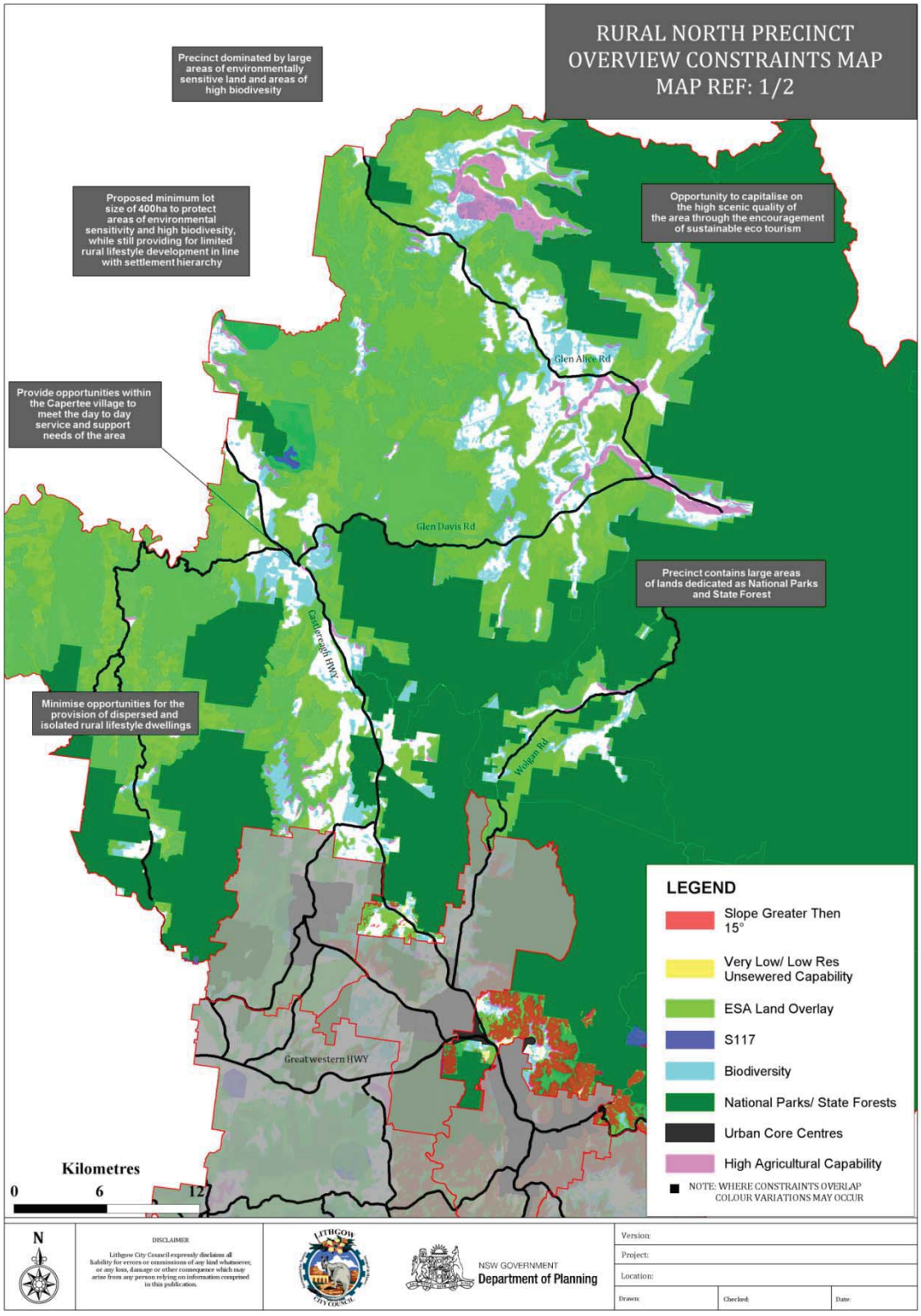


Figure 37. Rural North Precinct Overview Constraints Map



CULLEN BULLEN - Overview





Precinct Area	Cullen Bullen village area
Population	199
Landscape Characteristics	The existing Cullen Bullen village has developed on a north/south axis around the Castlereagh Highway. The area is bounded by State Forest to the east and north west, and the existing Cullen Valley Mine to the west and Invincible Colliery to the south. The area is constrained by high groundwater vulnerability, which has implications for the ongoing management of onsite effluent disposal systems within the village.
Dominant Land Uses	The Coalpac consolidation project, which currently forms a Part 3A application being considered by the Department of Planning, provides for the further development of and extraction of sand and coal resources in the vicinity of Cullen Bullen.
Future Direction	Maintain scale and extent of existing village area to contain further off-site environmental impacts from existing household effluent disposal systems. Limit further intensification of residential settlement to minimise potential land use conflict with existing and proposed mining and extractive land uses in the vicinity.





Figure 38. Cullen Bullen Existing LEP Provisions

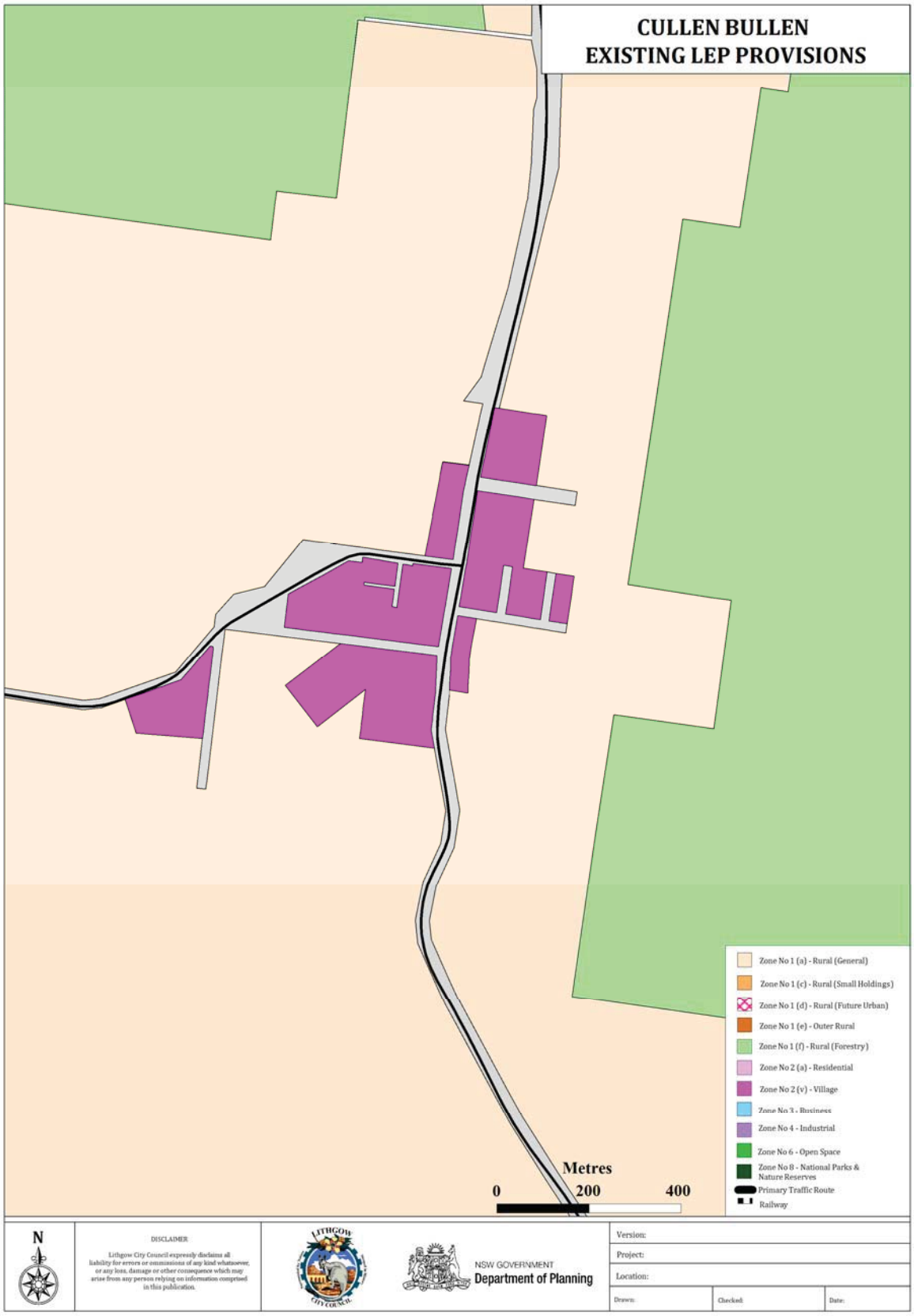


Figure 39. Cullen Bullen New LEP Directions

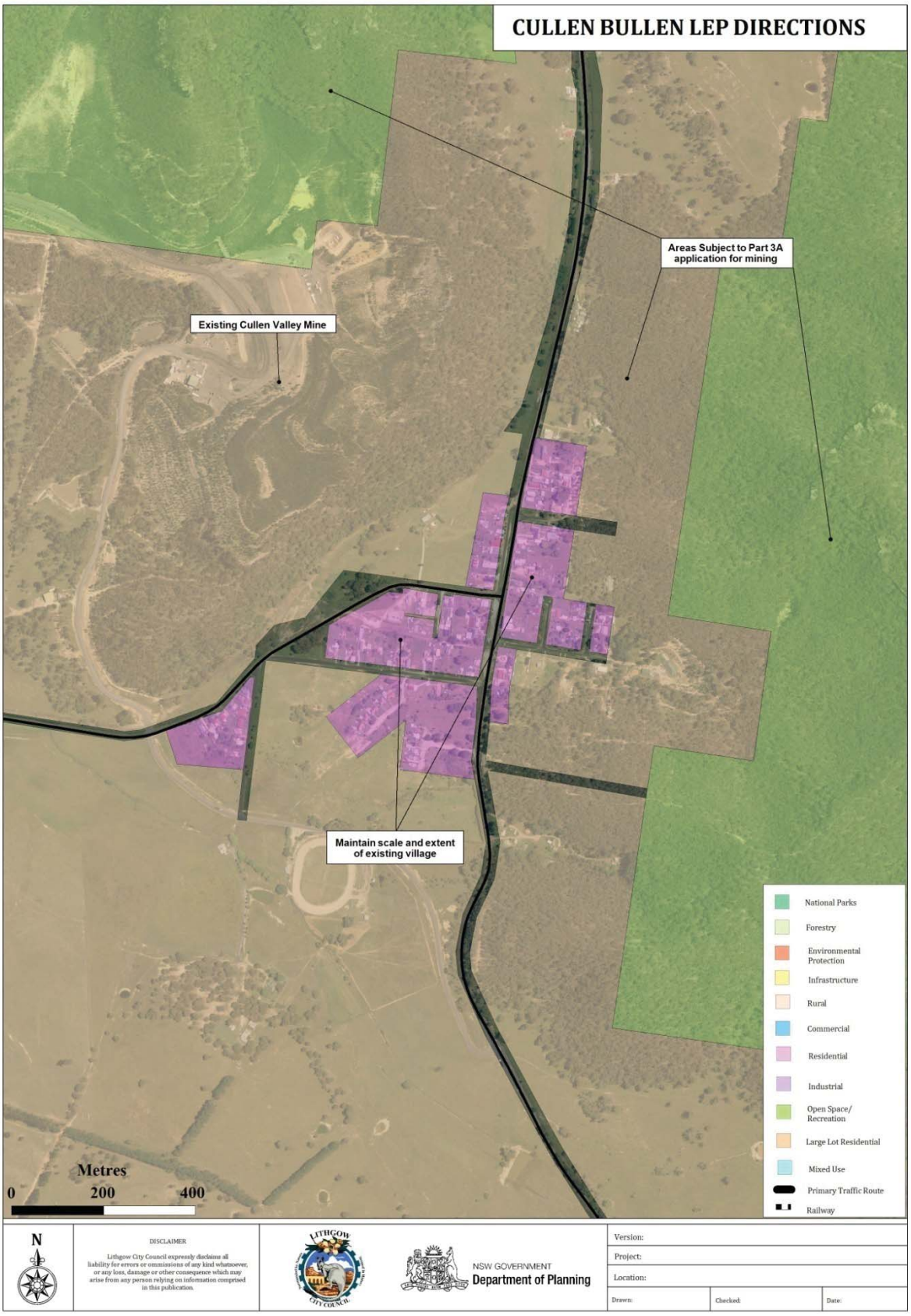
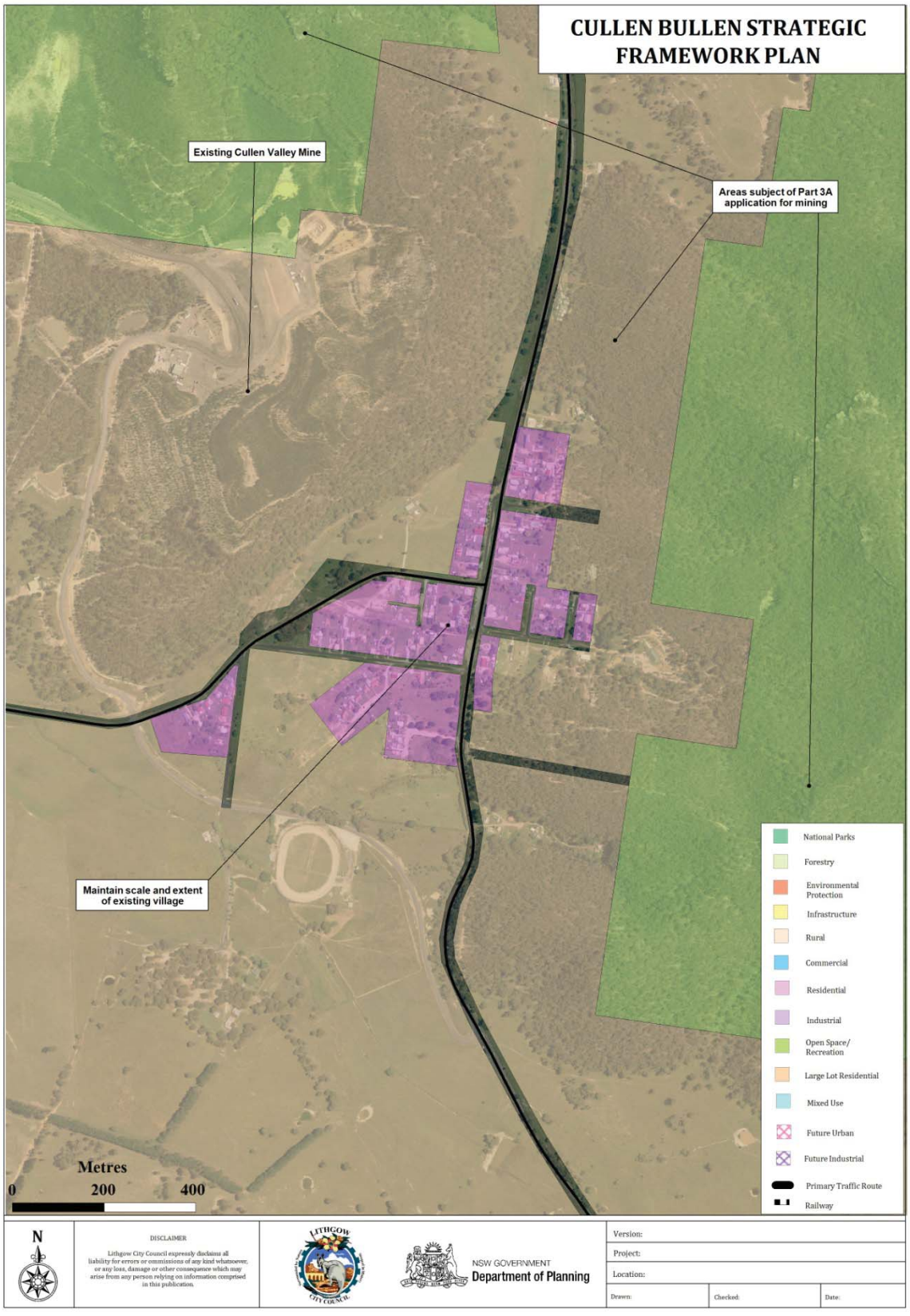


Figure 40. Cullen Bullen Strategic Framework Plan



CAPERTEE - Overview





Precinct Area	Capertee village area
Population	
Landscape Characteristics	The village has developed around the Castlereagh Highway and Railway Line to Mudgee. Significant vegetation areas are located south of the railway line, with these and other areas of substantial vegetation in the north and east providing a natural limit to the village.
Dominant Land Uses	The village contains a mix of land uses, reflective of its place in settlement hierarchy. Both new and old cottages, public school, police station, community hall, service station, hotel and vacant commercial premises and public open space areas are evident in the village setting. The village is a lower order centre, meeting basic day to day needs of the residents in the northern precinct.
Future Direction	It is evident that the village of Capertee has potential to contribute to servicing the daily social, educational and service needs of the wider Capertee and Northern Precinct community. Providing opportunities for village expansion to the west, will assist in meeting potential demand from business and tourism related development.





Figure 41. Capertee Existing LEP Provisions

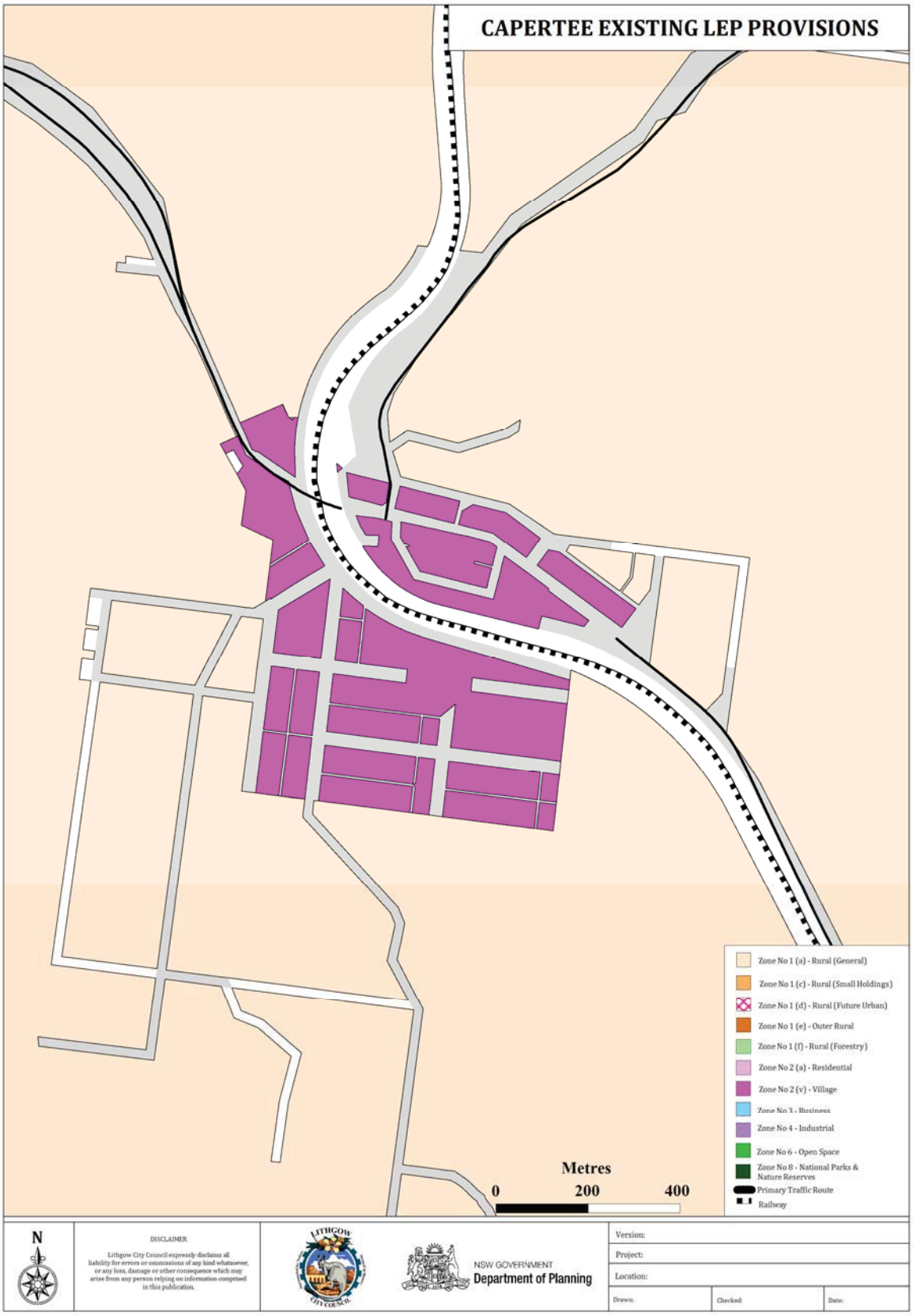


Figure 42. Capertee New LEP Directions

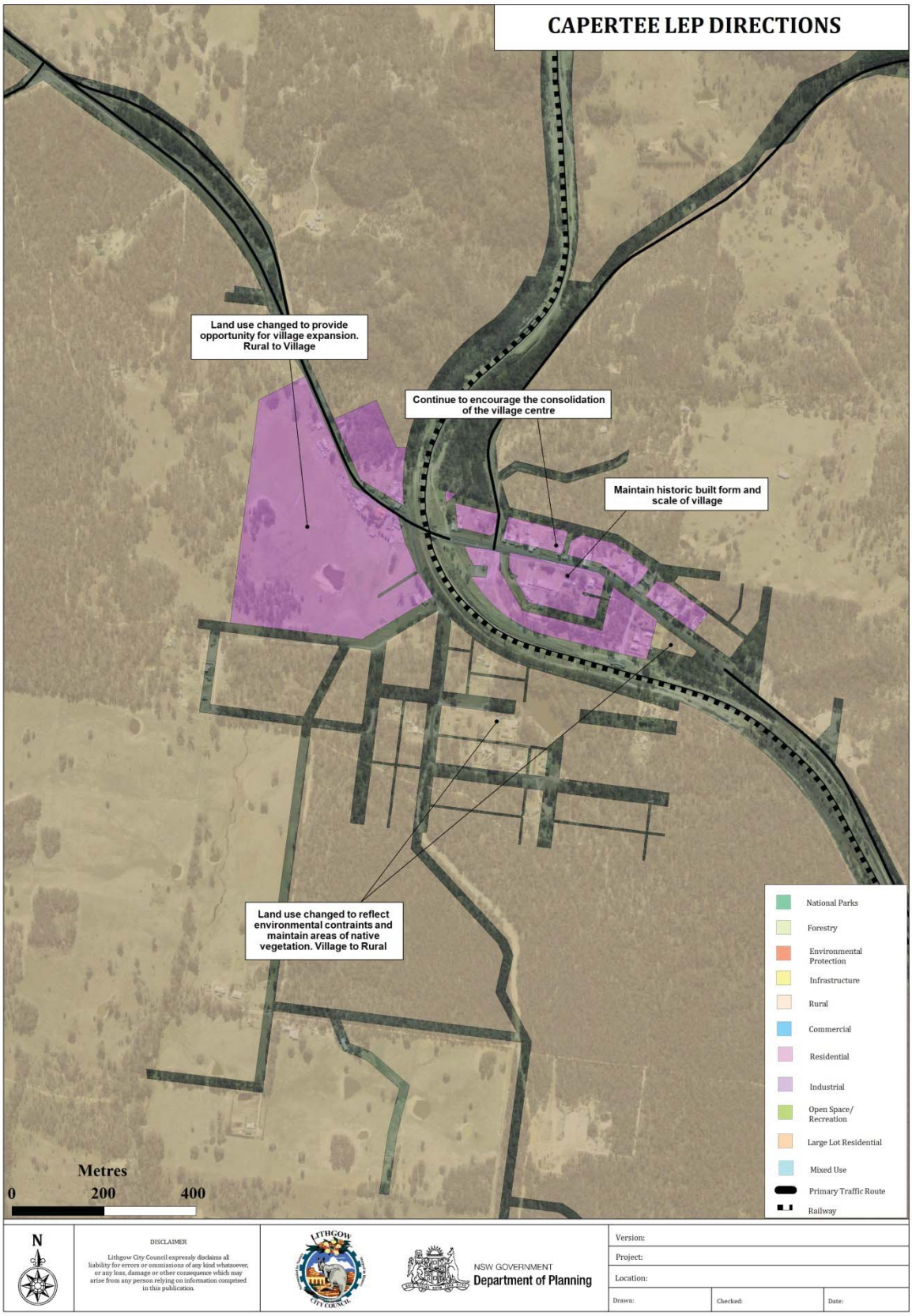
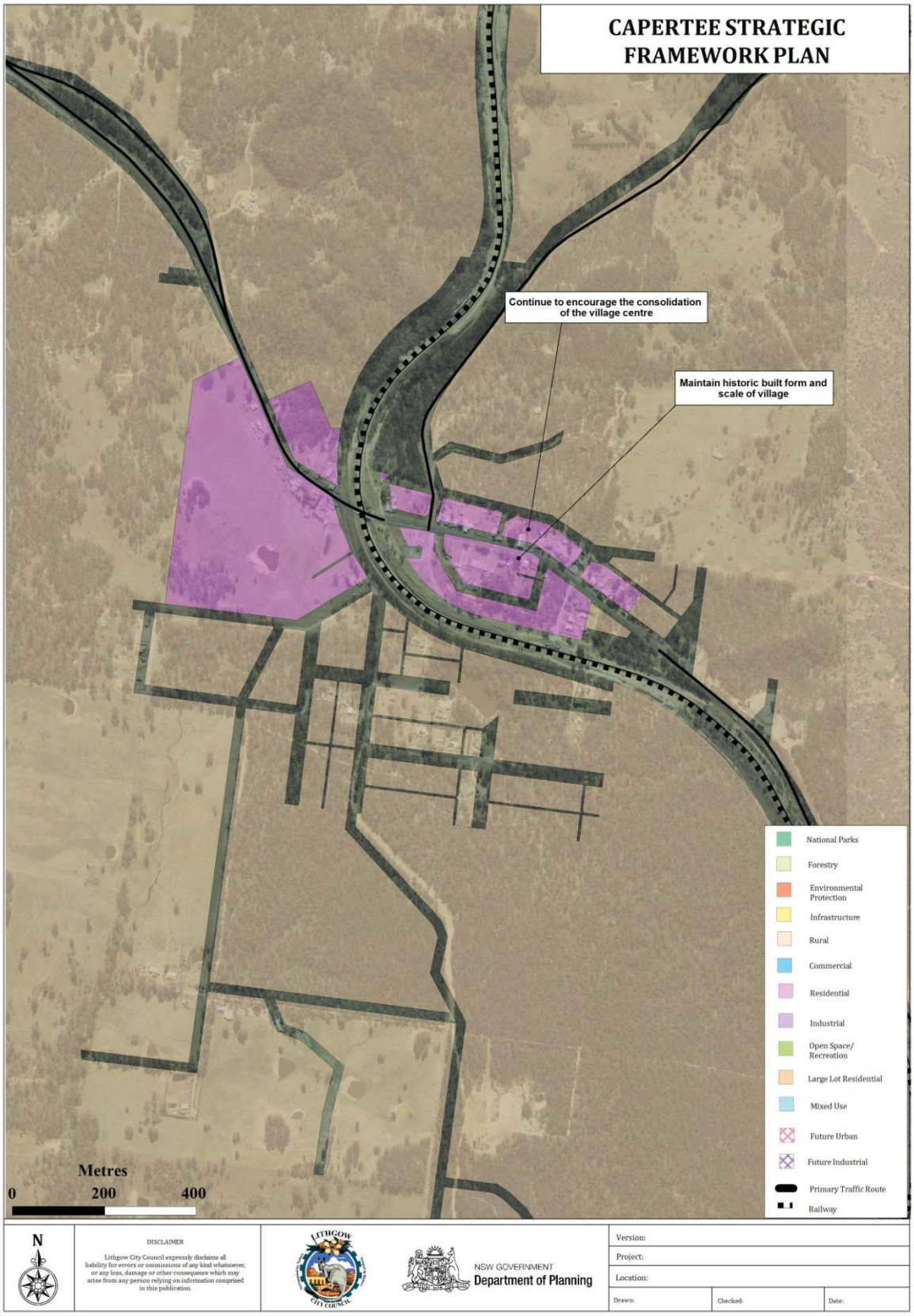


Figure 43. Capertee Strategic Framework Plan



STRATEGY REVIEW AND MONITORING

CONSULTATION PROCESS

Council will consult with the community, government agencies and key stakeholders to ensure the Strategy accurately reflects the land use planning issues facing the LGA and that the new planning approach is in line current policy and community values and expectations.

Following the public exhibition period Council will consider all submissions and prepare a final Land Use Strategy to be endorsed by the NSW Department of Planning.

REVIEW AND MONITORING

It is proposed to review the Land Use Strategy every five years following the release of the Census Population and Housing data to ensure that the document remains relevant, is achieving sound planning outcomes and meeting changing community needs.

DRAFT

APPENDIX 1 – SUPPLY AND DEMAND/CONSTRAINTS ANALYSIS

INTRODUCTION

A supply and demand analysis aims to provide an understanding of development trends within a catchment area over an established period. This section will provide an analysis of thirteen(13) years of development data captured across the Lithgow LGA, to establish development trends and produce an accurate picture of what the settlement pattern of the LGA looks like. It will also quantify land supply in terms of established settlement trends and expected future demands.

This analysis will:

- Establish settlement growth by zone and precinct. The precinct layers are presented in Figure 1.
- Determine future demand using population projection and established demand
- Provide quantified supply data across all core areas
- Provide constraints qualified supply data in the urban areas

The following methodology has been utilised in preparing this supply and demand analysis:

- Review and analysis of Council's Dwelling Monitor(1996-2009)
- Review and analysis of Council's Subdivision Monitor(1996-2009)
- Analysis of aerial photography
- Analysis of GIS data
- Review of Lithgow Local Profile(Section 5)
- Local Knowledge
- Analysis of census data and DIPNR data

This supply and demand analysis has been broken into several core areas:

1. SETTLEMENT: In this section information relating to demand and supply for dwellings across the LGA, for residential use will be explored. Data collected for the Residential(2a), Village(2v), Rural Small Holdings(1c), Future Urban(1d) and Rural Lifestyle(1a & 1e) is presented.
2. OPEN SPACE: The aim of the supply and demand analysis is to compare and contrast the quantity of open space with industry standards and other LGAs.
3. EMPLOYMENT LANDS: In this section information relating to commercial, retail and industrial lands is analysed.

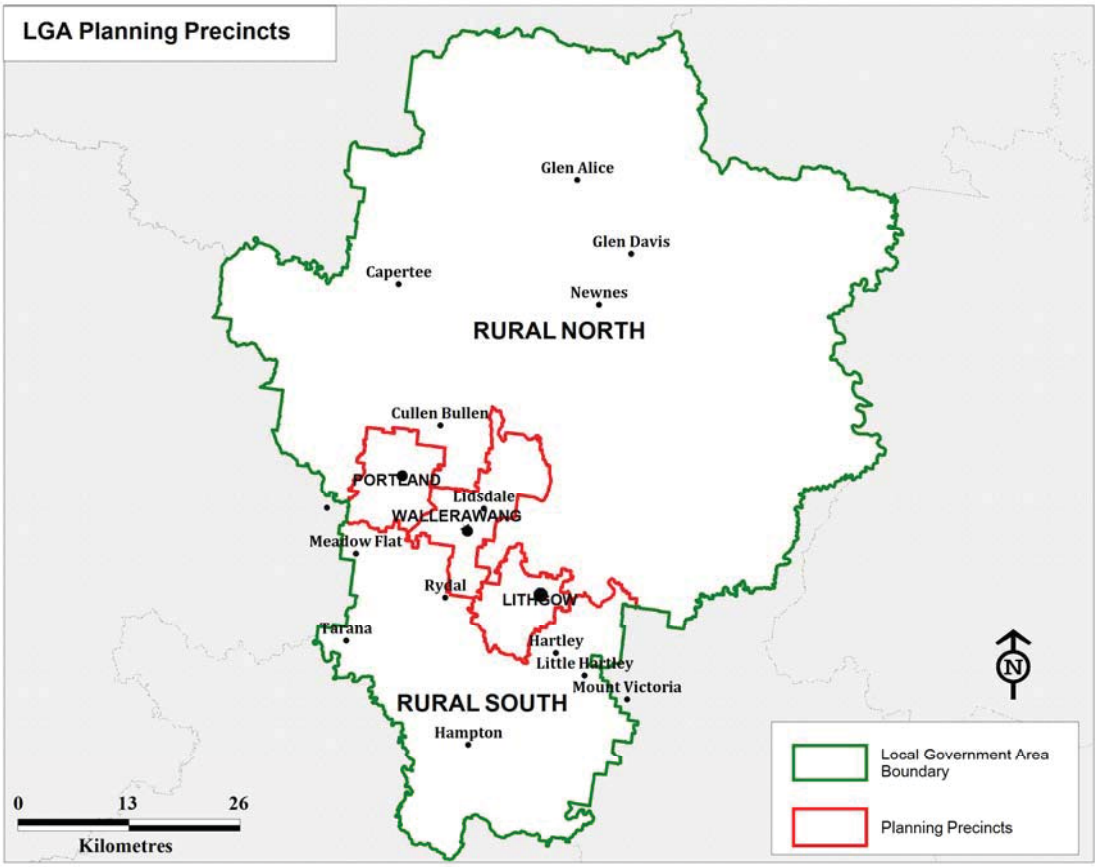
SETTLEMENT

INTRODUCTION

This section will consider the demand and supply for urban, rural and rural residential development throughout the LGA. Projected dwelling demand has been calculated to establish the life expectancy of the existing zoned land, and whether further opportunity areas for settlement growth need to be considered.

The existing pattern of settlement growth has been established in order to create a snapshot of where people are choosing to live across the LGA and analysing this data against a traditional settlement hierarchy. The adopted strategy directions for future settlement options; will be drawn from these findings in terms of projected dwelling demand and land supply for each precinct and zone within the broader parameters of the proposed settlement hierarchy).

Figure 1. LGA Planning Precincts



PROJECTED DWELLING DEMAND – URBAN & RURAL

EXISTING POPULATION

For the purposes of statistical analysis of the existing population and its distribution, the Local Government Area (LGA) has been split into planning precincts as shown in the following figure. These precincts were developed in line with the major population catchment areas in the LGA. They correspond to the areas on Council's online community profile located at Online Community Profile.

Table 1. Lithgow LGA Planning Precincts

Statistical Type	2001	2006	Change 2001-2006
Place of Usual Residence	19254	19759	+ 505
Estimated Resident Population	20568	20553	-15

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, and 2001.
Source: Australian Bureau of Statistics, Cat. No. 3235.0 - Population by Age and Sex, Regions of Australia, 2007
NOTE: Table totals may not equate with other similar tables due to randomisation of small numbers.

The distribution of this population and the average household size using the planning precincts is shown in the following table.

Table 2. Distribution of Population and Household Size

Planning/Statistical Precinct	2001	2006	Change 2001-2006
Lithgow Urban Area	11224	11204	-20
Average Household Size	2.4	2.32	⇩
Wallerawang	2155	2142	-12
Average Household Size	2.81	2.63	⇩
Portland	2213	2131	82
Average Household Size	2.56	2.45	⇩
Rural North	1931	2142	211
Average Household Size	2.68	2.59	⇩
Rural South	1814	2058	245
Average Household Size	2.71	2.67	⇩

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, and 2001
NOTE: Table totals may not equate with other similar tables due to randomisation of small numbers.

The above table shows clearly the trends of population distribution towards the rural precincts of the LGA.

PROJECTED POPULATION

There are several available sources of population projections for the Lithgow Local Government Area. All data sources vary due to methodology and context, however all represent a similar projection for a static to declining population projection into the future..

Table 3. Key Available Projections

Data Source	2011	2016	2021	2031
Department of Planning (2010)	20600	20600	20500	19900
Local Government Shires Association (2007)	20265	19799	19212	N/A
NSW Health (2009)	20616	20714	20654	20194
Department of Health and Ageing (Series B 2008)	20778	20839	20741	N/A
Centroc Western Research Institute Scenario B (2008)	20991	21459	21766	21556

Source: LCC from published data sources listed

As can be seen in the above table, population projections can vary depending on assumptions involving fertility and migrations rates and historical data.

Population projections reported here represent a view of future populations based on demographic modelling which assumes that historical trends will continue. Notwithstanding the population projections, Lithgow City Council's 2007 Strategic Plan, adopted a target annual growth rate of between 1% and 2% for planning purposes

The population targets to be adopted by Lithgow City Council are just that – and represent the aim that Council has set itself and the community, which is coupled with deliberate policy actions to assist in meeting the target.

The variation between the lowest population projections (Department of Planning 2010) and Council's 2007 target is shown in the table below.

Table 4. Variation in Populations

Projected Population Growth					
Scenarios	Year				
	2011	2016	2021	2026	2031
DoP Pop Projections	20600	20600	20500	20300	19900
Low Growth Scenario (0.5%)		21120	21653	22199	22759
Medium Growth Scenario (1%pa)		21650	22755	23916	25136
Population Based on Dwelling Demand (1.1%pa)		21776	22952	24128	25304
High Growth Scenarios (2%pa)		22744	25111	27725	30611

It is considered that Council should revise down the population targets of the 2007 Strategic Plan to a more achievable target rate of between 0.5 and 1%. Such target is cognisant that the LGA currently has a high unoccupied dwelling rate of 14.9% (equivalent to 3,275 people) and the likelihood that household size and structure will continue to decrease; meaning that more houses will be needed to house less people.

Such a target will be kept under continual review and modified accordingly should key drivers such as employment generating development, improved road and rail infrastructure to the Central West and changes in government policy to encourage further decentralisation, occur.

DWELLING APPROVALS - LGA

From the analysis of Council's dwelling monitor, 1269 dwellings were approved across the LGA for the period 1996-2009. This equates to an average of ninety eight(98) dwellings per year.

Dwelling approval rates were highest in the period 1999–2000 and 2002 – 2005. These periods coincide with residential land releases in both the rural residential and urban areas of the Lithgow LGA. Aside from these spikes in dwelling approvals, the rate of dwellings approvals is relatively stable across the selected data capture period.

Over the thirteen (13) year period, the following facts were evident:

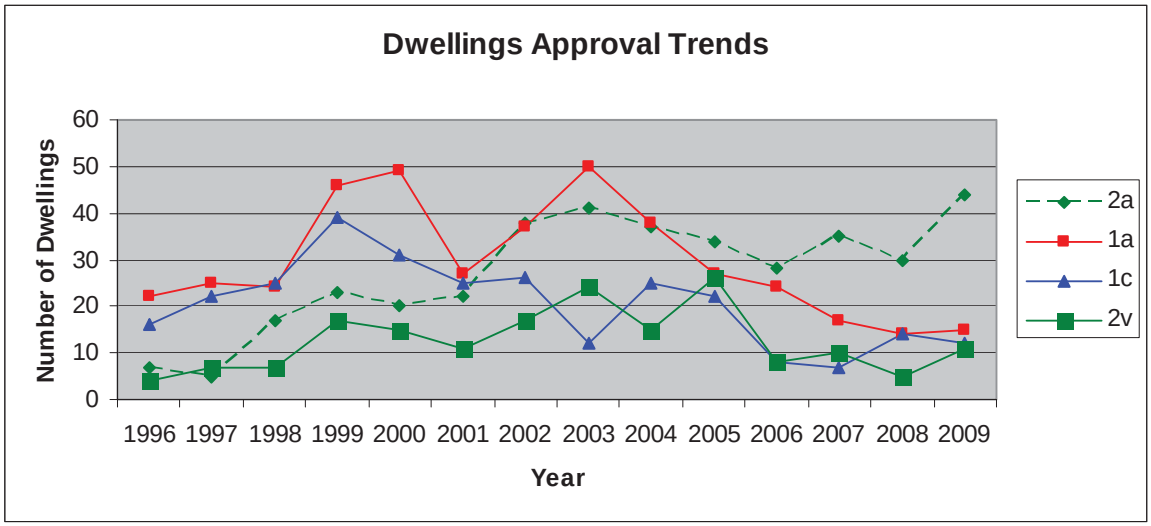
- 55.1% of dwelling approvals occurred in the rural areas of the LGA i.e zones 1(a) and 1(c).
- 30.3% of dwelling approvals were recorded in the Lithgow urban area. i.e 2(a) & 1(d)
- 6.1% of dwelling approvals were recorded in the village area of Portland i.e 2(v) & 1(d)
- 6.6% of dwelling approvals were recorded in the village area of Wallerawang. i.e 2(v) & 1(d)
- 3.9% of approvals were recorded in the other village areas of Tarana, Rydal, Cullen Bullen & Capertee

Table 5. Dwellings by Zone and Year

Dwellings By Zoning By Year													
Year	2a			1a		1c		1d		2v		6		Total by Year
1996	7			22		16		0		4				49
1997	5			25		22		2		7				61
1998	17			24		25		0		7				73
1999	23			46		39		1		17				126
2000	20			49		31		2		15				117
2001	22			27		25		1		11				86
2002	38			37		26		1		17				119
2003	41			50		12		0		24				127
2004	37			38		25		1		15				116
2005	34			27		22		1		26				110
2006	28			24		8		0		8				68
2007	35			17		7		1		10				70
2008	30			14		14		0		5		2		65
2009	44			15		12		0		11				82
	381			415		284		10		177		2		1269
% of total by zone		30%			32.70%		22.40%		0.70%		14.00%		0.20%	100.00%

Source: Lithgow Approvals Monitor. Note: the years 1996 – 2009 include data from the Greater Lithgow City Council area only.

Figure 2. Dwelling Approval Trends



DWELLINGS BY ZONE & PRECINCT

The dwelling data has been extrapolated into both zone and precinct, in order to show on a catchment basis where settlement has occurred over the last thirteen (13) years.

The following table demonstrates the spread of dwelling approvals across the LGA over the period 1996-2009. It also identifies how achieving population growth of 1%pa will impact the population of each precinct, if current levels of dwelling demand within each precinct is to continue.

Table 6. Dwelling Approvals Across the LGA

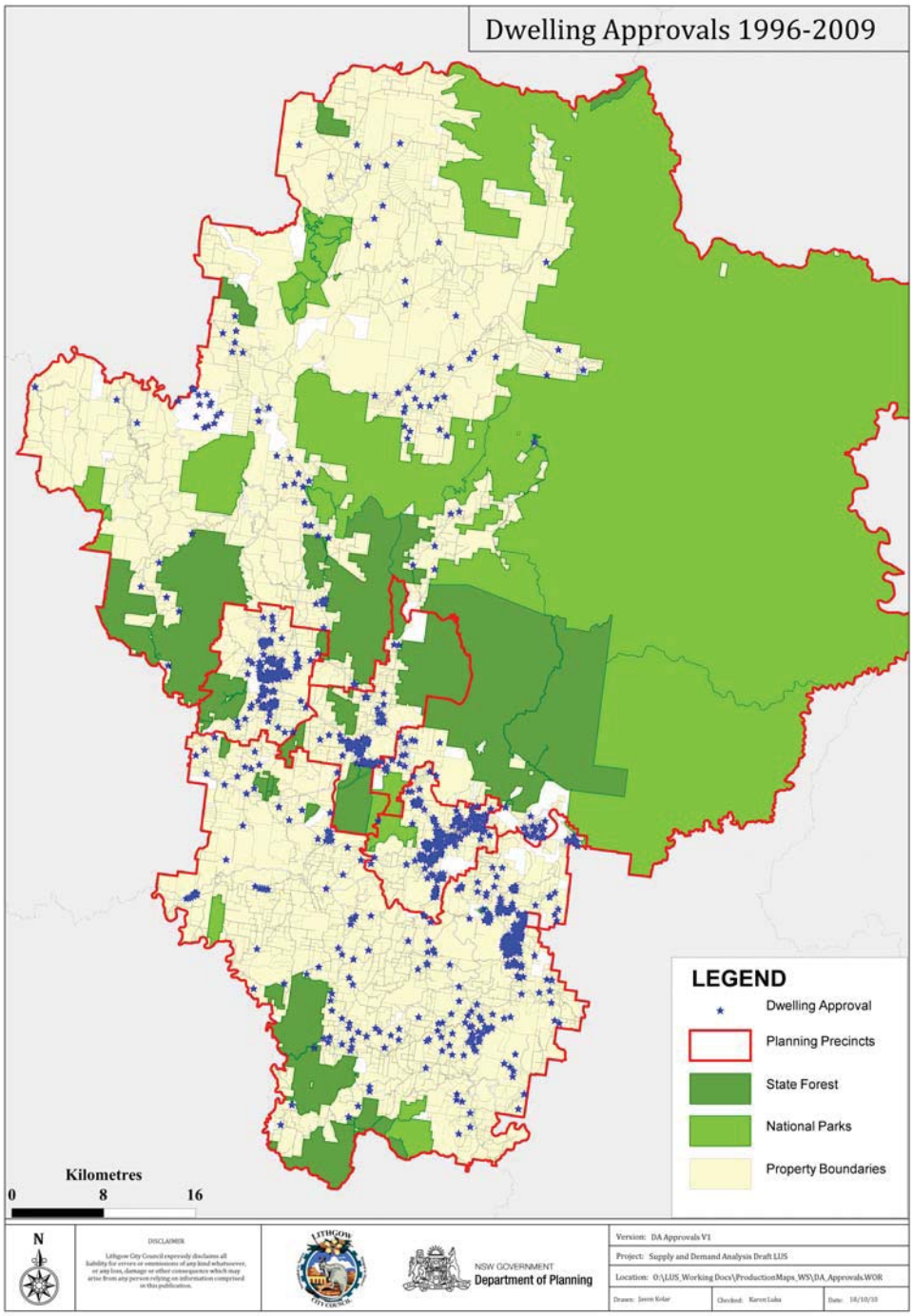
Zone/Precinct	Yearly Demand 1996-2009	Dwelling Demand 2031(20yrs)	Pop Increase based on Dwelling Demand
Lithgow			
2a	29	580	
1a	4	80	
1c	2	40	
1d			
2v			
Precinct Total	35	700	1680
Wallerawang			
2a			
1a	2	40	
1c	2	40	
1d			
2v	6	120	
Precinct Total	10	200	480
Portland			
2a			
1a	2	40	
1c	5	100	
1d			
2v	6	120	
Precinct Total	13	260	624
Rural Nth			
2a			
1a	8	160	
1c	2	40	
1d			
2v	0.5	10	
Precinct Total	10.5	210	504
Rural Sth			
2a			
1a	17	340	
1c	11	220	
1d			
2v	2	40	
Precinct Total	30	600	1440
Total	98.5	1970	4728

Source: Lithgow Approvals Monitor. Note: the years 1996 – 2009 include data from the Greater Lithgow City Council area only.

It is noted that based on current demand over the next twenty(20) years, the projected Rural South population growth would be similar to that of our main urban centre, Lithgow. It is also evident that the demand for dwellings outside our urban centres has not just been directed to the larger lot residential 1c areas, with strong demand recorded in the general rural zone.

The fragmentation generated by this proliferation of development outside the urban centres is represented in the map below.

Figure 3. Dwelling Approvals 1996-2009



Development data indicates that the demand for medium density development continues to be low, however, it is anticipated that the demand for this type of development will increase as our population ages. We have already seen the results of this trend with the approval of two(2) large urban retirement villages in South Bowenfels area of the Lithgow precinct.

SUPPLY – LAND AVAILABLE FOR A DWELLING

A review of the supply of lands throughout the LGA able to accommodate a dwelling or able to be subdivided to accommodate a dwelling, has revealed that large areas of land remain in both urban and rural areas for residential settlement.

However, within the urban settlement areas, a strategic constraints analysis has been applied and has revealed that some of these areas are potentially unsuitable for residential settlement. As a consequence, some lands have been discounted either partially or fully from the potential land supply. The urban supply areas are shown in Table 27 with a full copy of the urban supply analysis and constraints mapping discussed later in this chapter.

Table 7. Key Constraints Considered in the Urban Areas

Criteria	Assessments tool/s
Vegetation coverage	Environmental Sensitivity Area maps SLWCA Stage 1 threshold maps for SCA Aerial photographs/ mapping Local Knowledge
Slope	Environmental Sensitivity Area maps SLWCA Stage 1 threshold data maps for SCA Topographic maps and aerial photographs Local Knowledge
Drainage/Water	Environmental Sensitivity Area maps SLWCA Stage 1 threshold maps for SCA Topographic maps and aerial photographs Local Knowledge
Access to key service	Liaising with Council GIS data

Development potential may also be constrained as a result of site specific constraints and servicing implications beyond what has been estimated within this supply and demand analysis.

The contribution that these lands may make to residential supply may need to be further investigated (there may be, for example, an opportunity to 'back-zone' these lands to provide for development at a rural-residential scale – and as such they may still make some contribution to the residential land supply).

In the rural areas, the primary constraints have not been applied to the raw supply. It is the compound effect of these primary physical constraints together with the application of the concentric settlement hierarchy and adoption of applied growth management principles that will combine to determine the overall constraints to supply in the rural areas.

This discussion will be dealt with in detail in Chapter 9 of the LUS.

SUPPLY CATEGORIES

In order to quantify the supply of zoned land (with a dwelling entitlement) throughout the LGA, supply has been categorised based on its capacity to service demand in the immediate to short term. Category A represents supply that is readily available to the market in the immediate to short term. Category B contains rural lands that require subdivision in order to enter the market as land supply. These lots would be more likely to enter the market supply on the short to medium term. Category C supply is considered a medium to long term form of supply.

Table 8. Definition of Categories

Category	Land Supply
Category A	Land within the urban settlement areas both vacant and with a dwelling with subdivision potential; vacant infill in the urban areas; vacant land within the rural zone with no further subdivision potential
Category B	Vacant land in the rural zone with further subdivision potential
Category C	Land with a dwelling in the rural zone with subdivision potential

Using the above criteria, supply totals have been estimated for each category. Although it is recognised that each supply category has differing levels of market readiness all categories have been incorporated in supply totals for this analysis.

The above figures for rural 1(a) supply include subdivision potential. It should be noted that this calculation was a purely strategic exercise and was not based on the reasonableness of subdividing land into 40ha lots.

Table 9. Supply Totals for Each Precinct and Category

LGA Supply Across all Zones						
Category A	Lithgow	Portland	Wallerawang	North	South	Total
Vacant Holdings 1a 40><80	10	2	5	84	103	204
Vacant Existing Holdings 1a	25	11	7	131	111	285
Vacant Concessionals 1a	8	0	0	88	65	161
Vacant 2a	1352					1352
Vacant 2v		801	396	42	33	1272
Vacant 1c	25	192	107	11	247	582
Category B						
Subdivision Vacant Lots 80ha> 1a	68	52	42	304	214	680
Category C						
Holding 80ha> 1a with dwelling	50	54	69	1199	1260	2632

RURAL SUPPLY SUMMARY

The following points for rural areas can be drawn from the supply data provided above.

Category A

- There are 399 remaining existing holding with a dwelling entitlement; 356 are located in the Rural North and South precincts
- 109 vacant concessional allotments remain predominantly in the Rural North & South precincts
- 158 lots are available for rural lifestyle across all precincts, in the 40-80ha range.

Category B

- 940 lots could added to rural supply, through the creation of 40ha lots in the Rural Nth & Sth precincts

Category C

- 2500 lots could be added to rural supply, through the creation of 40ha lots in the Rural Nth & Sth precincts
- 258 lots are available in the rural precincts for rural/residential dwellings(Hartley, Clarence & Dargan)

Village –Supply

Table 10. Overview of the Village Zones

Town	No# of Properties	Total Area of Properties	Average Area per Property	Est No# of Vacant Holdings	Lot Potential 4000sqm
Capertee	60	199537.87	3325.63115	20	42 lots
Cullen Bullen	91	183572.15	2017.276396	9	0 lots
Rydal	39	93132.14	2388.003677	6	5 lots
Tarana	24	168597.45	7024.893708	7	28 lots
Totals	318	1214917.84	3820.496366	43	

This analysis shows that there is little to no residual capacity for any future urban growth within the existing village areas of Cullen Bullen & Rydal. Although the lot potential in Capertee appears adequate, the majority of this supply is contained within the heavily vegetated areas of the south, the majority of which is also in Crown ownership. These constraints would substantially reduce supply in the Capertee area.

Lot potential in the villages has been determined having regard to the size of allotments required for satisfactory containment of on-site effluent i.e. 4000m².

URBAN SUPPLY SUMMARY

The following points for the urban areas can be drawn from the data provided above.

Based on existing zoned land (less constraints):

- 1352 lots are able to be created/provided for a dwelling in the Lithgow urban area.
- 801 lots are able to be created/provided for a dwelling in the Portland urban area
- 396 lots area able to be created/provided for a dwelling in the Wallerawang urban area
- 324 lots for large lot residential are available adjacent to the three urban township
- Limited potential(1lot)remains for supply of large lot residential in this category at Lithgow
- Limited supply capacity remains within the 2v zone in the rural villages of Capertee, Cullen Bullen, Rydal & Tarana for further urban settlement (refer to Table 10)

DEMAND & SUPPLY

Table 11. Projected Dwelling Demand Compared with Land Supply

Demand And Supply by Precinct/Zone						
Zone/Precinct	Dwelling Approvals 1996-2009	Avg Yearly Demand	Land Supply	Projected Dwelling Demand 2031(20yrs)	Pop Increase	Land Supply/Years
Lithgow						
2a	383	29	1352	580	1392	46
1a	49	4	141	75	180	37.6
1c	26	2	25	40	96	12
1d	4		-627	6	14	
Marrangaroo Investigation Area			-1326			
Precinct Total	462		1358	704	1689	95.6
Wallerawang						
1a	17	2	103	26	62	79
1c	26	2	107	40	96	53.5
1d	4		-687	6	14	
2v	80	6	396	123	295	66
Precinct Total	127		606	195	468	198.5
Portland						
1a	20	2	99	30	72	66
1c	62	5	192	95	228	38.4
1d	2		-381	3	7	
2v	76	6	801	116	278	133
Precinct Total	160	13	1092	244	585	237.4
Rural Nth						
1a	104	8	1930	160	384	241
1c	26	2	11	40	96	5
2v	6	0.5	42	9	21	84
Precinct Total	136	10.5	1983	209	501	330
Rural Sth						
1a	225	17	1272	346	830	76
1c	144	11	247	221	530	22
2v	15	2	33	32	76	16.5
Precinct Total	384	30	1552	599	1436	114.5
Total	1269dwellings		6591	1951dwellings	4682persons	195yrs average

As illustrated in the above table, the supply of land varies considerably across all zones and precincts. Overall, the LGA has an average of 69yrs supply based on established demand.

However, the analysis has highlighted the deficiency of supply in some of the specific land use categories in some precincts.

The undersupply of rural residential(1c) in the Lithgow precinct is apparent, as is the undersupply of village lots in Rydal and Capertee.

The supply of rural residential(1c) in the Rural Nth is also shown to be insufficient to meet the projected demand over the next 20 yrs. However the supply of land generally for a dwelling is adequate to cope with overall demand within these precincts.

The provision of additional large lot residential areas to supplement supply within the urban precinct of Lithgow, together with the existing supply at Portland and Lidsdale, should satisfy the demand anticipated for this particular type of land use.

CLUSTERED GROWTH – SUPPLY SCENARIOS

By adopting a target population growth of 1%pa as identified in this analysis, and growth management principles based on a recommended settlement hierarchy, the demand on supply of land within each land use category and precinct will be challenged in different ways to that identified by current settlement trends. In the table below, different settlement scenarios have been utilised to demonstrate how the application of these fundamental planning principles may change the look of the supply and demand across the precincts and land use categories into the future.

Table 12. Amend tables for existing supply

Zone/Areas	Scenario One Demand Share	Demand over 20 years	Supply in Years	Estimated Supply	Scenario Two Demand Share	Demand over 20 years	Supply in Years
Standard Residential							
Lithgow	50%	980	27yrs	1352	45%	882	30yrs
Portland	7%	137.2	116yrs	801	11%	215.6	74yrs
Wallerawang	7%	137.2	58yrs	396	11%	215.6	37yrs
Clustered Rural Lifestyle							
Lithgow	5%	98	5yrs	25	5%	98	5yrs
Portland	5%	98	39yrs	192	10%	196	19yrs
Wallerawang/Lidsdale	3%	58.8	36yrs	107	5%	98	21yrs
Villages	4%	78.4	19yrs	75	4%	78.4	19yrs
Rural Lifestyle	5%	98	723.4yrs	3545	5%	98	723.4 yrs
Clustered Rural Lifestyle	14%	274	42yrs	582	5%	98	118yrs

Source: LCC Based on current dwelling demand average 98 per annum Based on current MLS for Rural Lifestyle (40ha) and Clustered Rural Lifestyle (2ha)

What the above table illustrates is that on a LGA wide basis, current supply for each land use category is able to accommodate increased dwelling demand generated as a consequence of strategies introduced to reduce the land supply in the rural zones. i.e an increased minimum lot size. Even under these hypothetical scenarios, no further land rezoning would be required as current supply is adequate to meet projected demand for each land use category.

Urban Demand and Supply Summary

- There is 46 years supply of residentially zoned land within Lithgow, 66 years supply in Wallerawang and 133 years supply in Portland.
- In the Lithgow area, there are approx 812 lots available or able to be provided for a dwelling within the South Bowenfels area alone.
- Land has been identified in the West Bowenfels and Magpie Hollow Rd area for future urban expansion(1d zone). Following a constraints analysis of these areas a further 637 or 193 residential lots would be available for future urban use in these areas at low density (8houses/ha). This equates to an additional 28 years supply based on current demand.

- An area at Wallerawang West has been identified for future urban use (1d zone). There is a lot potential of 687 lots within this area. This equates to an additional 114 years supply based on current demand for the Wallerawang area.
- There is an undersupply of large lot residential land within the urban settlement area of Lithgow. The supply at Magpie Hollow Road could be utilised for this purpose.
- The rural residential subdivisions on the fringe of the Portland urban centre, have met 38% of new dwelling demand in this precinct. While the residential area has contributed to 47% of dwelling demand.
- Two pockets of future urban 1(d) land have been identified at Portland South and Portland East. The constrained supply in Portland South allows for no additional future development in that area. The Portland East area has an available supply of 381 lots identified for future urban use. This equates to an additional 63 years supply based on current demand.
- Infrastructure issues particularly within the Portland area, may necessitate the revision of zoning for some of the undeveloped residentially zoned land in the short to medium term.
- The Marrangaroo Investigation area north of Lithgow is an area that has been identified for future urban expansion. This area has a constrained supply of approx 1326 lots (mix of low density residential & large lot residential). This equates to a further 45 years of supply based on current demand trends.
- The 2v lands within the rural villages of Cullen Bullen, Capertee, Rydal and Tarana have minimal supply remaining for urban settlement having regard to the requirement for the satisfactory provision of on-site effluent disposal (4000m^2 per allotment).

Rural Lifestyle Demand and Supply Summary

- The rural 1(a) zone has met 32.7% of total dwelling demand over the last thirteen years, which is more than that recorded for the Lithgow urban centre (30%)
- The Rural South precinct, based on current supply and demand trends, will continue to grow at a similar rate to the Lithgow urban precinct.
- Under current planning provisions in Lithgow City LEP 1994, the Rural North and Rural South precincts have the potential to supply 3202 rural lifestyle lots to the overall supply total. If all lots are developed with a dwelling this would equate to a potential additional population in these rural areas of over 8000 people.
- Existing holdings add 285 lots to the rural 1(a) supply across all precincts.

OPEN SPACE

SUPPLY ASSESSMENT

Overall, there is a large amount of land dedicated for open space across the LGA. However there are large variances in the:

- quantity of open space
- number of parks
- distribution of open space
- differing level of embellishments
- level of maintenance of open space.

Table 13. Snapshot of the Distribution of Open Space Types Across the LGA.

Open Space - Supply in Hectare				
Planning Precinct	Recreation - Local	Recreation - District	Sport	Total
Lithgow	6.26	10.69	40.16	57.1
Portland	5.38		6.75	12.14
Wallerawang	1.77	40.39	4.91	47.06
Rural North	0.95		0.38	1.32
Rural South	0.49		0.31	0.8
Total	14.84	51.08	52.5	118.42

Over 1,150ha of land (more than 220 individual properties) were audited as part of this assessment. The focus of the audit was public recreation land and open space designated under Council's control. As such, the assessment excluded national parks and state forests, privately owned recreation and sporting lands.

DEMAND ASSESSMENT

Table 14. The Demand for Open Space Assessed Using Range and Threshold as Base Identifiers for Calculation.

Range - Accessibility Standard			
Infrastructure Type	Local	District	City Wide
Recreation Park	0.5km in urban areas	2.5km in urban areas	n/a
Sports Park	n/a	2.5-5km in urban areas	LGA

Threshold - Rate of Land Available(ha/1000people)			
Infrastructure Type	Local	District	City Wide
Recreation Park	1	0.5	n/a
Sports Park	2.5		

SPATIAL DISTRIBUTION OF OPEN SPACE

Figure 4. The distribution of open space across the major urban precincts is illustrated in the following diagrams.

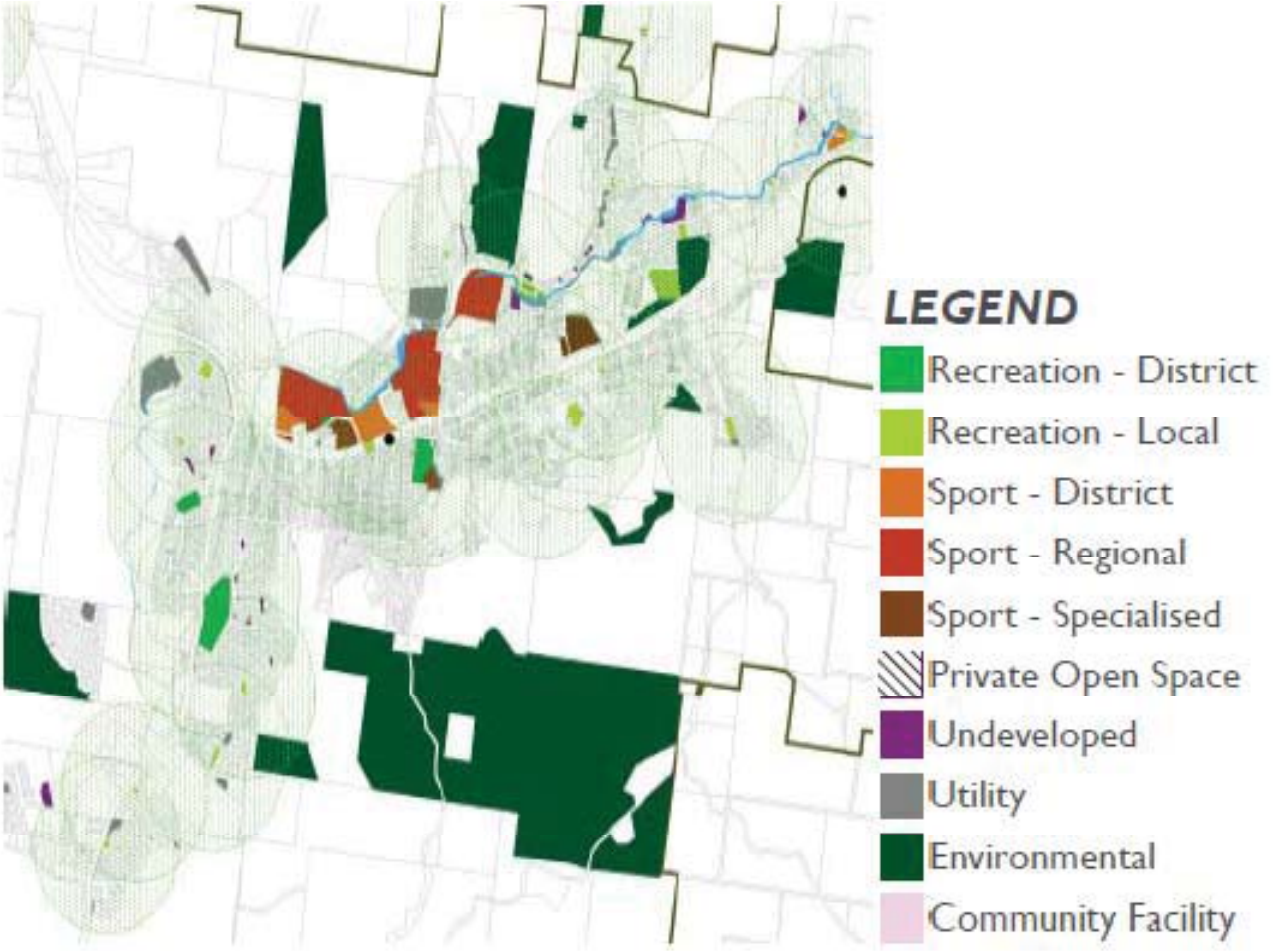


Figure 5. Open space in Portland with 500m radius around recreation parks

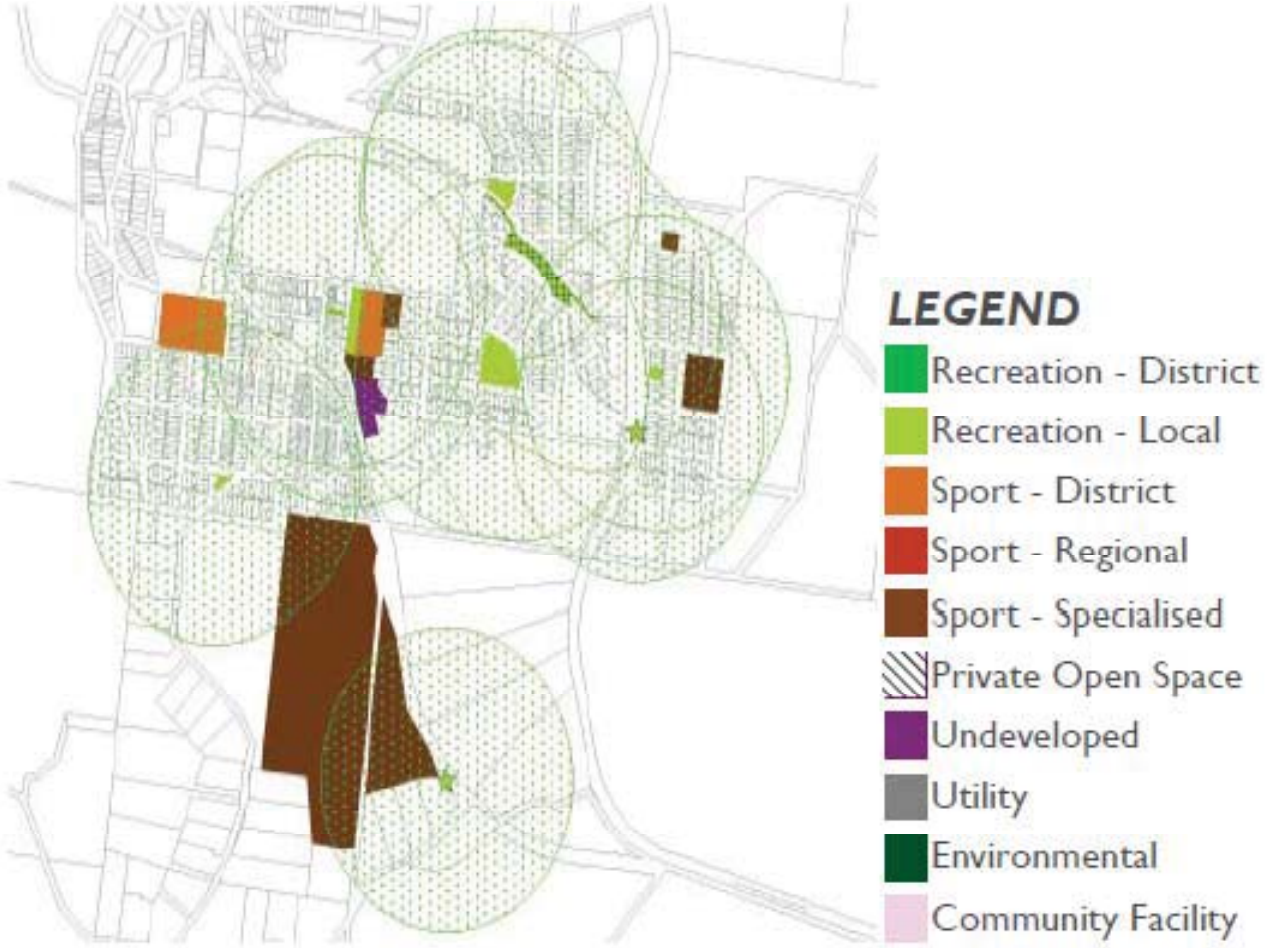
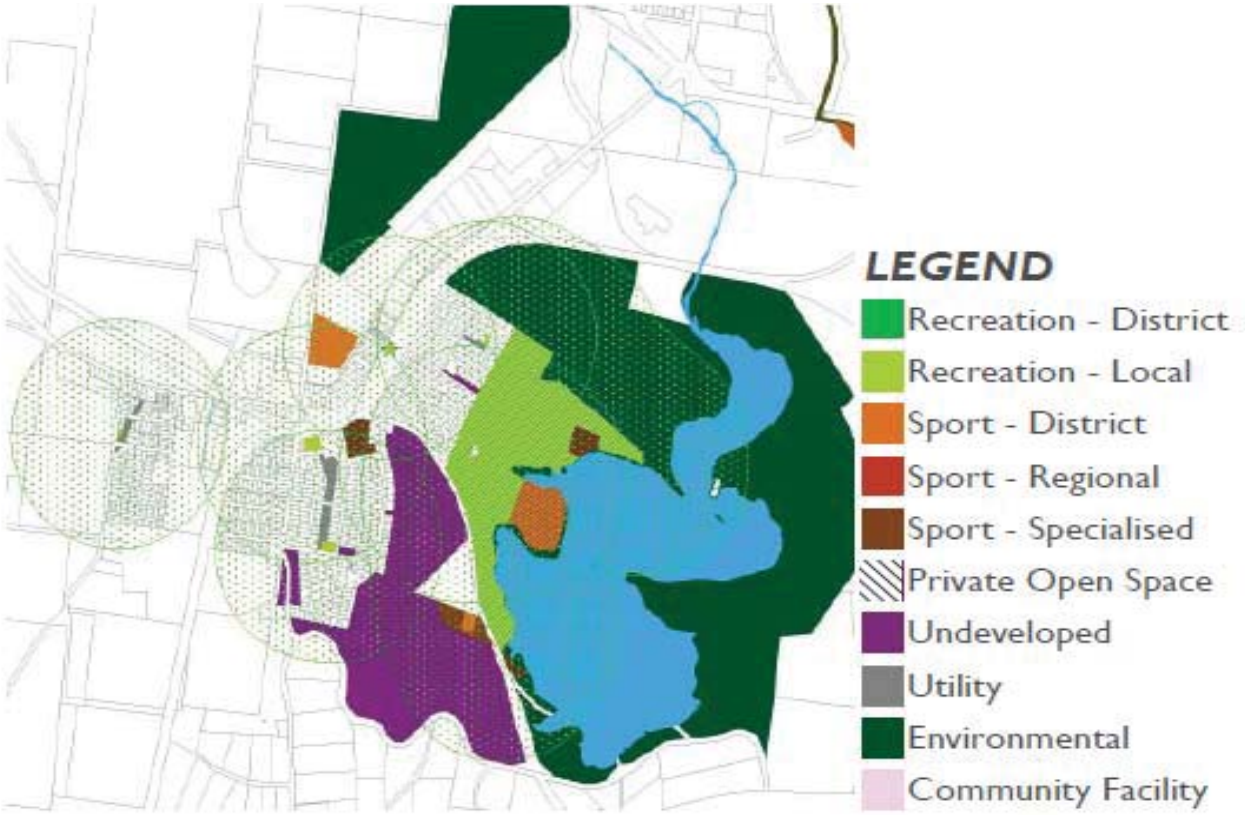


Figure 6. Open space in Wallerawang with 500 m radius around recreation parks



The above diagrams demonstrate the adequacy of the open space network in regards to accessibility for users. In the Rural North & South precincts, the Open Space Recreational Needs Study has identified that at a regional level, the provision of open space is adequate for these areas.

The table below illustrates how the demand for open space is distributed across all the planning precincts. It is obvious that the highest demand will occur in areas of largest population i.e our urban centres of Lithgow, Wallerawang and Portland.

Table 15. Demand for Open Space Distribution Across Precincts

Open Space - Demand in Hectare				
Planning Precinct	Recreation - Local	Recreation - District	Sport	Total
Lithgow	11.03	5.52	27.58	44.12
Portland	2.13	1.07	5.33	8.53
Wallerawang	1.74	0.87	4.35	6.96
Rural North	2.48	1.24	6.2	9.92
Rural South	1.99	1	4.98	7.96
Total	19.38	9.69	48.44	77.5

SUPPLY & DEMAND

The gap analysis for supply and demand for open space is based on the following assumptions:

- a standard of 4 ha per 1,000 people, comprising 2.5ha for Sports Parks and 1.5ha for Recreation Parks
- population data from Lithgow City Council
- the analysis focuses only on those park types which form part of the established open space network. Other urban open space areas such as waterways, environmental parks, roadside stops, land primarily used for utility purposes and vacant or undeveloped parks have not been included
- analysis excludes specialised sports parks (although these have been considered at a broad level)
- no account has been taken of private sport and recreation facilities (although these have been considered at a community level).

Table 16. Open Space – Supply and Demand

Open Space - Supply & Demand				
Planning Precinct	Recreation - Local	Recreation - District	Sport	Total
Lithgow	-4.78	5.18	12.58	12.98
Portland	3.25	-1.07	1.42	3.61
Wallerawang	0.03	39.52	0.56	40.1
Rural North	-1.54	-1.24	-5.83	-8.6
Rural South	-1.5	-1	-4.66	-7.16
Total	-4.54	41.39	4.07	40.92

Based on the desired standards of service (DSS) for quantity of land, Council generally has an oversupply of open space. However, this is an elementary analysis as it does not consider the range, access or quality of the existing supply, nor more importantly, the location of land.

Overall, Council has many more parks than it requires from a catchment perspective. This is often the case as land comes into Council's possession and is developed as parkland without the land meeting the desired standards.

The assessment is solely based on functioning open space; that is, it has excluded all other land in Council's open space layer that is not yet developed into a park, or land that has a dual utility function (detention basins, telecommunication easements etc).

Open Space Demand & Supply Summary

- Council generally has an abundance of land used for, or capable of being used for, open space.
- Council has more parks than it requires on a catchment basis. The opportunity exists to consider disposal of open space land that is surplus to requirements.
- The LGA has a significant amount of land that is currently being considered as open space, however the priority recommendations of the Draft OSRNS should be adopted to ensure the available supply is suitable to meet demand in both function and form.
- The quantity of land available for recreational needs is likely to be sufficient for the foreseeable future.

EMPLOYMENT LANDS

The supply and demand of employment lands has been undertaken and analysed in relation to:

1. Industrial Land
2. Retail and Commercial

INDUSTRIAL LAND

REGIONAL CONTEXT

Due to the range of permissible zones for industrial development it is difficult to determine actual industrial lands take up rates. On review of Lithgow's Dwelling and Subdivision Monitor there appears to be approximately one subdivision per year (for the period 1996 – 2006) relating to industrial development. Most industrial activity has been ancillary to existing mining or extractive industry development.

With the limited demand data available, there is no statistical indication of the demand for industrial land, however anecdotal information suggests that trade has been lost to other regional centres such as Bathurst and the sub region of Blayney, Cabonne and Orange.

Lithgow LGA appears to be extremely well positioned to maximise on industrial developments in the future due to a number of key attributes:

- Lithgow is geographically accessible to the Sydney Basin and is in a prime position to provide suitably zoned and located industrial lands for this market.
- Lithgow is well suited to service the Central West as a distribution point.
- The area is accessible by key road and rail transport routes.
- There is a sound industry base existing in this area (although it is predominately within the mining and power generation industries).
- Several sites have been identified for potential employment lands into the future (Minerals Park and Marrangaroo Investigation Area).

DRIVERS OF DEMAND

An indication of potential industrial demand can be gauged from established demand in the other central west centres.

Table 17. Indication of Potential Industrial Demand

Industrial Demand in the Central West		
	Current Demand	Predicted Demand 2031
Bathurst	8ha/annum	20ha/annum
Orange	1.6ha/annum	8ha/annum

Another method of calculating demand is by using population driven forecasting and subsequent workforce predictions to calculate required industrial floor space.

The ABS population projections in Table 1 of this report were used as the basis for calculating workforce projections for the Lithgow LGA. The resulting projections of the workforce (at five-yearly intervals, corresponding to Census years) are used as control totals for subsequent forecasts of employment at lower geographical levels.
As a result, forecast jobs in Lithgow LGA are shown in the following table below with corresponding forecasts under 1% and 2% population increases.

It should be noted that the table represents population lead forecasts rather than industry lead forecasts. Development of base industries can stimulate population growth and therefore challenge these predicted outcomes. These figures should therefore only be regarded as one indicator of industrial demand.

Table 18. Forecast of Jobs in Lithgow at 2021

Industry Type	Jobs in 2006*	Jobs in 2021		
		ABS Growth	1% Growth pa	2% Growth pa
Agriculture, forestry & fishing	267	246	282	323
Mining	787	261	299	343
Manufacturing	642	450	514	590
Electricity, gas, water & waste services	397	274	313	359
Construction	486	600	687	789
Wholesale trade	150	97	111	127
Retail trade	881	1,176	1,346	1,546
Accommodation & food services	687	815	932	1,070
Transport, postal & warehousing	411	245	280	322
Information media & telecommunications	60	43	49	56
Financial & insurance services	147	143	163	187
Rental, hiring & real estate services	87	98	113	129
Professional, scientific & technical services	222	287	329	378
Administrative & support services	249	367	420	482
Public administration & safety	652	840	962	1,104
Education & training	473	583	668	767
Health care & social assistance	780	1,148	1,315	1,509
Arts & recreation services	74	116	132	151
Other services	265	354	405	465
Total	7,717	8,141	9,320	10,699

* Source: ABS Census 2006

The ABS, the more conservative forecast of growth, anticipates job growth of 424 jobs between 2006 and 2021. By comparison using Council's target of 1% and 2%, job growth of 1,600 and almost 3,000 jobs are forecast over the same period.

DEMAND FOR INDUSTRIAL ZONED LAND

The increase in jobs translates to an increase in demand for zoned and serviced land. Demand is calculated by assigning floor space and an assumed 0.5:1 floor space ratio (FSR) requirement to each additional industrial type job and apportioning the jobs to industrial zones only. The calculations are shown below.

Table 19. Demand for Industrial Floorspace in Lithgow to 2021

Industry Type	Proportion of Jobs in Industrial Zones*	2006 GFA per Job (sqm)	2021 GFA per Job (sqm)**	Industrial Land Demand (sqm)***			
				2006	2011	2016	2021
Agriculture, forestry & fishing							
Mining							
Manufacturing	100%	80	104	102,689	103,953	100,726	93,504
Electricity, gas, water, waste	100%	80	104	63,507	63,990	61,686	56,905
Construction	100%	80	104	77,711	93,758	109,524	124,775
Wholesale trade	100%	100	130	29,999	29,849	28,122	25,197
Retail trade	20%	80	104	28,178	34,990	41,998	48,904
Accommodation, food services	20%	80	104	21,975	26,102	30,108	33,886
Transport, postal, warehousing	100%	220	286	180,931	176,322	162,004	140,100
Information media, telecomm.	50%	80	104	4,816	4,864	4,809	4,491
Financial & insurance services			0				
Rental, hiring & real estate services	20%	80	104	2,775	3,242	3,701	4,080
Professional, scientific, Technical	20%	80	104	7,118	8,727	10,358	11,948
Administrative & support services	20%	80	104	7,967	10,280	12,762	15,272
Public administration & safety	20%	80	104	20,864	25,549	30,299	34,950
Education & training	-	-	-	-	-	-	-
Health care & social assistance	-	-	-	-	-	-	-
Arts & recreation services	-	-	-	-	-	-	-
Other services	40%	80	104	16,979	21,087	25,250	29,419
Total				565,509	602,713	621,347	623,432

* Sources: Hill PDA estimate based on previous and various studies

** Allows for declining worker occupancy rates due to increasing automation in line with historic trend

*** Land demand equals number of jobs multiplied by the proportion rate, multiplied by GFA rate, divided by an average FSR of 0.5:1. FSR may be lower than permissible levels but generally reflects what is cost-effectively achievable for a single storey building with required setbacks and on-site car parking.

The table above suggests that Lithgow will require an additional 5.8 hectares of industrial zoned land between 2006 and 2021, equivalent to average growth of 0.5ha per annum. This result however does not consider existing supply of industrial floor space or industrial zoned land in the LGA. The supply of appropriately zoned and vacant land across the LGA will be discussed further in this analysis.

The demand for industrial floor space as shown in the above table, was based on population forecasts from the ABS. A 1% per annum increase in the population would result in demand for an additional 15ha of

industrial floor space between 2006 and 2021, equivalent to additional demand of around 1 hectare per annum. A 2% increase in population per annum results in additional demand for 25ha or 1.7ha per annum.

Using the above figures and the demand data from other central western councils, it is suggested that a very conservative estimate for industrial demand of 2.5ha per annum be adopted for the LUS.

INDUSTRIAL LAND - SUPPLY

There area nine(9) industrial precincts across the LGA. The precincts are summarised in the table below and are shown spatially in Figures 7-11.

Table 20. Summary of Industrial Precincts

Industrial Supply – Urban Centres			
Location	Land Area	Available Supply	Comment
Inch Street	4.73ha	3 ha	Restricted access due to low level overhead bridge and route through residential area. No capacity for development outside of current boundary. Adjoins residential area; potential for land use conflict. Limited to light industrial.
Donald Street	13.66ha	Nil	Limited road access and no capacity for development outside of current boundary. Adjoins residential area. Access through adjoining residential areas limits land use to light industrial.
Mort Street	5.64ha	Nil	No capacity for development outside of current boundary but the site does have good road access. There is an identified opportunity to redevelop the old gas works site; contamination on this site needs to be considered. The Cultural Precinct Study conducted for Eastern Main St has implication for the future direction in land use for this site
Hartley Valley Road	4.73ha	2 ha	No capacity for development outside of current boundary but the site does have good road access.
Chifley Road	12.29ha	3.1 ha	No capacity for development outside of current boundary but the site does have good road access and exposure.
CBD West	19.38ha	Nil	No capacity for development outside of current boundary but the site does have good road access.
ADI Site	19.91ha	10 ha (approx)	Opportunities for development however there are constraints due to contamination, potential land use conflict and restricted access. These constraints have implication on the future direction in land use for this site.
Wallerawang	44.12ha	14 ha	Good transport access and service provision.
Total	124.46 ha	32.1 ha	Approx 12.8yrs supply at 2.5 ha/yr

Figure 7. LGA Employment Lands - Industrial

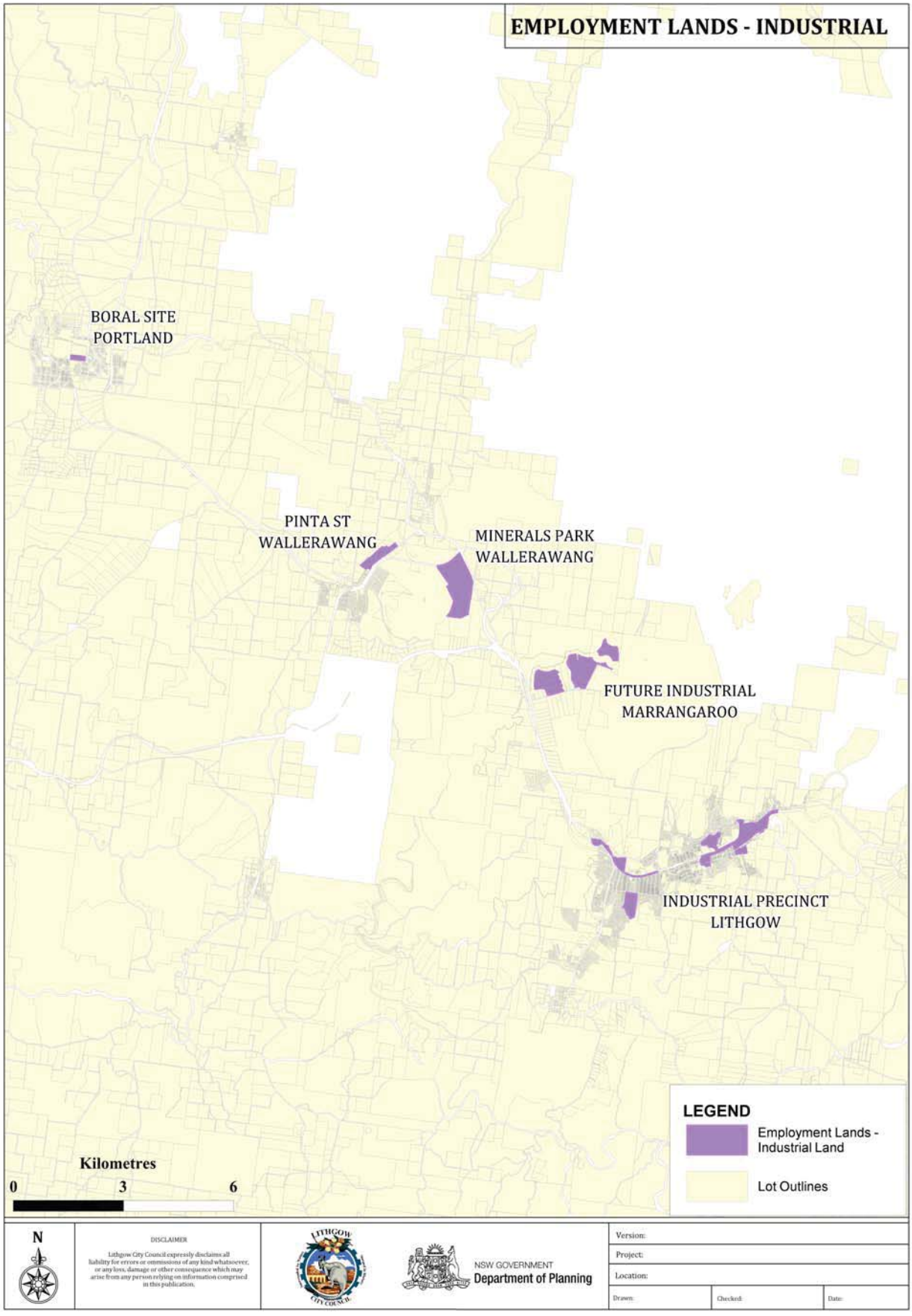


Figure 8. Employment Lands – Lithgow East Existing Industrial

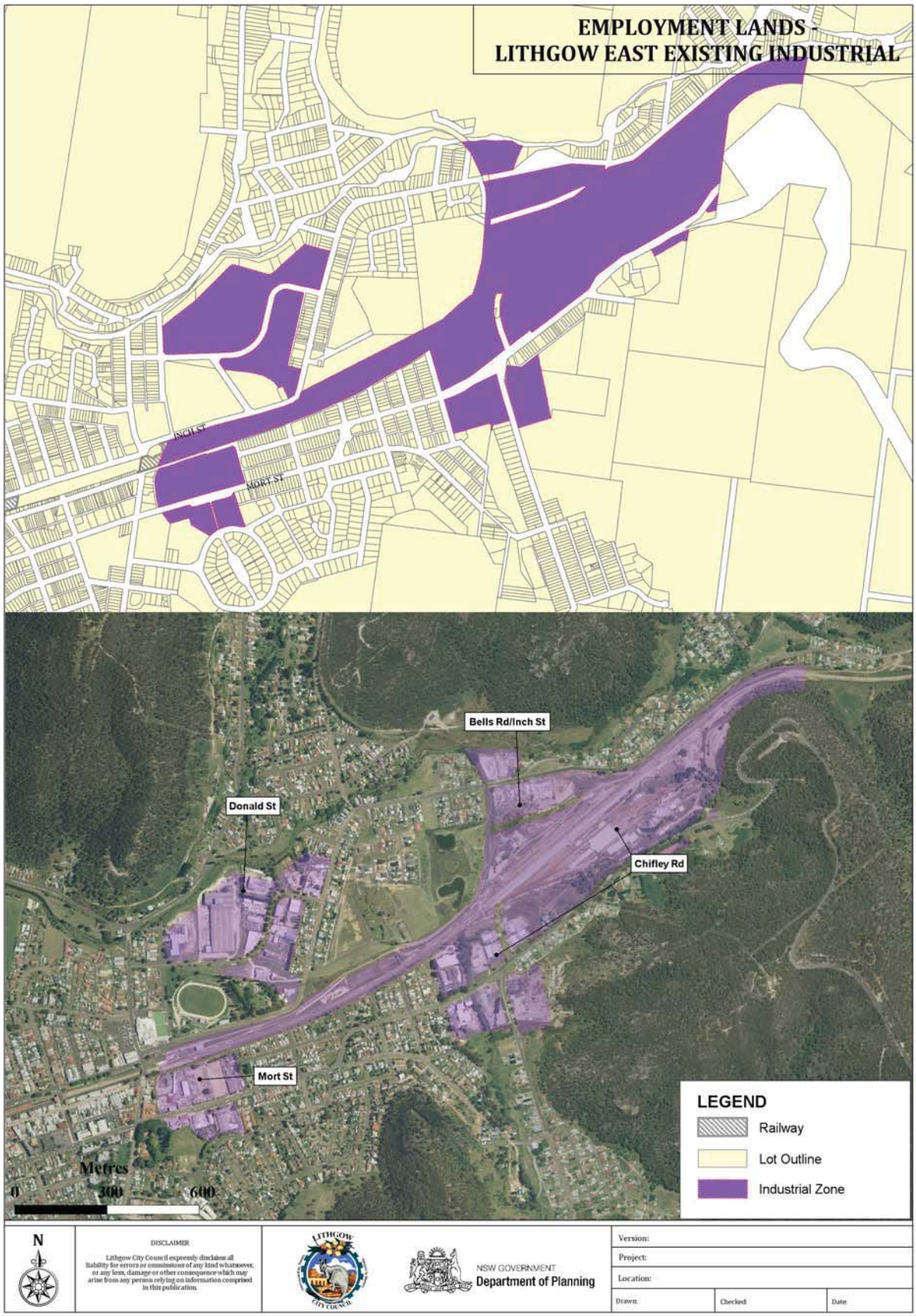


Figure 9. Employment Lands – Lithgow West Existing Industrial

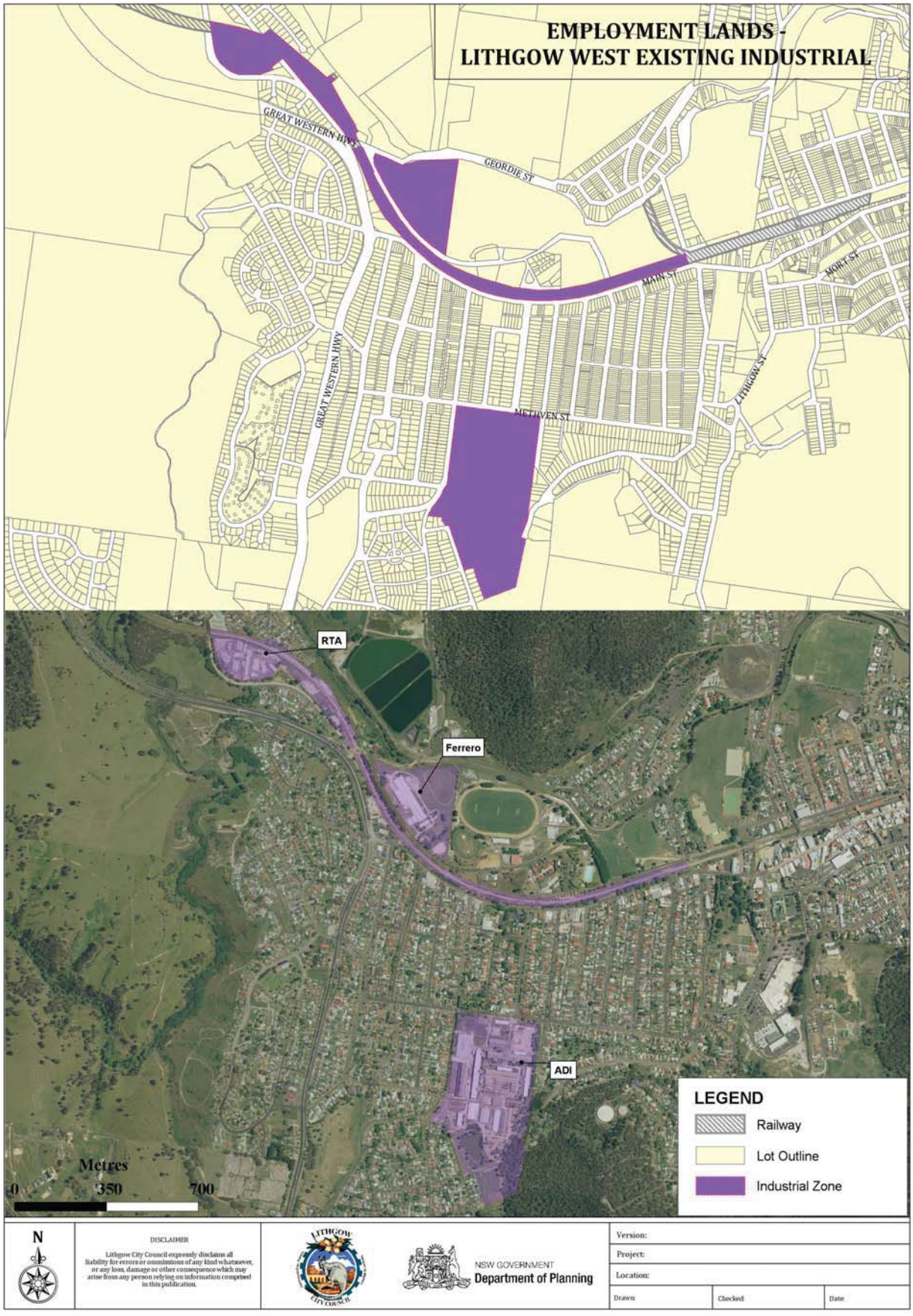


Figure 10. Employment Lands – Future Mineral Park Industrial

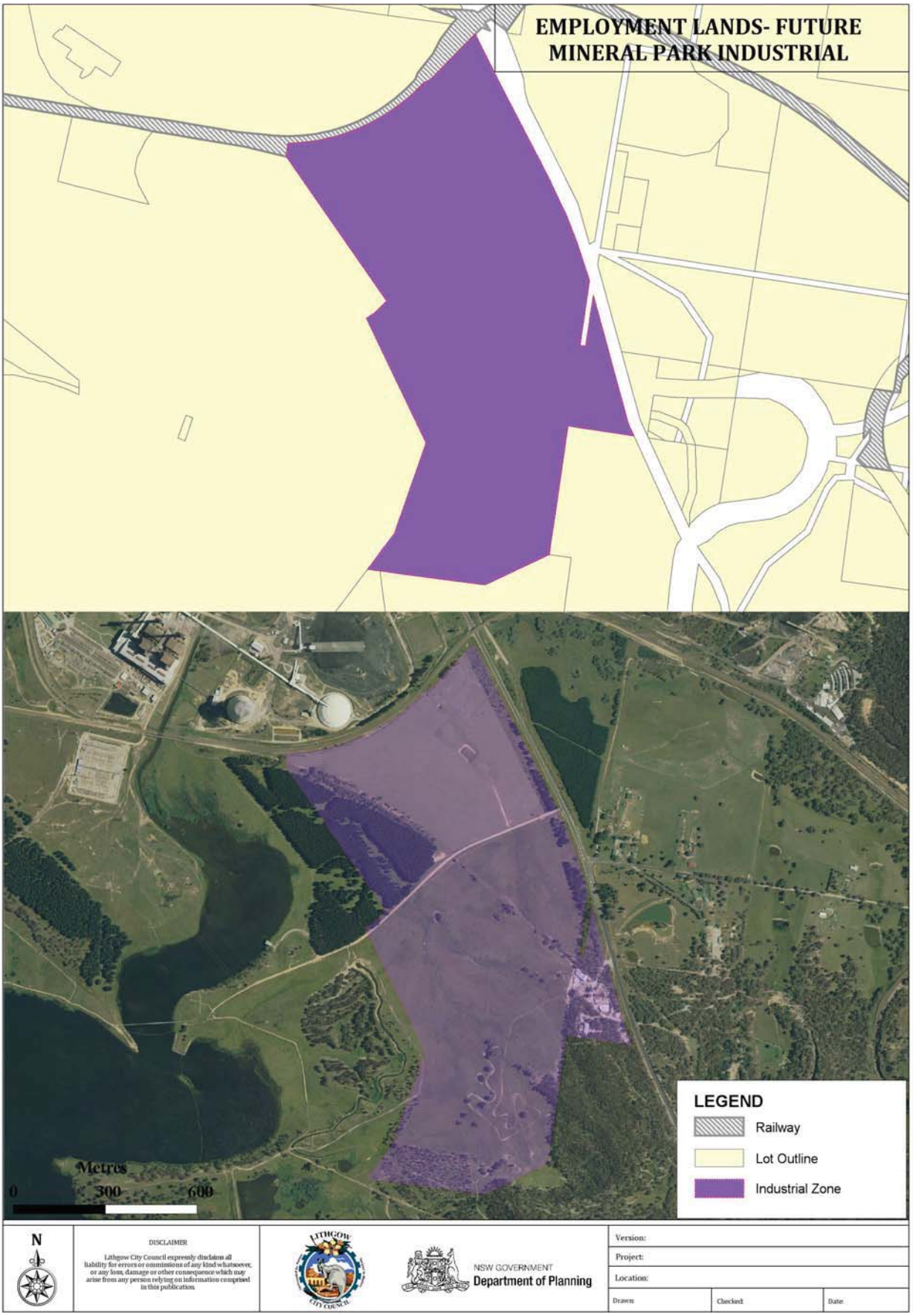


Figure 11. Employment Lands – Future Pinta St Industrial



INDUSTRIAL SUPPLY – INVESTIGATION AREAS

The following sites have been identified as investigation areas for future industrial land use and have the potential to play an important role in contributing to future supply. The identified investigation areas include:

- Boral Site Portland.
- Marrangaroo Employment Lands

Each of these sites are identified and discussed as follows:

BORAL SITE

This subject site is located within the Portland township and was the home of the first Australian cement production facilities and as a result there are substantial heritage values attributed to the site. The precinct is currently zoned village 2(v) under the Lithgow LEP 1994.

Although the site is very large, currently vacant and with adaptive reuse opportunities, the land is somewhat constrained from being redeveloped for modern new industrial land uses due to:

- Heritage values attributed to the site
- Possible land use conflicts with adjacent residential development to some parts of the site.
- Access and condition of local road network
- Distance from major roads.

DRAFT CONCEPT PLAN FOR REDEVELOPMENT OF THE BORAL SITE PORTLAND

By utilising the draft concept plan recommendations an area of approximately 3.8ha would be provided within the Boral site for industrial land use.

Figure 12. Former Portland Cement Works – Concept Plan

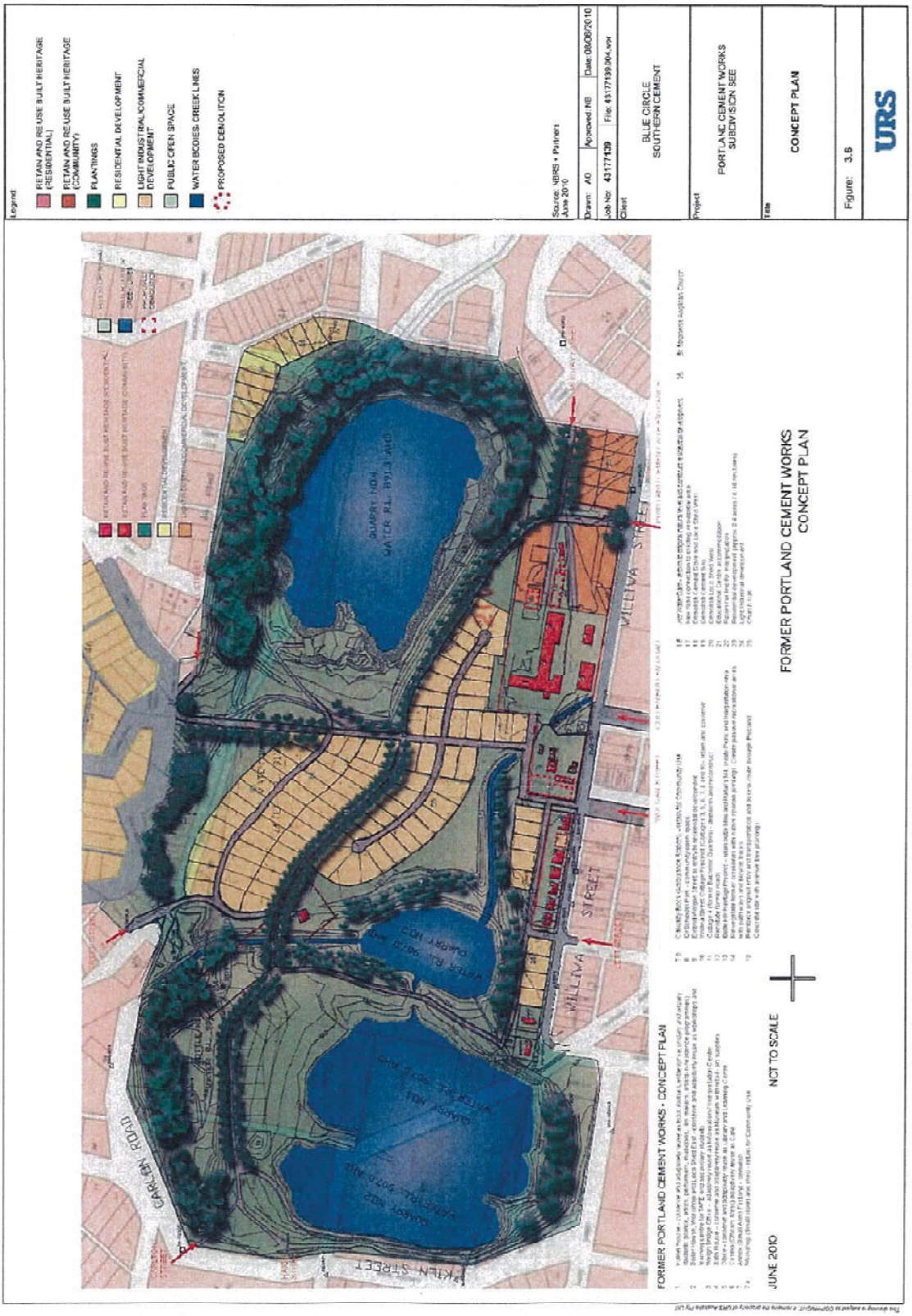


Figure 13. Employment Lands – Future Boral Industrial



MARRANGAROO

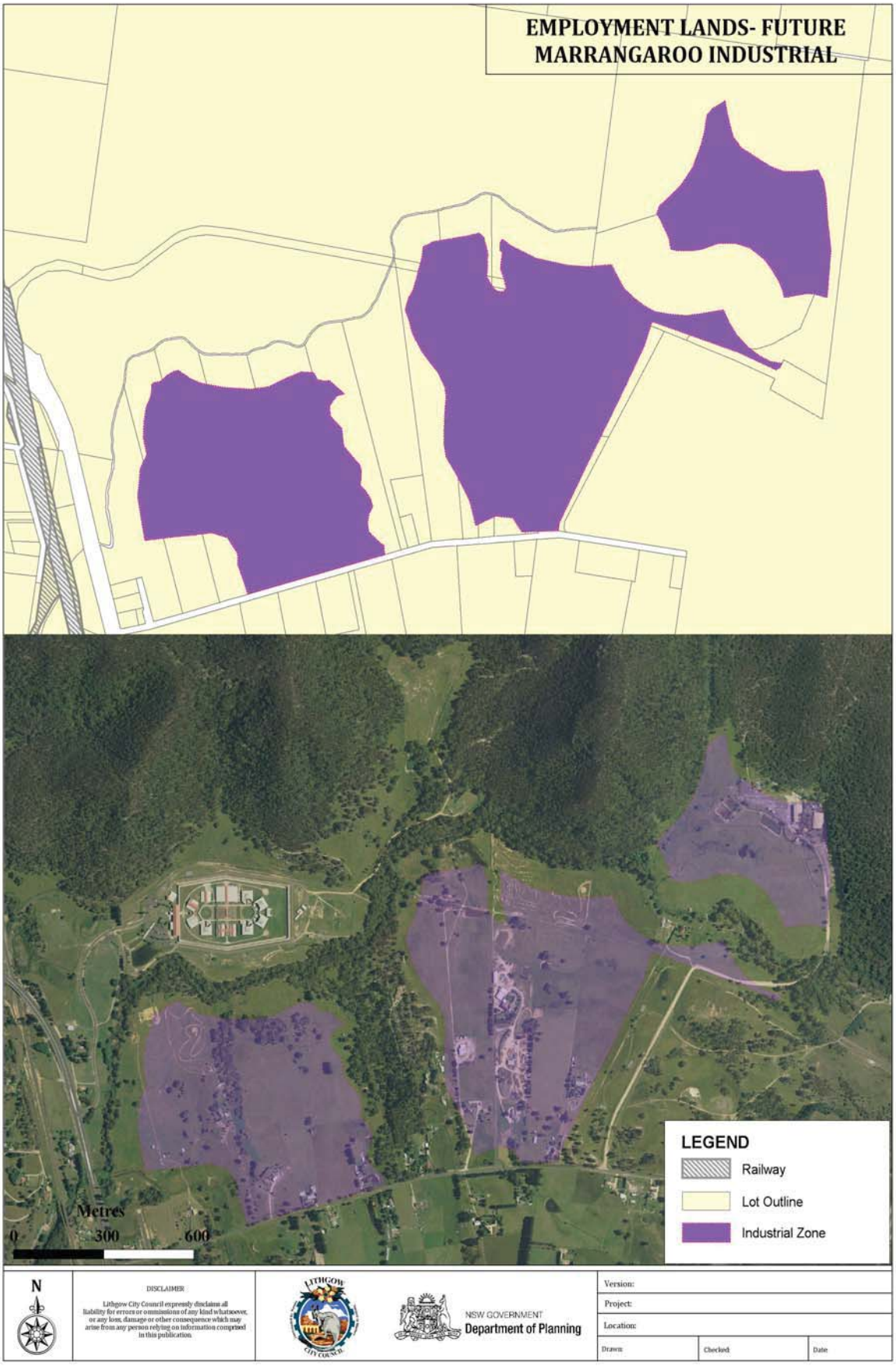
The Marrangaroo Local Environmental Study(MLES), (June 2006) has identified a number of land use options for this investigation area. These include the development of employment lands via the creation of an enterprise corridor and industrial park. The objectives of the area would be to:

- Promote businesses along main roads and encourage a mix of compatible uses
- To enable a mix of employment opportunities
- To maintain the economic strength of existing commercial centres

A number of principles have been developed for the area which aim to meet the above objectives as well as reducing opportunities for land use conflict. The preferred option includes the potential development of part of the investigation area for industrial land use.

This industrial investigation area, less lands to the south of Reserve Rd and to the west of the Great Western Highway, has an overall development potential of 122ha, which would equate to an addition supply of approx 42 industrial lots, ranging in size from 2h(30lots) – 5ha(12lots). The subject site has good visibility from and access to the Great Western Highway and already contains a mix of existing manufacturing and industrial land uses.

Figure 14. Employment Lands – Future Marrangaroo Industrial



INDUSTRIAL LAND – SUPPLY & DEMAND

The availability of land for industrial purposes is a crucial link in the economic growth of the Lithgow LGA. As shown above, while there is some 42ha of land supply within the identified or zoned industrial locations, the nature of the land and the constraints present hinder its immediate availability and suitability to meet the demands of the modern industrial user.

Within the Lithgow urban area, the majority of the existing industrial precincts are either fully developed or constrained in such a way that substantially restrict future industrial development potential.

Could some of the servicing and ownership constraints be overcome on the Minerals Park site, this area could be developed in the short term for general industrial land use and would enable the creation of a high spec industrial park.

INDUSTRIAL SUPPLY & DEMAND SUMMARY

- There is currently an under-supply of existing Zone 4 - Industrial Lands across the LGA
- Flexibility in zonings has not lead to any substantial take up rates for industrial development
- LEP flexibility has lead to dispersed industrial development
- The flexibility has limited confidence in establishing new industrial development and it could be further argued that Lithgow has potentially lost development to neighbouring LGA's, notably Bathurst.
- Lithgow has the capacity to meet higher future demands through the allocation, zoning and servicing of additional industrial lands.
- If a well positioned, serviced industrial park were to be developed in the LGA, it is anticipated that forecast demand for industrial lands would be in the vicinity of 2.5ha per annum
- Additional areas of industrial supply need to be identified. The industrial investigation area of Marrangaroo and the Boral site at Portland should be further examined to determine their suitability for short term industrial supply.
- The existing supply areas together with the Mineral Park would provide Council with approx 16yrs of supply.(based on demand of 2.5ha/annum)
- Utilising the western section of the Marrangaroo Industrial Investigation area(43ha) along Reserve Rd, an additional 17years of supply would be provided to service potential demand.

RETAIL AND COMMERCIAL

INTRODUCTION

Council adopted the Business & Retail Strategy prepared by SGS Economics & Planning in June 2010.

This analysis of supply and demand for the retail and commercial areas will therefore include:

- A summary of the finding from the SGS Strategy in relation to supply & demand for retail and commercial land .
- land use surveys of the business types and uses
- review and assessment of the current retail hierarchy
- Modelling of retail demand
- analysis of supply and demand as it relates to vacancy/occupancy rates only.

RETAIL MODELLING - DEMAND

Retail modelling was used to assess the amount of retail floor space that could be supported within Lithgow LGA. This is based on ABS 2008 Estimate Resident Population[1], redistributed to reflect the 2006 population distribution (Table 21).

Table 21. Population within Local Catchments

Centre Catchment	2006 Census Population	2008 Estimated Resident Population (redistributed)	Percentage of Total Population
Lithgow Local Catchment	12,818	13,434	65%
Wallerawang Local Catchment	3,127	3,277	16%
Portland Local Catchment	3,242	3,398	16%
Other	488	511	2%
Total	19,675	20,620	100%

Source: ABS, 2006, ABS, 2008 and SGS, 2009

The retail model breaks down residents' retail 'spend' by within and outside the LGA, and by centre levels within the hierarchy (Table 22). The share of typical spending by centre type, as well as escape expenditure, is based on SGS estimates and the findings of the retail survey. This provides an indication of the distribution of expenditure (0). Expenditure coming to Lithgow from outside the LGA is estimated at 10%, based on the proportion of shoppers recorded in Lithgow from outside the local area.

Table 22. Resident Expenditure by Level in Centre Hierarchy

Centre Type	Percent Share of Total Expenditure*	Expenditure Capture
Local Centres	15%	$33,947,496
Sub regional Centre	65%	$147,105,817
Outside Region eg. Sydney or Bathurst	20%	$45,263,328
Total	100%	$226,316,642

Source: SGS, 2009

[1] ABS (2009) Regional Population Growth, Australia, 2007-08, Catalogue No.: 3218.0

The following table illustrates the how the retail modelling above translates into commercial and retail floor space demand.

Table 23. Retail Model Demand Results for Lithgow, Wallerawang and Portland

Centre	Floorspace demand by Centre	
	Retail Turnover Density (RTD)($/sqm)	Supportable Floorspace (sqm)
Lithgow	$4,000	47,006
Wallerawang	$2,000	2,698
Portland	$2,000	2,797
Other - Outside of LGA	$6,000	7,684

DRIVERS OF DEMAND

In order to understand potential future demand for the LGA, a number of scenarios are hypothesised.

Scenario 1: Reduced expenditure 'leakage'. In this case the amount of escape expenditure was reduced from 20% to 10%, assuming that Lithgow Centre would capture this additional expenditure. Compared with the base case (if escape expenditure was reduced) approximately an additional 6,000 sqm of floor space could be supported within Lithgow centre. No change would be experienced within Portland and Wallerawang, as these centres do not offer higher order retailing.

Scenario 2: Higher proportion of people travelling to Lithgow to shop. If the number of shoppers in Lithgow, travelling from outside the LGA increased from 10% to 20%, it is estimated that an additional 6,000 sqm of retail floor space could be supported within the Lithgow This is a similar result to Scenario 1: reduced expenditure leakage.

Scenario 3: Increasing affluence of Lithgow LGA residents. At present the income profile of Lithgow LGA residents is lower than the Australian average. A higher income profile would most likely mean a greater available retail 'spend' within the catchment. If Lithgow LGA residents were to become more affluent, in line with the Australian average income profile, it is estimated that an additional 7,000 sqm of retail floor space could be supported within the Lithgow LGA

Scenario 4: Population growth to 25,000. Assuming Lithgow LGA's population were to grow to 25,000 people as Council aims, it is estimated that an additional 11,000 sqm of retail floor space could be supported between the centres of Lithgow, Wallerawang and Portland. This assumes that the distribution of population remains constant.

RETAIL & COMMERCIAL - SUPPLY

Information on the existing supply of retail and commercial floor space is based on data, collected by Council as part of the Business Survey conducted in July 2009. Where necessary (such as in Portland and Wallerawang, and for Woolworths within Lithgow) this information has been supplemented by floor space estimations from aerial photos. The supply data, while not purporting to be definitive, provides a good indication of existing supply.

Table 24. Precinct Summary of Commercial and Retail Supply.

Precinct	Land Area	Available retail space	Constraints
CBD	19.21 ha	Less than 10%	The vacancy rate is highest in the area between Eskbank Street and Bridge Street.
Pottery Estate and Valley Plaza	8.09 ha	4% in Valley Plaza and 40% in Pottery Estate An additional 4,055 m2 of retail floor space at Valley Plaza has been approved.	Vacant land adjacent to Pottery estate is zoned residential. Draft LEP considered by Council in 2006 that is pending due to contamination issues of land involved. Subdivision has been approved for commercial purposes.
Railway Parade Precinct	Approx 6ha	Greater than 10%	Fragmented from the CBD by the rail line.
Western Main Road Extension (Hassans Walls Road to the great Western Highway	Approx 6ha	Limited	Characteristics are different from the adjacent CBD precinct. These include a vacant depot; motor cycle retailer; power equipment; service station; tyre repairs; hardware; radio station and a range of food outlets.
Wallerawang	0.8ha	19%	The commercial precinct in Wallerawang meets the demand of existing residents. There is existing vacant land/premises within the precinct that could cater for any additional demand
Portland	1.1ha	22%	The commercial precinct in Portland meets the demand of existing residents. There is existing vacant land/premises within the precinct that could cater for any additional demand

In review of the various retail and commercial precincts, it appears that there is a clear 'role' or hierarchy that each town and urban area is playing. The purpose of the retail and commercial areas (in areas other than Lithgow) clearly services the day to day needs of residents. The commercial areas within Wallerawang and Portland do not have a business zoning however the majority of the retail and commercial areas are well defined, are accessible and located on main thoroughfares.

Table 25. Summary of Retail Supply for Lithgow, Wallerawang and Portland

Centre	Expenditure Capture from within the LGA				Floor space Supply by Centre	
	Share of Local Shopping	Share of sub regional shopping	Higher level shopping	Dollar Value	Retail Turnover Density (RTD)($/sqm)	Existing Floor space (sqm)
Lithgow	65%	100%	0%	$169,222,158	$4,000	55,445
Wallerawang	16%	0%	0%	$5,395,366	$2,000	8,000
Portland	16%	0%	0%	$5,593,788	$2,000	11,000
Other - Outside of LGA	2%	0%	100%	$46,105,330	$6,000	n/a

LITHGOW - SUPPLY

Based on a land use survey, the township of Lithgow has two (2) major identified retail and commercial precincts contributing approx 55 000sqm of retail floor space to the area. A smaller neighbourhood site is located on the Great Western Highway at Bowenfels.

CBD PRECINCT

The Lithgow Main Street runs in an east-west direction, parallel to the rail line. Businesses located along the main street are diverse, including pubs, cafes, restaurants, banks, charity stores, clothes retailers, a newsagent, chemist, community cinema, hairdressers and dry cleaners. There is a mixture of heritage, and more modern buildings





It is estimated that there is over 39,000 sqm of ground floor floorspace within the town centre[2]. Of this, it is estimated that around 28,500 sqm of floorspace is currently used for retailing or hospitality, with the remainder being vacant or used as office floorspace. Approximately 30 premises within Main Street were vacant in September 2009. While the floorspace of vacant premises is unknown, this is likely to account for approximately 7.5% of the floorspace within the centre. There appears to be a greater number of shop front vacancies towards the eastern end of Main Street, and along Railway Parade.

[2] Ground floor premises which offer higher visibility to pedestrians are more ideal for retailing. Second floor premises are likely to be office based, or service providers such as doctors or dentists. This figure does not include Woolworths, or other retailing within Lithgow, outside the Main Street.

At the eastern end of the centre, a potential cultural precinct is being investigated. It is likely that uses within the cultural precinct will be focussed on cultural production (such as workshops), as opposed to cultural consumptions.

Parking is plentiful within Lithgow Centre, but despite this, the retail survey responses suggested that residents would like to see more parking within the centre. There are a number of sites that could accommodate an increase in the amount of car parking.

One of the greatest strengths of the Lithgow Main Street is the mix of lot sizes, building styles and ages. There is also the potential to intensify the back lanes by allowing development along the lanes.

VALLEY PLAZA AND POTTERY ESTATE

Lithgow Valley Plaza is located to the south west of Main Street shopping precinct. The centre is anchored by Coles and Target, located at either end of the centre. Lithgow Valley Plaza contains a range of other food retailers: a bakery, patisserie, butcher and deli. Other retailing includes women's fashion, shoes, giftware, music and a discount shop. Services within the centre include Medicare, NRMA, the RTA, a credit union, hairdresser, chemist and a travel agent. The Lithgow Valley Plaza contains approximately 12,000 sqm of retail floorspace with an approval for approximately 5,000 sqm of additional floorspace. In September 2009, there were three vacant stores within the centre.

The Pottery Plaza, located to the south of Lithgow Valley Plaza contains Aldi, Dominos Pizza, Repco, Sams Warehouse, a car wash, Aussie Superpets and three vacant shops, accounting for more than 15% vacancy.

Overall, the role of this precinct is as a retail destination for grocery and comparison goods shopping. Over the longer term, the precinct may evolve to have a role as a bulky good retail destination.

SOUTH BOWENFELS

The appropriate location for neighbourhood shops in the South Bowenfels area would ideally be determined through a precinct planning process. However, the residential zoning of this precinct may also influence the potential location of neighbourhood retailing. Despite this, the site located on the highway, currently zoned business should be retained, such that there is an opportunity to accommodate local retailing in the longer term.

Figure 15. Lithgow Existing Commercial

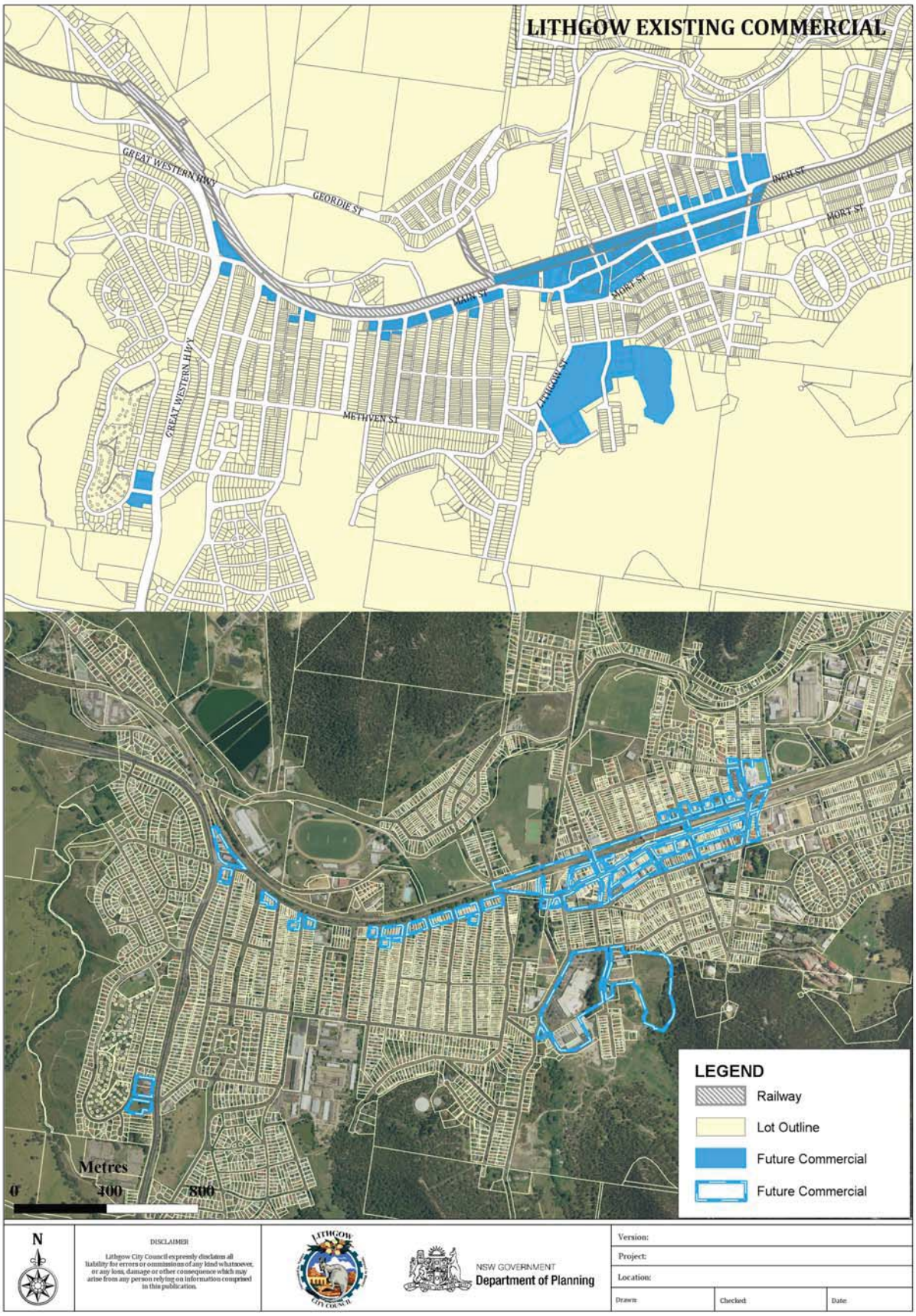


Table 26. Lithgow Commercial SWOT

Strengths	Weaknesses
• Primary centre of LGA – main location for administrative offices, medical specialists and comparison good retailing • Rail line – last station within the Sydney passenger rail network • Located between Sydney and the Central West – allowing for easy 2 hour vehicular travelling times to Sydney • Low commercial rents and cheap housing – a relatively affordable location • Country style main street – the community spirit and country atmosphere is highly valued by residents • Plenty of parking – allowing for ease of access	• Static population – limited population growth within the retail catchment means limited growth in the market for retailing • Ageing population – older people are less likely to participate in the labour force and less likely to have high disposable incomes • Relatively low income profile of residents • Business trading hours – residents noted that there is nowhere to have a coffee on Sunday afternoons. This also limits tourism potential if the Main Street and gives the appearance of being a ghost town on weekends • Few night time activities in the centre in terms or dining, entertainment, etc • Activities for Young People – some people applauded the new skate park but thought additional entertainment, such as a cinema, is required. However, cinemas generally require a catchment of 70,000 people. An alternative approach is required, such as further developing the existing community cinema. • Some vacancies present a negative image • Poor links between Main Street and Lithgow Valley Plaza • Western tail of CBD – some business types which could be located within the town centre are stretched along the western end of Main Street
Opportunities	Threats
• Attraction of labour intensive industries to locate preferably in the town centre area • Attraction of tertiary education providers to locate close to the town centre (eg University use of Hoskins building) • Adaptive reuse of existing buildings or renewal if appropriate • Cultural Precinct – currently being explored. This may add to the vibrancy and liveability of the Lithgow town centre. • Ways of consolidating cultural uses within the existing Main St should be considered a priority • Broaden the range of retail opportunities in Main Street, eg Clothing – many residents reported travelling outside the LGA to shop for men's and women's clothes. However given the limited catchment for Lithgow it is unlikely that a broad range of clothes will be available locally • Opportunities (continued) • Alternative uses – vacant shops could be considered for alternative uses. A program	• Heavy reliance on the mining and power generation industries – the fate of retailing in turn is tied to the general affluence of Lithgow LGA residents • Approved floorspace for Lithgow Valley Plaza – this will impact adversely upon the Main Street, as such a broader role, beyond retailing, needs to be considered for Main Street • Further population decline – potential decline in the market for retailing • Continued 'brain-drain' – young people continue to leave the area for education and training or employment • The ageing of the population should there be no jobs growth stimulus • Bypass – a reduction in people travelling through Lithgow is likely to reduce the number of visitors

such as 'Renew Newcastle' could provide the means to achieve this • Tourism – develop strategies to direct visitors and travellers into shopping precincts. • Develop a Tourism Strategy to encourage day trippers as well as longer stays and thus increasing tourism spend.	

PORTLAND AND WALLERAWANG

Both Portland and Wallerawang have typical retail and commercial centres on their respective main thoroughfares.

Portland's CBD extends along Wolgan Street to Williewa Street. It contains a mix of retail and commercial outlets which include a theatre, small supermarket, pub, newsagency etc that would meet day to day needs.



WOLGAN ST PORTLAND

Portland is a small local centre with a strong sense of community. The small village accommodates a range of businesses: Foodworks, a bakery, pharmacy, take away, pub, hairdresser, post office, bank, St Vincent de Paul, butcher, RSL Club, aromatherapy store, real estate agent and youth centre. In September 2009 there were 10 vacant shop fronts. While the majority of businesses are located around the intersection of Wolgan and Williewa Streets, the post office is located a short walk away, on the corner of Lett and Williewa Streets.

There is timed, on-street parking, with additional off street parking, located off Wallerawang/Portland and Portland to Cullen Bullen Road. The centre also contains a small park. Portland offers a high amenity pedestrian environment, with the footpath having been upgraded, and shrubbery along Wolgan Street. There is a small country village atmosphere, and a number of heritage buildings have been retained within the centre. Overall, there is approximately 11,000 sqm of commercial floorspace within the centre, of which it is estimated that 22% is vacant.

Figure 16. Portland Future Commercial

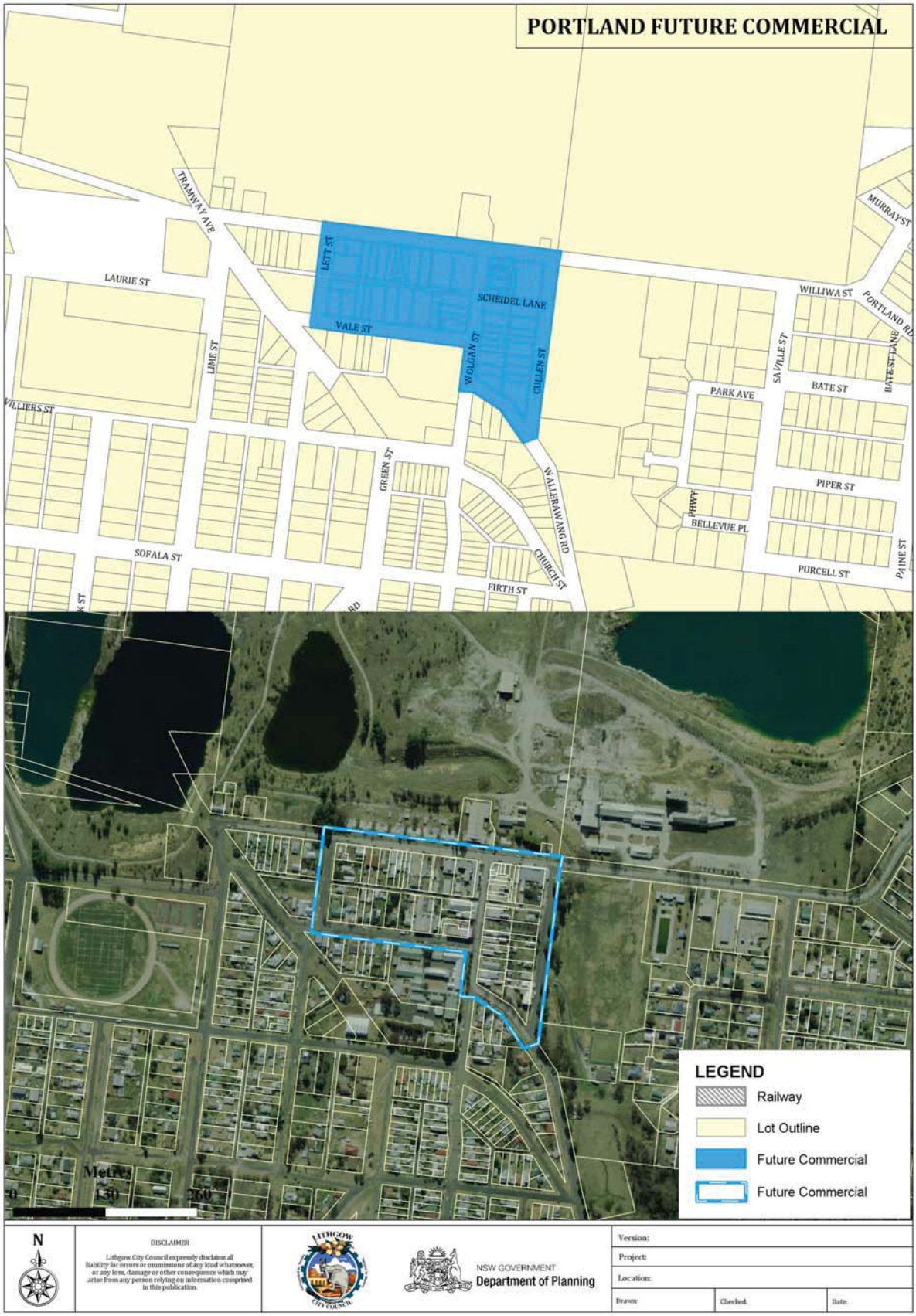


Table 27. Portland Commercial SWOT

Strengths	Weaknesses
• Strong community spirit and support of local residents for local businesses • Heritage buildings – create an attractive environment and present an opportunity for heritage based tourism • Attractive centre with high level of amenity for pedestrians • Within 2.5 hours driving distance of Sydney • Power and mining industries	• Business trading hours – limited number of retailers are open on the weekend, thus limiting potential for capturing tourist spend • Limited tourist accommodation
Opportunities	**Threats**
• Boral site – this site occupies a prominent position within the town centre and contains a number of heritage buildings, currently in disrepair • Heritage tourism – linked to other locations within the LGA such as Hartley • Temporary uses in vacant shop fronts • Direct tourists and visitors through both Wallerawang and Portland by creating tourist trail.	• Heavy reliance on the mining and power generation industries – the health of retailing in turn is tied to the general affluence of Lithgow LGA residents • Further population decline – potential decline in the market for retailing • Continued 'brain-drain' – young people continue to leave the area for education and training or employment. • The ageing of the population should there be no jobs growth stimulus

Wallerawang's CBD extends along the western side of Main Street to the Pipers Flat Road intersection. It contains a general mix of retail. Commercial, hotels, post office, library etc which, like Portland would meet the day to day needs of residents. The commercial centres are well-defined in both villages however they have significant vacancy levels.



Wallerawang Main St

Premises within Wallerawang centre are spread out and interspersed with residential properties. Conversion of old shop fronts to residential has been fairly insensitive (see photo). There is little shade to provide shelter for pedestrians. People shopping within Wallerawang tend to drive and park directly outside the shop they are going to.

Overall, there is approximately 8,000 sqm of commercial floor space within the centre, of which it is estimated that 19% is vacant.

Figure 17. Wallerawang Future Commercial

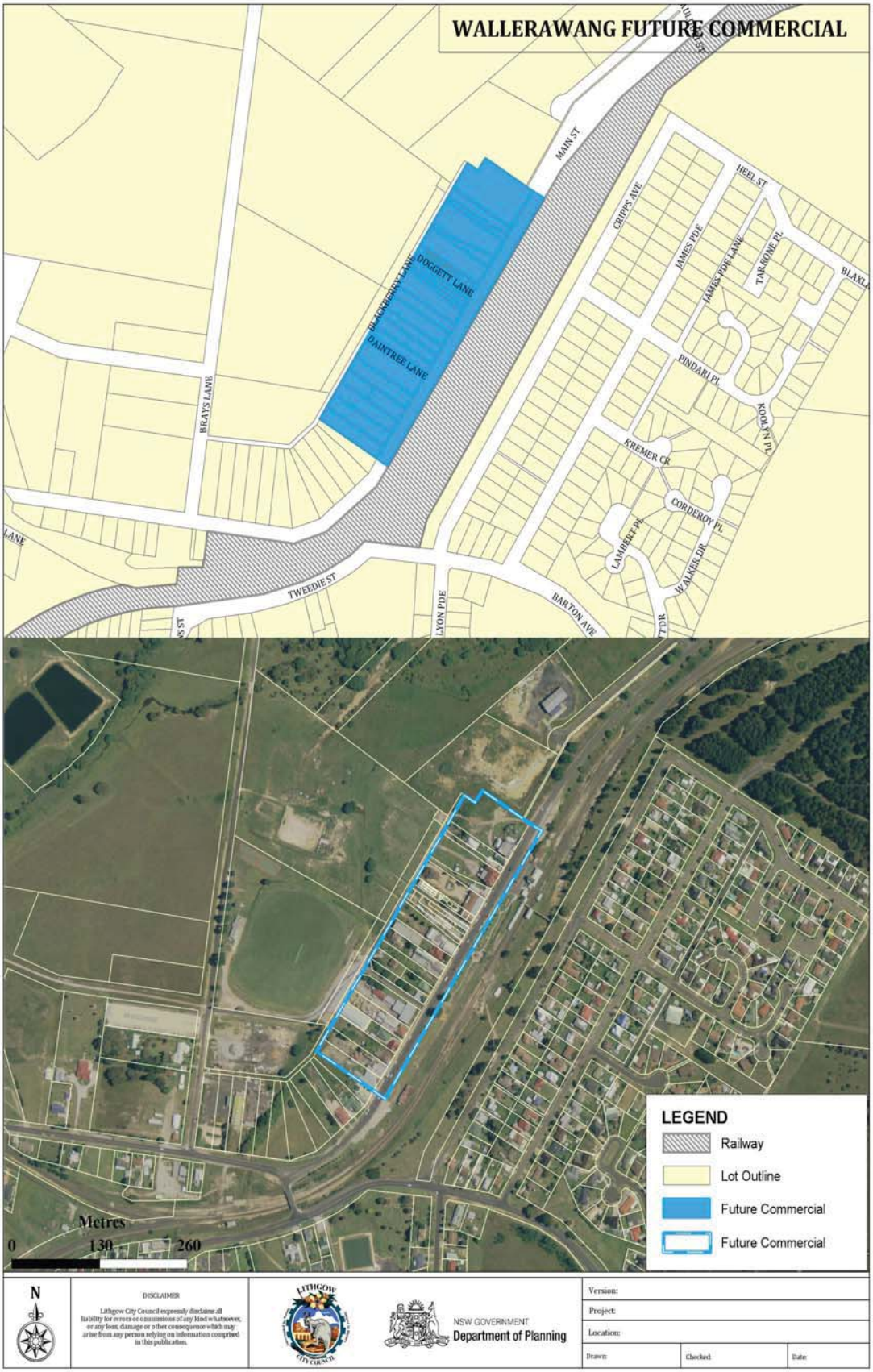


Table 28. WALLERAWANG COMMERCIAL SWOT

Strengths	Weaknesses
• Range of large employers within easy travelling – Delta powerstation and mines • Breakfast, lunch and dinner location for local workers – providing business for the bakery, take away shop and Chinese restaurant. Bowling Club and Hotels also have some dinning facilities. • Existing services and facilities – the post office, doctor and library encourage people to visit the centre • Railway Station renewal – this redevelopment may attract tourists on weekends and provides an example of successful adaptive reuse of heritage buildings • Rail heritage • Businesses are increasingly open on weekends • Open space located opposite the shops • Sporting oval at rear of Main Street used for training during the week and on weekends. • Accommodation providers at hotels, and Black and Gold Cabins. • Within 2.5 hours driving distance from Sydney	• Centre structure – the spacing between businesses and lack of shade does not create a pleasant pedestrian environment. • Small centres are often more successful when they consist of retailing on both sides of the street, while Wallerawang consist of only one side of shops, opposite a park and railway land. • Vacancies – create a poor image within the centre • Car based • Close to Lithgow – which means residents may be likely to shop in Lithgow, rather than Wallerawang
Opportunities	**Threats**
• Heritage wool sheds on State Rail land may have potential for adaptive reuse • Incentives for users of Lake Wallace, Sports Stadium and Bowling Club to travel to shopping centre. • Direct tourists and locals through Wallerawang to Portland as scenic and heritage drive. • Improve amenity – shade, seating, restoration of buildings and shop fronts	• Heavy reliance on the mining and power generation industries – the state of retailing in turn is tied to the general affluence of Lithgow LGA residents • Further population decline – potential decline in the market for retailing • Continued 'brain-drain' – young people continue to leave the area for education and training or employment. • The ageing of the population should there be no jobs growth stimulus

SUPPLY & DEMAND - COMMERCIAL

By comparing the estimated demand for floor space with the volume of existing supply, the any gaps in supply can be determined.

Table 29. Retail Model Results for Lithgow, Wallerawang and Portland Source: SGS, 2009

Centre	Floorspace demand by Centre			
	Retail Turnover Density (RTD)($/sqm)	Supportable Floorspace (sqm)	Existing Floorspace (sqm)	Floorspace Demand (sqm)
Lithgow	$4,000	47,006	55,445	-8,439
Wallerawang	$2,000	2,698	8,000	-5,302
Portland	$2,000	2,797	11,000	-8,203
Other - Outside of LGA	$6,000	7,684	n/a	n/a

LITHGOW

The potential supply (that is existing built stock which could be used for the purposes of retail) is significantly higher than estimated demand for retailing, with a potential oversupply of more than 13,000 sqm. While some of this stock is vacant, some is used for commercial purposes. An addition to floor space supply within Lithgow is likely, with additional floor space having been approved at Lithgow Valley Plaza, as such, alternative uses (to absorb potential vacancies) need to be investigated.

Having regard to the demand for settlement in the South Bowenfels area, it is estimated that 750 sqm of local retailing could be supported by the full development of South Bowenfels

WALLERAWANG

Assuming Wallerawang captures 16% of the LGA's resident's 'local' shopping (that is 16% of Lithgow LGA residents that live within Wallerawang's local catchment) Wallerawang is likely to support between 2,000 and 3,000sqm of retail floor space. Existing floor space far exceeds demand.

PORTLAND

It is estimated that 16% of Lithgow residents live within Portland's local catchment. As such, between 2,000 and 3,000 sqm of floor space could be supported within the centre. Like Wallerawang, existing supply far exceeds demand.

Retail & Commercial Demand & Supply Summary

- the capacity and accessibility of Lithgow to provide higher order needs to outlying areas.
- An over supply of retail and commercial space in the Lithgow CBD precinct.
- An under supply of retail and commercial space at Valley Plaza. However there is an existing approval for a further 4055sqm
- An over supply of retail and commercial space in the Pottery Estate.
- An over supply of retail and commercial space in the Portland and Wallerawang
- Under different demand scenarios including population growth and demographic changes, the overall supply of commercial land remains unchallenged.
- Impacting on the supply and demand is the fragmentation of the retail and commercial trade area across the Lithgow urban area.
- The development of the Valley Plaza has resulted in a fragmented retail trade area in the urban area; however this area represents a precinct with the greatest demand. The redevelopment of the Valley Plaza is meeting an identified demand, determined by the undersupply of retail space.
- Need to maintain neighbourhood business site at Bowenfels
- Suggested differentiation of CBD for commercial/business use and Valley Plaza/Pottery Plaza for general and bulky goods retailing.

Table 30. Existing Supply Urban & Large Lot Residential

Existing Supply Urban & Large Lot Residential						
Supply Area	Total Area	Number of hectares constrained	Comment		Remaining Supply (ha)	Remaining Supply (lots)
West Bowenfels				Reason		
1(d)	158.2ha	102.3ha	s.117 Data	Marrangaroo Quartzite Quarry Buffer	55.9	447 lots
			SLWCA	Excluded low/very low		
			Slope	Excluded low capability		
			This area has a number of constraints that include s.117 directions to protect the quartz resource at Marrangaroo. It also includes environmentally sensitive lands and areas of low capability for residential sewer.			
Magpie Hollow Road						
1(d)	34.9ha	10.7ha	SWWCA	Excluded low/very low capability	24.2	193lots
Bridge Street (Old Hospital site)						
2(a)	1ha		Site subdivided and approval remaining for 20 lots suitable for medium density development.		1ha	20lots

Supply Area	Total Area	Number of hectares constrained	Comment		Remaining Supply (ha)	Remaining Supply (lots)
Ivatt Street Hermitage Site						
2(a)	25.8ha	23.9ha	s.117 Data	Coal reserves		15lots
			SLWCA	Exclude very low/low		
			This site is heavily constrained by SLWCA's and ESA. It also is affected by Coal related s.117 directions to ensure the viability of these reserves. Other issues include mine subsidence and ground water vulnerability. The potential lot yield has not been included in the supply data at this time, but may make a limited contribution to supply in the future.			
Pottery Estate						
2(a)	34.2ha		s.117 Data	Coal reserve	0ha	0 lots
			SLWCA	Excludes low/very low capability		Needs further investigation before coming into immediate supply
			Slope	Excludes low/very low capability		
			Potential lot yield is constrained by environmental factors particularly SLWCA's & ESA) particularly in respect to Copper Wing Butterfly habitat). In addition to these factors other issues such as potential contamination, mine subsidence and ground water vulnerability limit this areas contribution to supply.			

Supply Area	Total Area	Number of hectares constrained	Comment		Remaining Supply (ha)	Remaining Supply (lots)
Infill Pillans Estate 2(a)						8 lots
Inch Street						
2(a)	1.8ha		The Inch Street land has remained undeveloped for many years and further site specific investigations are required as past use of site suggests potential contamination.		1.8ha	14 lots
Hoskins Avenue						
2(a)	4.5ha		Development approval for 24 medium density units on part of this site. Potential for further medium density development on the remainder of the site.		4.5	54 lots Medium density
South Bowenfels 2(a)						
Bowen Vista	140 lots		SLWCA	Excludes areas of low/very low capability		140 lots
Sweet Briar	160 lots		Slope	Excludes areas of low/very low capability		160 lots
Strathlone South	105 lots					105 lots
Strathlone North	80 lots		These supply totals are cognisant of the approved subdivision and concept plans for these areas. These concept plans represent constrained supply.			80 lots
Hillcrest	141 lots					141 lots
Hillcrest North & East	246 lots					246 lots
Strathlone Infill	16 lots					16 lots

Supply Area	Total Area	Number of hectares constrained	Comment		Remaining Supply (ha)	Remaining Supply (lots)
					Total	812 lots
Wirraway Street						
2(a)	45 lots		These supply totals are cognisant of the approved subdivision and concept plans for these areas.			27 lots
Marrangaroo Fields						
2(a)	80ha		s.117 Data	Marrangaroo Quartzite Quarry Buffer	0	0 lots
			SLWCA	Excludes low/very low capability		(448 potential future when 117's are removed)
			Slope	Excludes low/very low capability		
			This revision of the s.117 directions boundary has substantially impacted on this area. This coupled with other environmental constraints negates the inclusion of this area as residential supply in the short to medium term. The site however, should remain as a potential area of urban supply in the longer term.			
Oakey Forest Road West						
2(a)	13.5ha		s.117 Data	Marrangaroo Quartzite Quarry Buffer	0	0 lots
			This revision of the s.117 directions boundary has substantially impacted on this area. This coupled with other environmental constraints negates the inclusion of this area as residential supply in the short to medium term. The site however, should remain as a potential area of urban supply in the longer term.			(108 potential future when 117's are removed)

Supply Area	Total Area	Number of hectares constrained	Comment		Remaining Supply (ha)	Remaining Supply (lots)
Oakey Forest Road North						
2(a)	217 lots		s.117 Data	Marrangaroo Quartzite Quarry Buffer	0	217 lots
			These supply totals are cognisant of the approved subdivision and concept plans for these areas. However, with the review of the buffer for s.117 the majority of this area would be excluded from supply. Notwithstanding this, the development approvals issued for the site have been substantially commenced and the site will therefore be included in raw supply.			
Littleton						
2(a)	53 lots		SLWCA	Excludes low capability	0	53 lots
			These supply totals are cognisant of the approved subdivision and concept plans for these areas.			

Supply Area	Total Area	Number of hectares constrained	Comment		Remaining Supply (ha)	Remaining Supply (lots)
Blaxland Street						
2(a)	9 ha	6.2ha	SLWCA	Excludes areas of low/very low capability	2.8ha	0 lots
			Slope	Excludes areas of low/very low capability		Dept of Education land for school
			Although this site is zoned residential it forms part of the Department of Education holdings and is unlikely to form part of accessible supply in the short to medium term.			
Bowenfels West (off Landa Street)						
2(a)	106 lots		SLWCA	Excludes areas of low/very low capability		106 lots
			Slope	Excludes areas of low/very low capability		
			These supply totals are cognisant of the approved subdivisions and concept plans for these areas.			
Bowenfels North						
2(a)	34 lots	6.2ha	SLWCA	Excludes areas of low/very low capability		34 lots
			Slope	Excludes areas of low/very low capability		
			These supply totals are cognisant of the approved subdivisions and concept plans for these areas.			

Supply Area	Total Area	Number of hectares constrained	Comment		Remaining Supply (ha)	Remaining Supply (lots)
Lithgow South						
1(c)	260 ha	209.1ha	SLWCA	Excludes areas of low/very low capability	50.9ha	24lots
			Slope	Excludes areas of low/very low capability		Limited subdivision potential
			This area is heavily constrained by ESA's and SLWCA's. The unconstrained area of supply in this 1© area has been exhausted for further subdivision.			
East Bowenfels						
1(c)	18.2ha	9.7ha	SLWCA	Excludes areas of low/very low capability	8.5ha	1lot
			Slope	Excludes areas of low/very low capability		
			This area is heavily constrained by ESA's and SLWCA's. The unconstrained area of supply in this 1© area has been exhausted.			
South Portland						
1(d)	52.6ha		ESA		0	0
			This area is very constrained due to ESA. No further supply is available in this area.			
East Portland						
1(d)	60ha	12ha	ESA		48ha	381 lots
			This area is constrained due to ESA.			

Supply Area	Total Area	Number of hectares constrained	Comment	Remaining Supply (ha)	Remaining Supply (lots)
Village North					
2(v)	45ha	25.88ha	ESA	19.12	143 lots
			This area is very constrained due to ESA.		
Village North East					
2(v)	35.19ha	7.69ha	ESA	27.5ha	218lots
			This area is very constrained due to ESA.		
Village East					
2(v)	77ha	50.7ha	ESA	26.3ha	190lots
			This area is very constrained due to ESA.		

Supply Area	Total Area	Number of hectares constrained	Comment		Remaining Supply (ha)	Remaining Supply (lots)
Village South						
2(v)	60.4ha	39.4ha	ESA		21ha	166 lots
Infill						
2(v)	84 lots		ESA			84 lots
Portland South						
1(c)	304ha	193ha	ESA		111ha	25 lots
			This area is very constrained due to ESA.			
Portland North						
1(c)	539.5ha	165.5ha	ESA		374ha	167lots
			This area is very constrained due to ESA.			
Wallerawang West						
1(d)	150.4ha	62.6ha	SLWCA	Excludes areas of low/very low capability	87.8ha	687 lots
			Slope	Excludes areas of low/very low capability		
			This area is constrained due to ESA & SLWCA data.			

Supply Area	Total Area	Number of hectares constrained	Comment		Remaining Supply (ha)	Remaining Supply (lots)
Village South						
2(v)	23.6ha	20.6ha	SLWCA	Excludes areas of low/very low capability	3ha	20lots
			Slope	Excludes areas of low/very low capability		
			This area is constrained due to ESA & SLWCA data.			
Village North						
2(v)	9.5ha		This area is constrained due to STP and DECC/State Forest Buffer. No further supply is available in this area.		0	0
Village East						
2(v)	64ha	56.2ha	s.117	Silica Quartz Buffer	7.8ha	62lots
			SLWCA	Excludes areas of low/very low capability		(8lots/ha)
			Slope	Excludes areas of low/very low capability		
			This area is very constrained due to s.117 directions, SLWCA and ESA.			
Infill						
2(v)	229 lots	39 lots	Infill lots in the main areas of the village only. Does not include areas included with the larger areas of vacant village land already accounted for above.		190 lots	190 lots

Supply Area	Total Area	Number of hectares constrained	Comment		Remaining Supply (ha)	Remaining Supply (lots)
Lidsdale Village South						
2(v)	12.4ha	2.4ha	SLWCA	Excludes areas of low/very low capability	10ha	80lots
			Slope	Excludes areas of low/very low capability		Note: the potential residential supply in the Lidsdale village has been calculated based on remaining unconstrained vacant land or lots remaining with subdivision potential.
Lidsdale Village North						
2(v)	11.6ha	6.1ha			5.5ha	44lots
Wallerawang South						
1(c)	165ha	149.3ha	s.117 Data	Silica Quartz	15.7ha	20 lots
			SLWCA	Excludes areas of low/very low capability.		
			Slope	Excludes areas of low/very low capability		
			This area is heavily constrained due to the s.117 directions for protection of mineral deposits. Some existing approved lots remain vacant and will be counted as supply, but there is no further subdivision potential in this area.			

Supply Area	Total Area	Number of hectares constrained	Comment		Remaining Supply (ha)	Remaining Supply (lots)
Lidsdale						
1(c)	350.7ha	135ha	s.117 Data	Coal	215 ha	87 lots
			SLWCA	Excludes areas of low/very low capability.		
			Slope	Excludes areas of low/very low capability		
			This main area of constraint are the s.117 directions for coal related minerals. Also the ESA & SLWCA data. The potential for land use conflict in this area is enormous. The future land use direction recommended for this location must be mindful of this potential conflict. Minimal subdivision has occurred in this area for rural residential development.			
Capertee Infill						
2(v)	42lots		The southern village area of Capertee is constrained by ESA's and crown ownership. The proximity of Capertee to other outlying areas (Glen Davis, Glen Alice) and employment land (Airly Coalmine), place the village as an important service centre for these areas. The availability of developable supply to service the day to day needs of this and surrounding areas may require a rethink in the location of the village boundary.			42 lots

Supply Area	Total Area	Number of hectares constrained	Comment		Remaining Supply (ha)	Remaining Supply (lots)
Cullen Bullen Infill						
2(v)	31 lots		The Cullen Bullen area is constrained by S.117 direction for the protection of coal reserves and ESA. The area is also affected by ground water vulnerability. These constraints nullify any further contribution this area can make to urban supply.		0	0
Clarence						
1(c)	289 ha		s.117 Data	Coal		11 lots
			SLWCA	Excludes areas of low/very low capability		
			Slope	Excludes areas of low/very low capability		
			This area is heavily constrained by ESA and s.117 direction for coal resources. The only remaining supply would be the vacant lots within the Clarence subdivision			

Supply Area	Total Area	Number of hectares constrained	Comment		Remaining Supply (ha)	Remaining Supply (lots)
Dargan						
1(c)	197.5 ha		This area is heavily constrained by ESA and s.117 direction for coal resources. The only remaining supply would be the vacant lots within the Dargan subdivision.			14 lots
Tarana Infill						
2(v)	28lots		This is a large undeveloped section of land within the village zone. This would provide subdivision potential within the Tarana village and bolster the supply from 9 to 18 lots. Reconfiguration of the village zone to cover the houses already erected and removing the aone from the englobo lot would be suggested in this area.			28 lots
Rydal Infill						
2(v)	5 lots		The village is constrained by ESA in the North and East. This would discount approximately 10 lots from the supply.			5 lots
Hartley						
1(c)	1240 ha	537 ha	SLWCA	Excludes areas of low/very low capability	703 ha	233 lots
			Slope	Excludes areas of low/very low capability	Moyne Farm subdivision approved for 49 lots 09/09. This is in an area of constrained supply but has already been approved.	
			The Hartley area has a remaining lot potential of 184 after existing dwellings are identified.			

Supply Area	Total Area	Number of hectares constrained	Comment		Remaining Supply (ha)	Remaining Supply (lots)
Marrangaroo Study Area						
1(a)	633 ha	394 ha	SLWCA	Excludes areas of low/very low capability	239 ha	1326 lots
			Slope	Excludes areas of low/very low capability		
			The constraints data has been applied to the Marrangaroo Investigation area. The areas proposed for industrial development have been excluded for residential supply calculations. 85ha has been designated for large lot residential (194 lots).			

Figure 18. Lithgow Urban Supply Overview

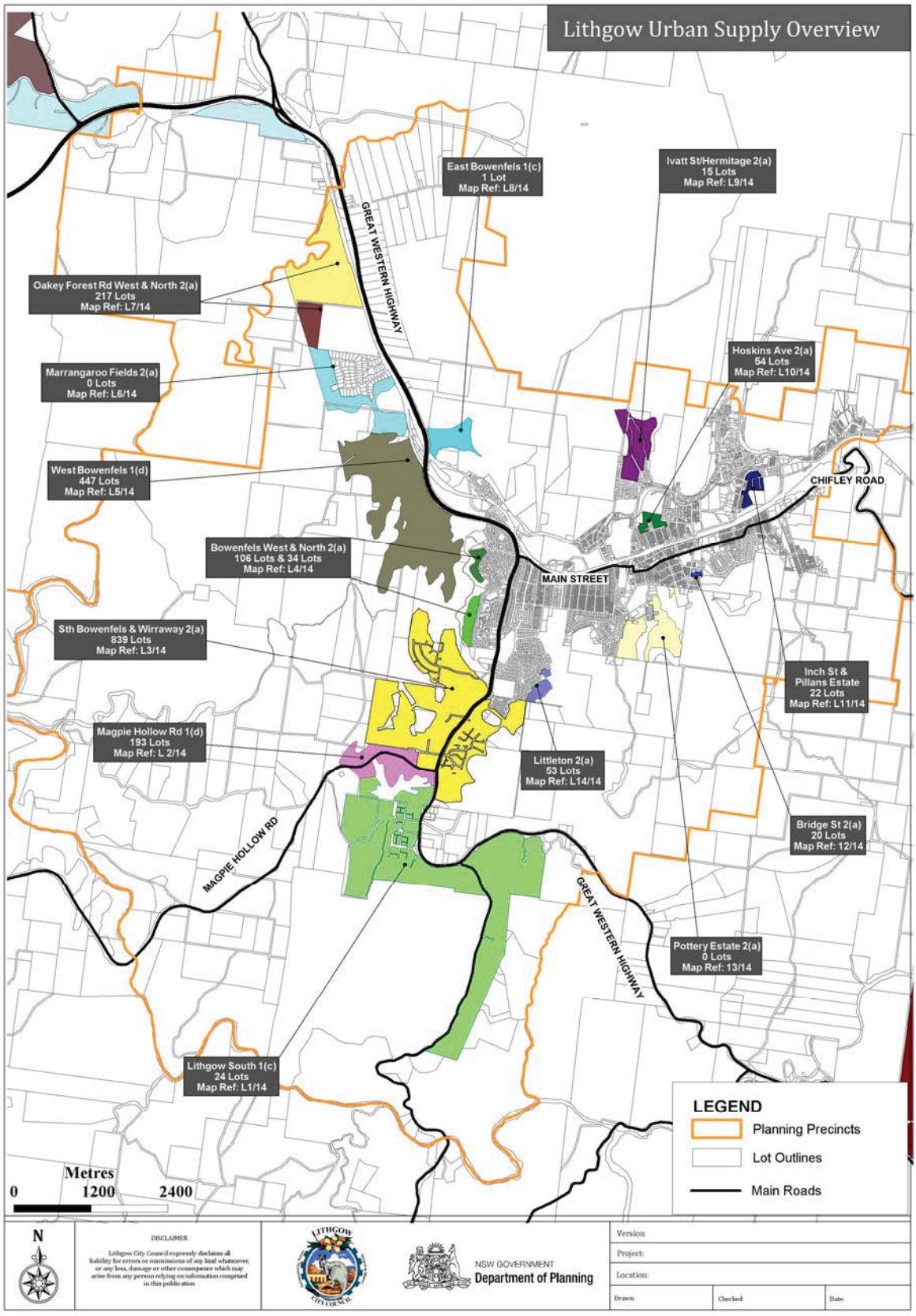


Figure 19. Lithgow South 1(c)



Figure 20. Magpie Hollow Road 1(d)

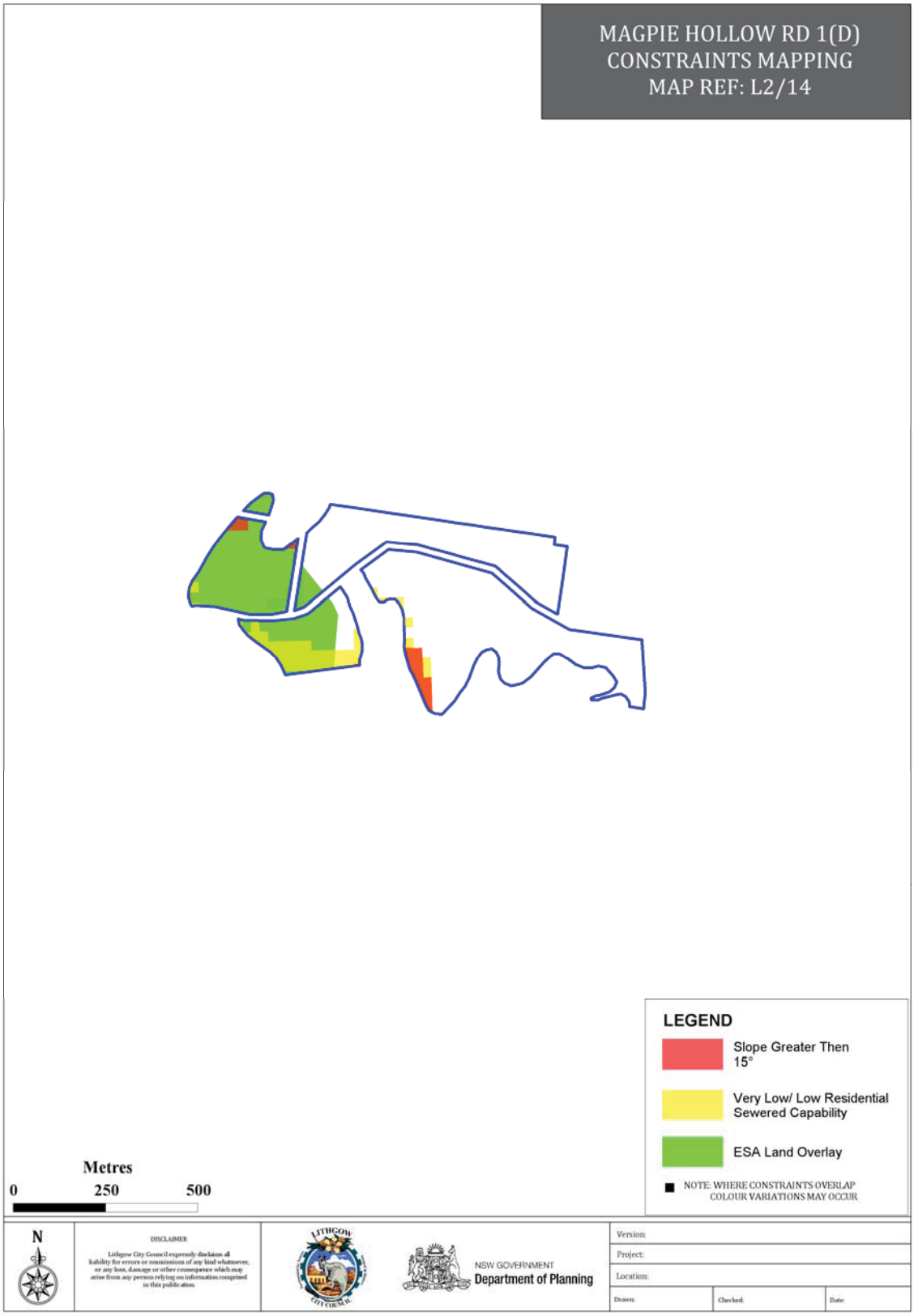


Figure 21. South Bowenfels & Wirraway 2(a)

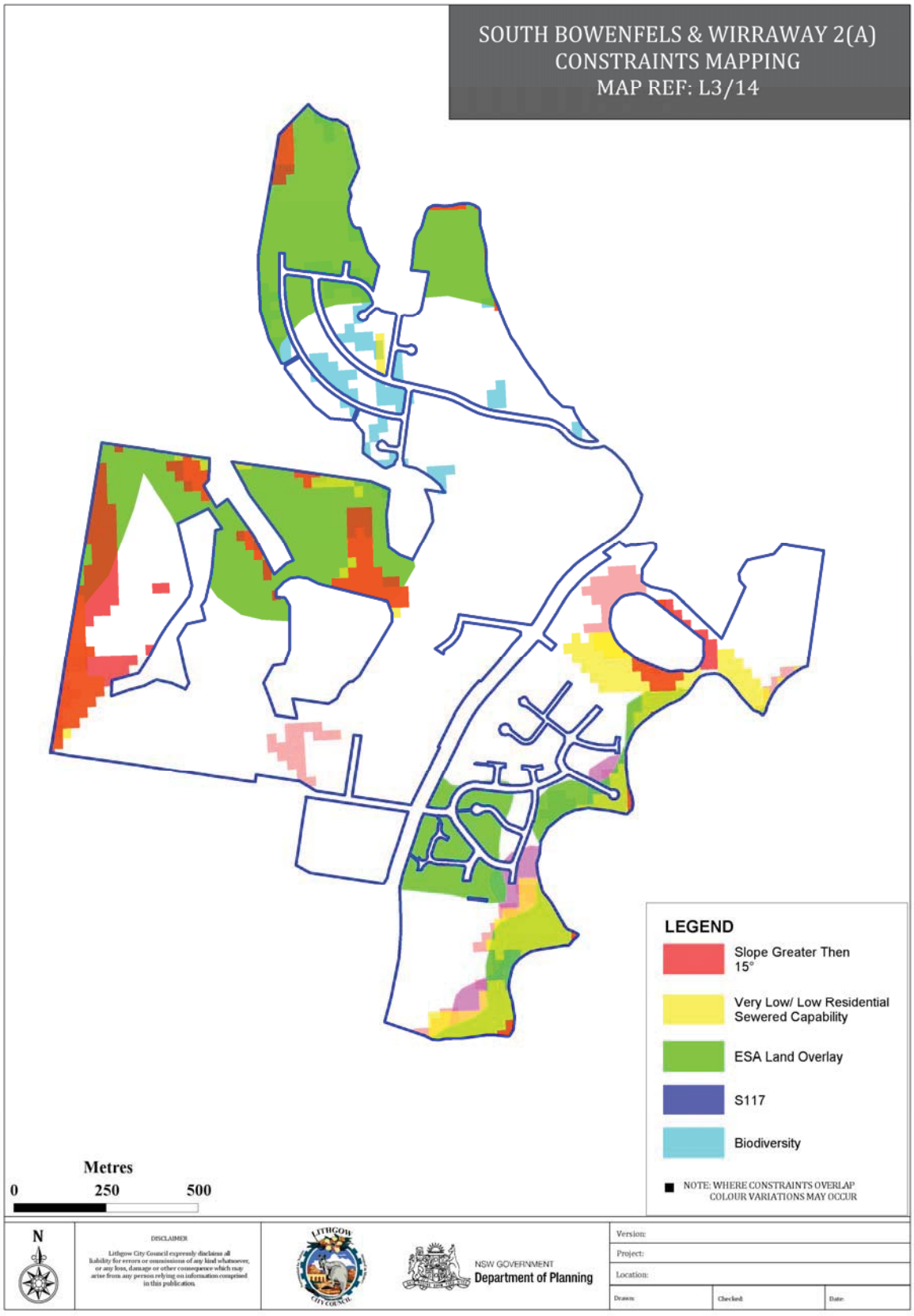


Figure 22. Bowenfels West and North 2(a)

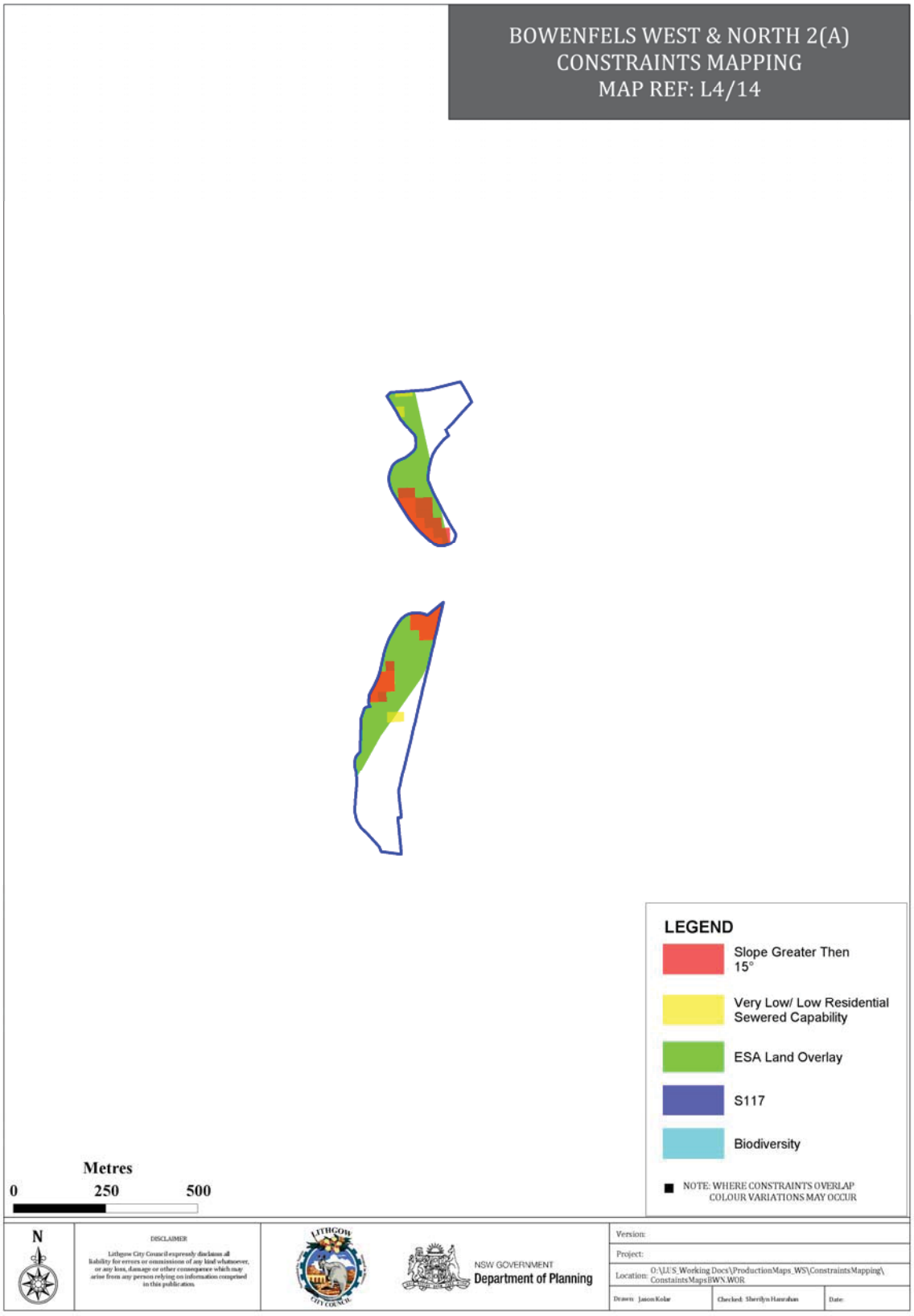


Figure 23. West Bowenfels 1(d)

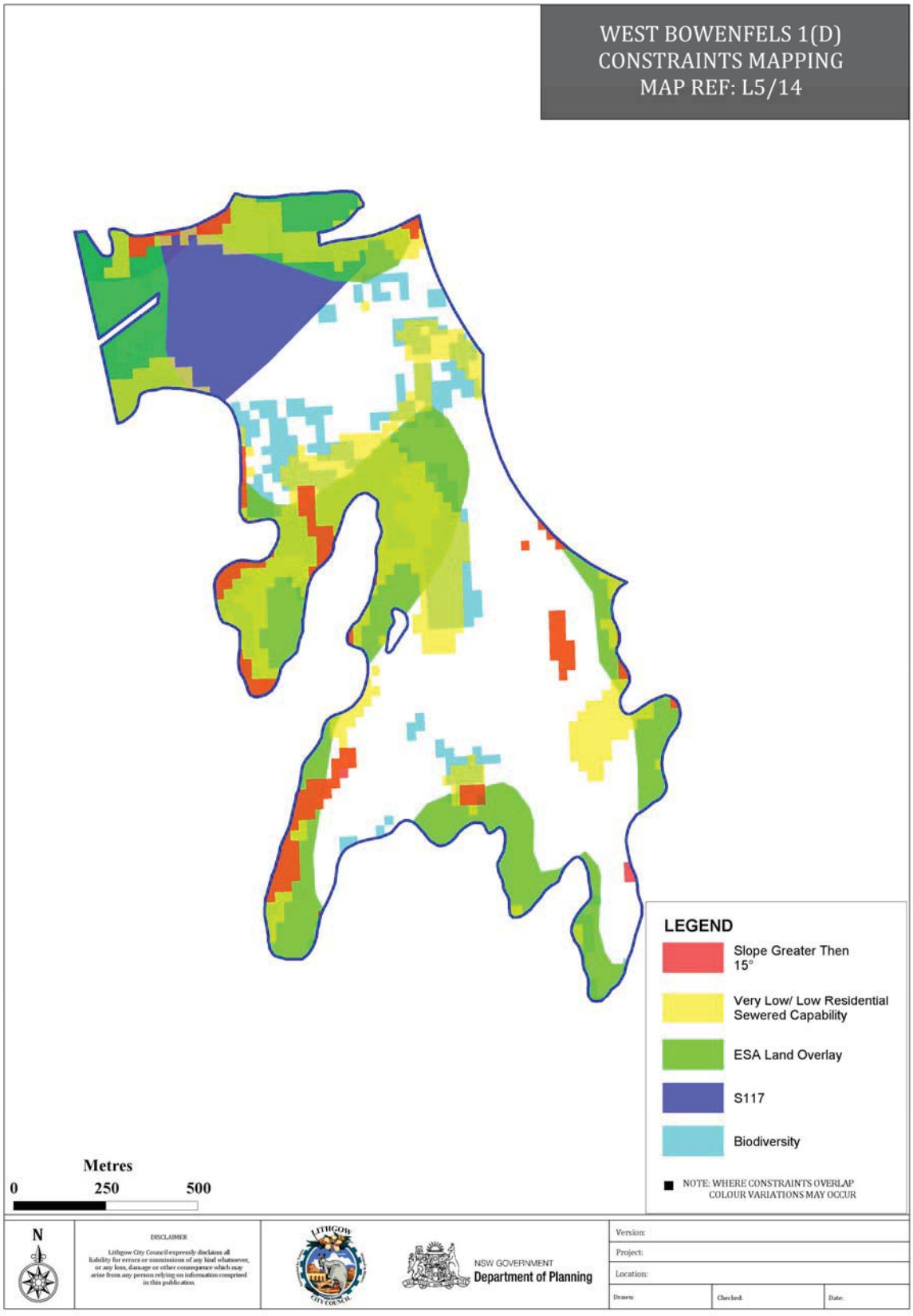


Figure 24. Marrangaroo Fields 2(a)

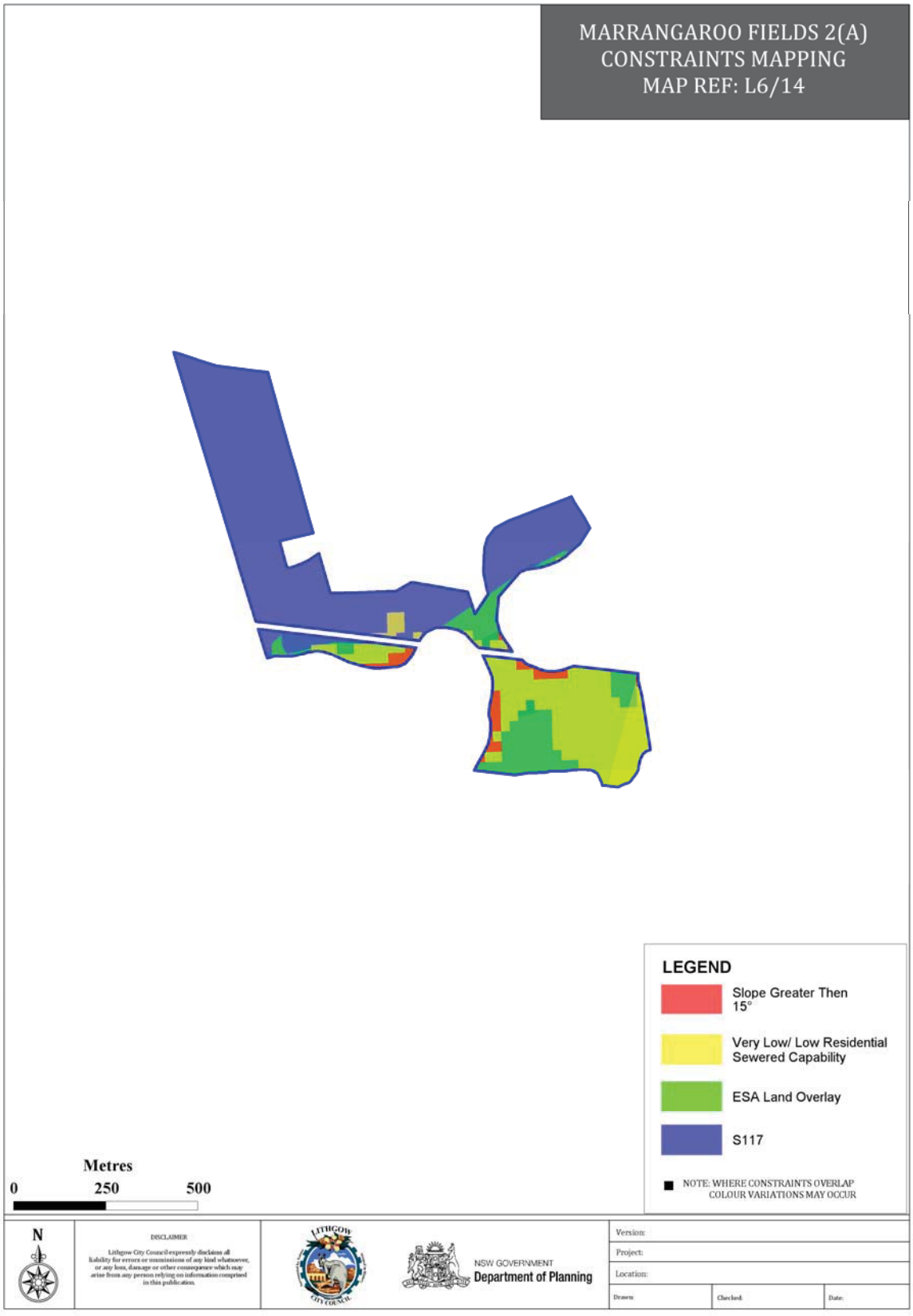


Figure 25. Oakey Forest Road West & North 2(a)

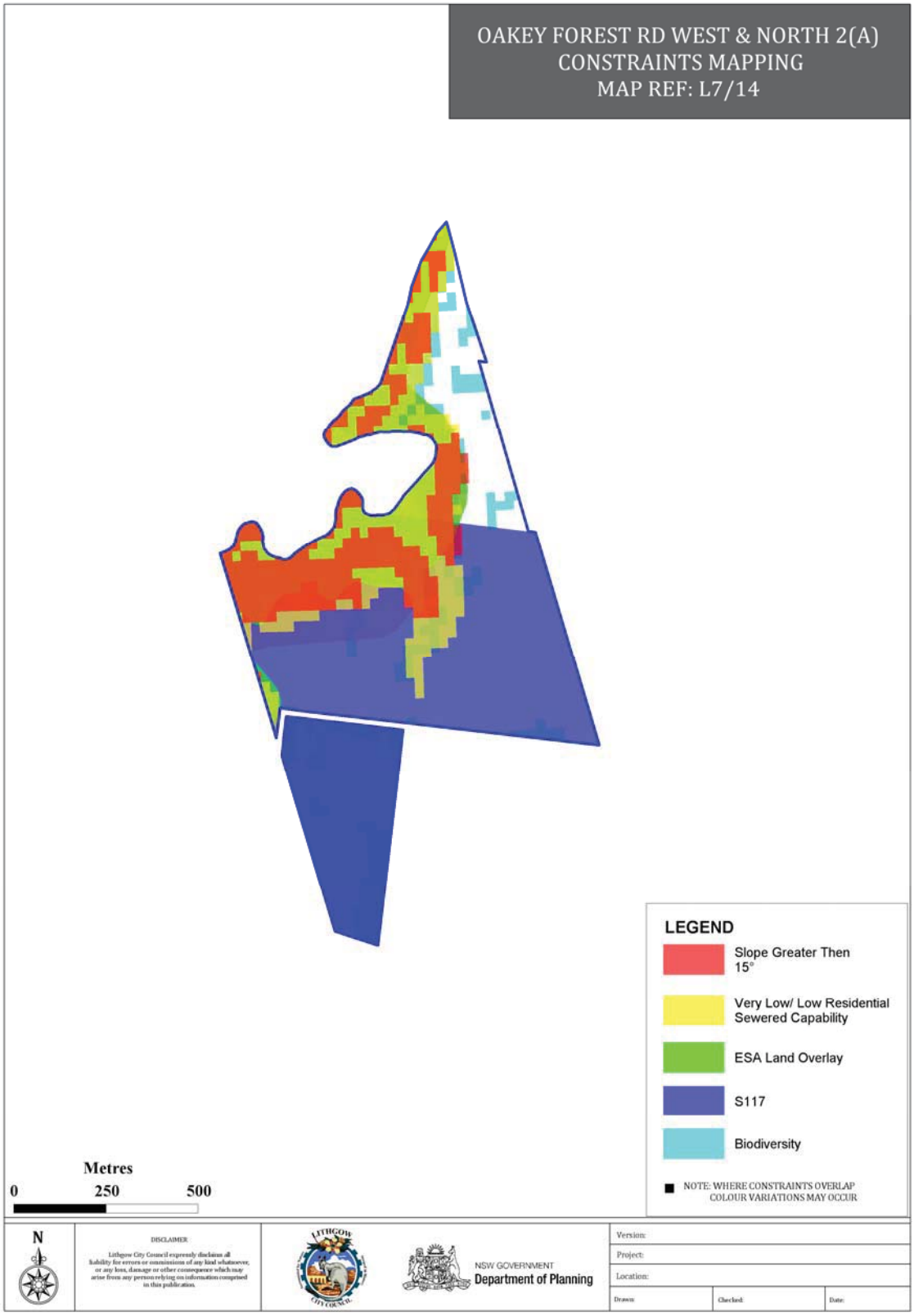


Figure 26. East Bowenfels 1(c)

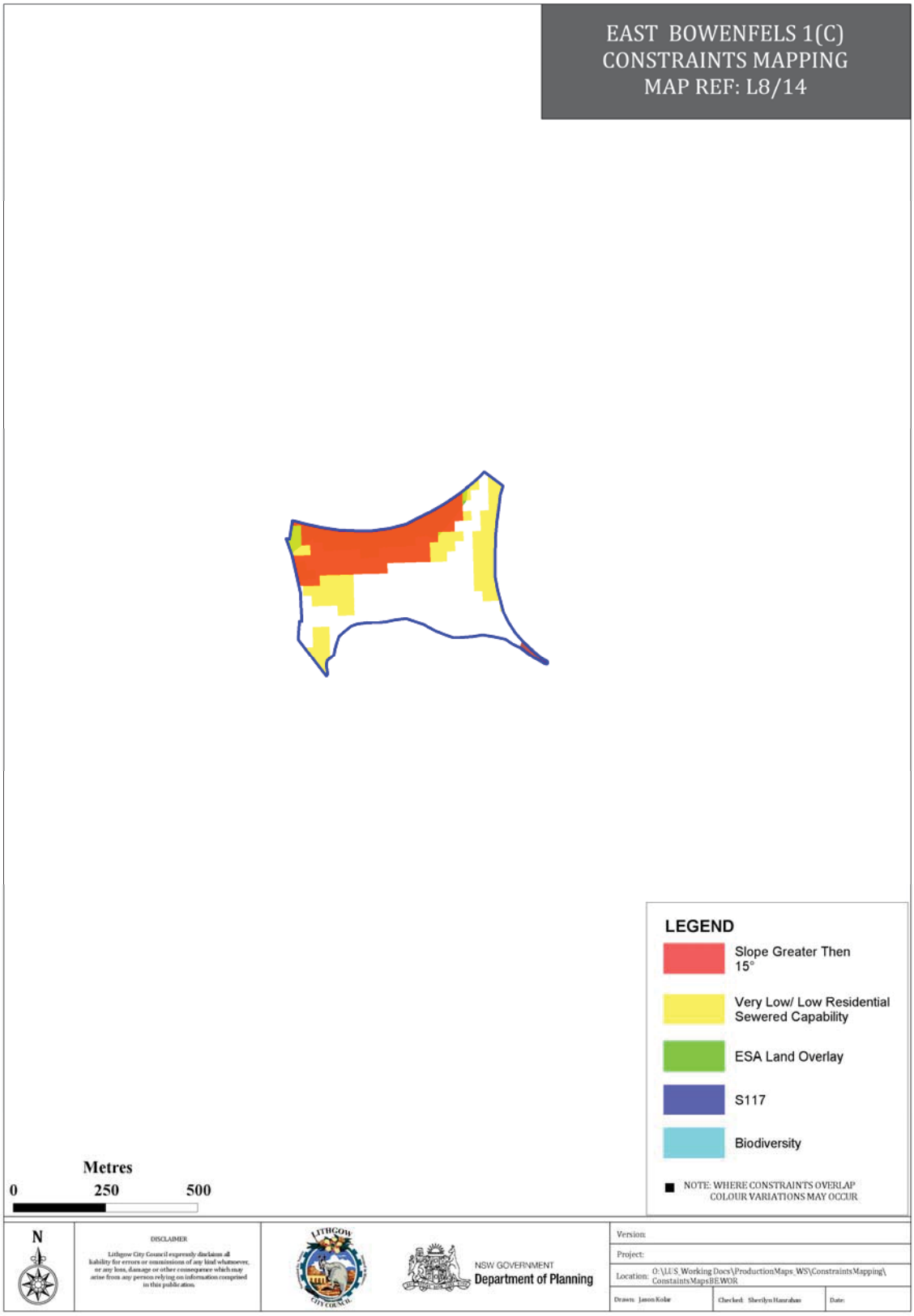


Figure 27. Ivatt Street/Hermitage 2(a)

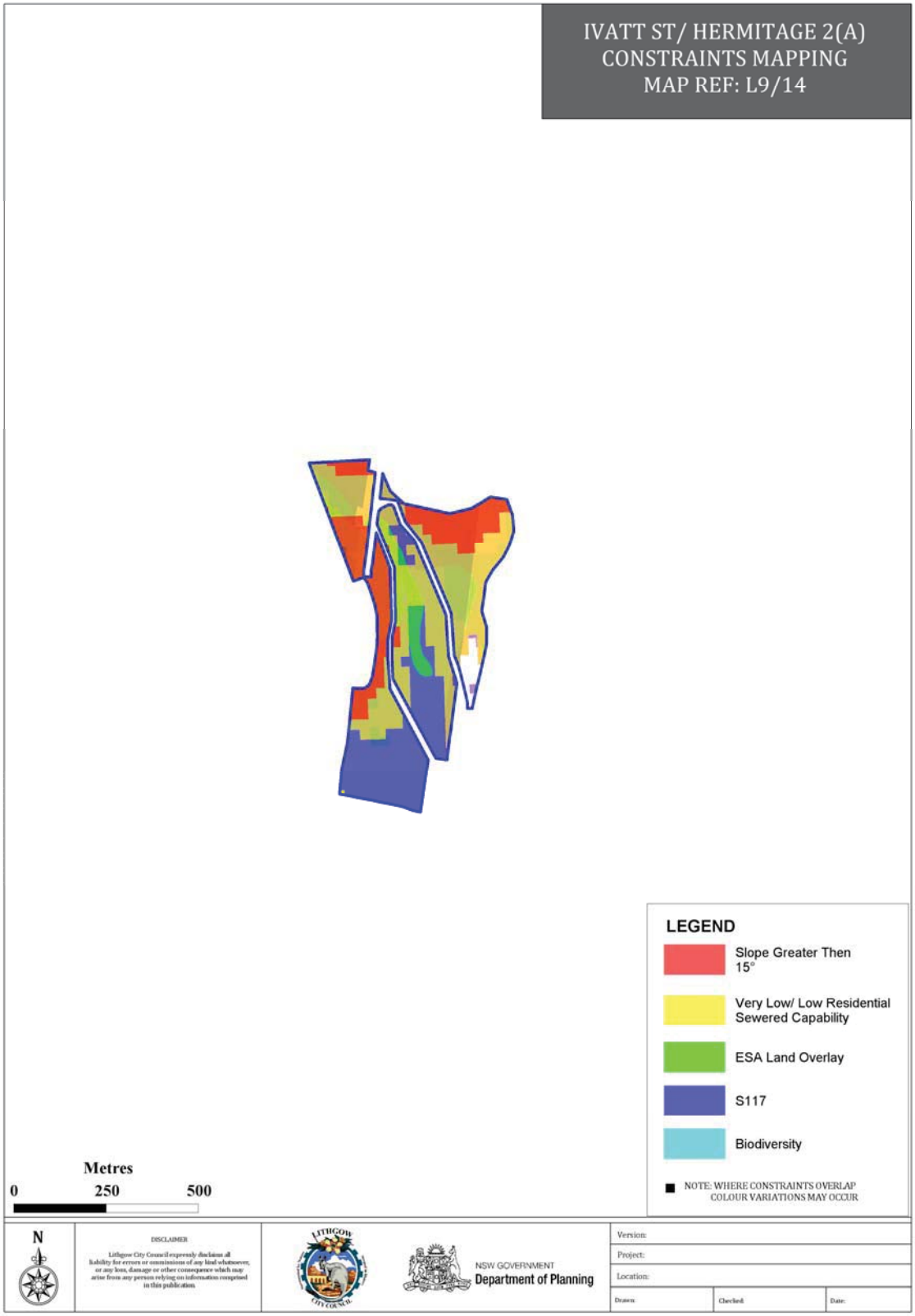


Figure 28. Hoskins Avenue 2(a)

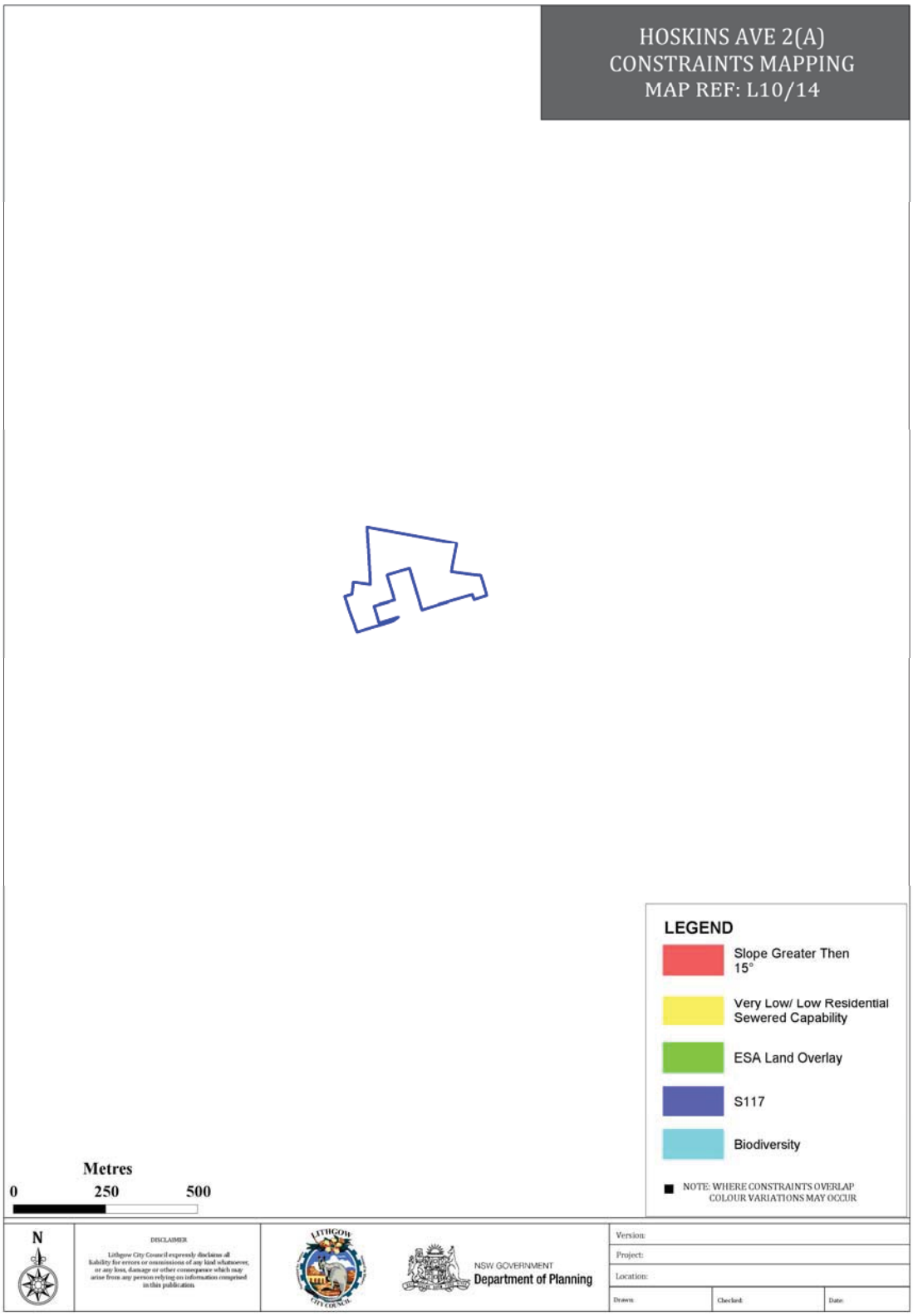


Figure 29. Inch Street & Pillans Estate

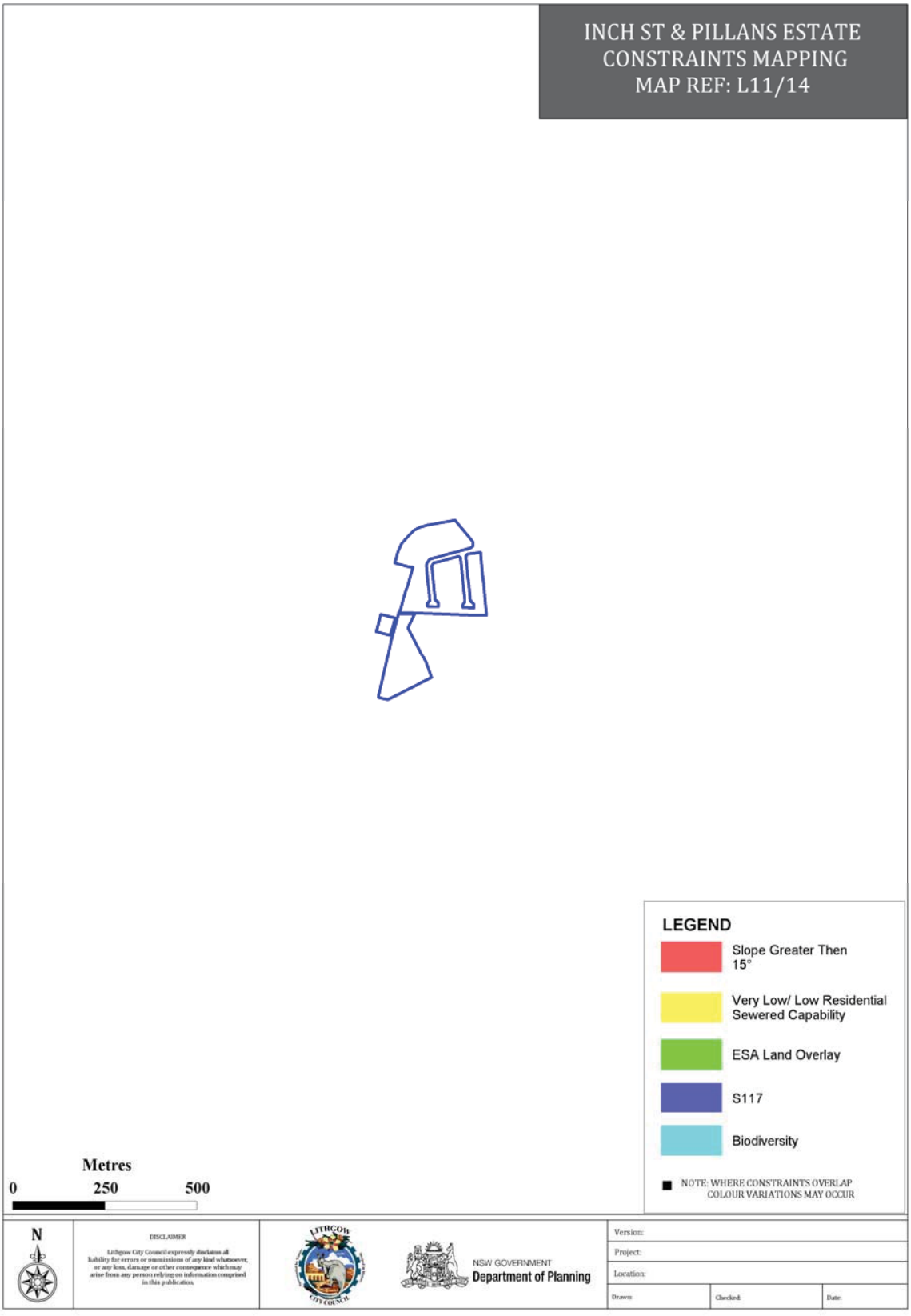


Figure 30. Bridge Street 2(a)

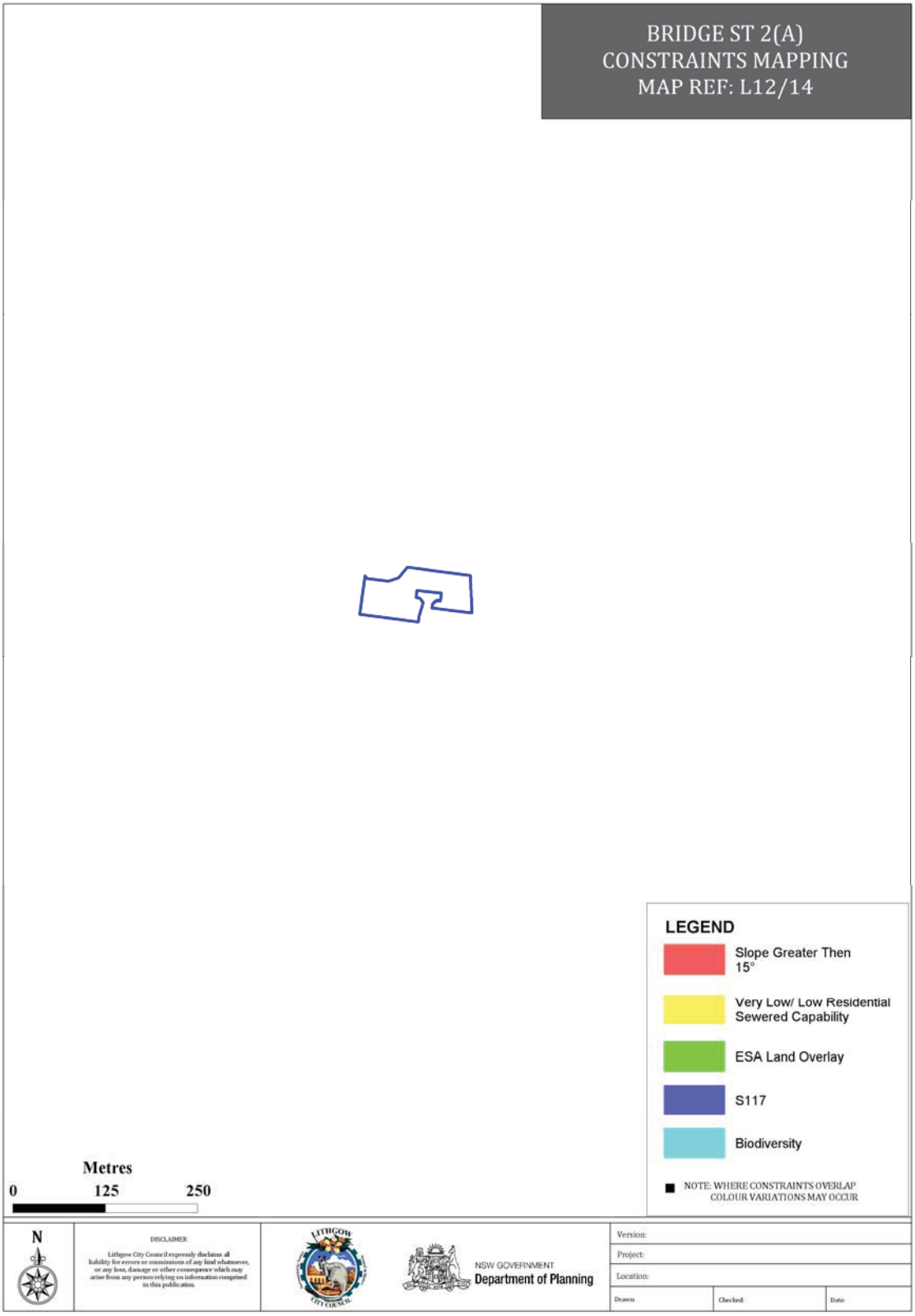


Figure 31. Pottery Estate 2(a)



Figure 32. Littleton 2(a)

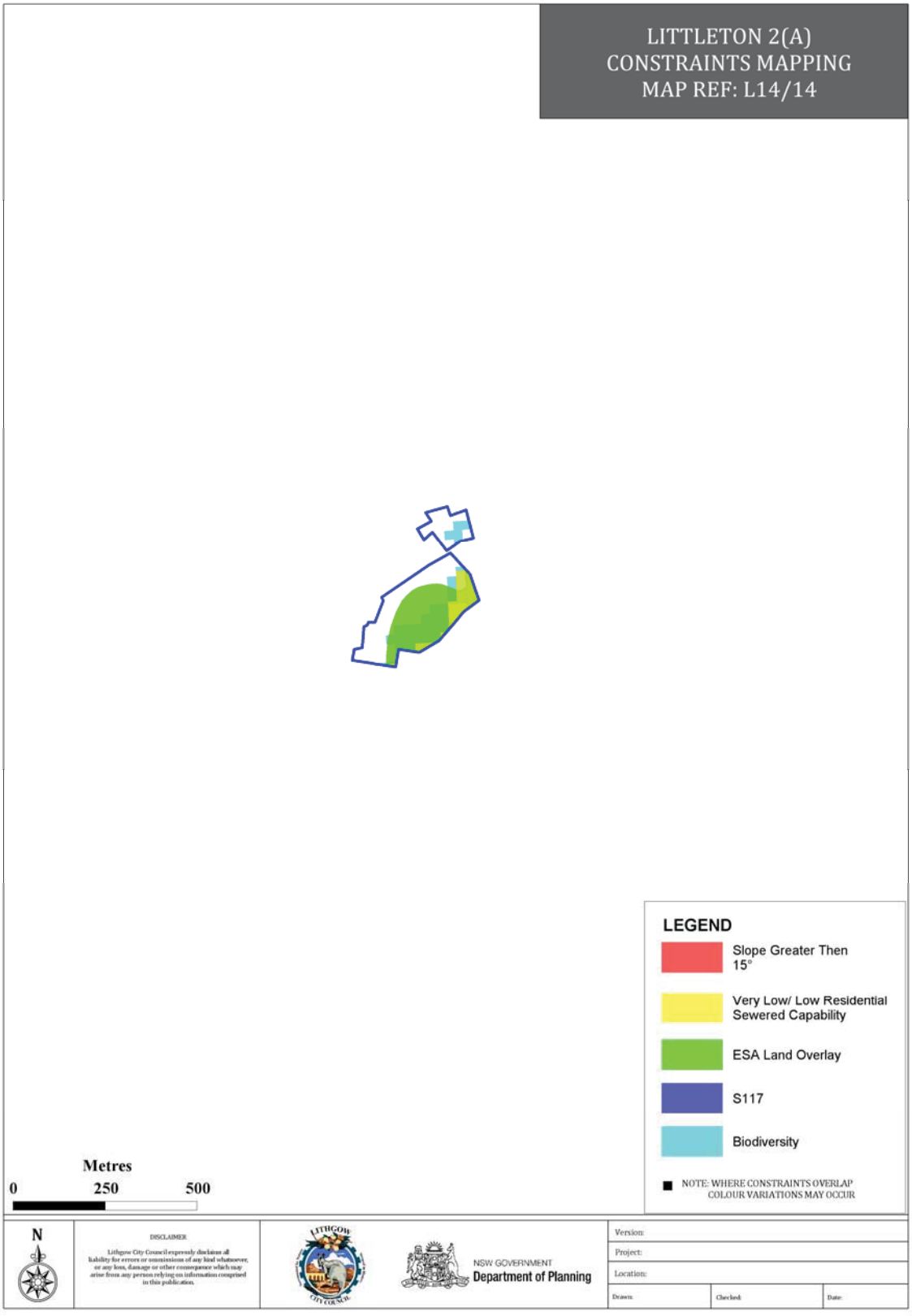


Figure 33. Portland Urban Supply Overview

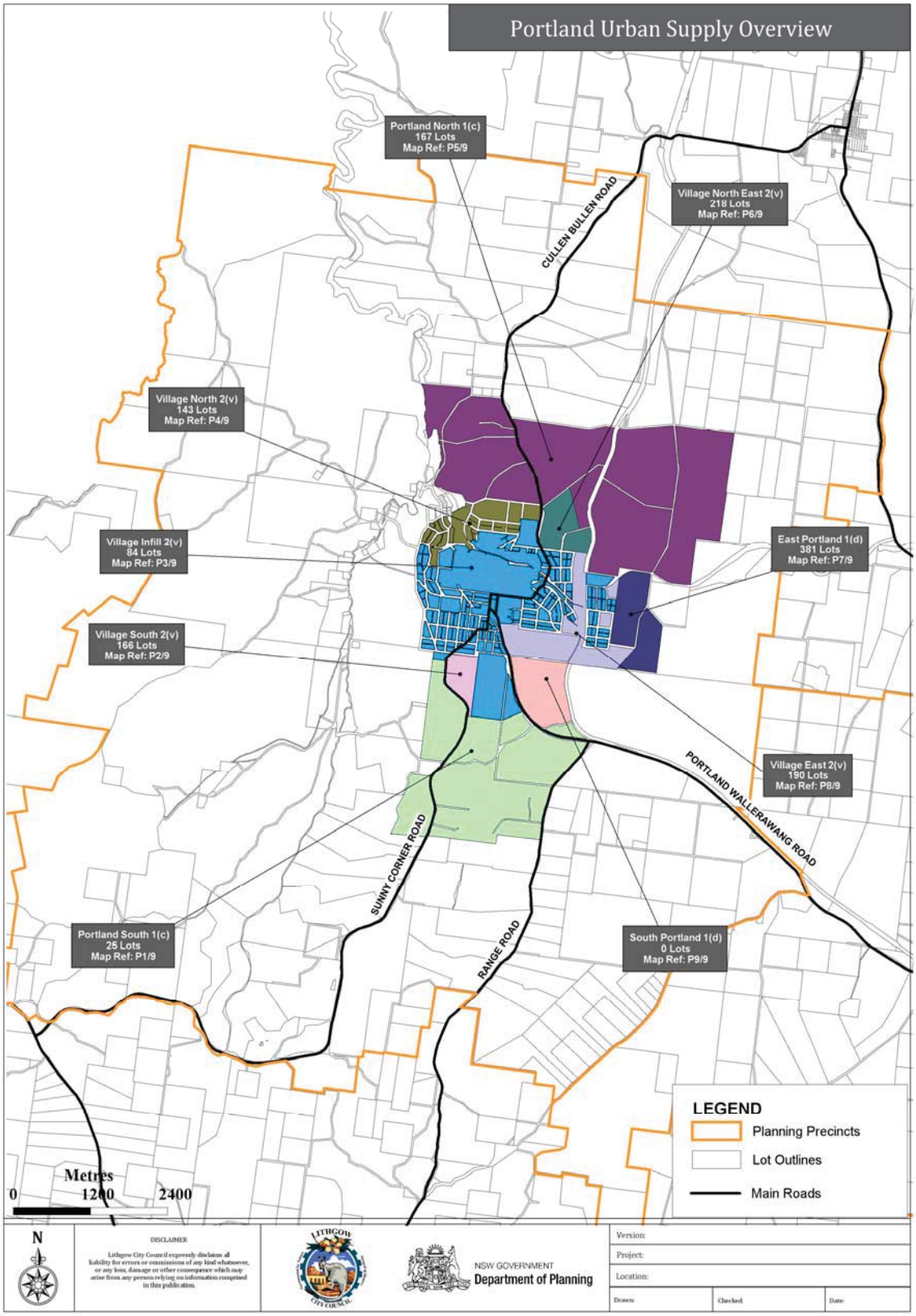


Figure 34. Portland South 1(c)

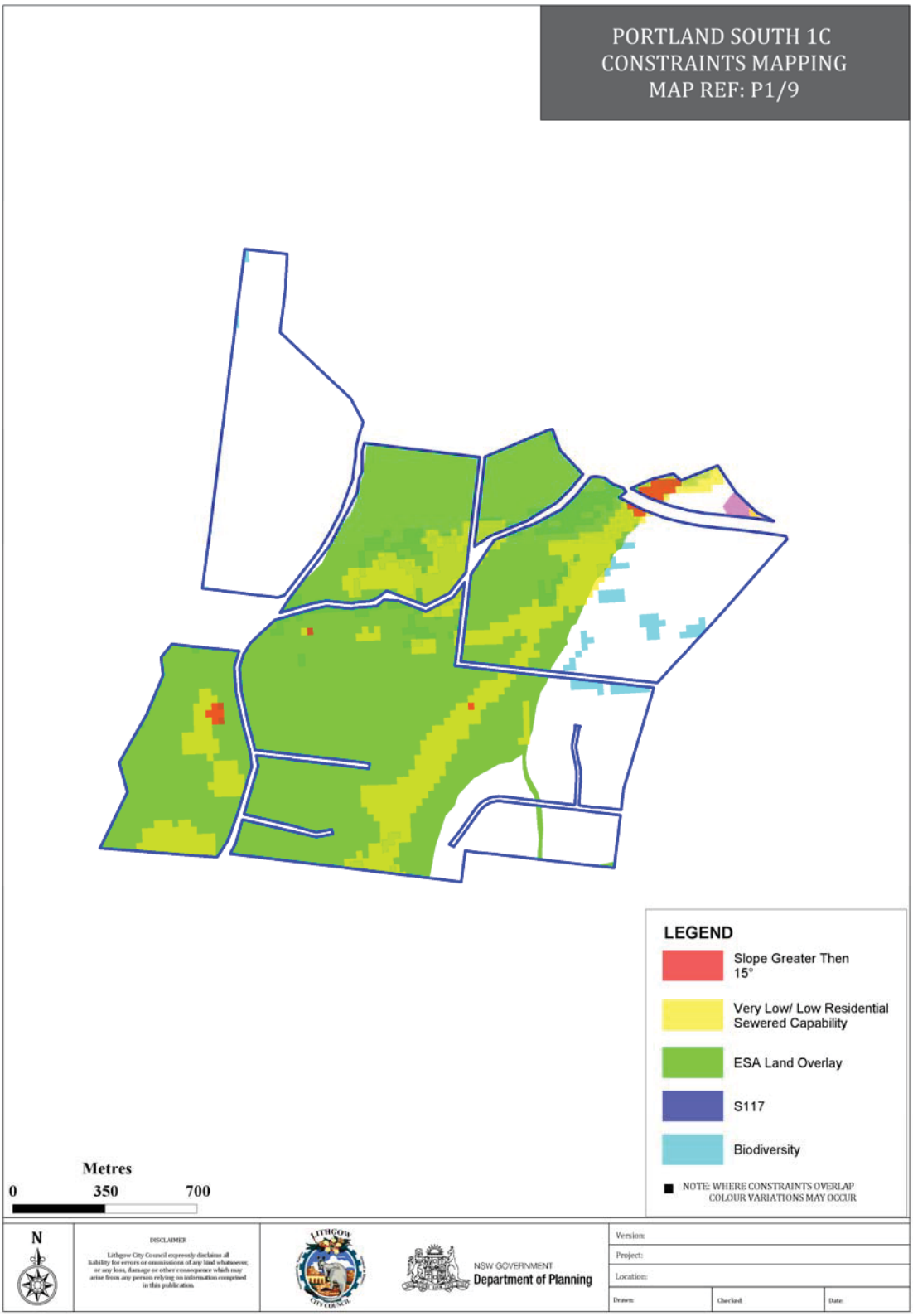


Figure 35. Village South 2(v)

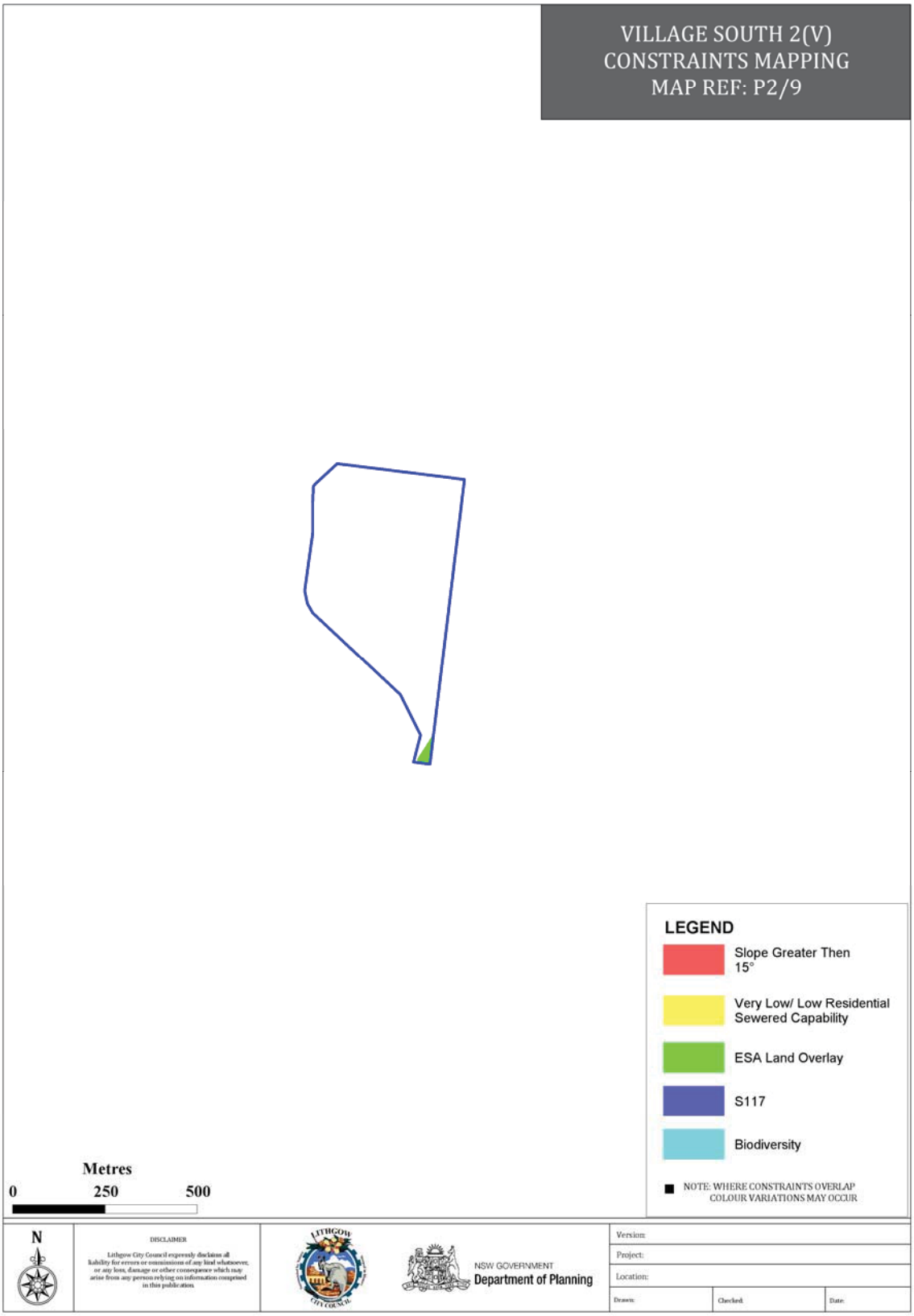


Figure 36. Village Infill 2(v)

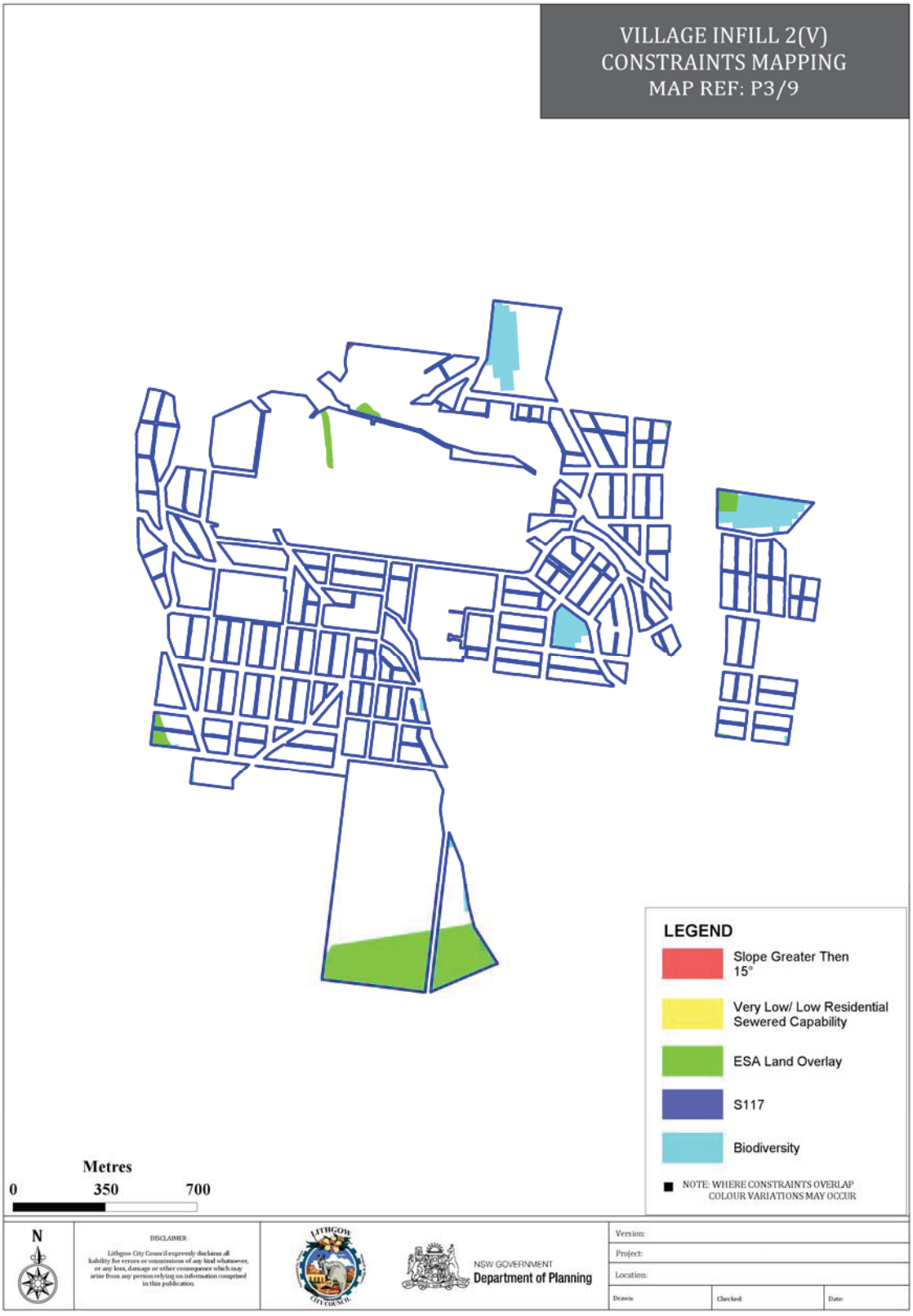


Figure 37. Village North 2(v)

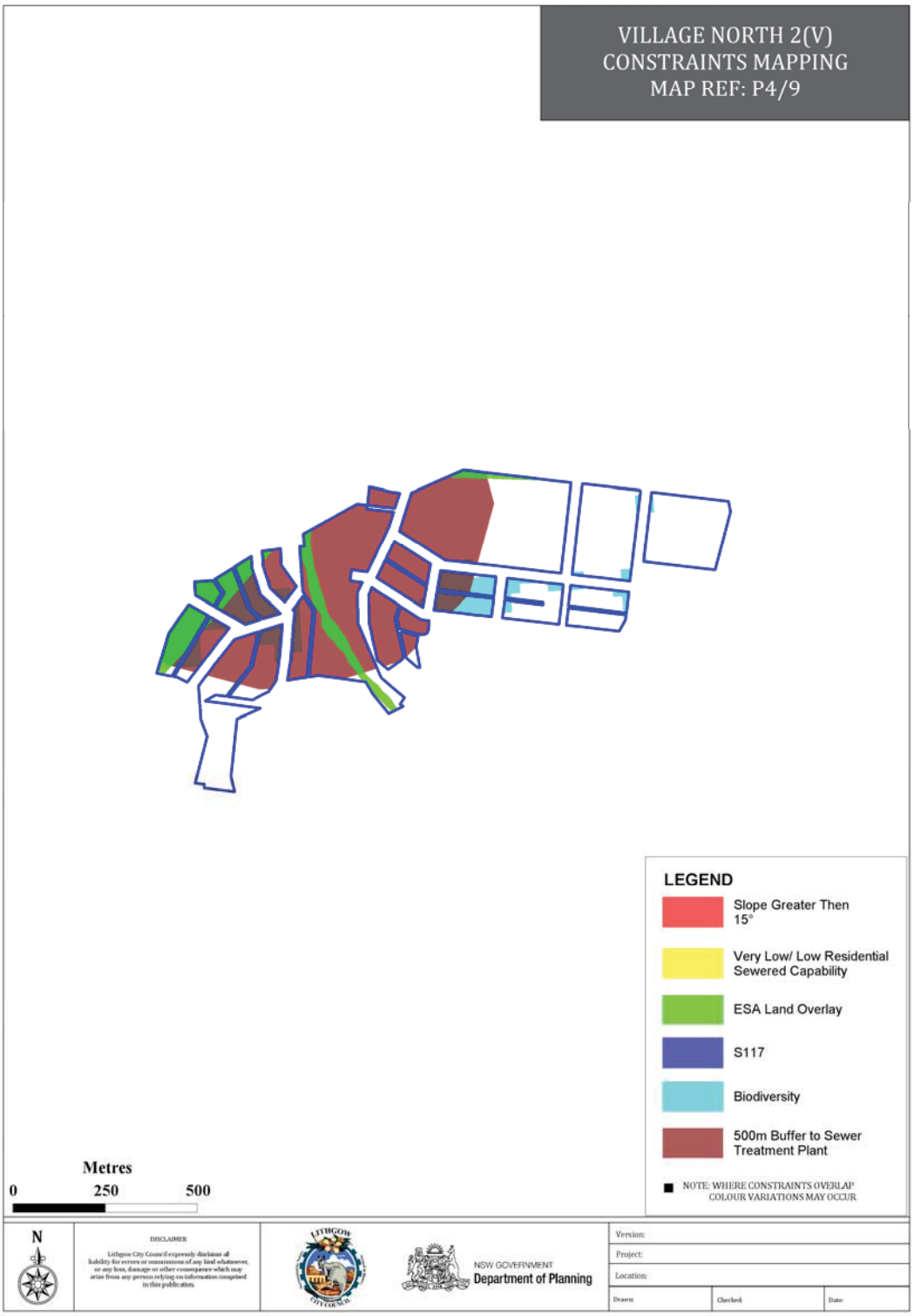


Figure 38. Village North 1(c)

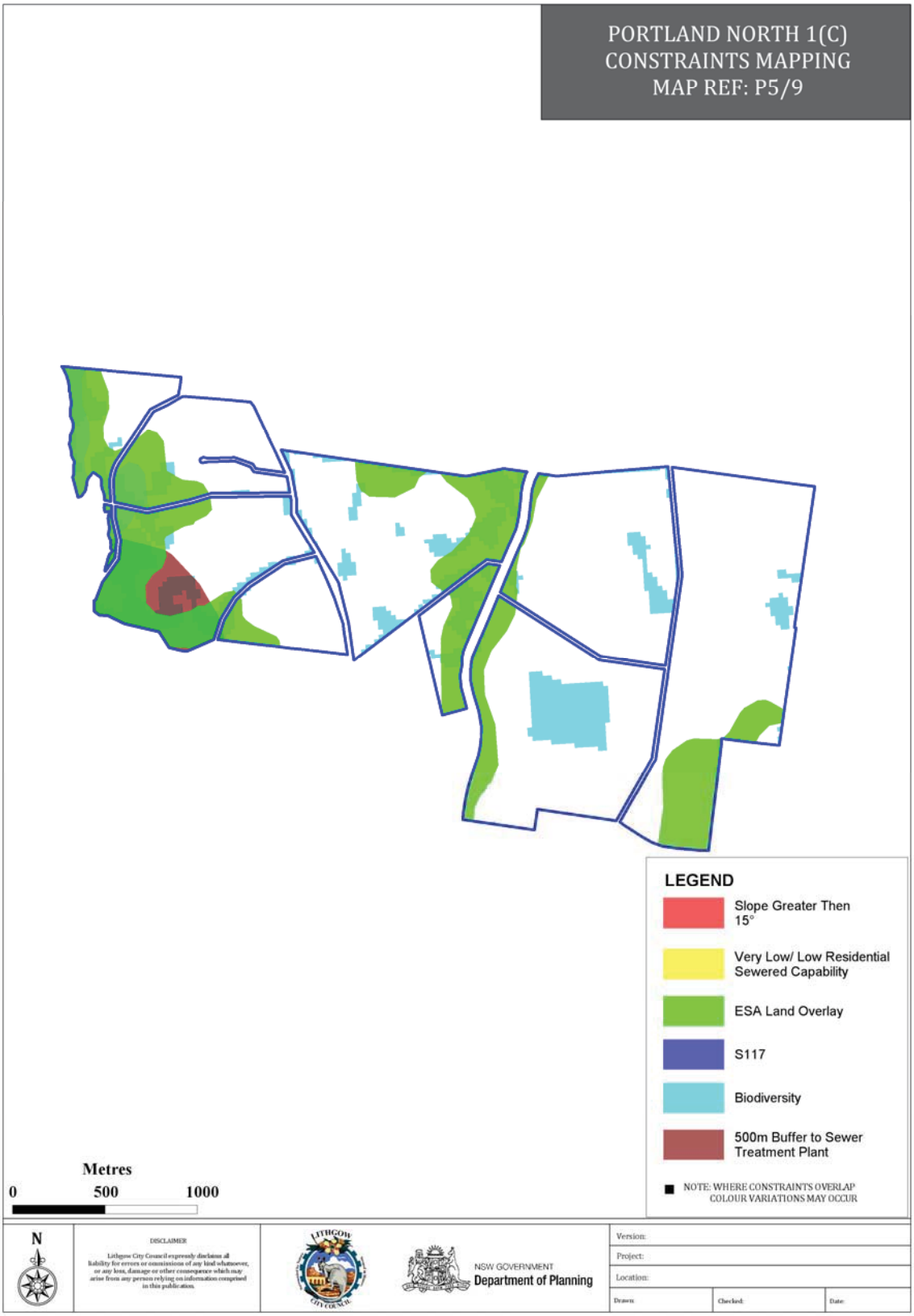


Figure 39. Village North East 2(v)

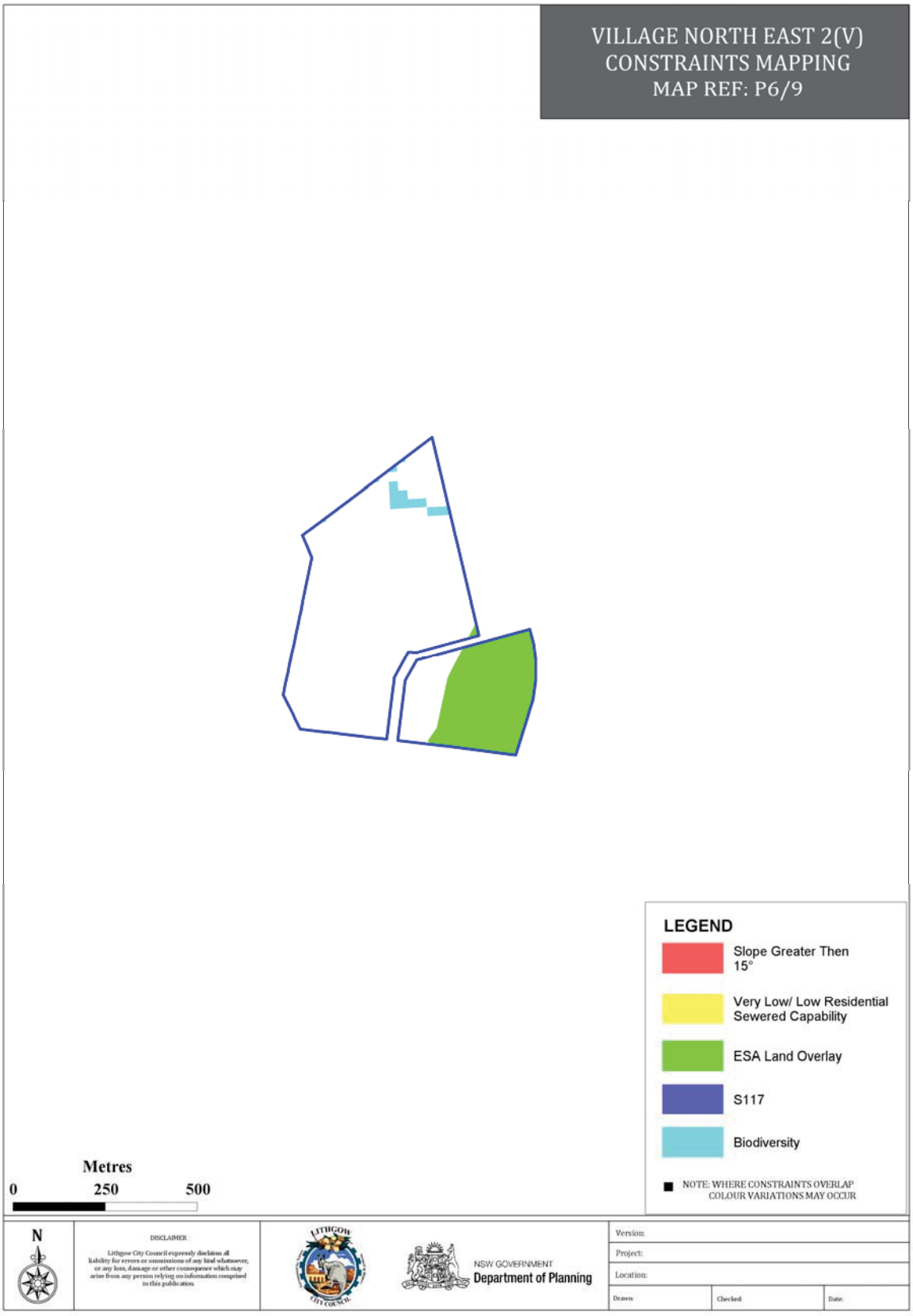


Figure 40. East Portland 1(d)

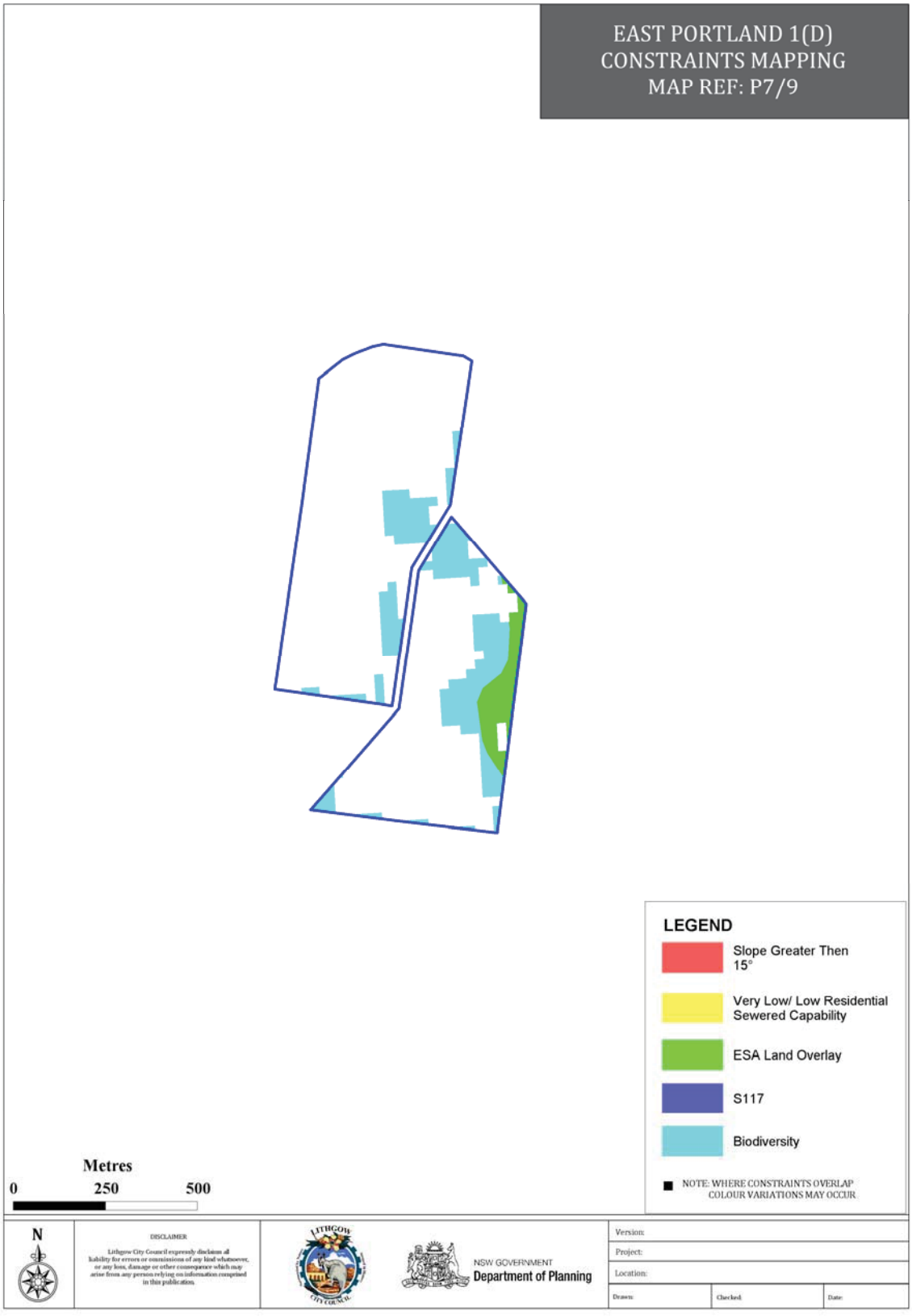


Figure 41. Village East 2(v)



Figure 42. South Portland 1(d)

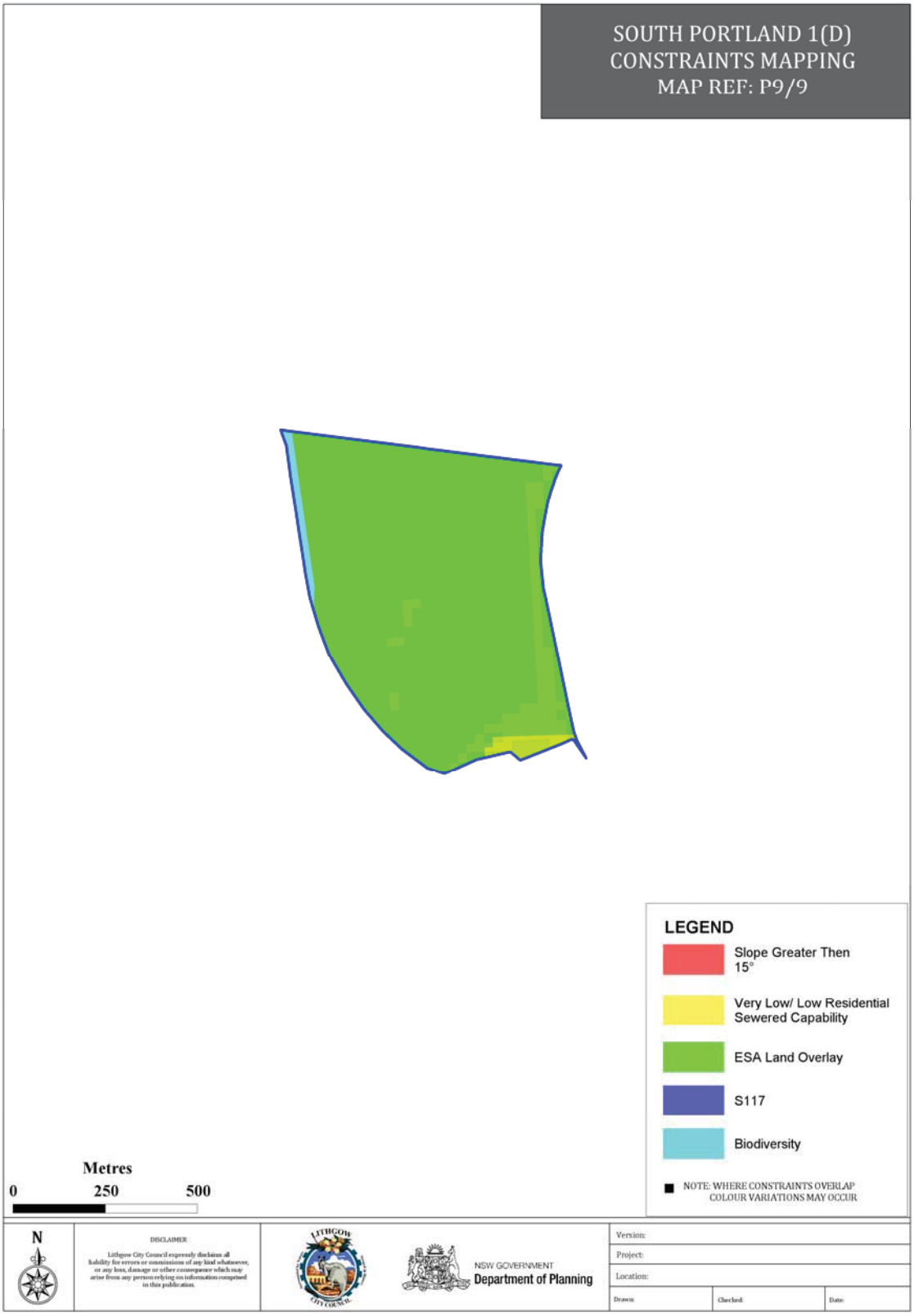


Figure 43. Wallerawang Urban Supply Overview

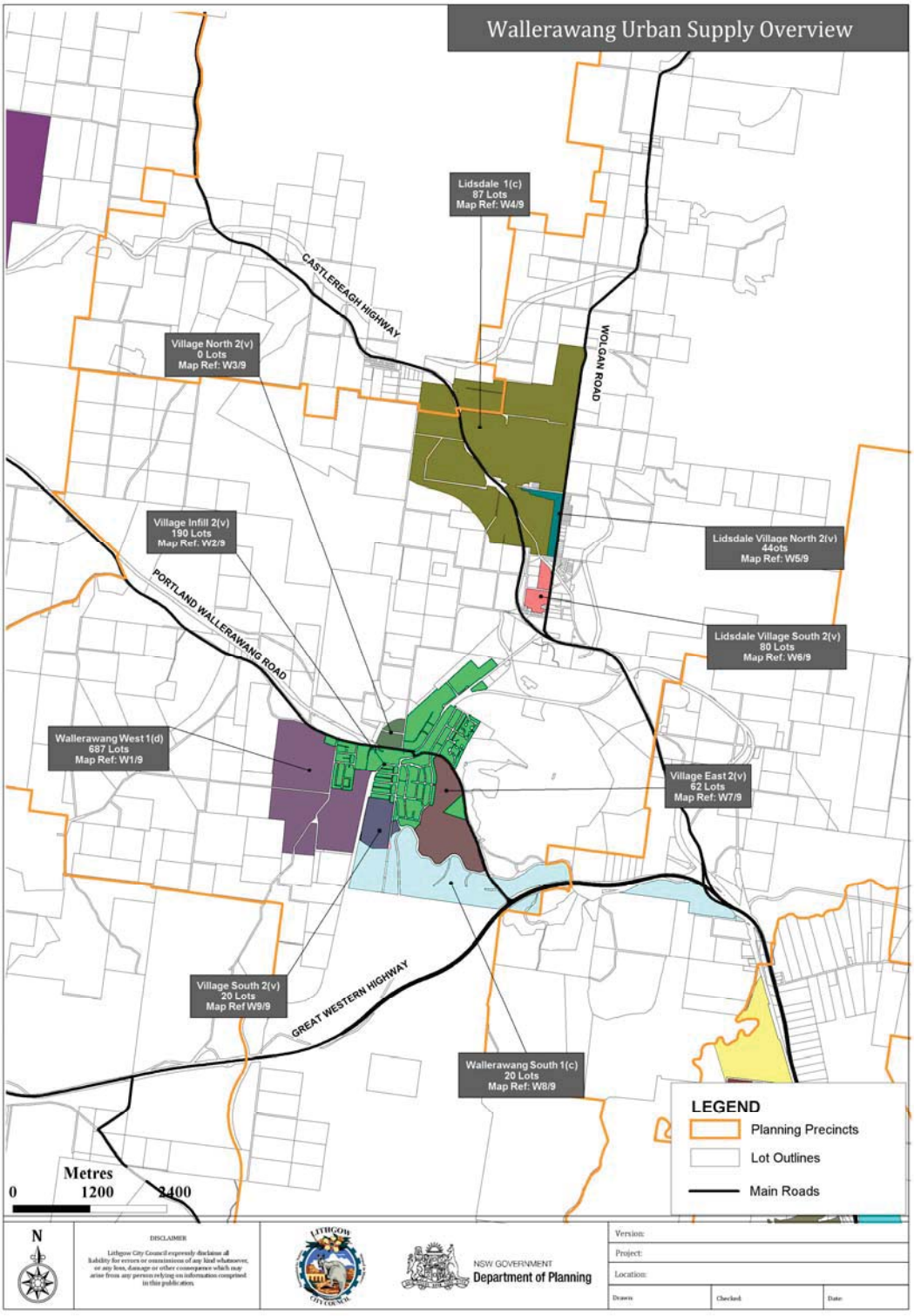


Figure 44. Wallerawang West 1(d)

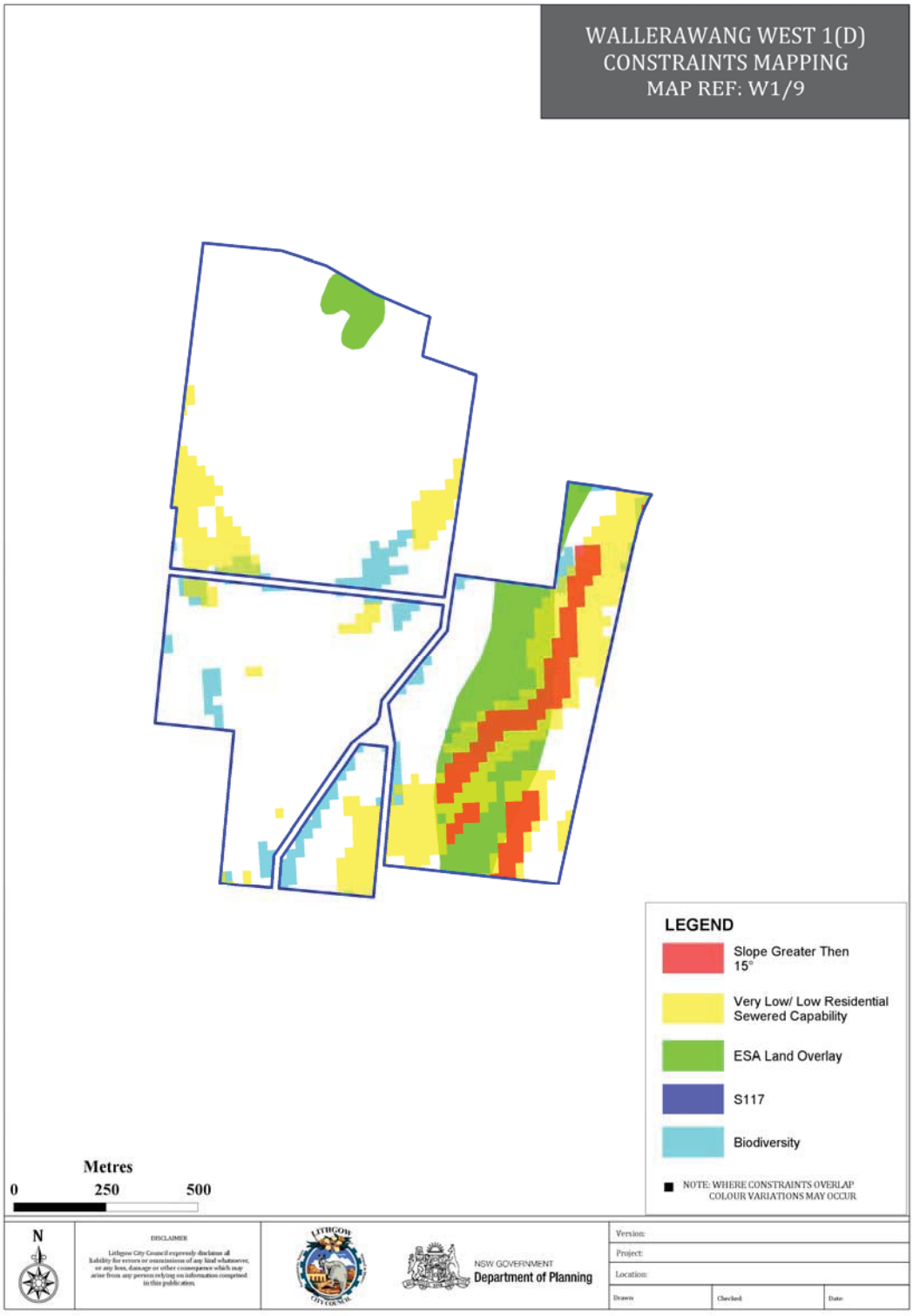


Figure 45. Wallerawang Infill 2(v)

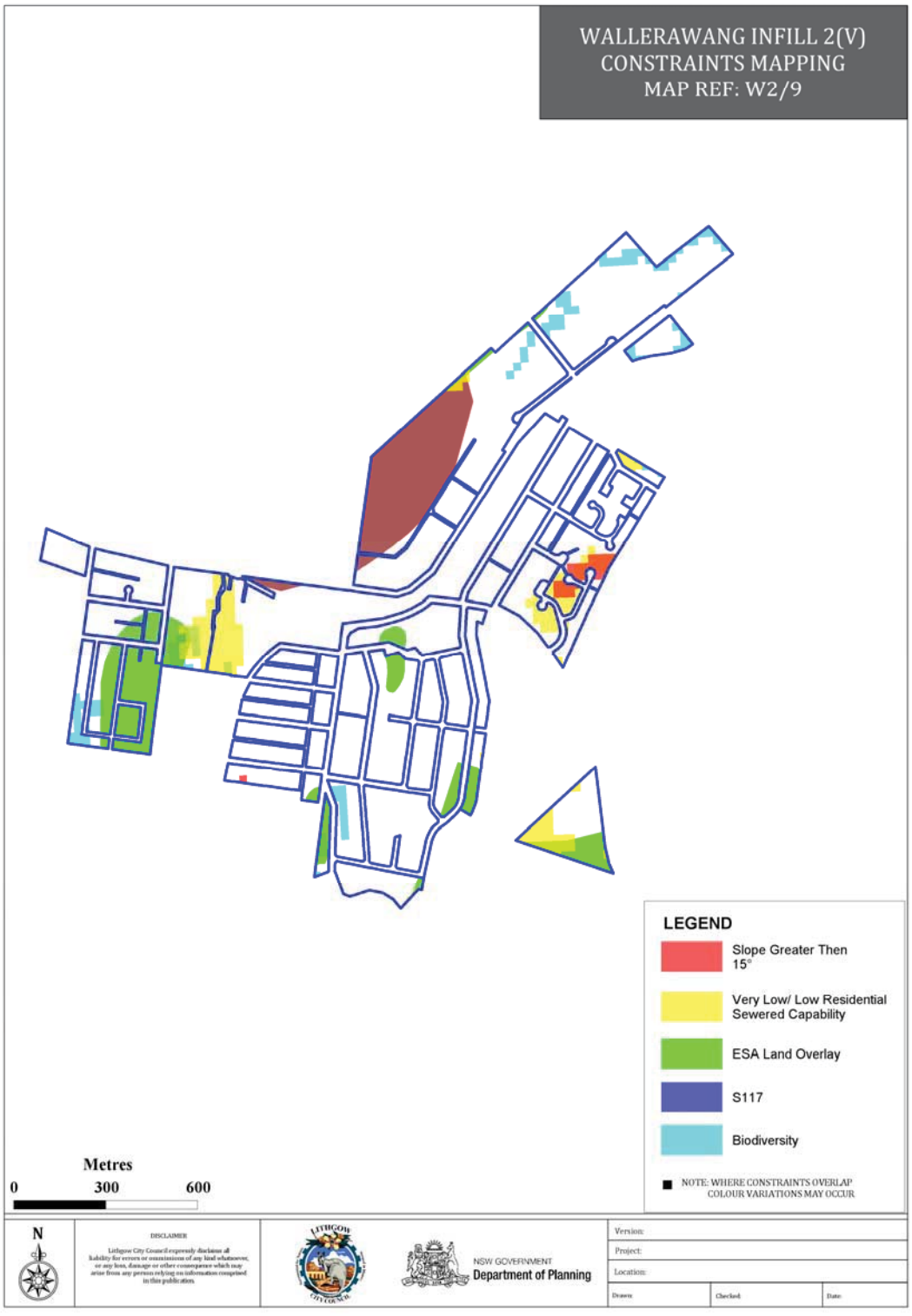


Figure 46. Wallerawang Village North 2(v)

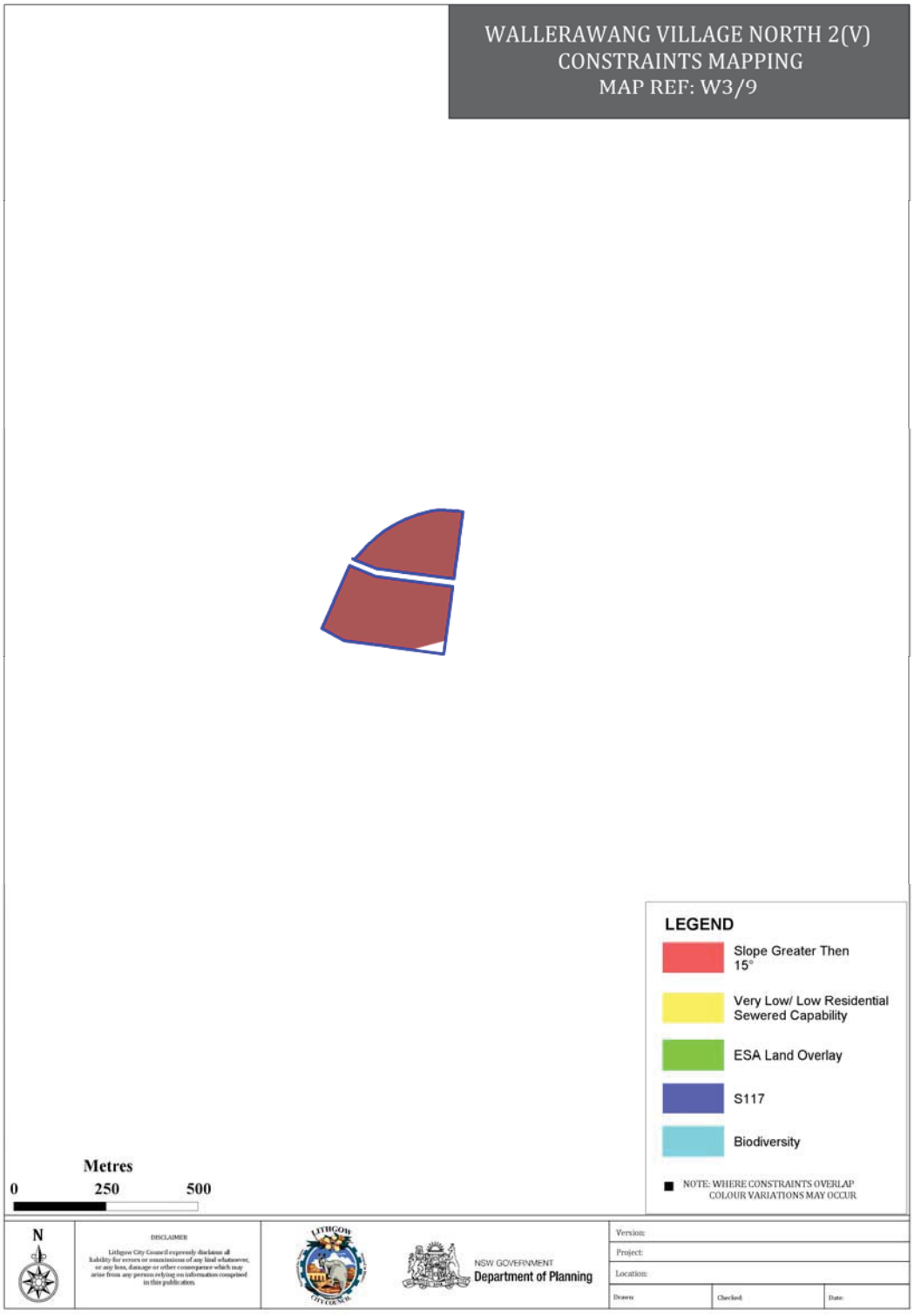


Figure 47. Lidsdale North 1©

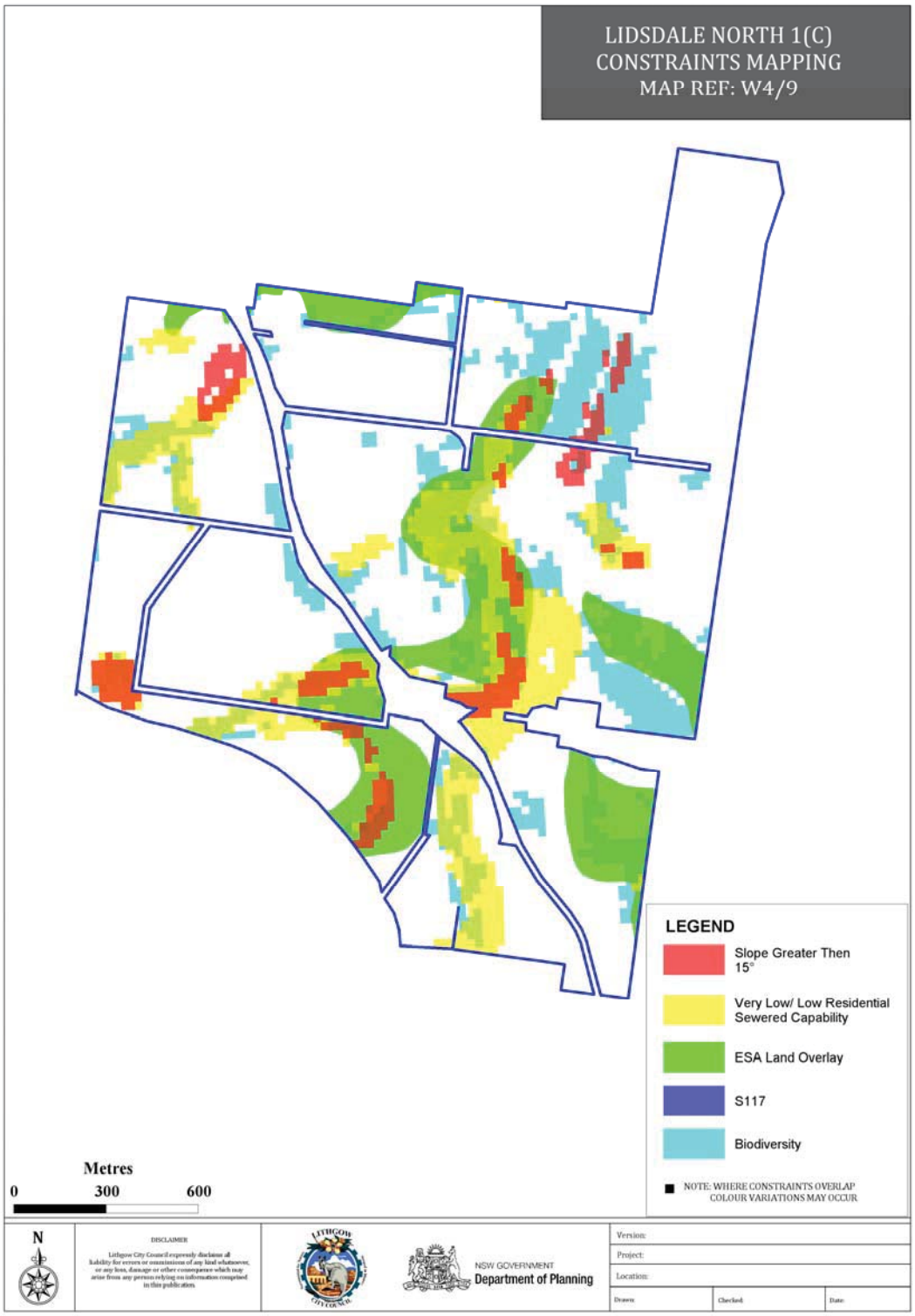


Figure 48. Lidsdale Village North 2(v)



Figure 49. Lidsdale Village South 2(v)

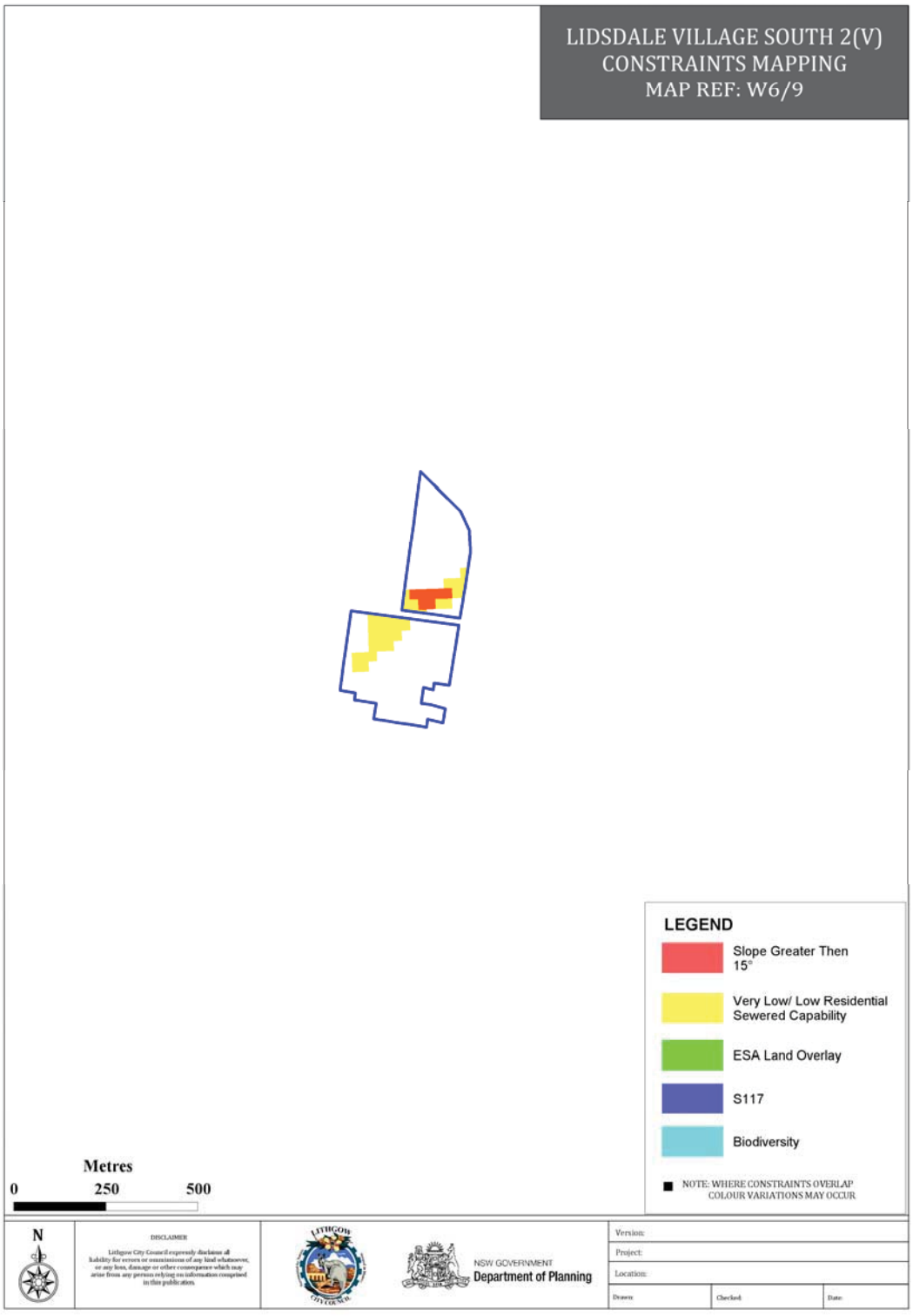


Figure 50. Wallerawang Village East 2(v)

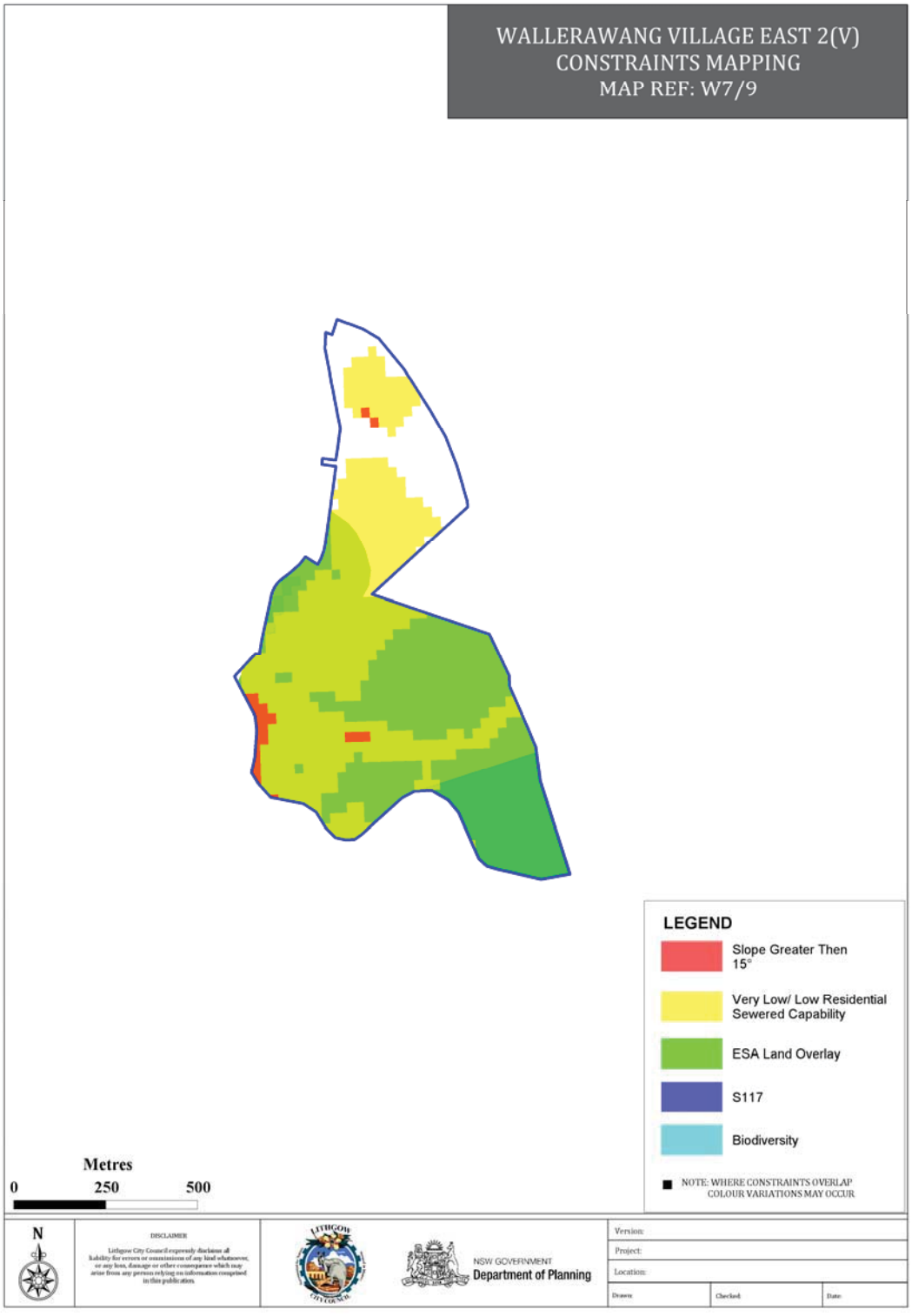


Figure 51. Wallerawang South 1(c)

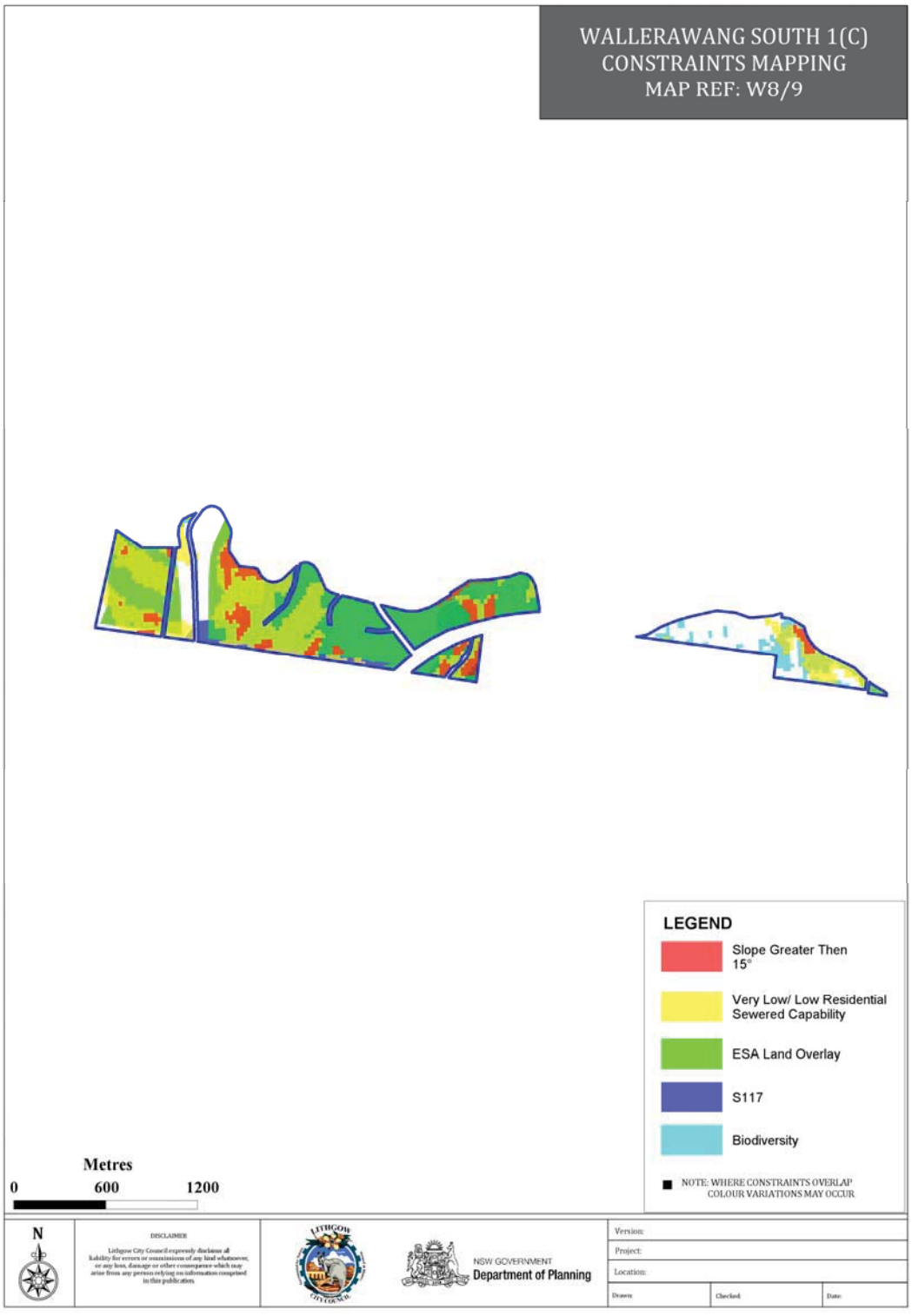
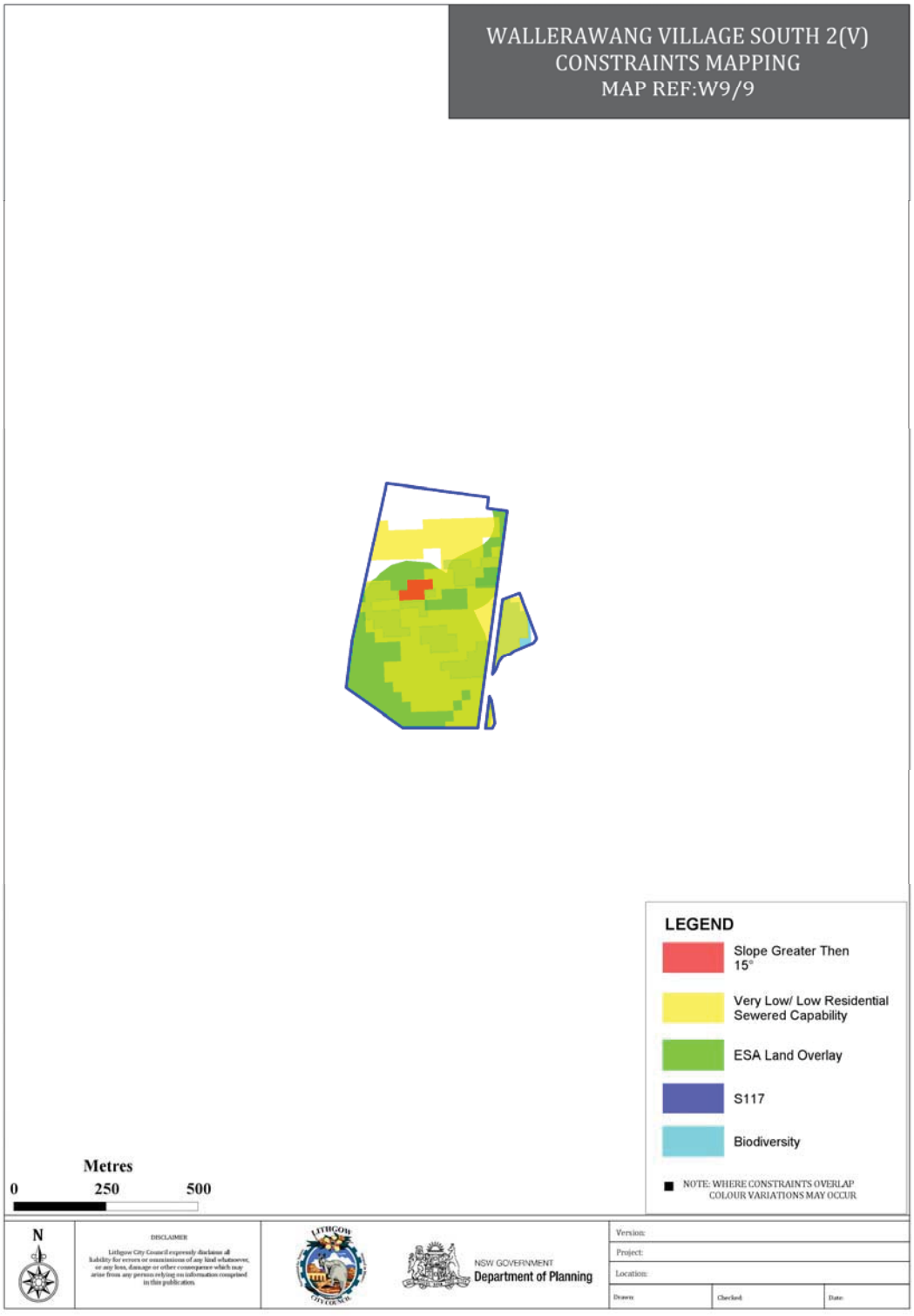


Figure 52. Wallerawang Village South 2(v)



Rural Villages and Clustered Rural Lifestyle

Figure 53. Hartley 1(c)

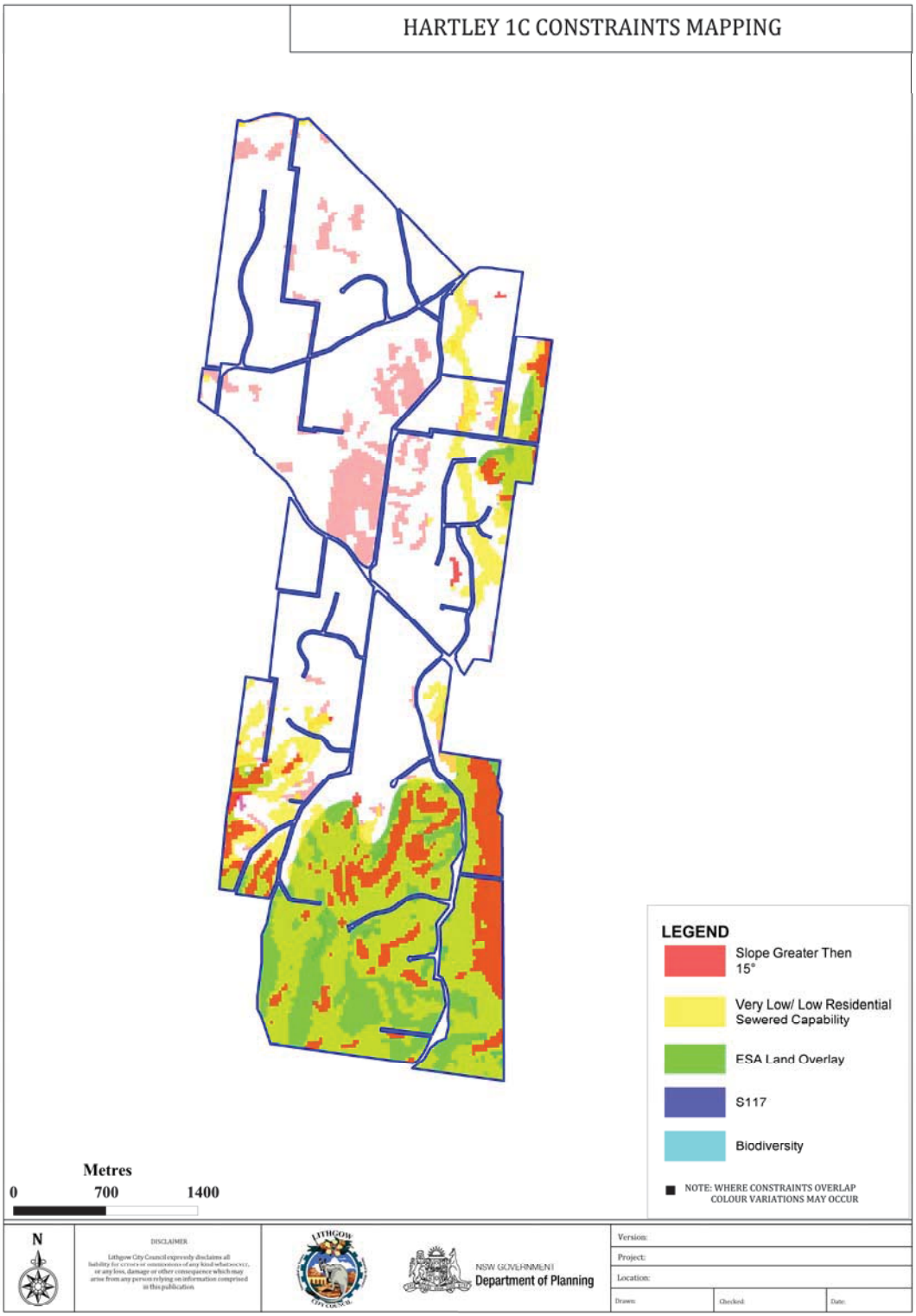

HARTLEY 1C CONSTRAINTS MAPPING
LEGEND
Slope Greater Then 15°
Very Low/ Low Residential Sewered Capability
ESA Land Overlay
S117
Biodiversity
NOTE: WHERE CONSTRAINTS OVERLAP COLOUR VARIATIONS MAY OCCUR
Metres
0
700
1400
N
DISCLAIMER
NSW GOVERNMENT
Department of Planning
Version:
Project:
Location:
Drawn:
Checked:
Date:

Figure 54. Tarana Village

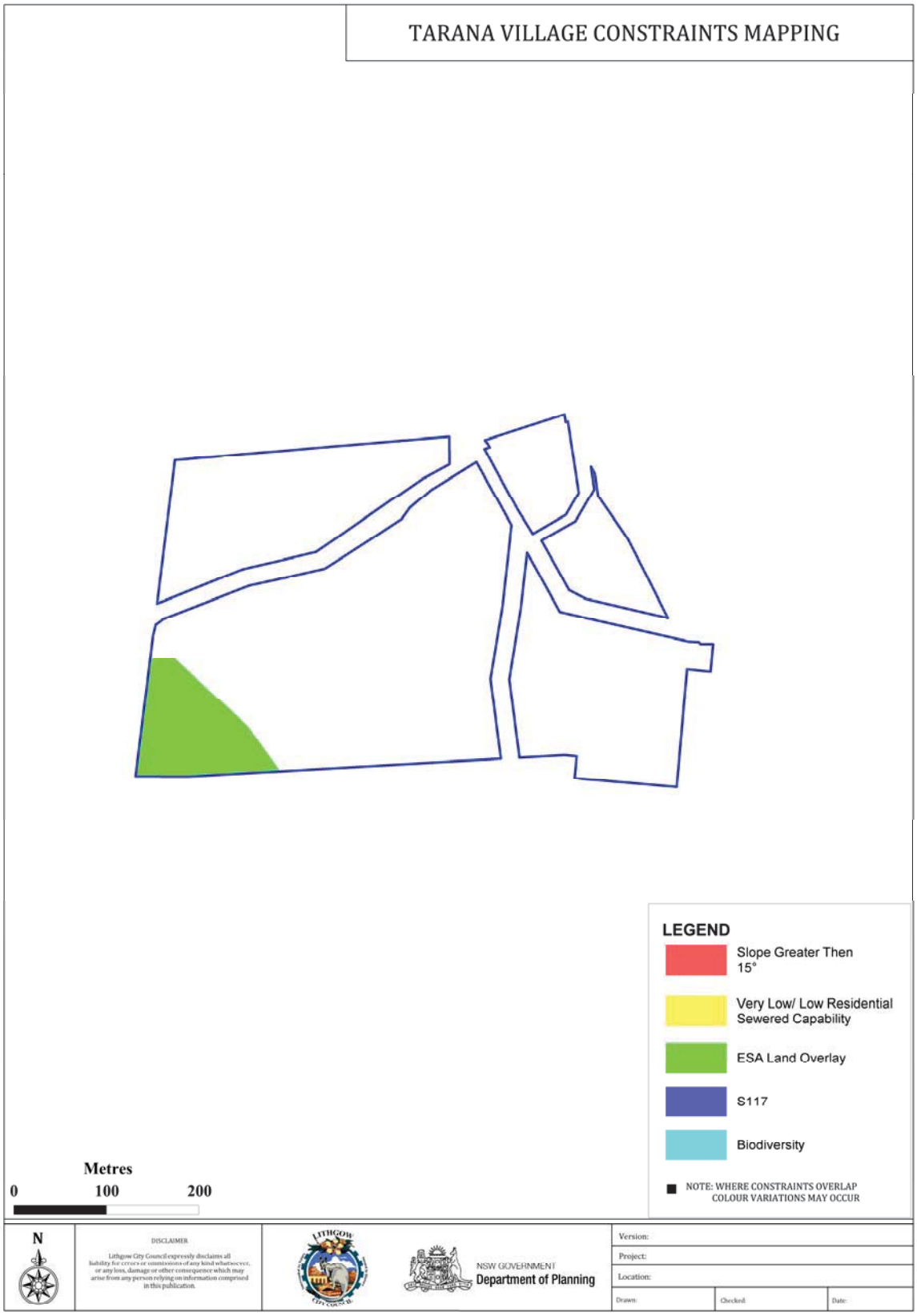


Figure 55. Rydal Village

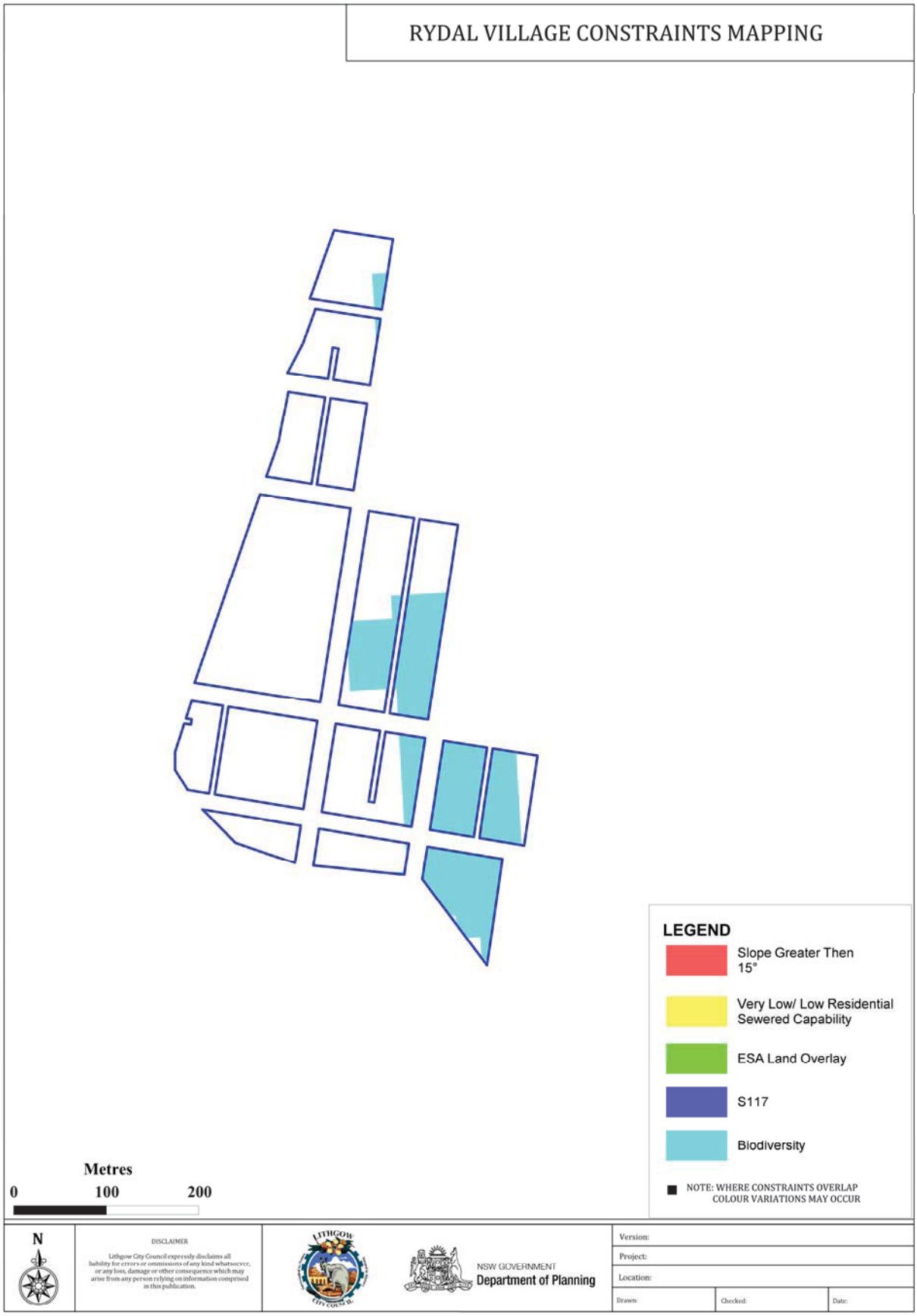
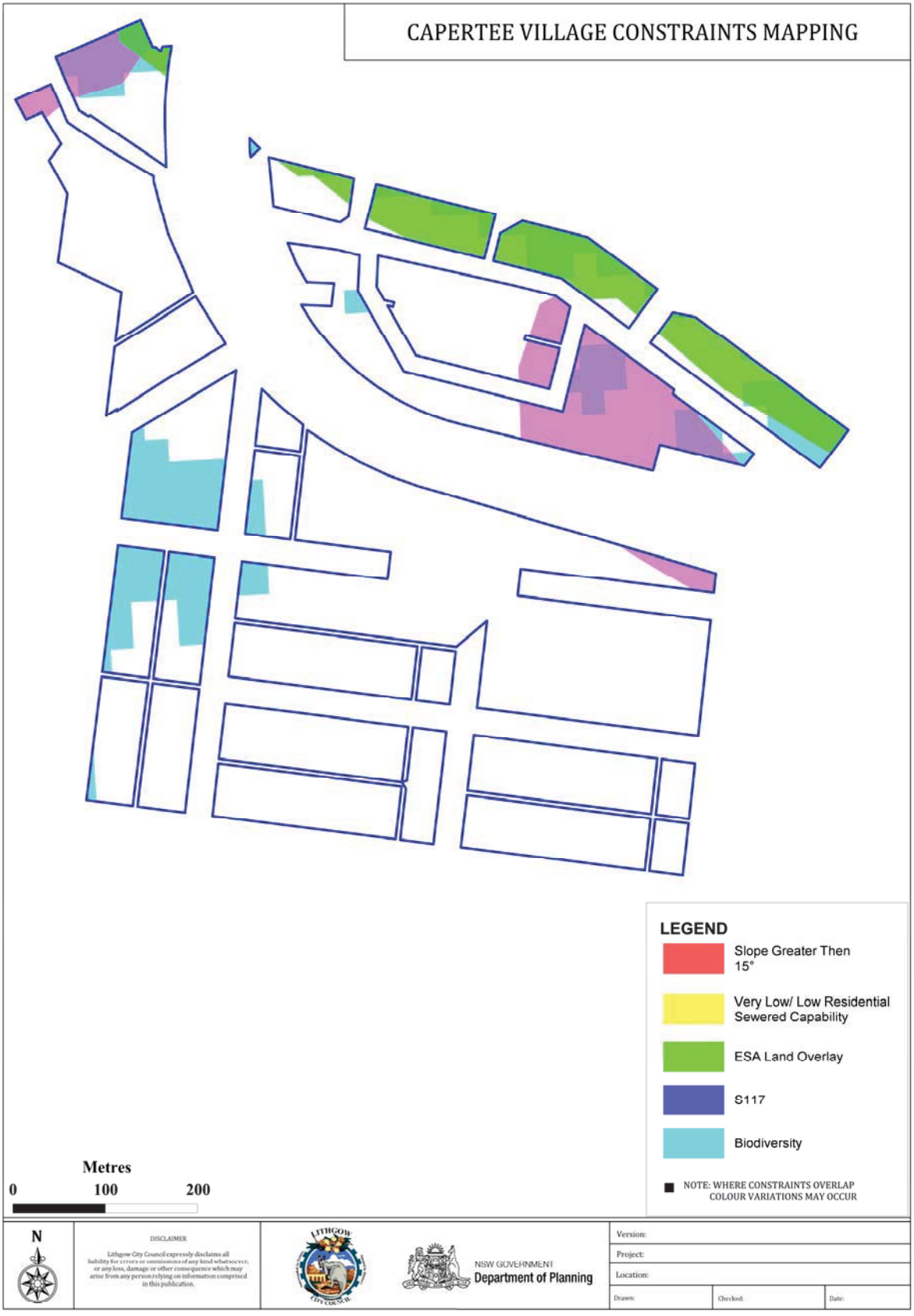


Figure 56. Cullen Bullen Village



Figure 57. Capertee Village



Lithgow City Council

COMMUNITY PROFILE

2006 and 2001 Enumerated Census information for:

Lithgow Urban Area

The Lithgow City Council Community Profile is designed to inform community groups, Council, investors, business, students and the general public. To achieve this, the Profile is formatted to present the data in simple, clear tables and charts with concise factual commentary. The Community Profile is based on the 2006 Census of Population and Housing published by the Australian Bureau of Statistics.

profile.id®

.id

Contents:

How many people live here? 3

Introduction and summary 3
Key Statistics 5
How old are we? 7
What is our individual income? 9
What is our household income? 11
What are our qualifications? 13
What is the highest secondary school year we have completed? 15
What is our employment status? 17
What industries do we work in? 19
What are our occupations? 22
How do we get to work? 24
What type of households do we live in? 26
How many people live in each household? 29
Are we owners, renters or buyers? 31
What type of dwellings do we live in? 33

Explanatory notes

Geography notes 35
Data notes 36
Specific notes 39

DISCLAIMER: Whilst all due care has been taken to ensure the content of this report is accurate and Current, there may be errors or omissions in it and no legal responsibility is accepted for the information and opinions in this website.

Copyright © id.consulting pty ltd - www.id.com.au 2010

Date created: 17/09/2010

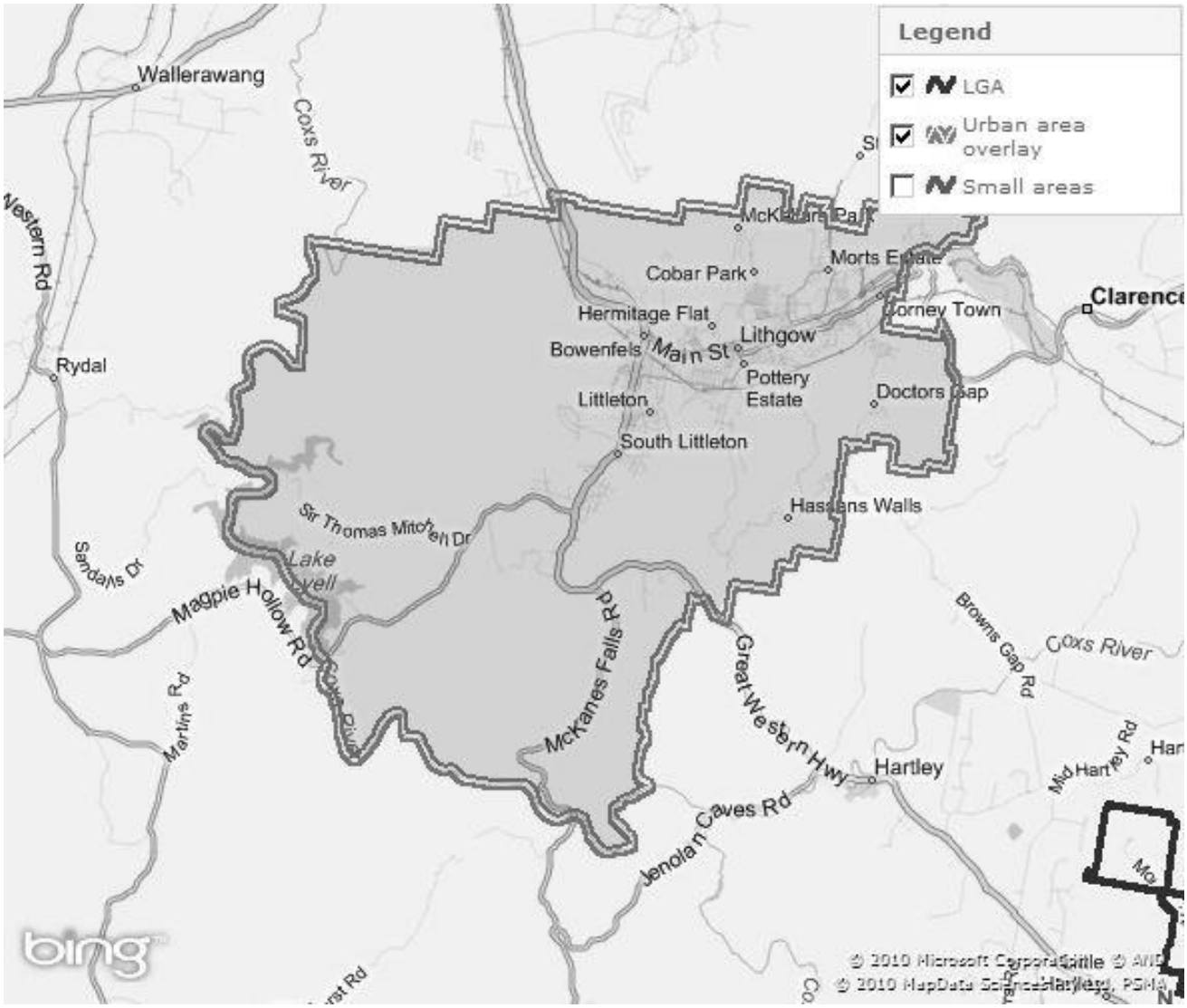
Lithgow Urban Area

Introduction and summary (Map and key statistics)

Lithgow Urban Area encompasses the urban areas of Lithgow (residential, commercial and industrial land use) and some surrounding rural residential and rural areas. Lithgow Urban Area is bounded by the localities of Marrangaroo and State Mine Gully in the north, the localities of Clarence and Hartley in the east, Coxs River in the south, and Lyell Reservoir and the localities of Rydal and Wallerawang in the west. Lithgow Urban Area includes the suburbs and localities of Bowenfels, Cobar Park, Corney Town, Doctors Gap, Hassans Walls, Hermitage Flat, Lithgow, Littleton, McKellars Park, Morts Estate, Oaky Park, Pottery Estate, Sheedys Gully, South Bowenfels, South Littleton and Vale of Clwydd.

Settlement of the area dates from 1824, although population was minimal until the 1860s. Significant growth took place during the late 1800s and early 1900s, spurred by the opening of the railway line in 1869 and industrial development, particularly coal and iron mining. Expansion continued during the early 1900s, with continuing growth in the immediate post-war years. The population decreased from the late 1950s, due largely to a decline in coal mining. The population declined slightly from the early 1990s, a result of few new dwellings being added to the area and a decline in the average number of persons living in each dwelling.

Major features of the area include the Lithgow CBD, Lithgow Valley Shopping Centre, Cook Street Plaza, TAFE Western (Lithgow College), Lithgow District Hospital, Lithgow Community Private Hospital, Bowenfels Cashmere Farm, Eskbank House, Lithgow Small Arms Museum, Old Lithgow Pottery, State Mine Heritage Park & Railway, the historic Bowenfels railway station, Bracey Lookout, Lake Lyell, Blast Furnace Park, Conran Oval, Emora Park, Endeavour Park, Glanmire Oval, Hassans Walls Reserve, Jim Monaghan Athletics Track, Lake Pillans Wetlands, Lithgow Greyhound Track, Lithgow Indoor Sports Centre, Lithgow Swimming Pool, Marjorie Jackson Oval, Queen Elizabeth Park, Tony Luchetti Sportsground, Watsford Oval and several schools.



Lithgow Urban Area:	**Land Area:** 7,636 hectares	**Density:** 1.44 people per hectare (2006)

Lithgow Urban Area

Introduction and summary (Map and key statistics)

The 'Key statistics' table presented below contains summary statistics for Lithgow Urban Area. By default the table displays 2001 and 2006 data as both absolute numbers and percentages (where applicable), along with the change in number between these years.

Key statistics(summary statistics)	Lithgow Urban Area						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Enumerated population, including overseas visitors							
Total population (a)	11,063	100.0	100.0	11,282	100.0	100.0	-220
Males (a)	5,454	49.3	49.4	5,559	49.3	49.6	-105
Females (a)	5,608	50.7	50.6	5,723	50.7	50.4	-115
Overseas visitors	32	0.3	0.4	13	0.1	0.5	19
Enumerated population, excluding overseas visitors							
Total population (b)	11,032	100.0	100.0	11,269	100.0	100.0	-237
Males (b)	5,445	49.4	49.4	5,558	49.3	49.6	-113
Females (b)	5,587	50.7	50.6	5,710	50.7	50.4	-123
Population characteristics							
Indigenous population	375	3.4	3.9	320	2.8	3.4	55
Australian born	9,531	86.4	83.8	9,793	86.9	84.5	-262
Overseas born	903	8.2	10.3	901	8.0	10.2	3
Australian citizens	10,144	92.0	91.1	10,464	92.8	92.2	-320
Australian citizens aged 18+	7,771	70.5	68.4	7,735	68.6	67.9	36
Institutional population	300	2.7	3.9	205	1.8	3.6	95
Age structure							
Infants 0 to 4 years	632	5.7	6.2	804	7.1	6.7	-172
Children 5 to 17 years	2,001	18.1	18.6	2,181	19.4	19.6	-180
Adults 18 to 64 years	6,533	59.2	58.7	6,753	59.9	58.6	-219
Mature adults 65 to 84 years	1,634	14.8	14.6	1,478	13.1	13.7	156
Senior citizens 85 years and over	227	2.1	1.9	151	1.3	1.5	76
Households and dwellings							
Owned	1,865	40.2	38.3	2,120	46.0	44.4	-255
Purchasing	1,148	24.8	28.7	1,016	22.1	22.7	133
Renting	1,374	29.6	26.2	1,220	26.5	25.3	154
Households (occupied private dwellings)	4,636	--	--	4,607	--	--	30
Persons counted in households	10,759	--	--	11,078	--	--	-319
Average household size (persons)	2.32	--	--	2.40	--	--	-0.08
Total Dwellings	5,223	100.0	100.0	5,153	100.0	100.0	71

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the

specific data notes for more information.

Lithgow Urban Area

How old are we? (Age structure)

Derived from the Census question, *'What is the person's date of birth (or age last birthday)?'*

The Age Structure of the population is the most widely used component of the Census. It is an indicator of an area's residential role and function and how it is likely to change in the future. The age structure of a population is usually indicative of an area's era of settlement and provides key insights into the level of demand for services and facilities (as most services and facilities are age-specific).

To get a more complete picture of the demographic characteristics of an area the age structure should be viewed in conjunction with Households and Family types.

Age structureage group (years)	Lithgow Urban Area						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
0 to 4	632	5.7	6.2	804	7.1	6.7	-172
5 to 11	1,039	9.4	9.7	1,165	10.3	10.6	-126
12 to 17	962	8.7	8.9	1,016	8.9	9.0	-53
18 to 24	896	8.1	8.1	951	8.4	8.0	-55
25 to 34	1,252	11.4	10.8	1,440	12.7	12.0	-189
35 to 49	2,223	20.2	20.9	2,412	21.2	21.6	-189
50 to 59	1,505	13.6	13.5	1,421	12.5	12.1	84
60 to 69	1,170	10.6	10.2	1,000	8.8	9.2	169
70 to 84	1,122	10.2	9.9	1,005	8.8	9.4	117
85 and over	227	2.1	1.9	151	1.3	1.5	76
Total	11,028	100.0	100.0	11,367	100.0	100.0	-339

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of the age structure of Lithgow Urban Area in 2006 compared to Regional New South Wales shows that there was a similar proportion of people in the younger age groups (0 to 17) as well as a similar proportion of people in the older age groups (60+).

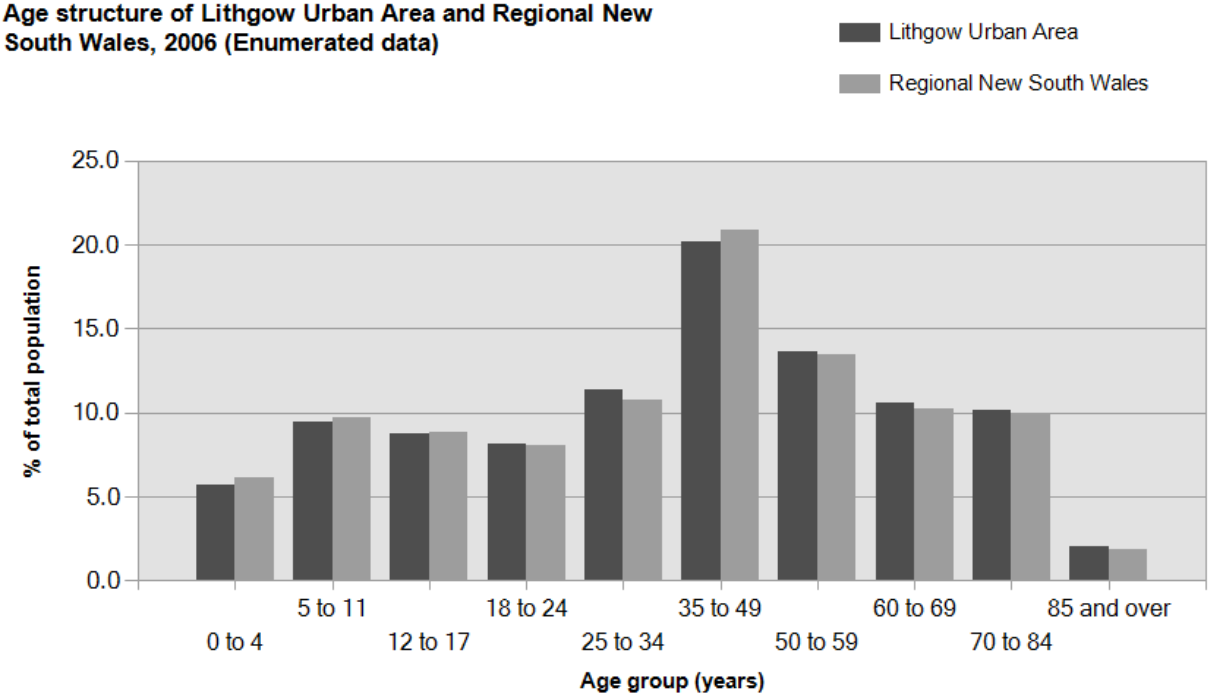
Overall, 23.8% of the population was aged between 0 and 17, and 22.9% were aged 60 years and over, compared with 24.8% and 22.0% respectively for Regional New South Wales.

There were no major differences between Lithgow Urban Area and Regional New South Wales's age structure data in 2006.

The largest changes in age structure in this area between 2001 and 2006 were in the age groups:

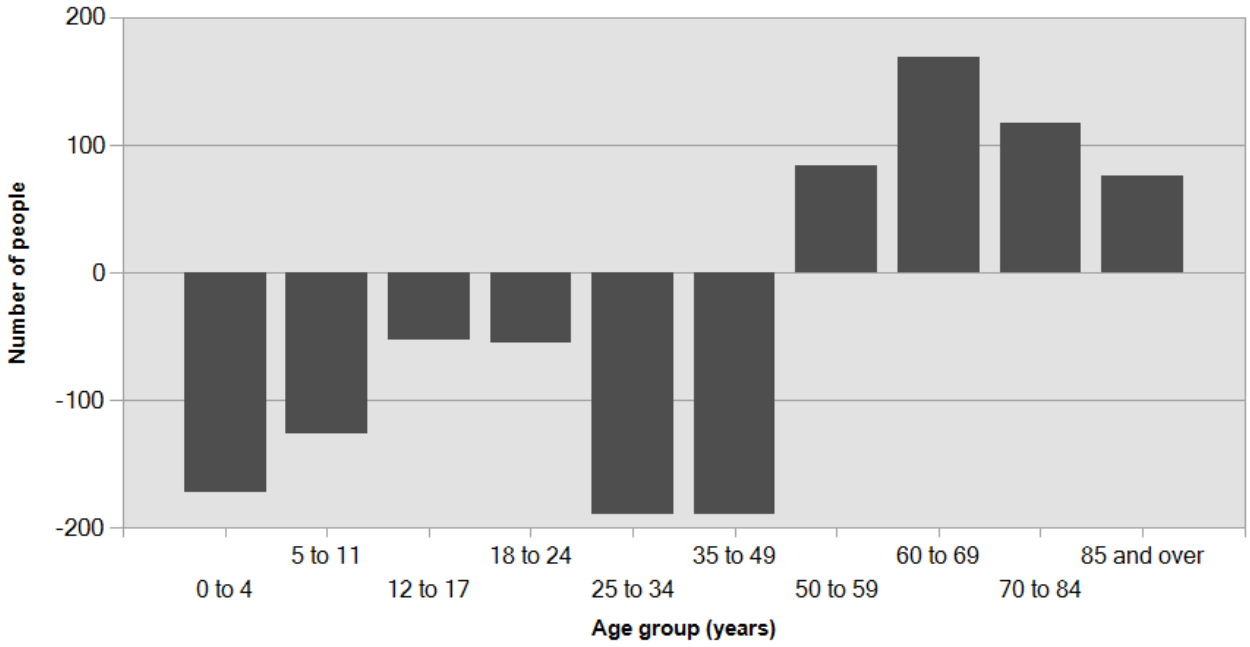
- 60 to 69 (+169 persons);
- 35 to 49 (-189 persons);
- 25 to 34 (-189 persons), and;
- 0 to 4 (-172 persons).

Age structure of Lithgow Urban Area and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in age structure of Lithgow Urban Area, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Lithgow Urban Area

What is our individual income? (Weekly individual income)

Weekly individual income 2006

Derived from the Census question, *'What is the total of all wages/salaries, government benefits, pensions, allowances and other income the person usually receives?'* This is the gross amount and relates only to persons aged 15 years or more.

Individual Income is an indicator of socio-economic status. With other data sources, such as Household Income, Educational Qualifications and Occupation, it helps to evaluate the economic opportunities and socio-economic status of an area. The amount of income an individual receives is linked to a number of factors including the person's:

- employment status;
- age (as for instance students and retirees often receive a lower income);
- qualifications; and
- the type of employment undertaken by the person.

It is interesting to view individual income data in relation to both household income and number of persons usually resident. Areas with relatively high household income may be the result of multiple earners in the household contributing to that household income, so it is possible that some areas that have relatively high household incomes will have relatively low levels of individual income.

To enable a comparison of Individual Income levels of an area over time, Individual Income quartiles have been calculated and presented in the 'Individual income quartiles tab'.

Weekly individual incomeincome groups (persons)	Lithgow Urban Area		
	2006		
Enumerated data	number	%	Regional New South Wales %
negative/nil income	542	6.1	6.4
$1 to $149	651	7.3	7.1
$150 to $249	1,895	21.3	17.8
$250 to $399	1,620	18.2	16.1
$400 to $599	1,130	12.7	14.8
$600 to $799	707	7.9	9.9
$800 to $999	493	5.5	6.5
$1,000 to $1,299	491	5.5	6.1
$1,300 to $1,599	317	3.6	3.7
$1,600 to $1,999	273	3.1	1.9
$2,000 or more	162	1.8	2.0
not stated	608	6.8	7.7
Total	8,890	100.0	100.0

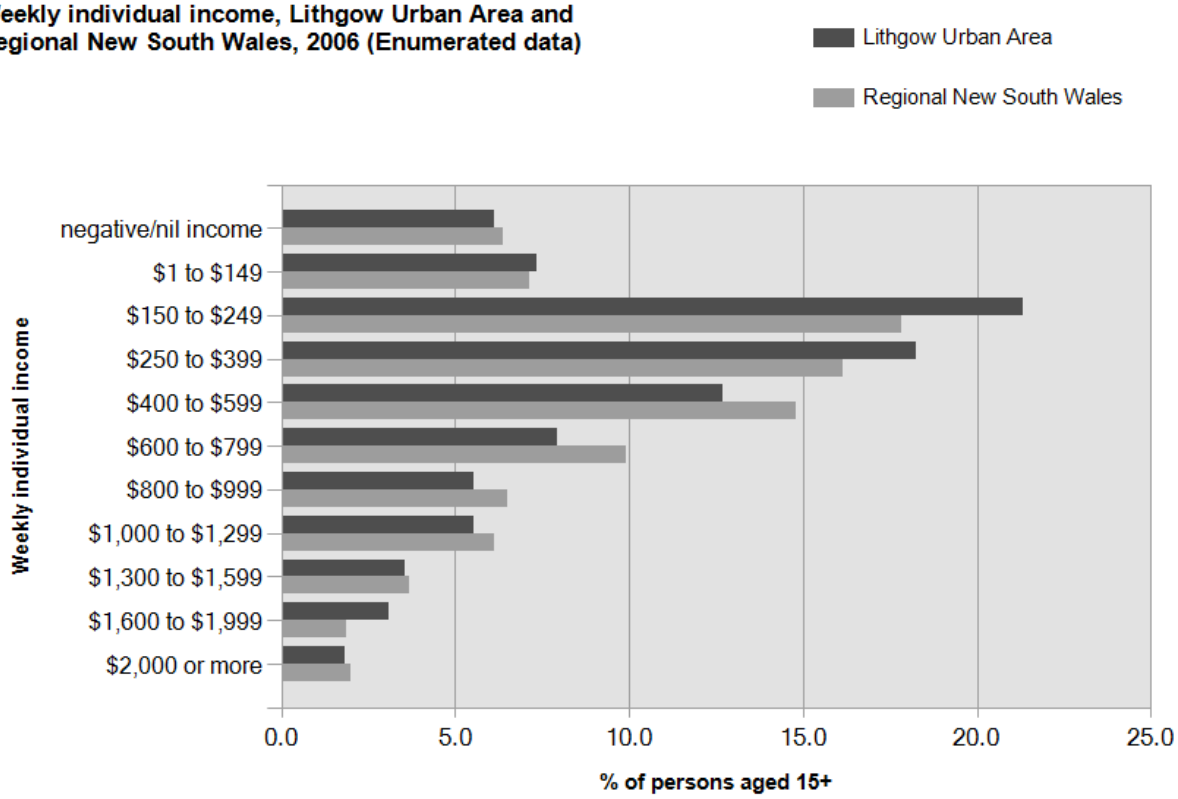
Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of individual income levels in Lithgow Urban Area in 2006 compared to Regional New South Wales shows that there was a similar proportion of persons earning a high income (those earning $1,000 per week or more) but a larger proportion of low income persons (those earning less than $400 per week).

Overall, 14.0% of the population earned a high income, and 52.9% earned a low income, compared with 13.7% and 47.4% respectively for Regional New South Wales.

Weekly individual income, Lithgow Urban Area and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Lithgow Urban Area

What is our household income? (Weekly household income)

Weekly household income 2006

Derived from the Census question, *'What is the total of all wages/salaries, government benefits, pensions, allowances and other income the person usually receives?'.* This is the gross amount and relates only to persons aged 15 years or more.

Household Income is one of the most important indicators of socio-economic status. With other data sources, such as Educational Qualifications and Occupation, it helps to evaluate the economic opportunities and socio-economic status of an area. The amount of income a household generates is linked to a number of factors:

- the number of workers in the household;
- the percentage of people unemployed or on other income support benefits; and
- the type of employment undertaken by the household members.

Note: It is important to remember that households vary in size, so that some areas have a greater number of dependents per income generated than others. If the area has a large number of retirees then this will produce a higher proportion of households with low income. This is not necessarily a measure of retirees' affluence, as retirees often have capital resources. Refer to the Age Structure section to understand this element.

To enable a comparison of Household Income levels of an area over time, Household Income quartiles have been calculated and presented in the 'Household income quartiles tab'.

Weekly household incomeincome groups (households)	Lithgow Urban Area		
	2006		
Enumerated data	number	%	Regional New South Wales %
Negative / Nil income	35	0.8	1.1
$1 to $149	90	2.0	1.6
$150 to $249	423	9.3	6.5
$250 to $349	525	11.6	8.9
$350 to $499	368	8.1	7.1
$500 to $649	577	12.7	12.7
$650 to $799	286	6.3	6.6
$800 to $999	275	6.0	6.9
$1000 to $1199	352	7.7	10.5
$1200 to $1399	205	4.5	5.2
$1400 to $1699	259	5.7	6.4
$1700 to $1999	264	5.8	4.9
$2000 to $2499	200	4.4	4.5
$2500 to $2999	145	3.2	3.3
$3000 or more	99	2.2	2.6
Partial income stated	269	5.9	7.7
All incomes not stated	172	3.8	3.4
Total	4,544	100.0	100.0

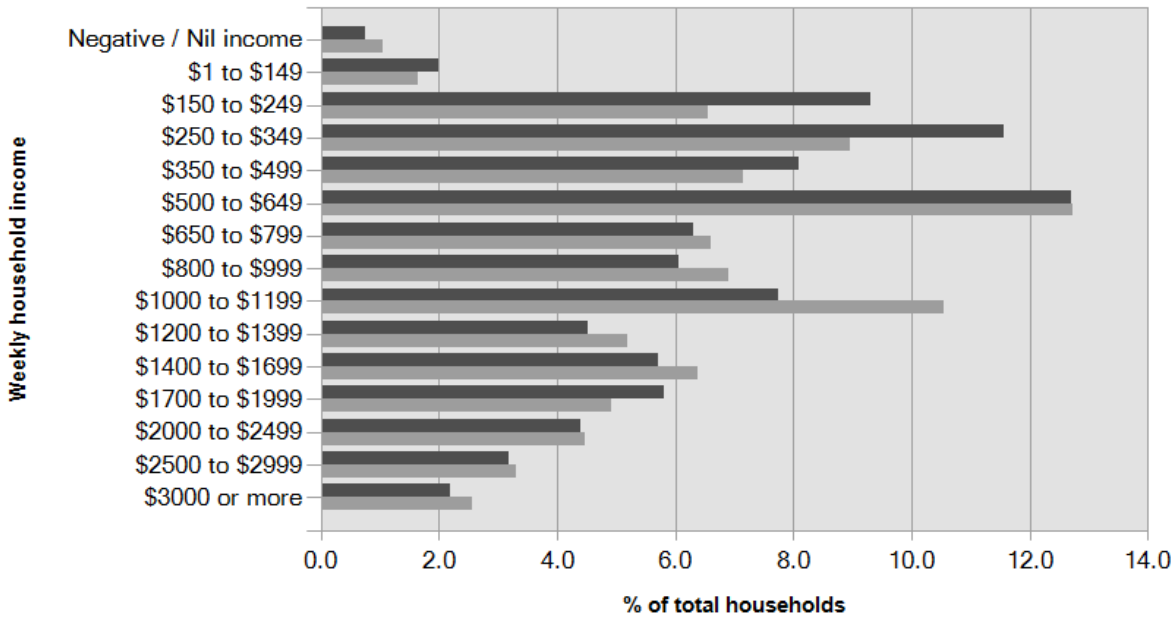
Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of household income levels in Lithgow Urban Area in 2006 compared to Regional New South Wales shows that there was a similar proportion of high income households (those earning $1,700 per week or more) but a larger proportion of low income households (those earning less than $500 per week).

Overall, 15.6% of the households earned a high income, and 31.8% were low income households, compared with 15.3% and 25.2% respectively for Regional New South Wales.

Weekly household income, Lithgow Urban Area and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Lithgow Urban Area

What are our qualifications? (Highest education qualification achieved)

Derived from the Census question, *'What is the level of the highest qualification the person has completed?'* and relates only to persons aged 15 years or more.

Educational Qualifications are one of the most important indicators of socio-economic status. With other data sources, such as Income and Occupation, Educational Qualifications help to evaluate the economic opportunities and socio-economic status of an area. Level of Educational Qualifications in a population relate to a number of factors including:

- the age of the population (e.g. older people tend to have more vocational qualifications, while people in their twenties and thirties are more likely to have a university degree);
- the professional or working ambitions of people (to seek education as youth or retraining as adults);
- the opportunities afforded to people to continue studying beyond compulsory schooling.

Highest qualification achieved (persons aged 15 years and over)	Lithgow Urban Area						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Bachelor or Higher degree	516	5.8	10.4	433	4.9	8.6	83
Advanced Diploma or Diploma	394	4.4	6.2	299	3.4	5.2	96
Vocational	1,898	21.4	20.1	1,789	20.2	18.2	110
No qualifications	4,885	55.1	50.3	5,339	60.4	56.2	-454
Not Stated	1,172	13.2	12.9	980	11.1	11.8	192
Total	8,865	100.0	100.0	8,839	100.0	100.0	26

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of the qualifications of the population in Lithgow Urban Area in 2006 compared to Regional New South Wales shows that there was a smaller proportion of people holding formal qualifications (Bachelor or higher degree; Advanced Diploma or Diploma; or Vocational qualifications) and a larger proportion of people with no formal qualifications.

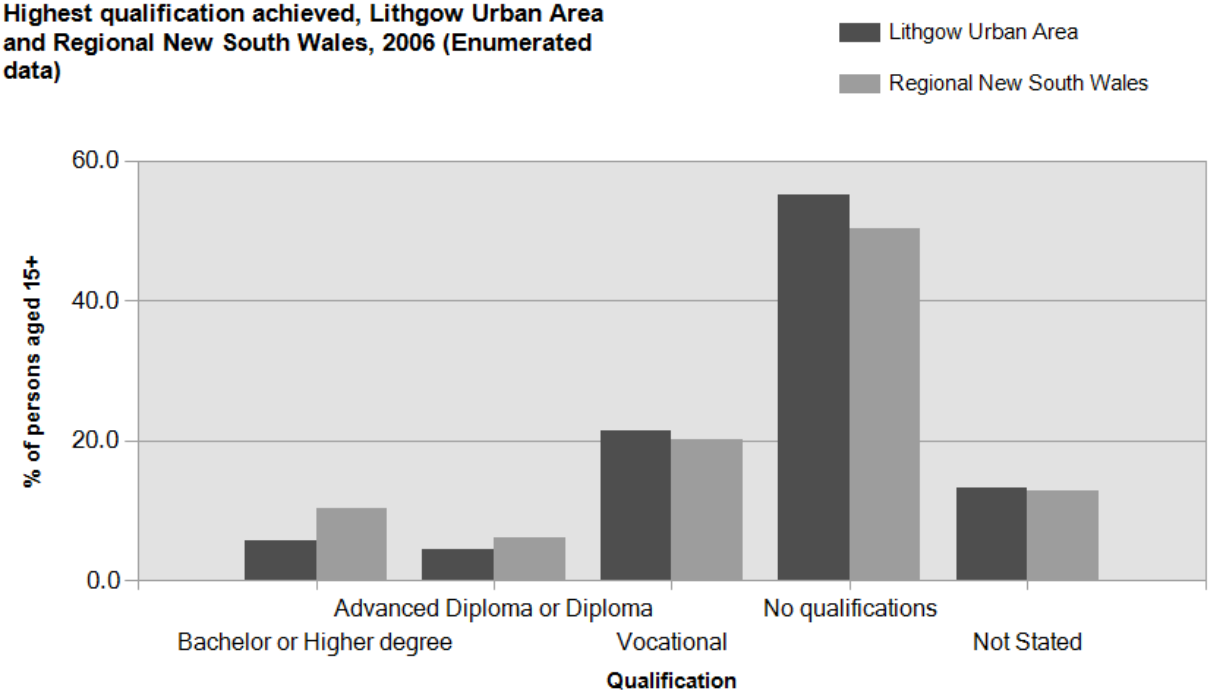
Overall, 31.6% of the population held educational qualifications, and 55.1% had no qualifications, compared with 36.7% and 50.3% respectively for Regional New South Wales.

There were no major differences between Lithgow Urban Area and Regional New South Wales's highest qualifications achieved data in 2006.

The largest changes in the qualifications of the population in Lithgow Urban Area between 2001 and 2006 were in those with:

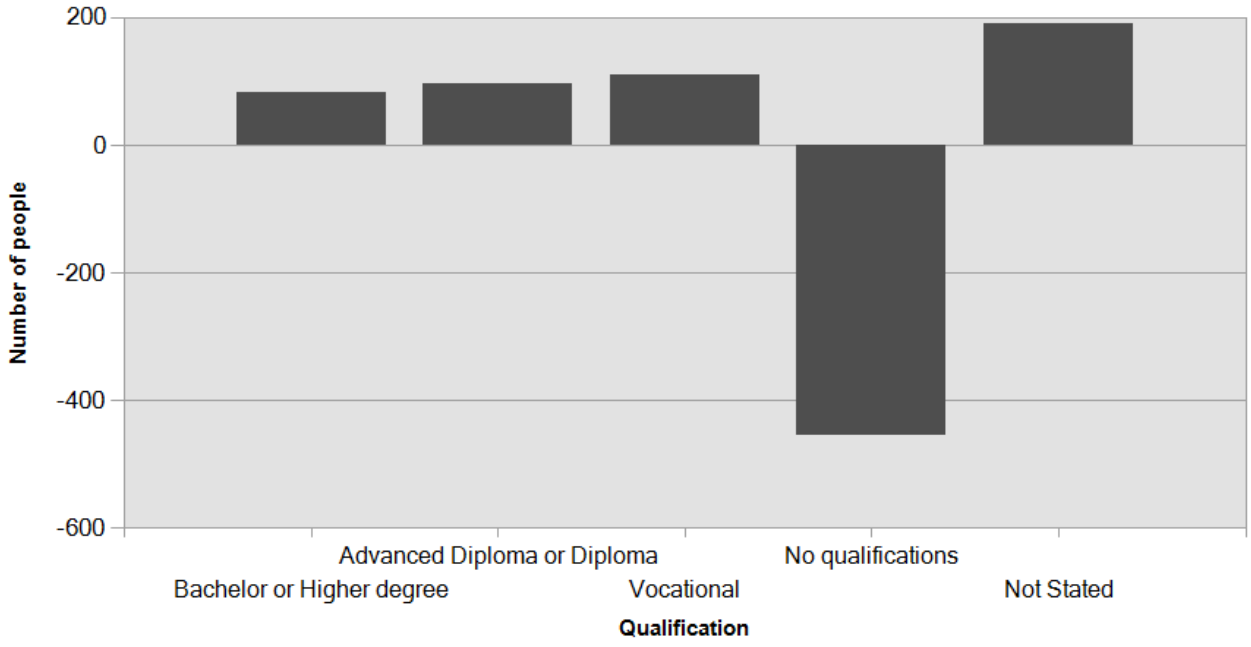
- Vocational qualifications (+110 persons), and;
- No qualifications (-454 persons).

Highest qualification achieved, Lithgow Urban Area and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in highest qualification achieved, Lithgow Urban Area, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Lithgow Urban Area

What is the highest secondary school year we have completed? (Highest level of schooling completed)

Derived from the Census question, '*What is the highest year of primary or secondary school the person has completed?*' and relates only to persons aged 15 years or more.

The Year of Schooling data is a useful indicator of socio-economic status of an area. With other indicators, such as proficiency in English, the data informs planners and decision-makers as to people's ability to access services. Combined with Educational Qualifications it also allows assessment of the skill base of the population. The reasons for differences in Year of Schooling completed across areas are linked to a number of factors including:

- the age of the population, as over time there has been a greater emphasis on acquiring higher education in order to find employment;
- the working and social aspirations of the population; and
- a lack of access to further education opportunities due to financial constraints or distance to schools.

Unfortunately this data is only available for 2006 as there is no comparable data for previous Census years. Please see specific data notes for further detail.

Highest level of schooling completed(persons aged 15 years and over)	Lithgow Urban Area		
	2006		
Enumerated data	number	%	Regional New South Wales %
Year 8 or below	933	10.5	8.4
Year 9 or equivalent	1,234	13.9	11.0
Year 10 or equivalent	3,236	36.4	33.0
Year 11 or equivalent	620	7.0	6.9
Year 12 or equivalent	1,979	22.3	31.0
Did not go to school	43	0.5	0.5
Not Stated	849	9.5	9.2
Total	8,894	100.0	100.0

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

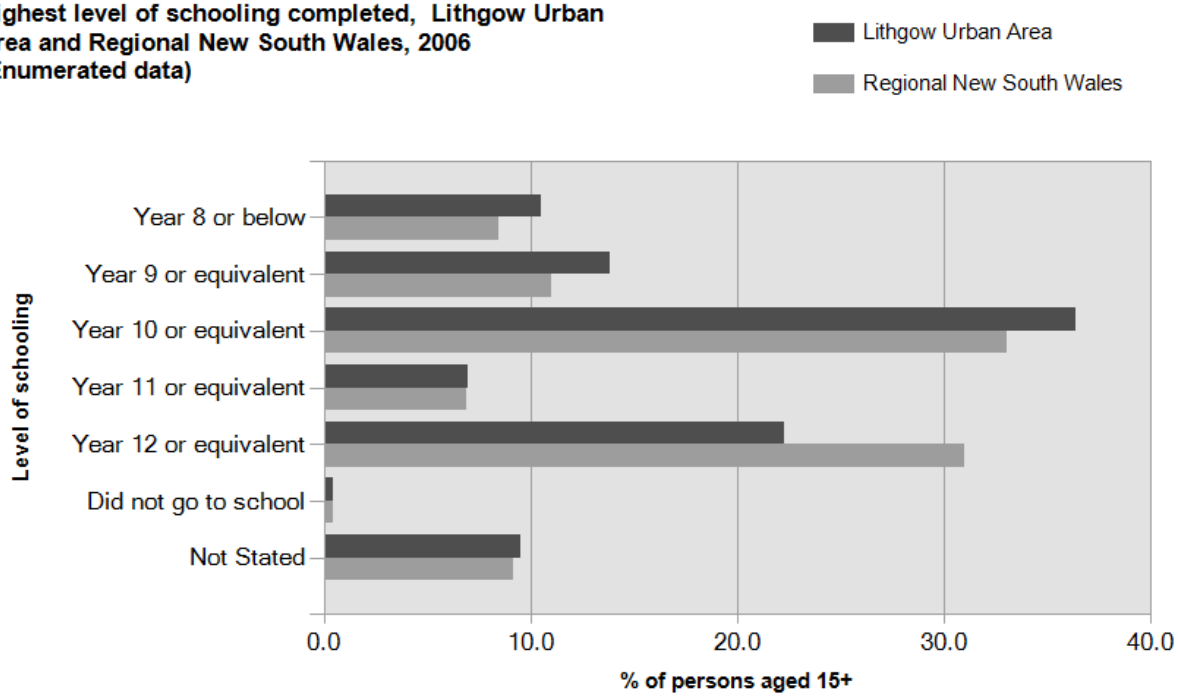
Analysis of the highest level of schooling attained by the population in Lithgow Urban Area in 2006 compared to Regional New South Wales shows that there was a larger proportion of people who had left school at an early level (Year 10 or less) but a smaller proportion of people who completed Year 12 or equivalent.

Overall, 60.8% of the population left school at Year 10 or below, and 22.3% went on to complete Year 12 or equivalent, compared with 52.4% and 31.0% respectively for Regional New South Wales.

The major differences between the level of schooling attained by the population in Lithgow Urban Area and Regional New South Wales were:

- A *larger* percentage of people who left school at Year 10 or equivalent (36.4% compared to 33.0%);
- A *larger* percentage of people who left school at Year 9 or equivalent (13.9% compared to 11.0%);
- A *larger* percentage of people who left school at Year 8 or below (10.5% compared to 8.4%), and;
- A *smaller* percentage of people who left school at Year 12 or equivalent (22.3% compared to 31.0%).

Highest level of schooling completed, Lithgow Urban Area and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Lithgow Urban Area

What is our employment status? (Employment status)

Derived from the Census question, *'Last week did the person have a full time or part time job of any kind?'* and relates only to persons aged 15 years or more.

The Employment Status of the population is an important indicator of the socio-economic status of an area. It represents the share of the population that is employed full-time, part-time or unemployed, as well as changes over time in the labour force. Employment Status is linked to a number of factors:

- the age structure of the population, which for example influences the number of persons in the workforce (i.e. population 15 years or more) or retired (i.e. population over 60 years);
- the economic base and employment opportunities available in the area; and
- the education and skill base of the population.

Census Employment Status data should be analysed in conjunction with Income, Occupation and Education Qualifications data to identify the relative socio-economic status of an area.

Employment status(persons aged 15 years and over)	Lithgow Urban Area						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Employed full time	2,684	56.8	56.6	2,636	55.8	56.2	48
Employed part time	1,497	31.7	33.8	1,451	30.7	31.7	45
Employed not stated	90	1.9	2.6	118	2.5	2.8	-28
Total employed	4,271	90.4	93.0	4,205	89.0	90.7	65
Total unemployed	454	9.6	7.0	520	11.0	9.3	-66
Total labour force	4,725	100.0	100.0	4,725	100.0	100.0	0
Total in labour force	4,725	53.1	56.1	4,725	53.7	55.6	0
Total not in labour force	3,776	42.4	38.6	3,756	42.7	40.5	20
Not stated	402	4.5	5.3	310	3.5	3.9	92
Total	8,903	100.0	100.0	8,791	100.0	100.0	112

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

The size of Lithgow Urban Area's labour force in 2006 was 4,725 persons, of which 1,497 were employed part-time (31.7%) and 2,684 were full time workers (56.8%).

Analysis of the employment status of the population in Lithgow Urban Area in 2006 compared to Regional New South Wales shows that there was a smaller proportion in employment, and a larger proportion unemployed.

Overall, 90.4% of the labour force was employed (48.0% of the population aged 15+), and 9.6% unemployed (5.1% of the population aged 15+), compared with 93.0% and 7.0% respectively for Regional New South Wales.

Between 2001 and 2006, the number of people employed in Lithgow Urban Area showed an increase of 65 persons and the number unemployed showed a decrease of 66 persons.

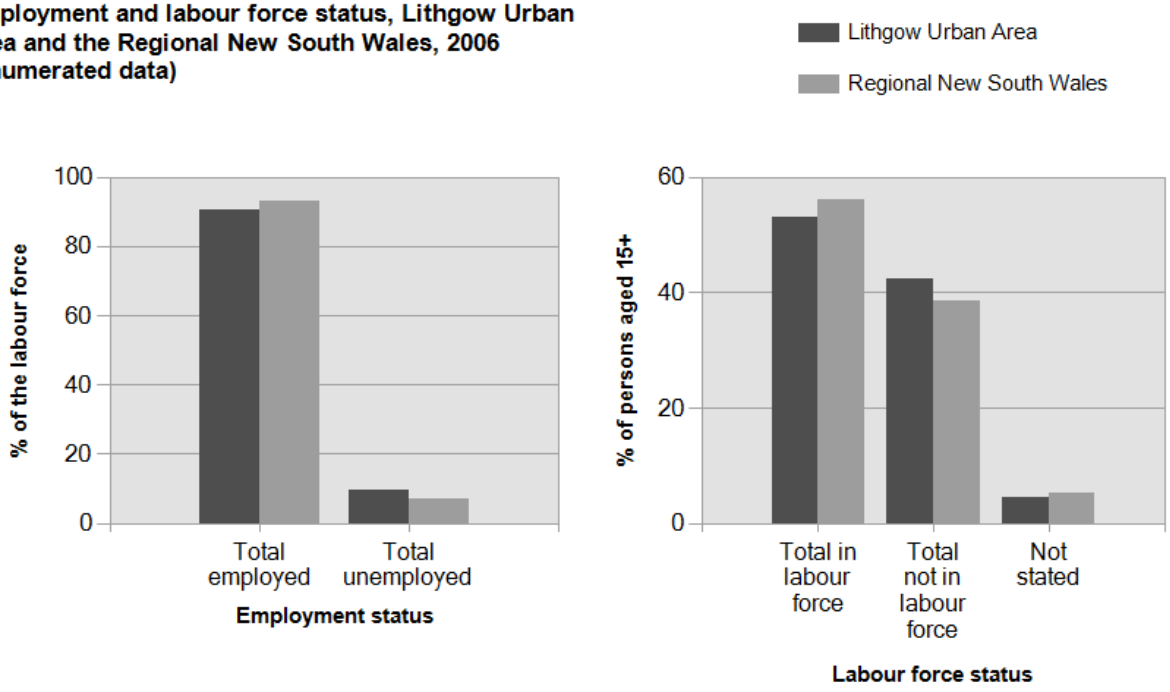
The labour force participation rate refers to the proportion of the population over 15 years of age that was employed or actively looking for work. "The labour force is a fundamental input to domestic production. Its size and composition are therefore crucial factors in economic growth. From the viewpoint of social development, earnings from paid work are a major influence on levels of economic well-being." (Australian

Bureau of Statistics, Australian Social Trends 1995).

Analysis of the labour force participation rate of the population in Lithgow Urban Area in 2006 shows that there was a smaller proportion in the labour force (53.1%) compared with Regional New South Wales (56.1%).

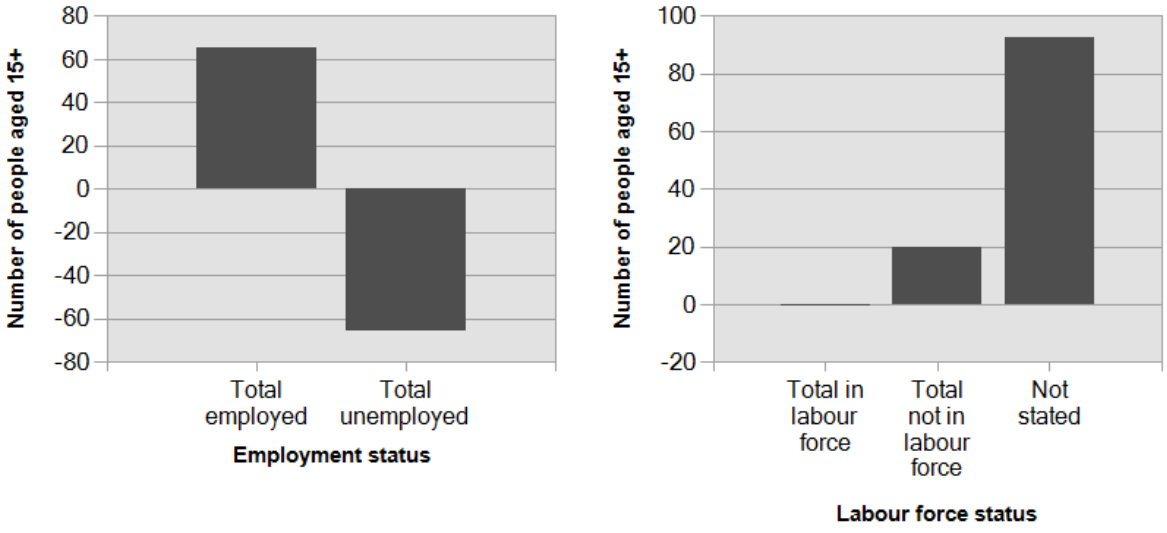
Between 2001 and 2006 in Lithgow Urban Area the number of people in the labour force showed an increase of 0 people, or 0%.

Employment and labour force status, Lithgow Urban Area and the Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in employment and labour force status, Lithgow Urban Area, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Lithgow Urban Area

What industries do we work in? (Industry)

2006 industry categories

Derived from the two Census questions, *'[What] best describes the business of [your] employer?'* and *'What are the main goods produced or main services provided by [your] employer's business?'* and relates only to persons aged 15 years or more.

The Industry data identifies the industries in which the residents of an area work (this may be within the residing area or elsewhere). The Industry Structure of the work force is indicative of the skill base and (to some extent) the socio-economic status and industry structure of an area.

The industries that are prominent in an area are strongly related to a range of factors including:

- the economic base and employment opportunities available in the general region;
- the educational levels of the local population; and
- the working and social aspirations of the population.

Industries are classified by grouping businesses which carry out similar productive activities. The 2006 Australian and New Zealand Standard Industrial Classification (ANZSIC) provides the current framework for industry classification in Australia. This classification provides a contemporary and internationally comparable industrial classification system which includes information about "new economy" industries such as Information, Media and Telecommunications. As this is a new classification *only 2006 data is available*.

Time series industry data (based on the 1993 ANZSIC classification) is available in the tab above named 'Time series industries'.

Industry, 2006 ANZSIC(employed persons)	Lithgow Urban Area		
	2006		
Enumerated data	number	%	Regional New South Wales %
Agriculture, Forestry & Fishing	32	0.7	6.9
Mining	415	9.7	1.7
Manufacturing	350	8.1	9.2
Electricity, Gas, Water and Waste Services	176	4.1	1.3
Construction	280	6.5	7.8
Retail Trade	568	13.2	12.3
Wholesale Trade	103	2.4	3.1
Accommodation and Food Services	419	9.8	7.5
Transport, Postal and Warehousing	247	5.8	4.3
Information Media and Telecommunications	37	0.9	1.2
Financial and Insurance Services	84	2.0	2.3
Rental, Hiring and Real Estate Services	40	0.9	1.5
Professional, Scientific and Technical Services	113	2.6	4.4
Administrative and Support Services	127	3.0	2.5
Public Administration and Safety	334	7.8	6.9
Education and Training	247	5.8	8.2
Health Care and Social Assistance	445	10.4	11.5
Arts and Recreation Services	30	0.7	1.2
Other Services	165	3.8	3.9
Inadequately described or Not stated	81	1.9	2.3
Total	**4,294**	**100.0**	**100.0**

Source: Australian Bureau of Statistics, Census of Population and Housing 2006.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

An analysis of the jobs held by the resident population in Lithgow Urban Area in 2006 shows the three most popular industry sectors were:

- Retail Trade (568 persons or 13.2%)
- Health Care and Social Assistance (445 persons or 10.4%)
- Accommodation and Food Services (419 persons or 9.8%)

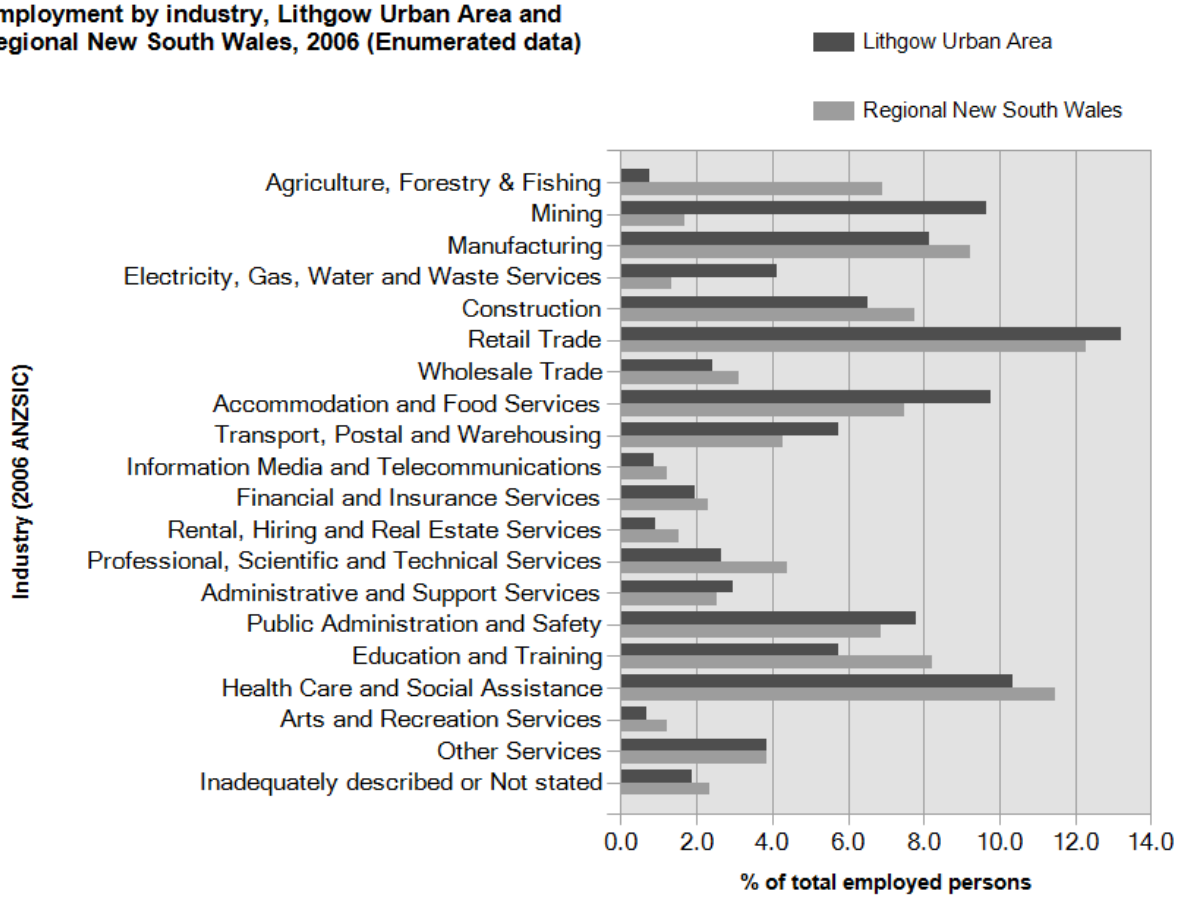
In combination these three industries employed 1,432 people in total or 33.3% of the employed resident population.

In comparison, Regional New South Wales employed 12.3% in Retail Trade; 11.5% in Health Care and Social Assistance; and 7.5% in Accommodation and Food Services.

The major differences between the jobs held by the population of Lithgow Urban Area and Regional New South Wales were:

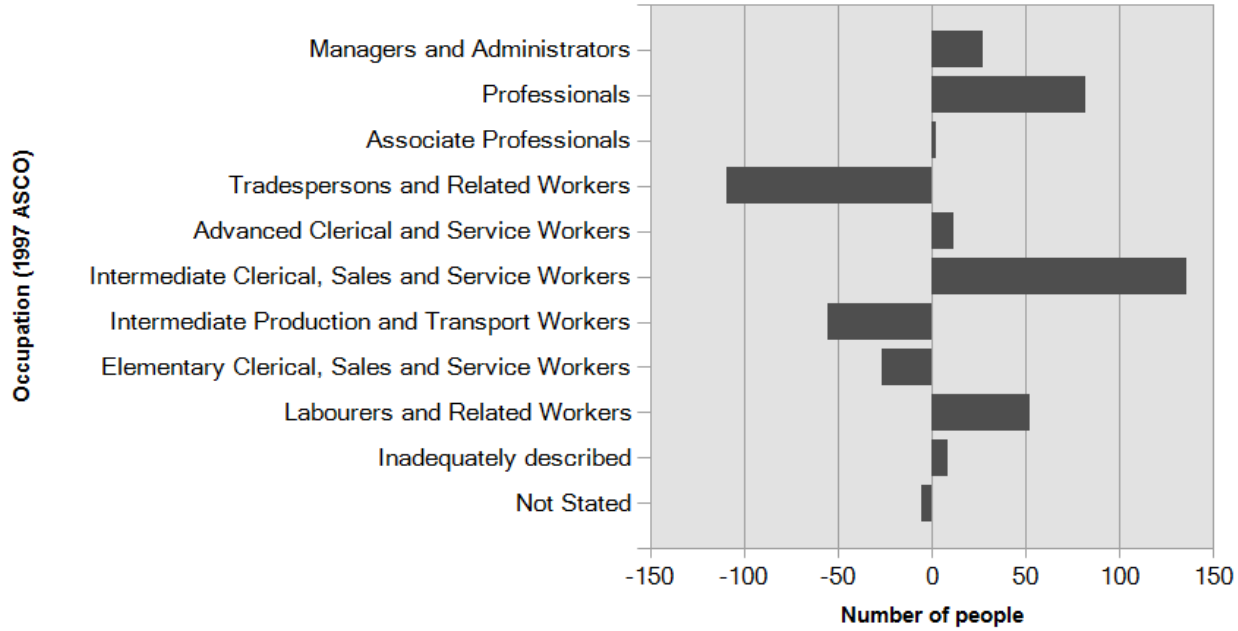
- A *larger* percentage persons employed in Mining (9.7% compared to 1.7%);
- A *larger* percentage persons employed in Electricity, Gas, Water and Waste Services (4.1% compared to 1.3%);
- A *smaller* percentage persons employed in Agriculture, Forestry & Fishing (0.7% compared to 6.9%), and;
- A *smaller* percentage persons employed in Education and Training (5.8% compared to 8.2%).

Employment by industry, Lithgow Urban Area and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in employment by occupation, Lithgow Urban Area, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Lithgow Urban Area

What are our occupations? (Occupation)

2006 occupation categories

Derived from the two Census questions, *'In the main job held last week, what was the person's occupation?'* and *'What are the main tasks that the person himself/herself usually performs in that occupation?'* and relates only to persons aged 15 years or more.

The Occupation data identifies the occupations in which the residents of an area work (this may be within the residing area or elsewhere). The occupational structure of the work force is an important indicator of the characteristics of the labour force. With other indicators, such as Educational Qualifications and Income, Occupation is a key component of evaluating the socio-economic status and skill base of an area. The occupations held by a workforce are linked to a range of factors including:

- the economic base and employment opportunities available in the area;
- the educational qualification levels of the population; and
- the working and social aspirations of the population.

Occupations are classified using a combination of skill level and skill specialisation to form meaningful groups. The 2006 Australian and New Zealand Standard Classification of Occupations (ANZSCO) provides the current framework for occupation classification in Australia. This classification provides a contemporary occupation classification system. As this is a new classification *only 2006 data is available*.

Time series occupation data (based on the ASCO Second Edition classification) is available in the tab above named 'Time series occupations'.

Occupation, 2006 ANZSCO(employed persons)	Lithgow Urban Area		
	2006		
Enumerated data	number	%	Regional New South Wales %
Managers	372	8.7	14.4
Professionals	486	11.3	16.4
Technicians and Trades Workers	770	17.9	15.4
Community and Personal Service Workers	485	11.3	9.7
Clerical and Administrative Workers	537	12.5	12.9
Sales Workers	450	10.5	10.1
Machinery Operators And Drivers	564	13.1	7.3
Labourers	549	12.8	12.3
Inadequately described or Not stated	79	1.8	1.6
Total	**4,294**	**100.0**	**100.0**

Source: Australian Bureau of Statistics, Census of Population and Housing 2006.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

An analysis of the occupations held by the resident population in Lithgow Urban Area in 2006 shows the three most popular occupations were:

- Technicians and Trades Workers (770 persons or 17.9%)
- Machinery Operators And Drivers (564 persons or 13.1%)
- Labourers (549 persons or 12.8%)

In combination these three occupations accounted for 1,883 people in total or 43.9% of the employed resident population.

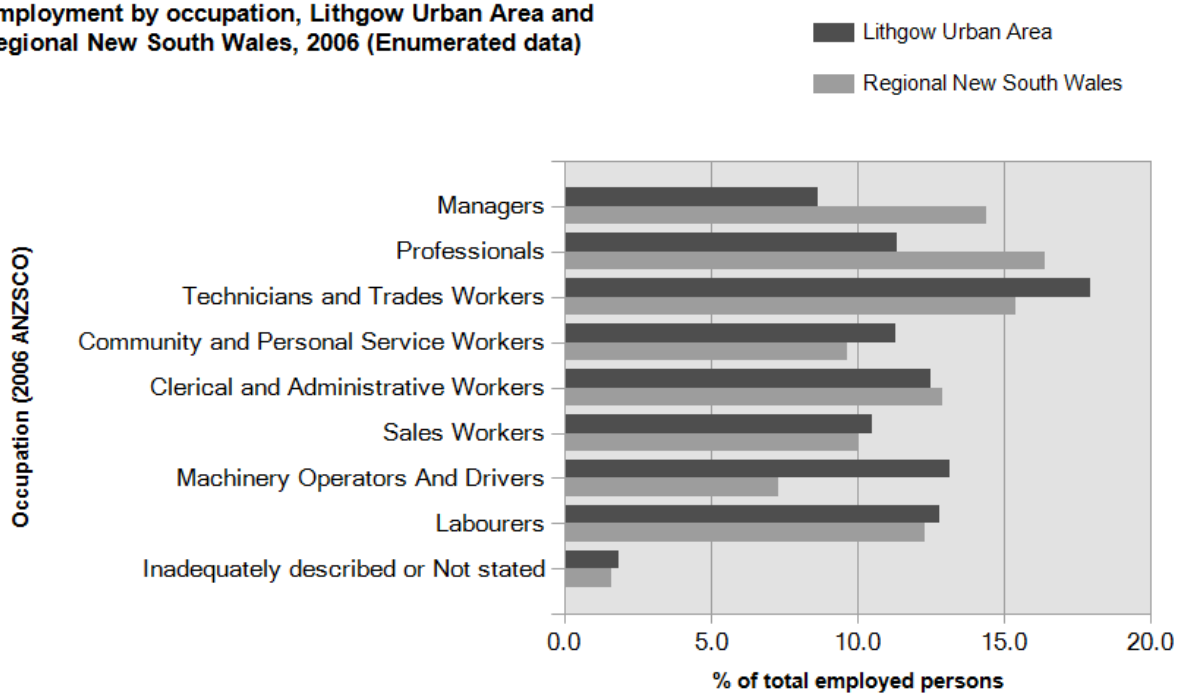
In comparison, Regional New South Wales employed 15.4% as Technicians and Trades Workers; 7.3% as

Machinery Operators And Drivers; and 12.3% as Labourers.

The major differences between the occupations of the population of Lithgow Urban Area and Regional New South Wales were

- A *larger* percentage persons employed as Machinery Operators And Drivers (13.1% compared to 7.3%);
- A *larger* percentage persons employed as Technicians and Trades Workers (17.9% compared to 15.4%);
- A *smaller* percentage persons employed as Managers (8.7% compared to 14.4%), and;
- A *smaller* percentage persons employed as Professionals (11.3% compared to 16.4%).

Employment by occupation, Lithgow Urban Area and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Lithgow Urban Area

How do we get to work? (Method of travel to work)

Derived from the Census question, *'How did the person get to work on Tuesday, 8 August 2006?'* and relates only to persons aged 15 years or more.

This data reveals the main Modes of Transport used by residents to get to work. This data is very useful in transport planning as it informs decision-makers on the effectiveness and availability of local public transport. There are a number of reasons why people use different Modes of Transport to get to work including:

- the availability of affordable and effective public transport options;
- the number of motor vehicles available within a household; and
- the travel distance to work, which for example, can allow people to walk or bicycle to their place of employment.

Note that respondents to the Census can nominate up to three methods of travel. The data presented here include people using multiple methods, but shows only one method. A hierarchy is used in which public transport is assumed to be the dominant mode if it is used. Hence people driving their car to a station or taking a taxi to the ferry are included under "Train" and "Tram or Ferry" respectively, rather than "Car" or "Taxi".

Travel to work(includes multi-mode journeys)	Lithgow Urban Area						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Train	50	1.2	0.8	53	1.2	0.9	-2
Bus	19	0.4	0.8	15	0.4	1.0	3
Tram or Ferry	0	0	0	3	0.1	0	-3
Taxi	21	0.5	0.2	13	0.3	0.2	8
Car - as driver	2,710	63.3	61.6	2,552	60.2	58.2	158
Car - as passenger	358	8.4	6.6	369	8.7	7.2	-12
Truck	63	1.5	2.0	78	1.8	2.6	-14
Motorbike	20	0.5	0.7	33	0.8	0.8	-13
Bicycle	34	0.8	0.8	27	0.6	0.9	7
Walked only	270	6.3	4.7	290	6.8	4.9	-20
Other	27	0.6	1.2	48	1.1	1.7	-21
Worked at home	102	2.4	6.4	119	2.8	7.2	-17
Did not go to work	528	12.3	12.2	561	13.2	12.4	-33
Not stated	77	1.8	1.9	81	1.9	1.9	-4
Total	4,281	100.0	100.0	4,243	100.0	100.0	38

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

In 2006, there were 69 people who caught public transport to work (train, bus, tram or ferry) in Lithgow Urban Area, compared with 3,151 who drove in private vehicles (car –as driver, car – as passenger, motorbike, or truck).

Analysis of the method of travel to work of the residents in Lithgow Urban Area in 2006 compared to Regional New South Wales shows that 1.6% used public transport, while 73.7% used a private vehicle, compared with 1.6% and 70.9% respectively in Regional New South Wales.

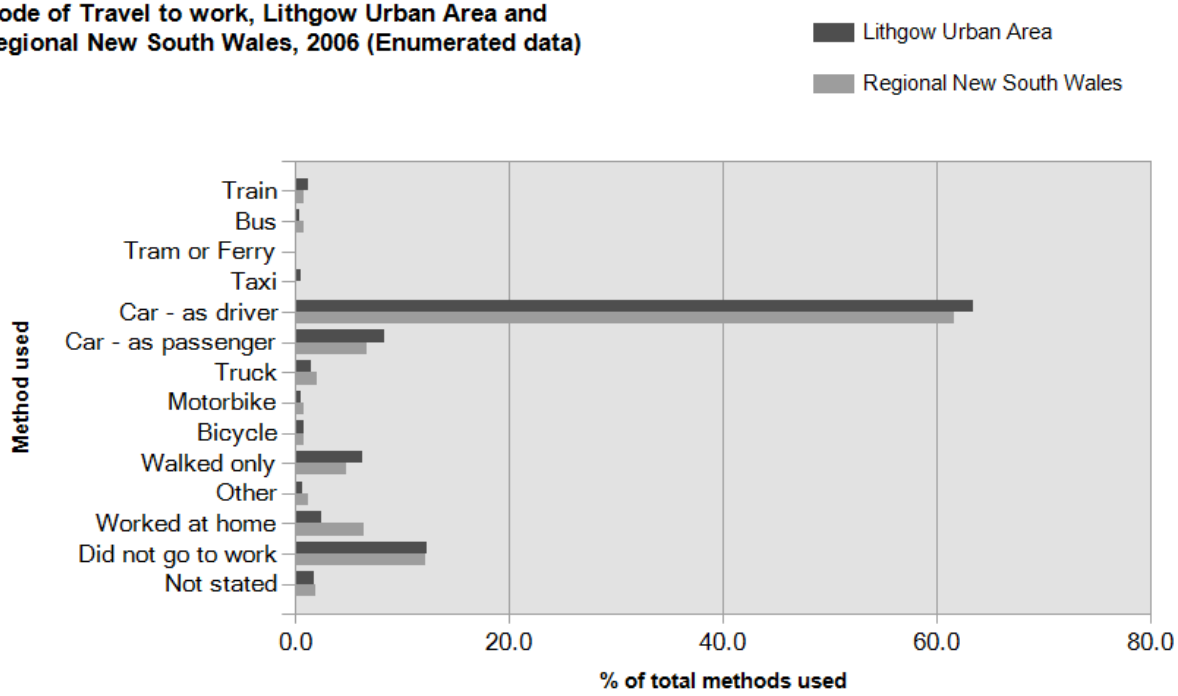
The major difference between the method of travel to work of Lithgow Urban Area and Regional New South Wales was:

- A *smaller* percentage of people who worked at home (2.4% compared to 6.4%).

The largest change in the method of travel to work by resident population in Lithgow Urban Area between 2001 and 2006 were for those nominated:

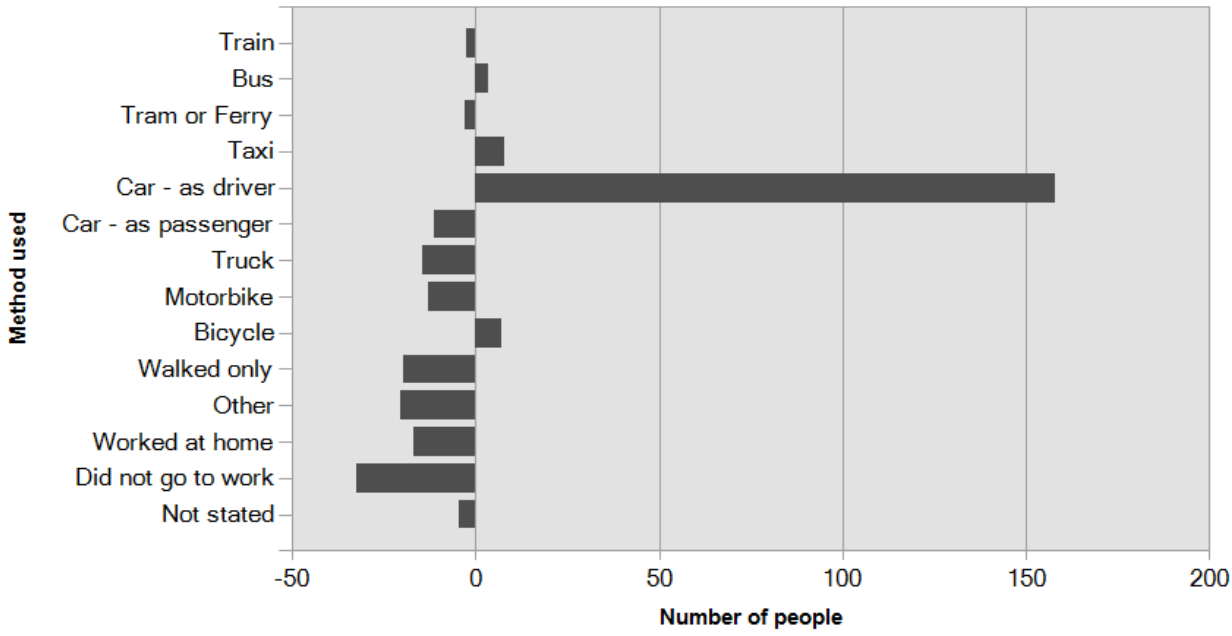
- Car - as driver (+158 persons).

Mode of Travel to work, Lithgow Urban Area and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in mode of travel to work, Lithgow Urban Area, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Lithgow Urban Area

What type of households do we live in? (Household and family types)

Derived from the Census question, *'What is the person's relationship [to each other person in the household]?'*

The Household and Family structure of the population is an indicator of an area's residential role and function (relating to the types of housing markets attracted to the area). It is usually indicative of the area's era of settlement and provides key insights into the level of demand for services and facilities (as most services and facilities are age- and household type-specific).

To get a more complete picture of the demographic characteristics of an area, the Household and Family Type data should be viewed in conjunction with Age Structure data.

Household types(households)	Lithgow Urban Area						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Couples with child(ren) under 15 years	801	26.3	29.0	928	30.6	31.5	-127
Couples with child(ren) 15 years and over	349	11.4	12.2	395	13.1	12.1	-46
Total couples with child(ren)	1,150	37.7	41.2	1,323	43.7	43.6	-174
One parent families with child(ren) under 15 years	360	11.8	10.1	372	12.3	10.1	-12
One parent families with child(ren) 15 years and over	283	9.3	6.7	225	7.4	6.0	58
Total one parent families	643	21.1	16.8	597	19.7	16.1	46
Couples without child(ren)	1,193	39.1	40.7	1,071	35.4	38.9	123
Other families	63	2.1	1.3	38	1.3	1.4	25
Total families	3,049	100.0	100.0	3,029	100.0	100.0	20
One family households	2,912	63.2	68.0	3,016	66.1	68.2	-104
Two or more family households	43	0.9	1.0	12	0.3	0.7	31
Total family households	2,954	64.1	69.0	3,028	66.4	68.9	-73
Lone person households	1,461	31.7	25.1	1,313	28.8	23.9	148
Group households	96	2.1	2.9	99	2.2	2.9	-4
Other not classifiable households	99	2.1	2.9	122	2.7	4.3	-23
Total households	4,610	100.0	100.0	4,562	100.0	100.0	48

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of the **family types** in Lithgow Urban Area in 2006 compared to Regional New South Wales shows that there was a smaller proportion of couple families with child(ren) but a larger proportion of one-parent families.

Overall, 37.7% of total families were couple families with child(ren), and 21.1% were one-parent families, compared with 41.2% and 16.8% respectively for Regional New South Wales.

The largest changes in family types in Lithgow Urban Area between 2001 and 2006 were:

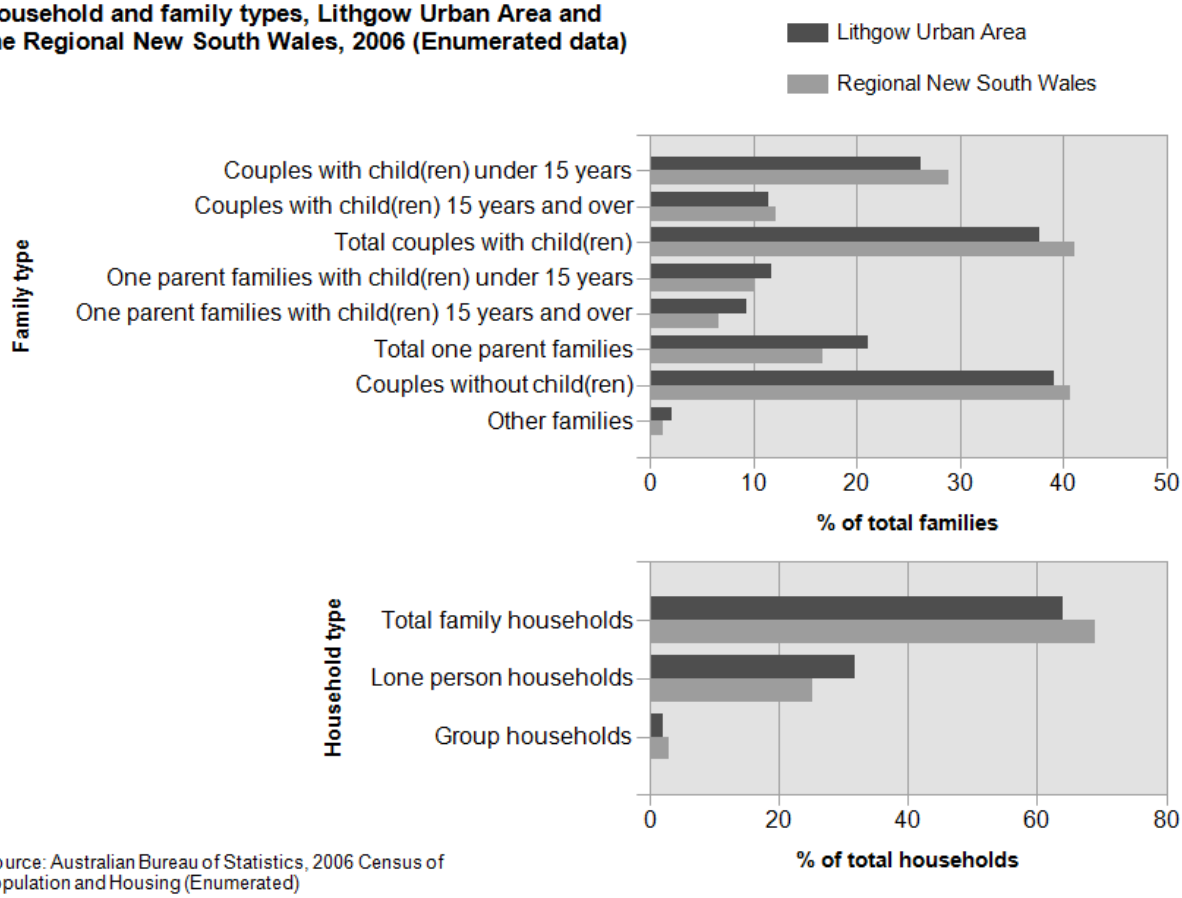
- Couples without child(ren) (+123);
- One parent families with child(ren) 15 years and over (+58), and;

- Couples with child(ren) under 15 years (-127).

Comparing **Household types** between Lithgow Urban Area and Regional New South Wales in 2006 reveals a smaller proportion of Family households, but a larger proportion of lone person households. Family households accounted for 64.1% of total households in Lithgow Urban Area while lone person households comprised 31.7%, (69.0% and 25.1% respectively for Regional New South Wales).

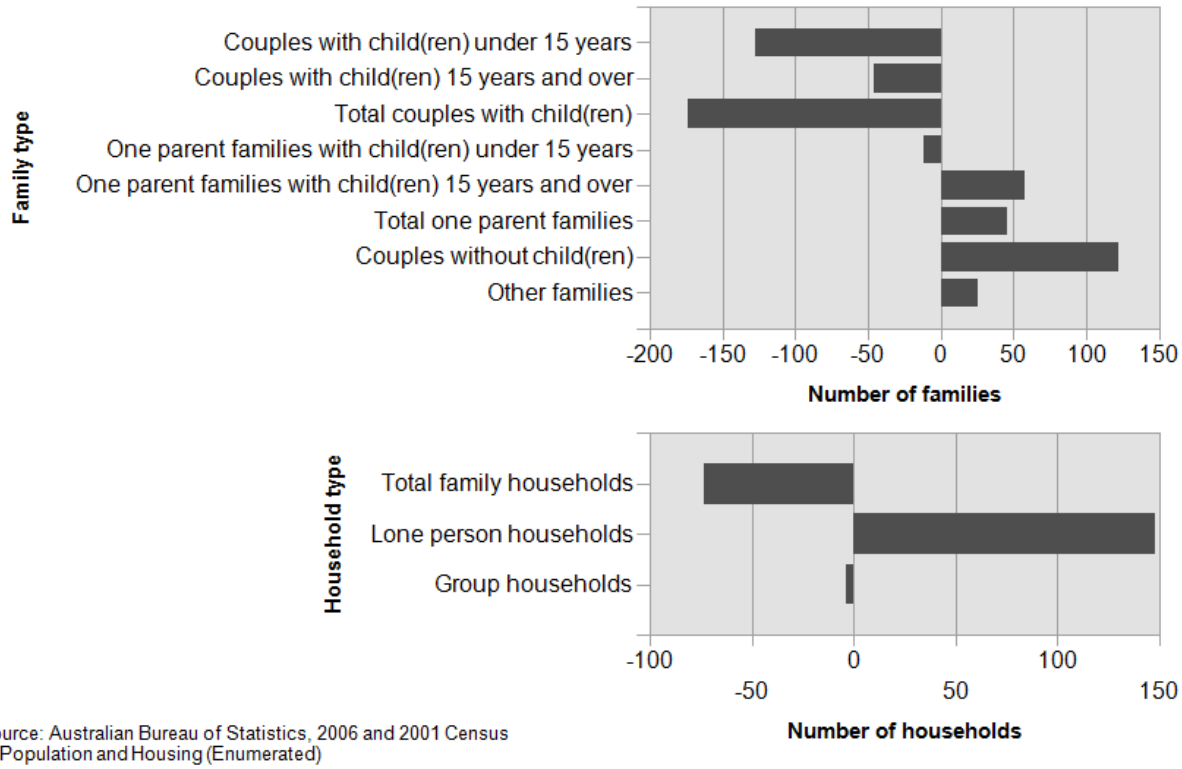
Between 2001 and 2006 in Lithgow Urban Area, there was a decrease in the number of Family households (-73), an increase in lone person households (148) and a decrease in group households (-4).

Household and family types, Lithgow Urban Area and the Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in household and family types, Lithgow Urban Area, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Lithgow Urban Area

How many people live in each household? (Number of persons usually resident)

Derived from the three Census questions, *'Name of each person including visitors who spent the night of Tuesday, 8 August 2006 in this dwelling*', and *'Where does the person usually live?*', and *'Are there any persons who usually live in this dwelling who were absent on Census Night (Tuesday, 8 August 2006)?*'

The size of households in general follows the life-cycle of families. Households are usually small at the stage of relationship formation (early marriage), and then increase in size with the advent of children. They later reduce in size again as these children reach adulthood and leave home. However, household size can also be influenced by a lack, (or abundance) of affordable housing. Further, overseas migrants and indigenous persons often have a tradition of living with extended family members and/or other families.

Household size(number of persons usually resident)	Lithgow Urban Area						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
1 Person	1,462	32.3	25.9	1,313	29.6	25.0	149
2 Persons	1,552	34.3	36.3	1,420	32.0	35.3	132
3 Persons	603	13.3	14.5	715	16.1	15.0	-112
4 Persons	591	13.1	14.0	611	13.8	14.5	-19
5 Persons	225	5.0	6.5	287	6.5	7.1	-62
6 or more Persons	87	1.9	2.8	93	2.1	3.1	-6
Total	4,520	100.0	100.0	4,437	100.0	100.0	83

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of the number of persons usually resident in a household in the Lithgow Urban Area compared with Regional New South Wales shows that there were a larger proportion of lone person households, and a smaller proportion of larger households (those with 4 persons or more). Overall there were 32.3% of lone person households, and 20.0% of larger households, compared with 25.9% and 23.3% respectively for Regional New South Wales.

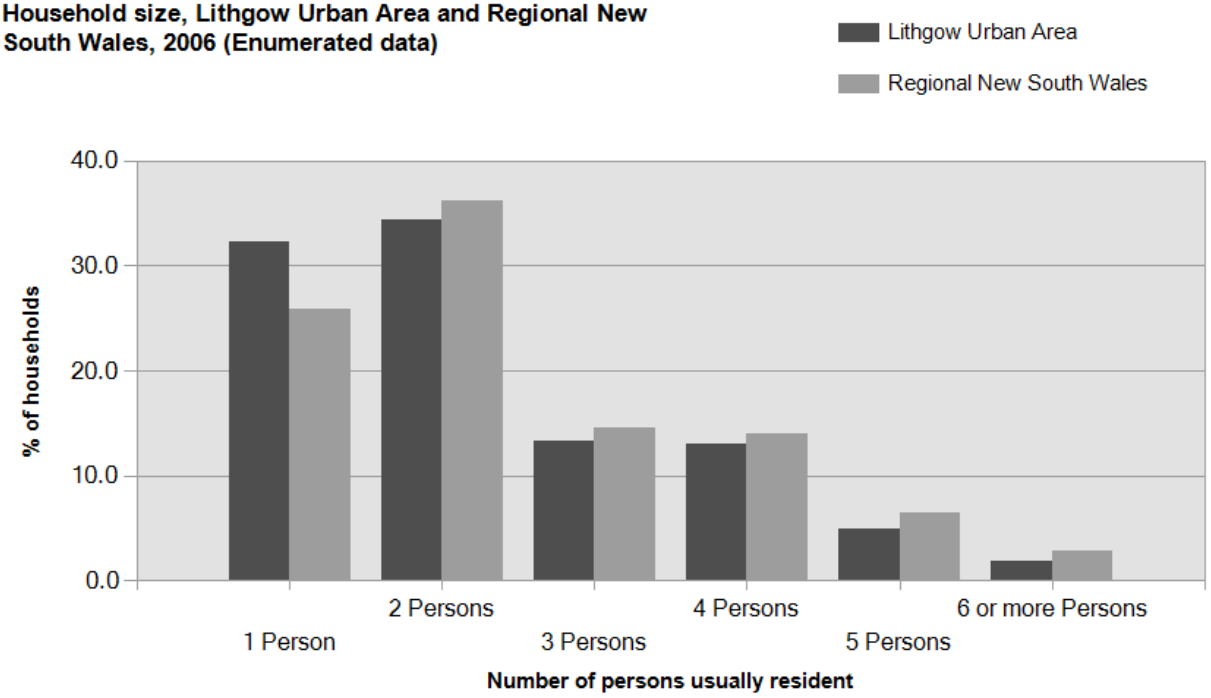
The major differences in the household size for Lithgow Urban Area and Regional New South Wales were:

- A *larger* percentage of 1 Person households (32.3% compared to 25.9%), and;
- A *smaller* percentage of 2 person households (34.3% compared to 36.3%).

The largest changes in the number of persons usually resident in a household in Lithgow Urban Area between 2001 and 2006 were:

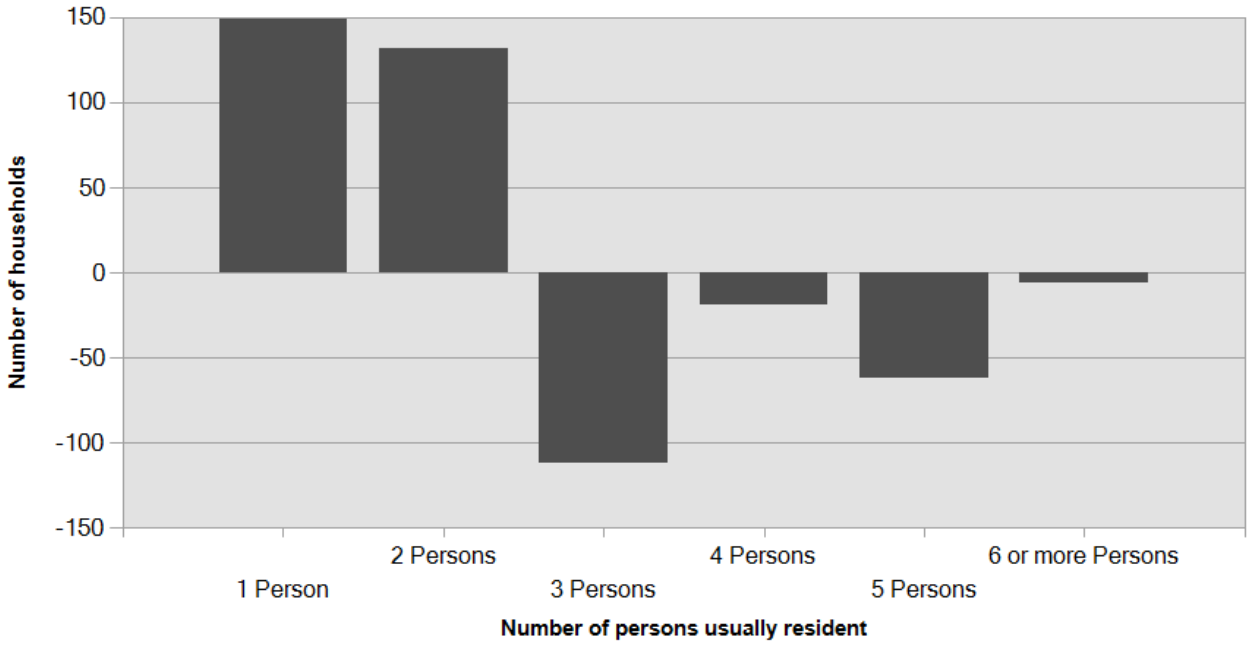
- 1 Person households (+149), and;
- 2 person households (+132).

Household size, Lithgow Urban Area and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in household size, Lithgow Urban Area, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Lithgow Urban Area

Are we owners, renters or buyers? (Housing tenure)

Derived from the Census questions, *'Is this dwelling [owned outright, owned with a mortgage etc]'*, and *'If this dwelling is being rented, who is it rented from?'*

Tenure data, to some extent, provide insights into the socio-economic status of an area as well as the role that the area plays in the housing market. For example, a high concentration of private renters may indicate an area attractive to specific housing markets such as young singles and couples, while a concentration of home owners indicates a more settled area (i.e. less transitory), with mature families and empty-nester household types. Tenure can also reflect built form, with a significantly higher share of renters in high density housing and a substantially larger proportion of home-owners in separate houses, although this is not a mutually exclusive pattern.

In conjunction with other socio-economic status information tenure data is useful for analysing a wide range of issues, including housing market analysis (in conjunction with Household and Family Type data) and for identifying public housing areas.

Housing tenure(households)	Lithgow Urban Area						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Owned	1,865	40.2	38.3	2,120	46.0	44.4	-255
Being purchased	1,148	24.8	28.7	1,016	22.1	22.7	133
Renting - Govt	331	7.1	4.3	356	7.7	4.6	-25
Renting - Other	1,009	21.7	20.8	846	18.4	20.4	163
Renting - Not stated	34	0.7	1.1	18	0.4	0.3	16
Renting - Total	**1,374**	**29.6**	**26.2**	**1,220**	**26.5**	**25.3**	**154**
Other tenure type	38	0.8	1.0	91	2.0	3.4	-53
Not stated	214	4.6	5.9	159	3.5	4.2	55
Total	**4,640**	**100.0**	**100.0**	**4,607**	**100.0**	**100.0**	**33**

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Care should be taken when analysing change over time for 'Owned' and 'Being purchased' categories as changes to the wording of the responses in the Census questionaire between 2001 and 2006 may have resulted in skewed data. Please see the specific data notes for more detail.

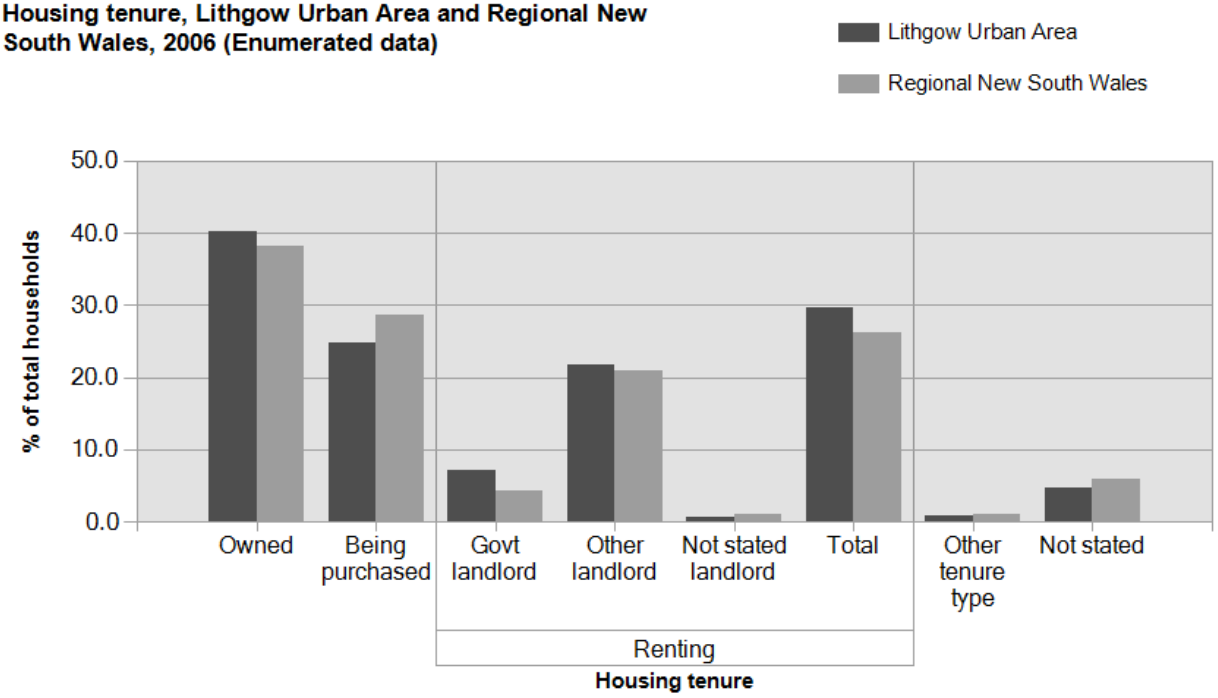
Analysis of the housing tenure of the population of Lithgow Urban Area in 2006 compared to Regional New South Wales shows that there was a larger proportion of households who owned their dwelling; a smaller proportion purchasing their dwelling; and a larger proportion who were renters.

Overall, 40.2% of the population owned their dwelling; 24.8% were purchasing, and 29.6% were renting, compared with 38.3%, 28.7% and 26.2% respectively for Regional New South Wales.

The largest changes in housing tenure categories for the households in Lithgow Urban Area between 2001 and 2006 were:

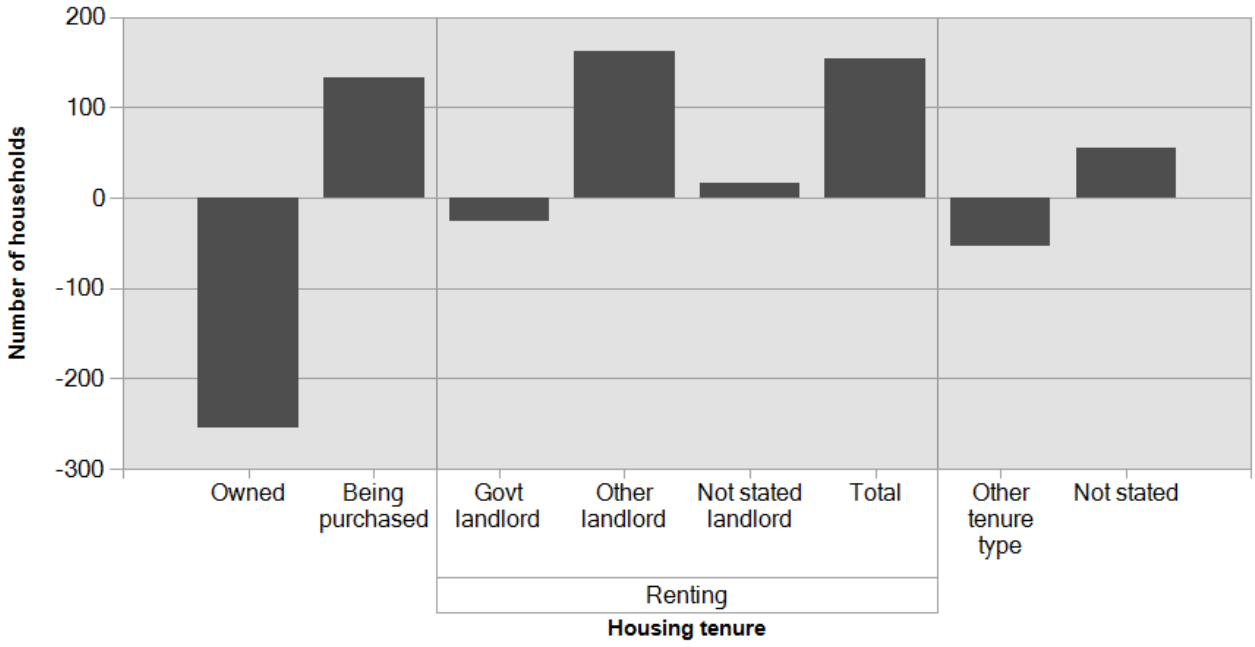
- Renting - Other (+163 households);
- Renting - Total (+154 households);
- Being purchased (+133 households), and;
- Owned (-255 households).

Housing tenure, Lithgow Urban Area and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in housing tenure, Lithgow Urban Area, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Lithgow Urban Area

What type of dwellings do we live in? (Dwelling types)

Dwelling Type is derived from an assessment by the Census Collector who observes and records the type of dwelling structure.

The types of dwellings that are common to areas are important determinants in the role and function that the area plays in the housing market. A greater concentration of higher density dwellings is likely to attract more young adults and smaller households; while larger, detached or separate dwellings are more likely to have families and prospective families living in them, although this is not a mutually exclusive pattern.

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

Dwelling structure(private dwellings)	Lithgow Urban Area						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Separate house	4,029	77.1	72.1	3,934	76.4	72.3	94
Medium density	562	10.8	11.4	528	10.2	11.3	34
High density	18	0.3	1.6	13	0.3	1.5	5
Caravans, cabin, houseboat	21	0.4	1.8	33	0.6	2.1	-12
Other	8	0.2	0.5	42	0.8	0.6	-34
Not stated	0	0	0.1	20	0.4	0.6	-20
TOTAL occupied private dwellings	4,636	88.8	87.5	4,570	88.7	88.3	66
TOTAL unoccupied Dwellings	587	11.2	12.5	582	11.3	11.7	5
TOTAL Dwellings	5,223	100.0	100.0	5,153	100.0	100.0	71

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

(a) 'Medium density' includes all semi-detached, row, terrace, townhouses and villa units, plus flats and apartments in blocks of 1 or 2 storeys, and flats attached to houses.

(b) 'High density' includes flats and apartments in 3 storey and larger blocks.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

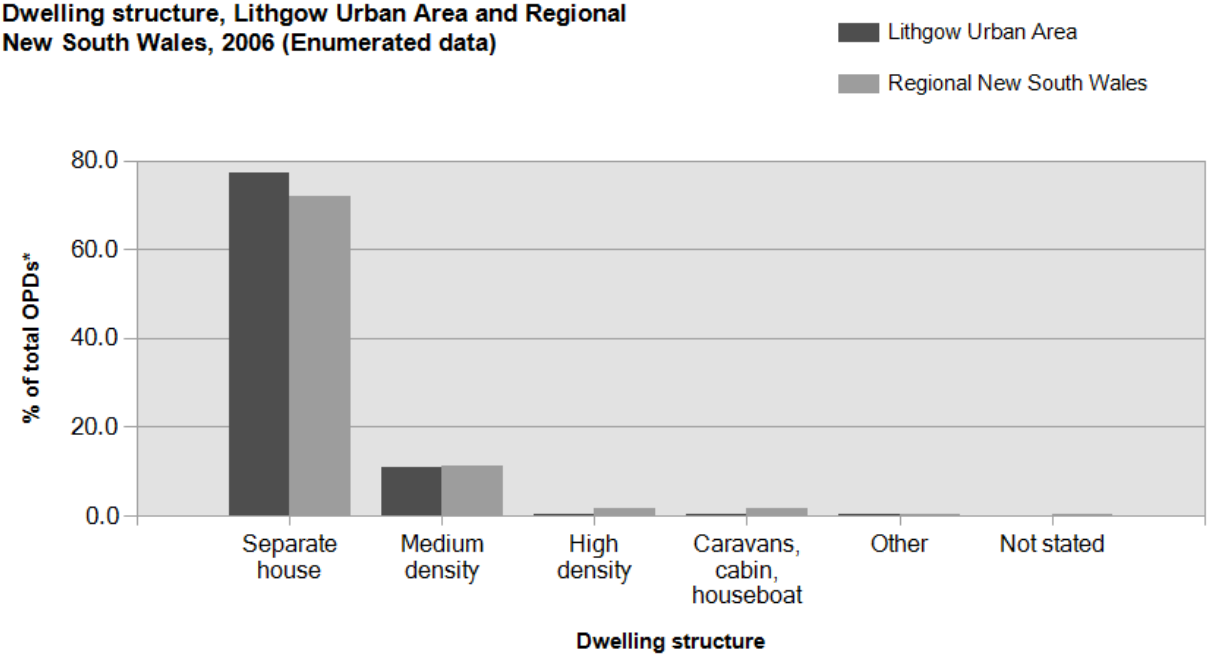
In 2006, there were 4,029 households who occupied a separate house in the area, while 562 occupied a medium density dwelling, and 18 occupied high density flats and apartments.

Analysis of the types of dwellings of the households in Lithgow Urban Area in 2006 compared to Regional New South Wales shows that 77.1% occupied a separate house; 10.8% occupied a medium density dwelling; while 0.3% occupied high density dwellings, compared with 72.1%, 11.4%, and 1.6% respectively in Regional New South Wales.

The largest change in the type of dwellings occupied by households in Lithgow Urban Area between 2001 and 2006 were for those occupying a:

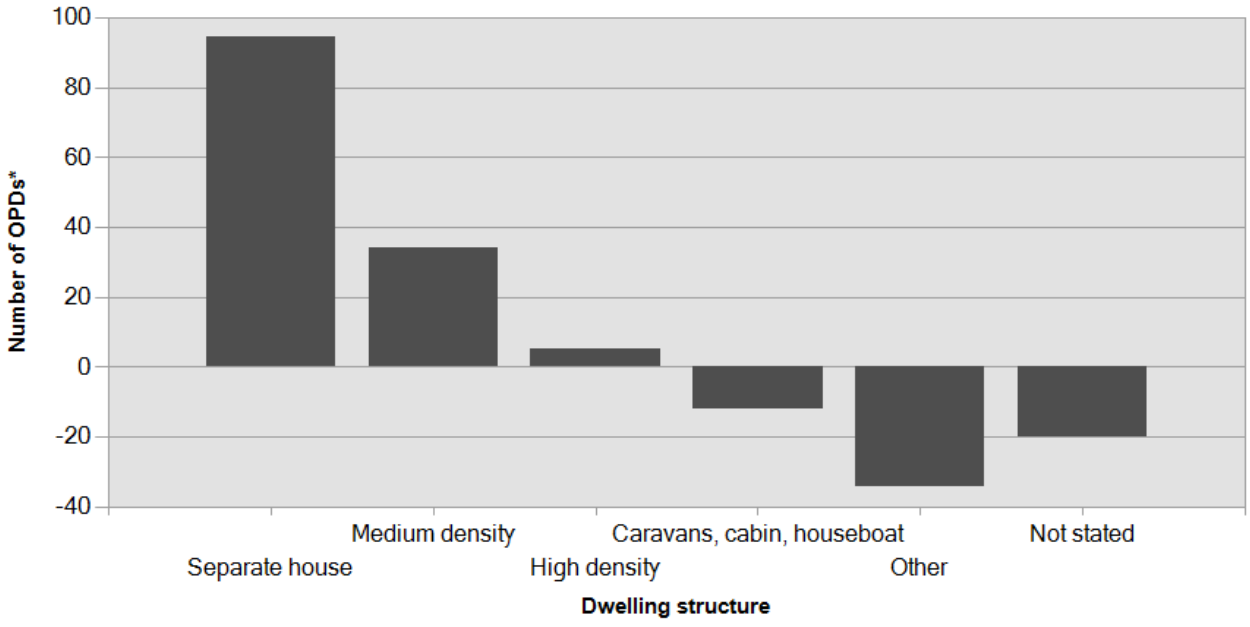
- Separate house (+94 dwellings).

Dwelling structure, Lithgow Urban Area and Regional New South Wales, 2006 (Enumerated data)



*OPDs refers to Occupied Private Dwellings.
Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in dwelling structure, Lithgow Urban Area, 2001 to 2006 (Enumerated data)



*OPDs refers to Occupied Private Dwellings.
Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Geography notes

Census data is available at a variety of different geographic levels, for example, State; Local Government; and Census Collector District (a unit of around 200 households). Rarely do these boundaries match actual 'communities', 'suburbs' or 'service catchments' needed for effective decision making.

The Community Profile combines data for Lithgow City along with customised suburbs/localities, aggregated from Census Collector Districts for the Census years: 2006, 2001, 1996, and 1991.

Lithgow City has 9 small areas:

- Bowenfels
- Lithgow - Hermitage Flat and District
- Morts Estate - Oaky Park - Vale Of Clwydd
- Portland
- Rural North - Marrangaroo
- Rural South - Little Hartley
- South Bowenfels - Littleton - South Littleton
- Wallerawang - Lidsdale
- Lithgow Urban Area

Suburb/locality geography

The suburbs and localities in the Community Profile tables are aggregations of 2006 Census Collection Districts (CDs). Where CDs did not fit exactly into the suburb or locality boundaries, estimates were made of the number of dwellings to be included. These estimates use aerial photography, dwelling counts, planning schemes, and street directories to determine what percentage of a CD goes into each suburb. The resulting data provides the most accurate population information for suburbs and localities.

NOTE: The geography in the Community Profile tables may not match the Australian Bureau of Statistics (ABS) suburb boundaries for 2006, which are based on aggregation of whole CDs.

Data notes

All data in this Profile is sourced from the Australian Bureau of Statistics, copyright in ABS data vests in the Commonwealth of Australia.

Population figures

The most comprehensive population count available in Australia is derived from the Census of Population and Housing, conducted by the Australian Bureau of Statistics every 5 years. It is an official count of all people and dwellings in Australia on Census night, and collects details of age, sex and other characteristics of the population. The last Census was conducted on 8 August 2006 and was the 15th national Census for Australia. The next Census will be conducted on 7 August 2011.

Census statistics are used as the basis for estimating the population at national, state and local government levels, for electoral purposes and the distribution of government funds. They are used by individuals and organisations in the public and private sectors for planning, administration, research and decision making.

Populations are estimated in various ways. It is important to understand how a population has been derived when you are using the data.

Census data in the Community Profile section of profile.id® includes **enumerated** and **usual residence** data. The **estimated resident population** can be found in the Additional Information section of this website.

Enumerated Population

The 'Enumerated Population' represents where people were counted on Census Night (8 August 2006), which may not be where they usually live. This population figure generally includes overseas visitors and visitors to the area from within Australia, but excludes Australians overseas.

This type of count provides a snapshot at a given point in time. The Census is timed to attempt to capture the typical situation, however, holiday resort areas, such as the Gold Coast and snow fields, may show a large enumeration count compared with the usual residence count.

Where enumerated population data is used in the profile, overseas visitors have been specifically excluded from the tables, but visitors from within Australia are included.

For detailed information about Enumerated population please refer to the ABS Fact Sheet – Population Measures.

Usual Residence Population

This population is derived from the Census. It is the place where a person usually lives, rather than the place where they were counted on Census night. Each person completing the Census is required to state their address of usual residence and this information is used to derive the Usual Residence population.

Census counts compiled on this basis are less likely to be influenced by seasonal factors, such as holiday seasons and snow seasons, and provide information about the usual residents of an area.

In 2006 all Census data are provided for usual residence as well as enumerated population. Previously household information was released as enumerated only (please see the detailed note for household and family type). Additionally, data about usual residence were not published for any data sets prior to 2001. Consequently, a time series has been provided for non-household data comparing 2006 and 2001 data only.

For detailed information about usual residence and enumerated population please refer to the ABS Fact Sheet – Population Measures.

Estimated Resident Population

The Estimated Resident Population (ERP) is the official ABS estimate of the Australian population. The ERP is based on results of the Census and is compiled as at 30 June of each Census year. It is updated between Censuses - quarterly for state and national figures, and annually for local government areas. ERP provides a population figure between Censuses.

The ERP is based on the usual residence population and includes adjustments for Census undercount,

Australian residents who were temporarily overseas on Census night, and backdates the population to 30 June. Each year's updates take into account births, deaths and both internal and overseas migration.

ERPs can be found under the 'Additional Information' section of the menu in the Community Profile.

For detailed information about ERPs please refer to the ABS publication Demographic Estimates and Projections: Concepts, Sources and Methods, 1999.

Randomisation

The information presented in the tables in the Community Profile is based on detailed tables produced by the Australian Bureau of Statistics at the Local Government Area level, and at the Census Collection District (CD) level for suburbs and small areas.

Note: The raw CD level data are then recalculated to exactly reflect the selected boundaries as shown on the maps within the Community Profile.

The Australian Bureau of Statistics (ABS) will randomise information it provides to preserve confidentiality. All cells are slightly adjusted to prevent any identification of personal details. Methodologies for doing this have changed between 2001 and 2006.

- Data tables released prior to the 2006 Census had small numbers (values of 1 or 2) randomly adjusted to either 0 or 3 by the ABS. As tables are randomly adjusted independently of each other, totals differ slightly across tables with the same population. The affect of randomisation is increased with the aggregation of Census Collector Districts into suburbs.
- In relation to the 2006 data, a new method called "perturbation" has been introduced. All figures included within any table may be randomly adjusted by a small amount. These adjustments result in small introduced random errors. Although the information value of the table as a whole is not impaired, care should be taken when interpreting very small numbers, since randomisation will affect the relative size of small numbers far more than larger numbers. The effect of the randomisation methodology also ensures that values of 1 and 2 do not appear in tables.

No reliance should be placed on small cells as they are impacted by random adjustment, respondent and processing errors.

Table totals and subtotals will be internally consistent but discrepancies may be observed between tables cross-tabulating the same population by different variables. While randomisation compromises the table totals by making them appear inconsistent, this is the best available socio-demographic data at the suburb level. This level of compromise is not statistically significant and should not impact on decision makers making effective resource allocation and planning decisions.

Overseas visitors

Enumerated data from the 2001 and 2006 Censuses are published by the ABS with "Overseas visitors" appearing as a separate category in many tables. To improve usability of the information the category "Overseas visitors" has been removed from all tables and calculations.

Table totals and rounding

Table totals may not equate with other similar tables due to randomisation of small numbers and percentages may not total to 100 due to rounding of decimal places. All discrepancies are minimal and are statistically insignificant.

Household and Family Composition

This variable describes the type of household within a dwelling. Household composition indicates whether a family is present and whether other unrelated household members are present. Any household, including lone person households, can contain visitors. 'Visitor only' households can contain overseas visitors (ABS Census Dictionary 2006).

The 'Other not classifiable' category includes those households which were occupied on Census night but where the Census collector could not make contact; households that contained only persons aged under 15 years; and households which could not be classified elsewhere in this classification because there was

insufficient information on the Census form. (ABS Census Dictionary 2006).

The household and family data are essentially the same for both Usual Residence and Enumerated population counts. The person who fills in the form identifies all persons who are present on Census night and their relationship within the household. Anyone who is temporarily absent is separately identified on the form, so that the type of household and number of usual residents can be identified. However, any table examining the characteristics of people by the type of household they live in will exclude these people as few demographic variables are collected for persons temporarily absent.

Persons who are away from home, will be counted in the household they are present in on Census night (generally in a non-private dwelling or as a visitor in a private dwelling). Although the ABS will know their usual address, and they will be coded back to their area of usual residence, the ABS is not able to impute that person's relationship to other people also resident at that address. Unlike the Enumerated count, Usual Residence household data does not include 'visitor only' households.

Specific notes

All data in the Community Profile is sourced from the Australian Bureau of Statistics, copyright in ABS data vests in the Commonwealth of Australia.

How many people live here?

Key Statistics

The summary statistics table contains 'Total population', ‘Overseas population’ 'Gender', 'Indigenous population', ‘Institutional population’ and 'Average household size'; along with a summary of data contained elsewhere in the Profile.

'Total population' and 'Gender' data are shown both including and excluding 'Overseas Visitors'.

'Indigenous population' refers to persons of Aboriginal and/or Torres Strait Islander origin.

‘Institutional population’ refers to people living in non-private dwellings. These types of dwellings are establishments which provide a communal type of accommodation. Examples of categories are hotel, motel, boarding house, private hotel, public hospital (not psychiatric), and childcare institution.

'Average household size' is calculated on the basis of the number people counted in occupied private dwellings (excluding overseas visitors), divided by the number of occupied private dwellings (excluding non-private dwellings, such as institutions and hotels etc).

For notes on other variables in the 'Key statistics' table please see the specific data notes for each of the relevant sections.

How old are we?

Includes all persons except 'Overseas Visitors'.

Between the 2001 and the 2006 Censuses, there was a small change in the way that the question regarding your age was phrased. The 2001 Census asked your age last birthday. In 2006, the question asked either your age last birthday or your date of birth. This change in the way age structure has been collected has not had an impact on the data produced; if date of birth was completed, then the ABS calculated age as at your last birthday. 2006 age data are comparable to prior Censuses.

Who are we?

Where were we born?

Includes all persons except 'Overseas Visitors'.

The 'United Kingdom' includes England, Scotland, Wales, Northern Ireland, Channel Islands, Isle of Man, and 'United Kingdom not further defined'.

'Former Federal Republic of Yugoslavia' includes Serbia and Montenegro, as well as 'South Eastern Europe nfd' in 2006. Those people categorised to South Eastern Europe in 2006 were primarily those who stated their birthplace as Yugoslavia, which did not exist as a nation in 2006. In 2001 it includes all people who listed their birthplace as Yugoslavia, while it is not available for 1996 and 1991 due to considerable changes to national boundaries in this region.

'Total Overseas born' includes 'inadequately described', 'at sea', and 'not elsewhere classified'.

'Main English speaking countries' includes Canada, Ireland, New Zealand, South Africa, the United Kingdom, and the United States of America.

'Non-English speaking backgrounds' refers to persons born in countries not included in 'Main English speaking countries'.

'China (excl. Taiwan Province) ' also excludes the Special Administrative Regions of Hong Kong and Macau.

Birthplace is coded using the Standard Australian Classification of Countries (SACC) 1998.

How many recently arrived?

Excludes persons who did not state their birthplace, and persons born in Australia or in other Australian territories.

Includes Australian residents born overseas who will be in Australia for more than one year.

How well do we speak English?

This is derived from the Census question, 'How well does the person speak English?' and applies to all persons who speak a language other than English at home. The table in the profile has been further restricted to refer only to persons born overseas and aged over 5 years (excluding overseas visitors).

English proficiency aims to measure the ability of persons who speak 'English as a Second Language' to also speak English. The data, when viewed with other ethnic and cultural indicators, tends to reflect the ethnic composition of the population and the number of years of residence in Australia. In general, an area with a higher proportion of persons born in English-speaking countries or who emigrated from non-English speaking countries several decades ago is likely to have greater English-speaking proficiency.

Note: A person's English proficiency is based on a subjective assessment and should therefore be treated with caution.

Responses to the question on Proficiency in English in the Census are subjective. For example, one respondent may consider that a response of 'Well' is appropriate if they can communicate well enough to do the shopping, while another respondent may consider such a response appropriate only for people who can hold a social conversation. Proficiency in English should be considered as an indicator of a person's ability to speak English and not a definitive measure of this ability.

For more information on proficiency in English, please refer to the ABS Census Dictionary (2901.0).

What language do we speak at home?

Includes all persons except 'Overseas Visitors'.

Language spoken at home is coded using the Australian Standard Classification of Languages (ASCL), 2005-06.

'Filipino' was recorded as a separate language from 'Tagalog' in the 2006 Census, but no such distinction was made in earlier Censuses. profile.id® combines the two languages together as 'Tagalog'. Filipino is a standardised version of Tagalog, incorporating words from other indigenous languages within the Philippines.

'Dari' was recorded as a separate language from 'Persian' in the 2006 Census, but no distinction was made in earlier Censuses. profile.id® combines the two languages together as 'Persian'. Dari is a localised name for Persian in Afghanistan.

What is our religion?

Includes all persons except 'Overseas Visitors'.

Religion is coded using the Australian Standard Classification of Religious Groups (ASCRG), 2005.

The religion question in the Census is an optional question and so has quite a high rate of 'Not Stated' responses.

The 2006 Census recorded 'Eastern Orthodox', which is a new designation for those churches previously described as 'Orthodox'.

The 2006 Census recorded 'Assyrian Apostolic' as a separate religious category. Previously, all religions falling under this category were recorded as 'Oriental Christian'.

The 2006 Census introduces a new designation called 'Oriental Orthodox'. The majority of the churches in this group were formerly known as 'Oriental Christian'. This includes:

- Oriental Orthodox, nfd
- Armenian Apostolic
- Coptic Orthodox Church
- Syrian Orthodox Church
- Ethiopian Orthodox Church
- Oriental Orthodox, nec

'Christian nfd' refers to a Christian religion 'not further defined', and includes:

- Apostolic Church, so described
- Church of God, so described
- Australian Christian Churches, so described
- New Church Alliance, so described

What is our individual income?

This data includes total gross income (including pensions and allowances) that a person usually receives each week.

This data applies only to people aged 15 years and over and excludes overseas visitors.

Individual incomes are collected as ranges in the Census.

Individual income quartiles

Individual income groups are not comparable over time because of the influences of economic change such as wage level fluctuations and inflation. The income quartile method has been adopted as the most objective method of comparing change in the income profile of a community over time.

Individual income quartiles look at the distribution of incomes in Lithgow City relative to Regional New South Wales. Quartiles split the total population into four equal parts for the Regional New South Wales. The table shows the number and proportion of individuals in Lithgow City falling into each segment for the benchmark area.

The table gives a clear picture of where individual incomes in Lithgow City sit relative to Regional New South Wales. For the Regional New South Wales, 25% of persons fall into each category. If, for example, Lithgow City has 30% in the top category and only 20% in the lowest, this indicates that Lithgow City has proportionally more higher-income individuals and less lower-income individuals.

Individual income quartile definitions(Annual income ranges)

	2006	2001	1996	1991
Lowest group	Nil to $10,593	Nil to $9,213	Nil to $7,449	Nil to $6,248
Medium lowest	$10,594 to$20,166	$9,214 to$16,237	$7,450 to$12,898	$6,249 to$11,681
Medium highest	$20,167 to$38,532	$16,238 to$30,456	$12,899 to$24,972	$11,682 to$22,218
Highest group	$38,533 and over	$30,457 and over	$24,973 and over	$22,219 and over

What is our household income?

Household income comprises the total of incomes of all persons in the household who stated an income.

Excludes ‘Visitor only households’ and ‘Other non classifiable households’.

'Not stated' includes 'Partial income not stated' and 'All incomes not stated'.

'Partial income not stated' includes households where at least one, but not all, member(s) aged 15 years and over did not state an income and / or at least one household member aged 15 years and over was temporarily absent. In these cases, the aggregate of all stated individual incomes would be less than the true household income so these households are excluded from the classification.

'All incomes not stated' includes households where no members present stated an income.

Household income quartiles

Household income groups are not comparable over time because of the influences of economic change such as wage level fluctuations and inflation. The income quartile method has been adopted as the most objective method of comparing change in the income profile of a community over time.

Household income quartiles look at the distribution of incomes in Lithgow City relative to Regional New South Wales. Quartiles split the total number of households into four equal parts for the Regional New South Wales. The table shows the number and proportion of households in Lithgow City falling into each segment.

The table gives a clear picture of where household incomes in Lithgow City sit relative to Regional New South Wales. For the Regional New South Wales, 25% of households fall into each category. If, for example, Lithgow City has 30% in the top category and only 20% in the lowest, this indicates that Lithgow City has proportionally more higher-income households and less lower-income households.

Household income quartile definitions(Annual income ranges)

	2006	2001	1996	1991
Lowest group	Nil to $22,618	Nil to $18,647	Nil to $14,904	Nil to $14,014
Medium lowest	$22,619 to$41,382	$18,648 to$32,914	$14,905 to$26,949	$14,015 to$24,525
Medium highest	$41,383 to$71,642	$32,915 to$57,579	$26,950 to$46,984	$24,526 to$42,010
Highest group	$71,643 and over	$57,580 and over	$46,985 and over	$42,011 and over

What are our qualifications?

Includes persons aged 15 years and over.

Excludes 'Overseas Visitors'.

Excludes schooling up to Year 12.

'No qualifications' refers to persons still studying for their first qualification, persons who do not have a qualification, and persons who have a qualification out of the scope of the Census version of the Australian Standard Classification of Education (ASCED), 2001.

What is the highest secondary school year we have completed?

Includes persons aged 15 years and over.

'Schooling' refers to Primary and Secondary schooling.

Excludes 'Overseas Visitors'.

There is no time series for this particular data set owing to differences in the way that the data was recorded. The 2001 Census did not record people who were over 15 years and still at school as having completed a particular year of schooling. Instead they were counted as “Still at school”. However, in 2006 they were coded to the highest year already completed, making the data non-comparable. This means that if an individual is still in the process of completing year 11 during a Census year, they are recorded as having completed year 10. This also means that the number of people who have completed year 10 cannot be treated as being indicative of the number of people who left school after completing year 10 as it will include people who were in the process of completing year 11.

Where are we learning?

Excludes 'Overseas Visitors'.

'Independent' refers to private and other non-Government schools.

‘Catholic’ refers to infant, primary and secondary schools run independently by the Catholic Church.

'TAFE' refers to 'Technical and Further Education' institutions.

Do we need assistance?

This data identifies people who report a need for assistance due to a 'profound or severe core activity limitation'. This population is defined as people who need assistance in their day to day lives with any or all of the following activities – self-care, body movements or communication – because of a disability, long-term health condition, or old age.

This question relies on people evaluating themselves, (or their carers), as being in need of assistance. Consequently this question provides an indication of the characteristics of people who report, or are reported as requiring, a need for assistance; but cannot be relied upon to provide details as to the total number of people with a 'profound or severe core activity limitation'.

Persons under the age of 40 whose only stated reason for need for assistance was ‘old or young age’ are included under ‘no need for assistance’.

Excludes 'Overseas Visitors'.

What do we do?

Do we do unpaid work?

This data includes help willingly given in the form of time, service or skills, to a club, organisation or association including:

- assisting at events and with sports organisations
- helping with school events and activities
- assisting in churches, hospitals, nursing homes and charities
- other kinds of volunteer work (e.g. emergency services, etc.).

Voluntary work excludes unpaid work done through a club, organisation or association mainly in order to qualify for government benefits such as Newstart Allowance. It also excludes any activity which is part of a person's paid employment or family business. ABS Census Dictionary 2006.

This data applies to persons aged 15 years and over and to **voluntary work undertaken in the 12 months prior to the Census**.

This data excludes 'Overseas Visitors'.

Unpaid domestic work

This data includes all the domestic work a person does without pay in their own home and in other places, for themselves, their family and other people in their household.

This data only applies to persons aged 15 years and over and to **domestic work performed in the week prior to Census**.

Unpaid domestic work can include meal preparation, service and clean-up; washing, ironing and managing clothes; other housework; gardening, mowing and yard work; home maintenance; car and bike maintenance; household shopping and managing household financial affairs.

This data excludes 'Overseas Visitors'.

Unpaid care

Unpaid care (unpaid assistance to a person with a disability, a long term illness or problems related to old age), includes the unpaid help a person gives to another person to assist them with their daily activities. It can include assistance with:

- bathing, dressing, toileting and feeding;
- mobility;
- understanding or being understood by others;
- emotional support;
- medication;
- dressing wounds
- food
- housework
- driving

This data applies to persons aged 15 years and over and to **care given in the two weeks prior to Census**.

This data excludes 'Overseas Visitors'.

Unpaid childcare

This data includes the time a person spends caring for a child or children without being paid. This can include people caring for their own children, whether they usually live with them or not. It can also include people looking after their own grandchildren or the children of other relatives or the children of friends or neighbours.

This data only applies to persons aged 15 years and over and to **child care given in the two weeks prior to Census**.

This data excludes 'Overseas Visitors'.

What is our employment status?

Excludes 'Overseas Visitors'

Includes persons aged 15 years and over.

'Employed full time' is defined as having worked 35 hours or more in all jobs during the week prior to Census night.

'Employed part time' is defined as having worked less than 35 hours in all jobs during the week prior to Census night.

The 'Labour force' is defined as all persons aged 15 years and over who are looking for work, or are employed, either full time, part time or casually.

What industries do we work in?

This data describes the industries in which employed people work. It applies only to people aged 15 and over who were employed in the week prior to Census.

Data for industry are coded using the Australia and New Zealand Standard Industrial Classification (ANZSIC). The industry classification is updated periodically to take account of emerging industries and changes in the structure of the economy.

For the 2006 Census, the updated ANZSIC06 classification was used, which includes more industry divisions which better reflect the structure of the Australian economy. Data are presented using this classification as an option. However for time series, data are also presented on the older ANZSIC93 classification, as this classification was used in earlier censuses.

For more information please refer to the 2006 Census Dictionary, and ANZSIC classification.

Time series industry categories

This data describes the industries in which employed people work. It applies only to people aged 15 and over who were employed in the week prior to Census.

Data for industry are coded using the Australia and New Zealand Standard Industrial Classification (ANZSIC). The industry classification is updated periodically to take account of emerging industries and changes in the structure of the economy.

For the 2006 Census, the updated ANZSIC06 classification was used, but people were also coded to the older ANZSIC93 classification. Data in the profiles is presented using both classifications; data for 2006 alone uses ANZSIC06, while time series data uses ANZSIC93 for comparability.

For more information please refer to the 2006 Census Dictionary, and ANZSIC classification.

What are our occupations?

This data describes the occupations of employed people. It applies only to people aged 15 and over who were employed in the week prior to Census.

Data for occupation are coded using the Australian and New Zealand Standard Classification of Occupations (ANZSCO). The occupation classification is updated periodically to take account of emerging occupation groups and changes to the structure of the labour force.

Data are presented for the broad occupation groupings. For 2006 these were coded using ANZSCO, the most recent classification. These are presented in profile.id® where no time series is required. For time series, the data are presented using the older ASCO 2nd edition classification, to ensure data comparability.

For more information please refer to the 2006 Census Dictionary, and the 2006 Australian and New Zealand Standard Classification of Occupations (ANZSCO).

Time series occupation categories

This data describes the occupations of employed people. It applies only to people aged 15 and over who were employed in the week prior to Census.

Data for occupation are coded using the Australian and New Zealand Standard Classification of Occupations (ANZSCO). The occupation classification is updated periodically to take account of emerging occupation groups and changes to the structure of the labour force.

Data are presented for the broad occupation groupings. For 2006 these were coded using ANZSCO, the most recent classification. These are presented in profile.id® where no time series is required. For time series, the data are presented using the older ASCO 2nd edition classification, to ensure data comparability.

How do we get to work?

This data looks at the method of travel to work of employed people. It applies only to people aged 15 and over who were employed in the week prior to Census.

Method of travel relates specifically to the journey to work on the morning of Census day. This differs to the industry and occupation data which relates to the main job held in the week prior to Census.

Respondents can nominate up to three modes of travel. For data presented in the profile, the following aggregations have been used:

- 'Train' includes any journey involving a train, whether or not other methods were used.
- 'Bus' includes any journey involving a bus, except for those also involving a train.
- The remaining categories, except for 'Other', only refer to a single method of travel (e.g. 'Car as driver'

when no other method was used).

- 'Other' refers to any method not listed in the standard categories, plus any combination of two or three methods NOT involving a bus or train.

Note that the categories "Walked only", "Worked at home" and "Did not go to work" are exclusive and are never combined with other methods.

'Tram or Ferry' includes light rail.

This data excludes 'Overseas Visitors'.

For more information please refer to the Census Dictionary 2006.

How do we live?

What type of households do we live in?

This data describes the type of family and non-family households within a dwelling.

The first section of the table counts family units in family households, and breaks them down by the presence of couples, single parents, and children. This classification of a family includes persons who are temporarily absent from the family on Census night.

The second section counts households. Households can contain up to three families, or a lone person, group of unrelated individuals (flatmates etc.) or other household.

The 'Other not classifiable' category includes those households which were occupied on Census Night but where the Census collector could not make contact; households that contained only persons aged under 15 years; and households which could not be classified elsewhere in this classification because there was insufficient information on the Census form. (ABS Census Dictionary 2006).

'Couple with child(ren) 15 years and under' and 'One parent family with child(ren) 15 years and under' refers to families with at least one child aged 15 years or younger. These families may also have older children living at home.

'One parent family with child(ren) over 15 years' and 'Couple with child(ren) over 15 years' refers to families with no children under the age of 15 years.

Data includes same sex couple families.

This data excludes 'Overseas Visitors'.

As the data are counting households, only enumerated counts are applicable.

How many people live in each household?

This data includes enumerated households by the number of persons usually resident, (includes up to three residents who were temporarily absent on Census night).

A household is defined as one or more persons, at least one of whom is at least 15 years of age, usually resident in the same private dwelling.

This data excludes ‘Visitor only’ and 'Other not classifiable' households.

Are we owners, renters or buyers?

This data presents the tenure type of occupied private dwellings, and for those dwellings being rented, provides a breakdown of the type of landlord the dwelling is being rented from.

‘Being purchased’ includes dwellings being purchased under a rent/buy scheme.

'Renting – Govt' refers to households renting from a State/Territory Government housing authority.

'Renting – Other' refers to households renting from private landlords, real estate agents and employers.

'Rented – Not stated' refers to rented dwellings where the landlord type was not stated.

‘Life tenure’ in 2006 has been included under ‘Other tenure type’

Tenure type changes between 2001 and 2006: Though the classification for Census data has remained the same, between 2001 and 2006 there was a change to the wording of dwelling ownership responses to the Tenure Type question on the Census questionnaire. "Fully Owned" in 2001 became "Owned Outright" in 2006, while "Being Purchased" became "Owned with a mortgage". This change in wording may have resulted in more accurate responses to this question, however it has made comparison over time difficult and such analysis should be done with caution. Looking at Australia as a whole, comparing 2006 to 2001 data, the "Being Purchased" category has increased by 5.7%, to 32.2% of private dwellings, while the "Fully Owned" category has decreased by 7.1%, to 32.6% of private dwellings. It is expected that a large part of this change is due to the change in wording, rather than representing change in the real world.

It is recommended that any analysis of change over time in these categories look only at the relative differences between change in local populations and the Australia-wide or state-based benchmarks, rather making inferences about local populations based on their numbers alone. Other categories in the Tenure Type classification are unaffected.

How much do we pay on our housing loan?

This data shows housing loan repayments being paid on a monthly basis by a household to purchase the dwelling in which it was enumerated (also applicable to caravans).

This data only applies to households (occupied private dwellings) who are purchasing their dwelling. It also includes households who are purchasing their dwelling under a 'rent/buy' scheme.

'Other not classifiable' households are excluded from this data.

Housing loan quartiles

Housing loan payments are not comparable over time because of the influences of economic change such as inflation. The loan payment quartile method has been adopted as the most objective method of comparing change in the cost of housing of a community over time.

Housing loan repayment quartiles look at the distribution of housing loan repayments in Lithgow City relative to Regional New South Wales. Quartiles split the total number of households into four equal parts for the Regional New South Wales. The table shows the number and proportion of households in Lithgow City falling into each segment.

The table gives a clear picture of the level of housing loan repayments in Lithgow City relative to Regional New South Wales. For the Regional New South Wales, the categories are split so that 25% of households fall into each category, so by comparison, the table will show if there are more or less households in Lithgow City with high repayments than in Regional New South Wales. If, for example, Lithgow City has 30% in the top category and only 20% in the lowest, this indicates that Lithgow City has proportionally more households with ‘top quarter’ repayments on their home loans, and less paying relatively low amounts.

Housing loan quartile definitions(Annual payment ranges)

	2006	2001	1996
Lowest group	Nil to $9,419	Nil to $7,093	Nil to $6,152
Medium lowest	$9,420 to$14,414	$7,094 to$10,081	$6,153 to$9,055
Medium highest	$14,415 to$21,029	$10,082 to$13,822	$9,056 to$12,273
Highest group	$21,030 and over	$13,823 and over	$12,274 and over

How much do we pay on our housing rental?

This data shows the amount of rent paid by households on a weekly basis for the dwelling in which they were enumerated on Census night (also applicable to caravans).

This data only applies to households (occupied private dwellings) renting their dwelling.

'Other not classifiable' households are excluded from this data.

Note that rent is shown on a **weekly** basis while housing loan repayments are on a **monthly** basis.

Housing rental quartiles

Rental payments are not comparable over time because of the influences of economic change such as inflation. The rental payment quartile method has been adopted as the most objective method of comparing change in the cost of rental housing of a community over time.

Rent quartiles look at the distribution of rental payments in Lithgow City relative to Regional New South Wales. Quartiles split the total number of households into four equal parts for the Regional New South Wales. The table shows the number and proportion of households in Lithgow City falling into each segment relative to the Regional New South Wales.

The table gives a clear picture of the level of rental payments in Lithgow City relative to Regional New South Wales. For the Regional New South Wales, 25% of households fall into each category, so by comparison, the table will show if there are more or less households in Lithgow City with high (or low) rent than in Regional New South Wales. If, for example, Lithgow City has 30% in the top category and only 20% in the lowest, this indicates that Lithgow City has proportionally more households paying ‘top-quarter’ rents, and less paying ‘bottom-quarter’ rents.

Housing rental quartile definitions(Annual payment ranges)

	2006	2001
Lowest group	Nil to $5,647	Nil to $4,682
Medium lowest	$5,648 to$8,528	$4,683 to$6,843
Medium highest	$8,529 to$11,416	$6,844 to$9,083
Highest group	$11,417 and over	$9,084 and over

What type of internet connection do we have?

This data relates to the question 'Can the Internet be accessed at this dwelling?' The question also asked for the type of connection:

- 'Broadband connection' - includes ADSL, Cable, Wireless and Satellite connection,
- 'Dial-up connection' - includes analog modem and ISDN connections
- 'Other' - includes Internet access through mobile phones, set-top boxes, games machines or connections other than dial-up or broadband.

This question was asked for the first time in the 2006 Census, replacing the questions in the 2001 Census relating to internet use and computer use. Owing to this there is no time series data available. Unlike the 2001 questions, the data relate to dwellings and not individuals.

How many cars do we own?

This data applies only to households in occupied private dwellings.

This data identifies the number of registered motor vehicles owned or used by household members, garaged, parked at or near private dwellings on Census night. It includes company owned vehicles.

The data excludes motorbikes, scooters and tractors.

What type of dwellings do we live in?

Dwelling structure looks at the type of dwelling for all occupied private dwellings. This data is classified by the Census collector on visiting the household, and the categories are broadly based on the density of the

housing types.

‘Separate house’ includes all free-standing dwellings separated from neighboring dwellings by a gap of at least half a metre.

‘Medium density’ includes all semi-detached, row, terrace, townhouses and villa units, plus flats and apartments in blocks of 1 or 2 storeys, and flats attached to houses.

‘High density’ includes flats and apartments in 3 storey and larger blocks.

‘Caravans, cabins, houseboats’ includes all such mobile accommodation, both inside and outside caravan parks.

‘Other’ includes houses and flats attached to shops or offices, and improvised homes, tents and sleepers out on Census night.

Unoccupied dwellings are shown separately in the table.

The Census classification for dwelling structure is based on the ABS Standard Dwelling Classification.

Lithgow City Council

COMMUNITY PROFILE

2006 and 2001 Enumerated Census information for:

Wallerawang - Lidsdale

The Lithgow City Council Community Profile is designed to inform community groups, Council, investors, business, students and the general public. To achieve this, the Profile is formatted to present the data in simple, clear tables and charts with concise factual commentary. The Community Profile is based on the 2006 Census of Population and Housing published by the Australian Bureau of Statistics.

profile.id®

.id

Contents:

How many people live here? 3

Introduction and summary 3
Key Statistics 5
How old are we? 7
What is our individual income? 9
What is our household income? 11
What are our qualifications? 13
What is the highest secondary school year we have completed? 15
What is our employment status? 17
What industries do we work in? 19
What are our occupations? 22
How do we get to work? 24
What type of households do we live in? 26
How many people live in each household? 29
Are we owners, renters or buyers? 31
What type of dwellings do we live in? 33

Explanatory notes

Geography notes 35
Data notes 36
Specific notes 39

DISCLAIMER: Whilst all due care has been taken to ensure the content of this report is accurate and Current, there may be errors or omissions in it and no legal responsibility is accepted for the information and opinions in this website.

Copyright © id.consulting pty ltd - www.id.com.au 2010

Date created: 17/09/2010

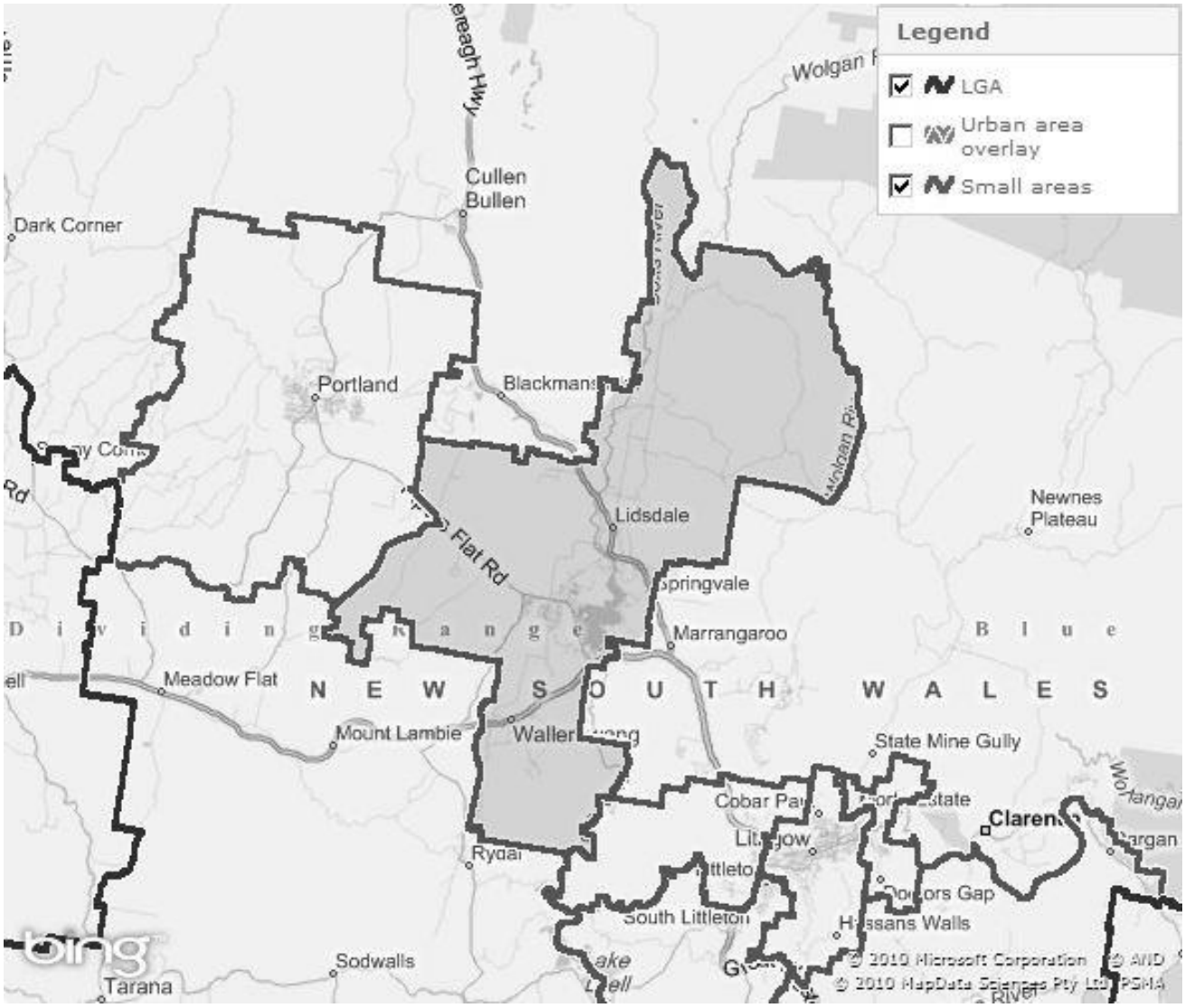
Wallerawang - Lidsdale

Introduction and summary (Map and key statistics)

Wallerawang - Lidsdale includes a township and surrounding rural areas. Wallerawang - Lidsdale is bounded by the locality of Blackmans Flat, Coxs River and the locality of Wolgan Valley in the north, the Wolgan River and the localities of Springvale and Marrangaroo in the east, Coxs River, the locality of Rydal, Solitary Creek and the locality of Mount Lambie in the south, and Thompsons Creek Road, Pipers Flat Road and the locality of Portland in the west. Wallerawang is named from an Aboriginal word thought to mean "water on rocks" or "plenty of water".

Settlement of the area dates from the 1820s, with land used mainly for farming. Population was minimal until the 1860s, with growth during the late 1800s, aided by the opening of the railway line in 1871. Significant development did not occur until the late 1950s, spurred by the opening of a power station in 1957. The population declined slightly from the mid 1990s, a result of few new dwellings being added to the area, and a decline in the average number of persons living in each dwelling.

Major features of the area include Lake Wallace, Wallerawang Power Station, Wallerawang Oval, several state forests and one school.



Wallerawang - Lidsdale:	**Land Area:** 13,698 hectares	**Density:** 0.15 people per hectare (2006)

Wallerawang - Lidsdale

Introduction and summary (Map and key statistics)

The 'Key statistics' table presented below contains summary statistics for Wallerawang - Lidsdale. By default the table displays 2001 and 2006 data as both absolute numbers and percentages (where applicable), along with the change in number between these years.

Key statistics(summary statistics)	Wallerawang - Lidsdale						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Enumerated population, including overseas visitors							
Total population (a)	2,091	100.0	100.0	2,170	100.0	100.0	-80
Males (a)	1,079	51.6	49.4	1,142	52.6	49.6	-63
Females (a)	1,012	48.4	50.6	1,029	47.4	50.4	-17
Overseas visitors	1	0.0	0.4	3	0.1	0.5	-2
Enumerated population, excluding overseas visitors							
Total population (b)	2,090	100.0	100.0	2,170	100.1	100.0	-81
Males (b)	1,078	51.6	49.4	1,142	52.7	49.6	-63
Females (b)	1,011	48.4	50.6	1,029	47.5	50.4	-17
Population characteristics							
Indigenous population	67	3.2	3.9	42	2.0	3.4	25
Australian born	1,855	88.8	83.8	1,898	87.6	84.5	-43
Overseas born	150	7.2	10.3	149	6.9	10.2	2
Australian citizens	1,928	92.3	91.1	1,982	91.5	92.2	-55
Australian citizens aged 18+	1,367	65.4	68.4	1,382	63.8	67.9	-15
Institutional population	45	2.2	3.9	89	4.1	3.6	-44
Age structure							
Infants 0 to 4 years	157	7.5	6.2	163	7.5	6.7	-7
Children 5 to 17 years	439	21.0	18.6	471	21.7	19.6	-32
Adults 18 to 64 years	1,293	61.9	58.7	1,343	62.0	58.6	-51
Mature adults 65 to 84 years	195	9.3	14.6	180	8.3	13.7	15
Senior citizens 85 years and over	11	0.5	1.9	21	1.0	1.5	-10
Households and dwellings							
Owned	276	35.5	38.3	323	43.6	44.4	-47
Purchasing	264	33.9	28.7	192	26.0	22.7	72
Renting	202	25.9	26.2	178	24.0	25.3	24
Households (occupied private dwellings)	779	--	--	740	--	--	39
Persons counted in households	2,048	--	--	2,082	--	--	-34
Average household size (persons)	2.63	--	--	2.81	--	--	-0.18
Total Dwellings	881	100.0	100.0	836	100.0	100.0	45

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the

specific data notes for more information.

Wallerawang - Lidsdale

How old are we? (Age structure)

Derived from the Census question, *'What is the person's date of birth (or age last birthday)?'*

The Age Structure of the population is the most widely used component of the Census. It is an indicator of an area's residential role and function and how it is likely to change in the future. The age structure of a population is usually indicative of an area's era of settlement and provides key insights into the level of demand for services and facilities (as most services and facilities are age-specific).

To get a more complete picture of the demographic characteristics of an area the age structure should be viewed in conjunction with Households and Family types.

Age structureage group (years)	Wallerawang - Lidsdale						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
0 to 4	157	7.5	6.2	163	7.5	6.7	-7
5 to 11	231	11.1	9.7	254	11.7	10.6	-23
12 to 17	207	9.9	8.9	216	9.9	9.0	-9
18 to 24	156	7.5	8.1	183	8.4	8.0	-27
25 to 34	278	13.3	10.8	283	13.0	12.0	-6
35 to 49	478	22.8	20.9	533	24.5	21.6	-55
50 to 59	294	14.0	13.5	264	12.1	12.1	30
60 to 69	149	7.1	10.2	147	6.7	9.2	3
70 to 84	133	6.3	9.9	113	5.2	9.4	20
85 and over	11	0.5	1.9	21	1.0	1.5	-10
Total	2,094	100.0	100.0	2,179	100.0	100.0	-85

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of the age structure of Wallerawang - Lidsdale in 2006 compared to Regional New South Wales shows that there was a larger proportion of people in the younger age groups (0 to 17) but a smaller proportion of people in the older age groups (60+).

Overall, 28.5% of the population was aged between 0 and 17, and 13.9% were aged 60 years and over, compared with 24.8% and 22.0% respectively for Regional New South Wales.

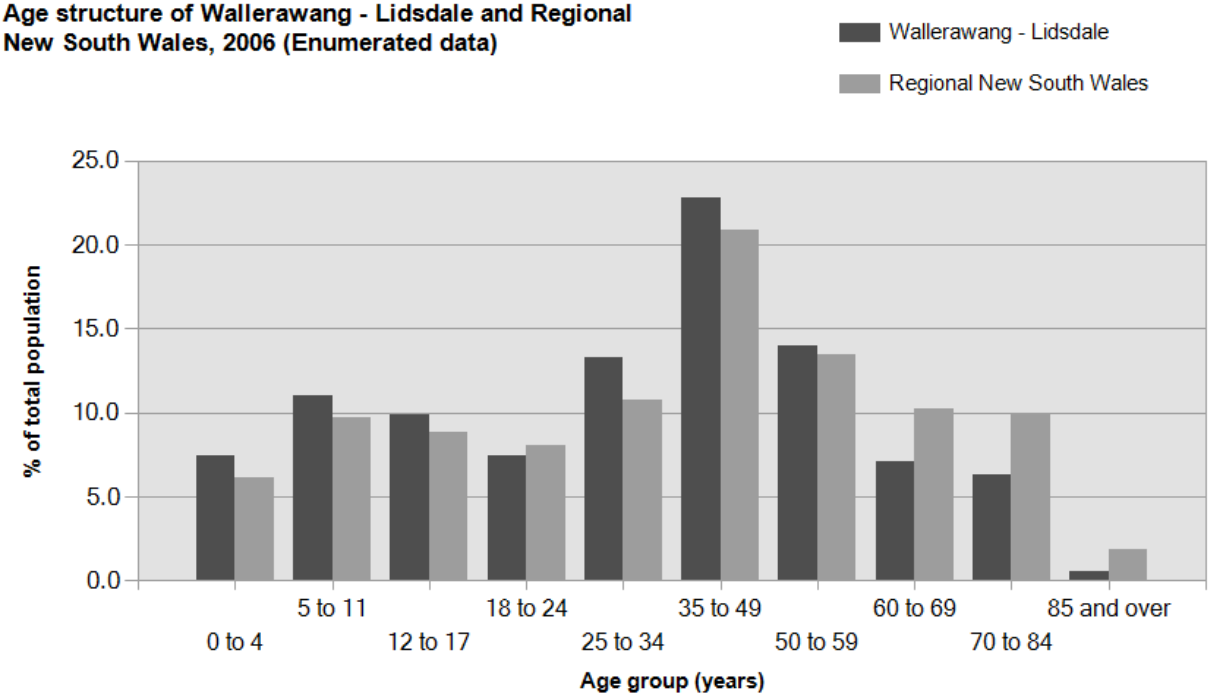
The major differences between the age structure of Wallerawang - Lidsdale and Regional New South Wales were:

- A *larger* percentage of 25 to 34 year olds (13.3% compared to 10.8%);
- A *larger* percentage of 35 to 49 year olds (22.8% compared to 20.9%);
- A *smaller* percentage of 70 to 84 year olds (6.3% compared to 9.9%), and;
- A *smaller* percentage of 60 to 69 year olds (7.1% compared to 10.2%).

The largest change in age structure in this area between 2001 and 2006 was in the age group:

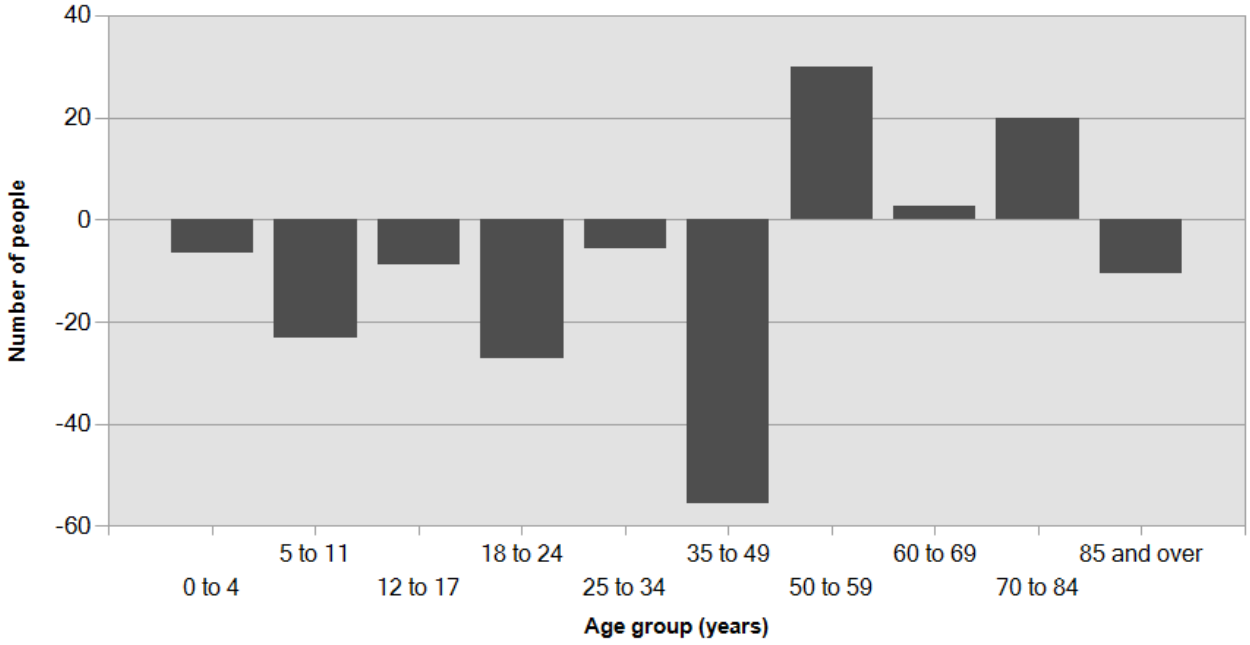
- 35 to 49 (-55 persons).

Age structure of Wallerawang - Lidsdale and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in age structure of Wallerawang - Lidsdale, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Wallerawang - Lidsdale

What is our individual income? (Weekly individual income)

Weekly individual income 2006

Derived from the Census question, *'What is the total of all wages/salaries, government benefits, pensions, allowances and other income the person usually receives?'* This is the gross amount and relates only to persons aged 15 years or more.

Individual Income is an indicator of socio-economic status. With other data sources, such as Household Income, Educational Qualifications and Occupation, it helps to evaluate the economic opportunities and socio-economic status of an area. The amount of income an individual receives is linked to a number of factors including the person's:

- employment status;
- age (as for instance students and retirees often receive a lower income);
- qualifications; and
- the type of employment undertaken by the person.

It is interesting to view individual income data in relation to both household income and number of persons usually resident. Areas with relatively high household income may be the result of multiple earners in the household contributing to that household income, so it is possible that some areas that have relatively high household incomes will have relatively low levels of individual income.

To enable a comparison of Individual Income levels of an area over time, Individual Income quartiles have been calculated and presented in the 'Individual income quartiles tab'.

Weekly individual incomeincome groups (persons)	Wallerawang - Lidsdale		
	2006		
Enumerated data	number	%	Regional New South Wales %
negative/nil income	117	7.3	6.4
$1 to $149	124	7.8	7.1
$150 to $249	305	19.1	17.8
$250 to $399	257	16.1	16.1
$400 to $599	202	12.6	14.8
$600 to $799	113	7.0	9.9
$800 to $999	98	6.1	6.5
$1,000 to $1,299	96	6.0	6.1
$1,300 to $1,599	82	5.2	3.7
$1,600 to $1,999	55	3.4	1.9
$2,000 or more	33	2.1	2.0
not stated	117	7.3	7.7
Total	1,598	100.0	100.0

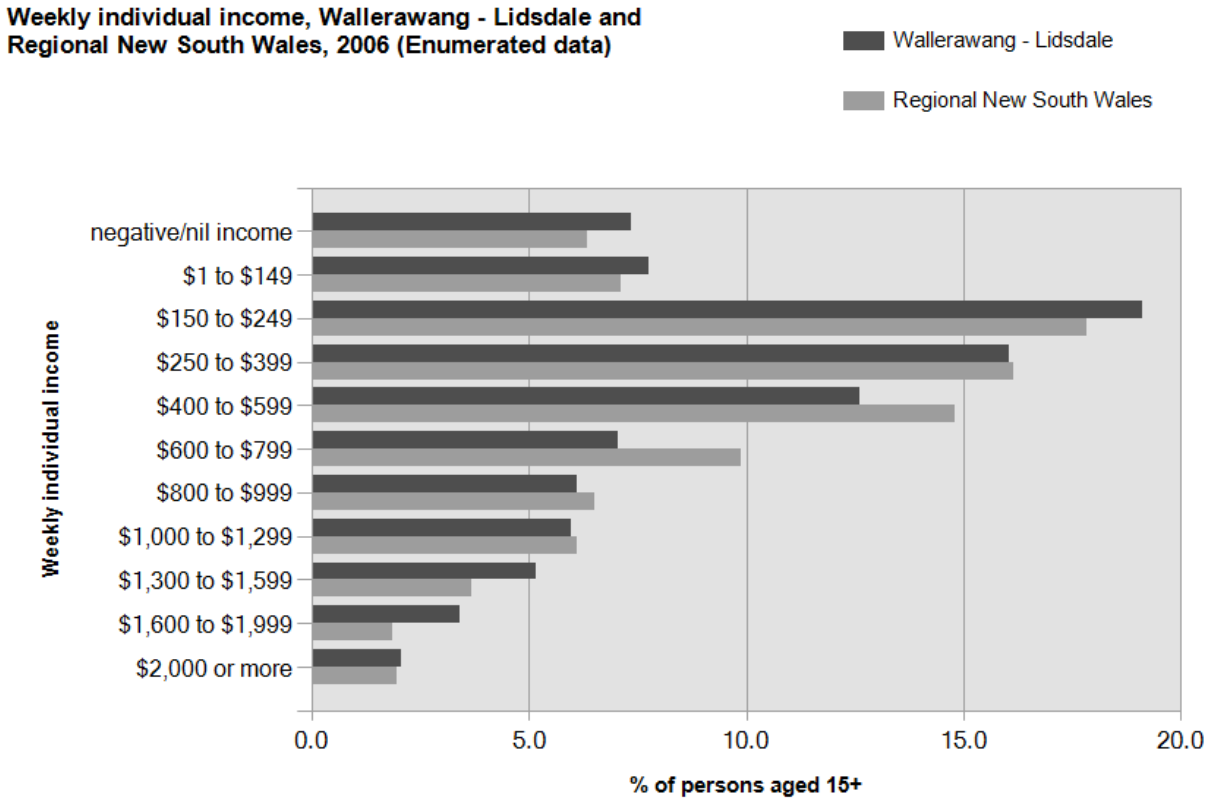
Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of individual income levels in Wallerawang - Lidsdale in 2006 compared to Regional New South Wales shows that there was a larger proportion of persons earning a high income (those earning $1,000 per week or more) as well as a larger proportion of low income persons (those earning less than $400 per week).

Overall, 16.7% of the population earned a high income, and 50.3% earned a low income, compared with

13.7% and 47.4% respectively for Regional New South Wales.



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Wallerawang - Lidsdale

What is our household income? (Weekly household income)

Weekly household income 2006

Derived from the Census question, *'What is the total of all wages/salaries, government benefits, pensions, allowances and other income the person usually receives?'.* This is the gross amount and relates only to persons aged 15 years or more.

Household Income is one of the most important indicators of socio-economic status. With other data sources, such as Educational Qualifications and Occupation, it helps to evaluate the economic opportunities and socio-economic status of an area. The amount of income a household generates is linked to a number of factors:

- the number of workers in the household;
- the percentage of people unemployed or on other income support benefits; and
- the type of employment undertaken by the household members.

Note: It is important to remember that households vary in size, so that some areas have a greater number of dependents per income generated than others. If the area has a large number of retirees then this will produce a higher proportion of households with low income. This is not necessarily a measure of retirees' affluence, as retirees often have capital resources. Refer to the Age Structure section to understand this element.

To enable a comparison of Household Income levels of an area over time, Household Income quartiles have been calculated and presented in the 'Household income quartiles tab'.

Weekly household incomeincome groups (households)	Wallerawang - Lidsdale		
	2006		
Enumerated data	number	%	Regional New South Wales %
Negative / Nil income	4	0.5	1.1
$1 to $149	11	1.4	1.6
$150 to $249	57	7.6	6.5
$250 to $349	58	7.6	8.9
$350 to $499	52	6.8	7.1
$500 to $649	81	10.7	12.7
$650 to $799	36	4.7	6.6
$800 to $999	53	6.9	6.9
$1000 to $1199	78	10.2	10.5
$1200 to $1399	39	5.1	5.2
$1400 to $1699	65	8.5	6.4
$1700 to $1999	56	7.4	4.9
$2000 to $2499	37	4.8	4.5
$2500 to $2999	38	5.0	3.3
$3000 or more	18	2.3	2.6
Partial income stated	65	8.5	7.7
All incomes not stated	14	1.8	3.4
Total	759	100.0	100.0

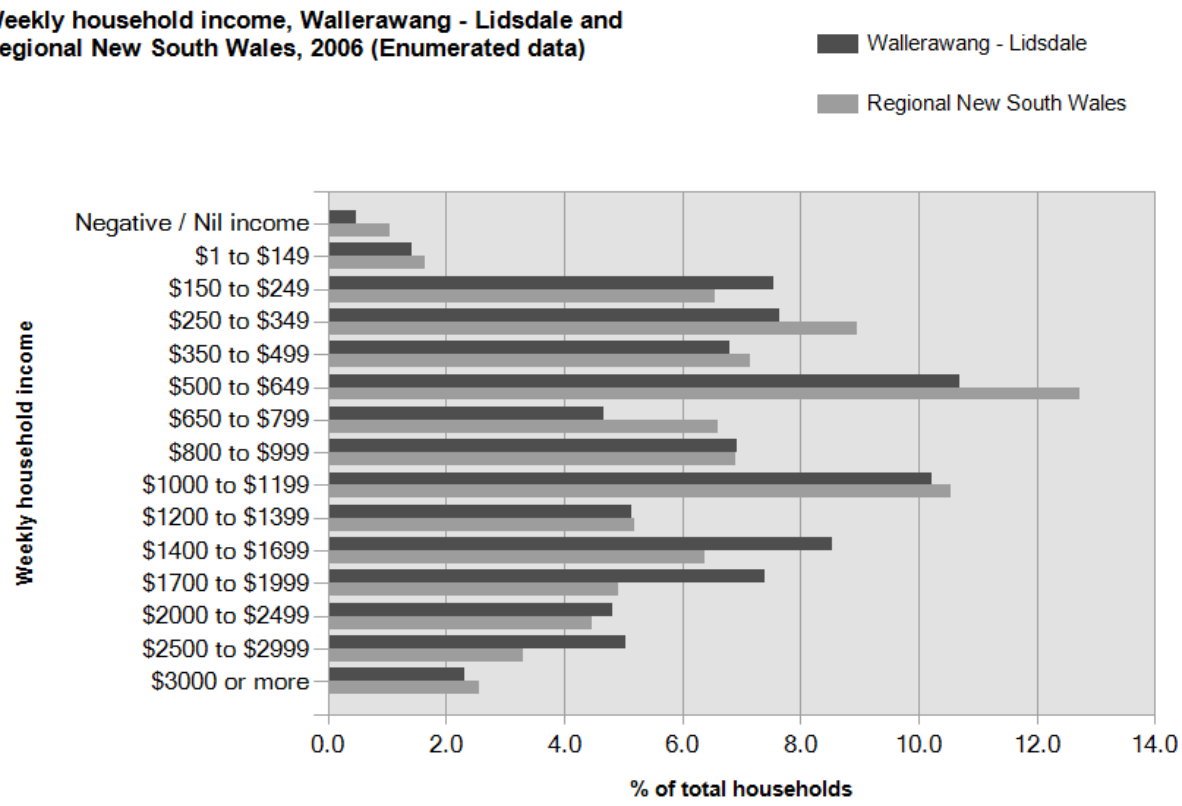
Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of household income levels in Wallerawang - Lidsdale in 2006 compared to Regional New South Wales shows that there was a larger proportion of high income households (those earning $1,700 per week or more) but a similar proportion of low income households (those earning less than $500 per week).

Overall, 19.5% of the households earned a high income, and 23.9% were low income households, compared with 15.3% and 25.2% respectively for Regional New South Wales.

Weekly household income, Wallerawang - Lidsdale and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Wallerawang - Lidsdale

What are our qualifications? (Highest education qualification achieved)

Derived from the Census question, *'What is the level of the highest qualification the person has completed?'* and relates only to persons aged 15 years or more.

Educational Qualifications are one of the most important indicators of socio-economic status. With other data sources, such as Income and Occupation, Educational Qualifications help to evaluate the economic opportunities and socio-economic status of an area. Level of Educational Qualifications in a population relate to a number of factors including:

- the age of the population (e.g. older people tend to have more vocational qualifications, while people in their twenties and thirties are more likely to have a university degree);
- the professional or working ambitions of people (to seek education as youth or retraining as adults);
- the opportunities afforded to people to continue studying beyond compulsory schooling.

Highest qualification achieved (persons aged 15 years and over)	Wallerawang - Lidsdale 2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Bachelor or Higher degree	65	4.1	10.4	69	4.2	8.6	-4
Advanced Diploma or Diploma	62	3.9	6.2	52	3.2	5.2	10
Vocational	366	22.9	20.1	349	21.3	18.2	17
No qualifications	904	56.5	50.3	961	58.5	56.2	-57
Not Stated	203	12.7	12.9	210	12.8	11.8	-7
Total	1,600	100.0	100.0	1,642	100.0	100.0	-42

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of the qualifications of the population in Wallerawang - Lidsdale in 2006 compared to Regional New South Wales shows that there was a smaller proportion of people holding formal qualifications (Bachelor or higher degree; Advanced Diploma or Diploma; or Vocational qualifications) and a larger proportion of people with no formal qualifications.

Overall, 30.9% of the population held educational qualifications, and 56.5% had no qualifications, compared with 36.7% and 50.3% respectively for Regional New South Wales.

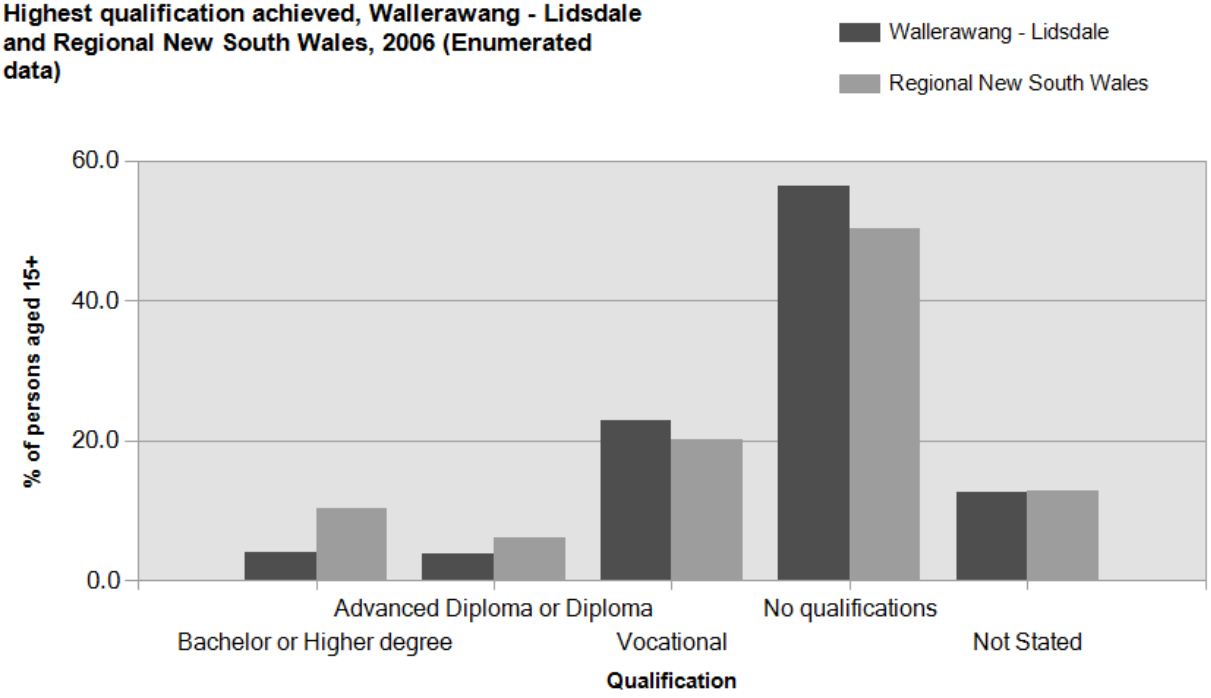
The major differences between the qualifications held by the population in Wallerawang - Lidsdale and Regional New South Wales were:

- A *larger* percentage of people with No qualifications (56.5% compared to 50.3%), and;
- A *smaller* percentage of people with Bachelor or Higher degrees (4.1% compared to 10.4%).

The largest change in the qualifications of the population in Wallerawang - Lidsdale between 2001 and 2006 was in those with:

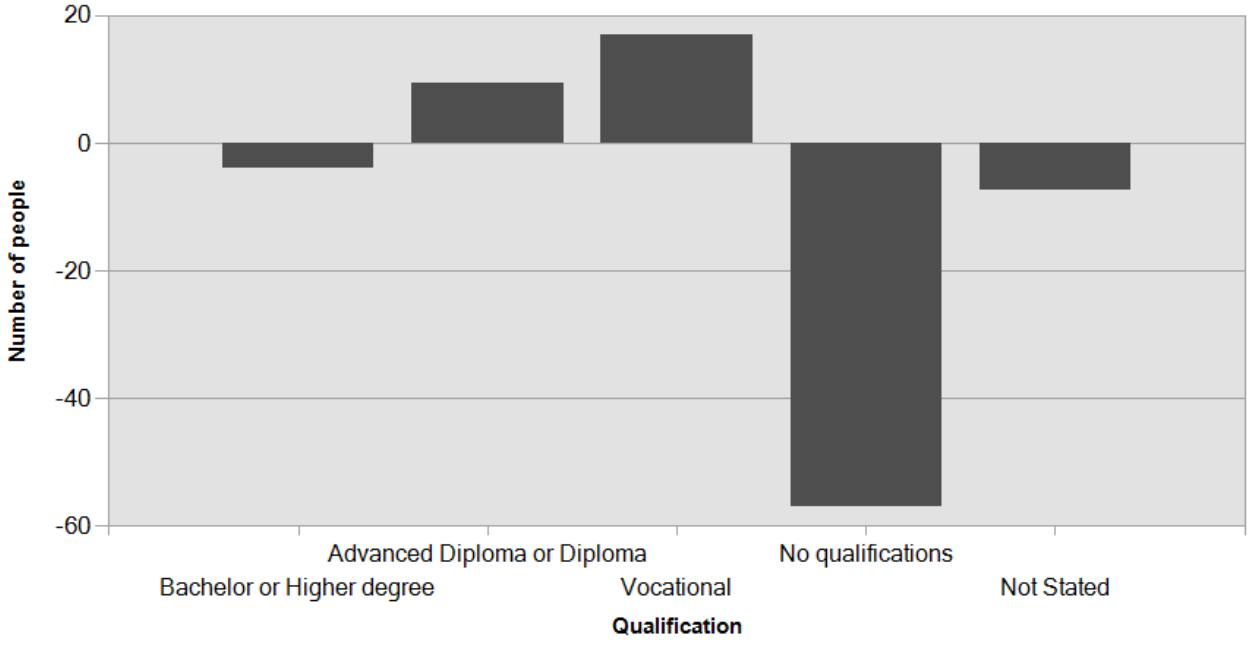
- No qualifications (-57 persons).

Highest qualification achieved, Wallerawang - Lidsdale and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in highest qualification achieved, Wallerawang - Lidsdale, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Wallerawang - Lidsdale

What is the highest secondary school year we have completed? (Highest level of schooling completed)

Derived from the Census question, '*What is the highest year of primary or secondary school the person has completed?*' and relates only to persons aged 15 years or more.

The Year of Schooling data is a useful indicator of socio-economic status of an area. With other indicators, such as proficiency in English, the data informs planners and decision-makers as to people's ability to access services. Combined with Educational Qualifications it also allows assessment of the skill base of the population. The reasons for differences in Year of Schooling completed across areas are linked to a number of factors including:

- the age of the population, as over time there has been a greater emphasis on acquiring higher education in order to find employment;
- the working and social aspirations of the population; and
- a lack of access to further education opportunities due to financial constraints or distance to schools.

Unfortunately this data is only available for 2006 as there is no comparable data for previous Census years. Please see specific data notes for further detail.

Highest level of schooling completed(persons aged 15 years and over)	Wallerawang - Lidsdale		
	2006		
Enumerated data	number	%	Regional New South Wales %
Year 8 or below	162	10.1	8.4
Year 9 or equivalent	202	12.6	11.0
Year 10 or equivalent	687	42.9	33.0
Year 11 or equivalent	107	6.7	6.9
Year 12 or equivalent	300	18.7	31.0
Did not go to school	3	0.2	0.5
Not Stated	142	8.8	9.2
Total	1,602	100.0	100.0

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

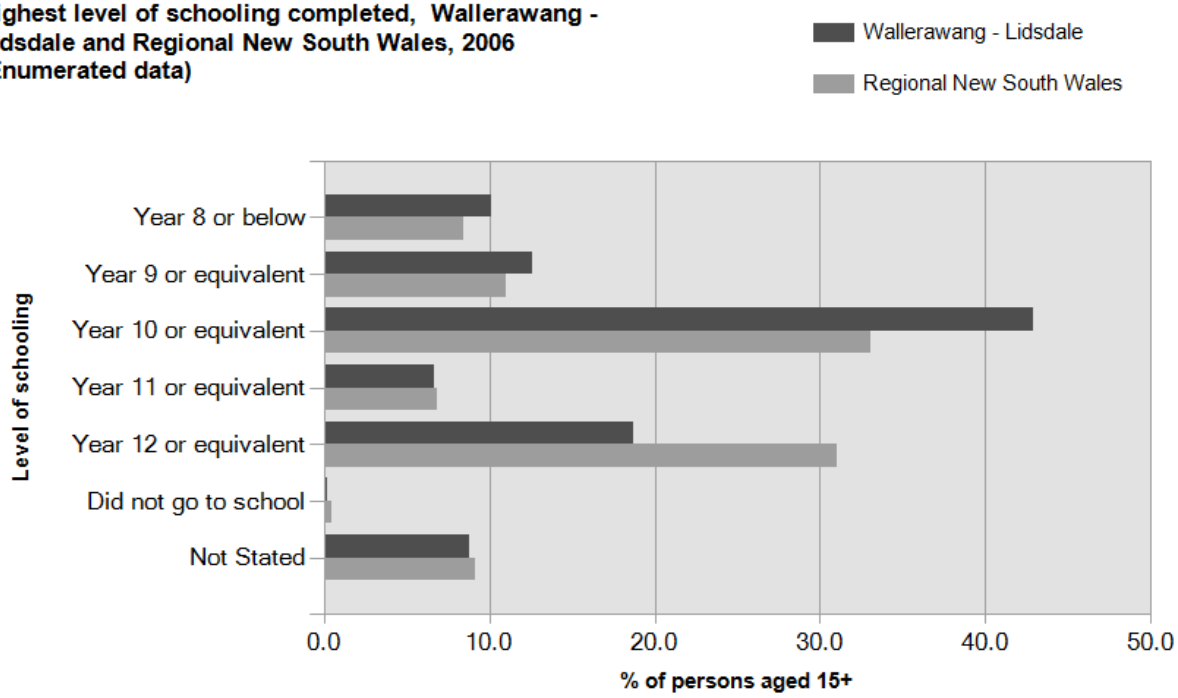
Analysis of the highest level of schooling attained by the population in Wallerawang - Lidsdale in 2006 compared to Regional New South Wales shows that there was a larger proportion of people who had left school at an early level (Year 10 or less) but a smaller proportion of people who completed Year 12 or equivalent.

Overall, 65.6% of the population left school at Year 10 or below, and 18.7% went on to complete Year 12 or equivalent, compared with 52.4% and 31.0% respectively for Regional New South Wales.

The major differences between the level of schooling attained by the population in Wallerawang - Lidsdale and Regional New South Wales were:

- A *larger* percentage of people who left school at Year 10 or equivalent (42.9% compared to 33.0%);
- A *larger* percentage of people who left school at Year 8 or below (10.1% compared to 8.4%);
- A *larger* percentage of people who left school at Year 9 or equivalent (12.6% compared to 11.0%), and;
- A *smaller* percentage of people who left school at Year 12 or equivalent (18.7% compared to 31.0%).

Highest level of schooling completed, Wallerawang - Lidsdale and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Wallerawang - Lidsdale

What is our employment status? (Employment status)

Derived from the Census question, *'Last week did the person have a full time or part time job of any kind?'* and relates only to persons aged 15 years or more.

The Employment Status of the population is an important indicator of the socio-economic status of an area. It represents the share of the population that is employed full-time, part-time or unemployed, as well as changes over time in the labour force. Employment Status is linked to a number of factors:

- the age structure of the population, which for example influences the number of persons in the workforce (i.e. population 15 years or more) or retired (i.e. population over 60 years);
- the economic base and employment opportunities available in the area; and
- the education and skill base of the population.

Census Employment Status data should be analysed in conjunction with Income, Occupation and Education Qualifications data to identify the relative socio-economic status of an area.

Employment status(persons aged 15 years and over)	Wallerawang - Lidsdale 2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Employed full time	533	58.0	56.6	573	60.0	56.2	-40
Employed part time	268	29.2	33.8	265	27.8	31.7	3
Employed not stated	32	3.5	2.6	29	3.0	2.8	4
Total employed	834	90.7	93.0	867	90.8	90.7	-34
Total unemployed	85	9.3	7.0	88	9.2	9.3	-2
Total labour force	919	100.0	100.0	955	100.0	100.0	-36
Total in labour force	919	57.5	56.1	955	58.0	55.6	-36
Total not in labour force	641	40.0	38.6	629	38.2	40.5	12
Not stated	40	2.5	5.3	63	3.8	3.9	-23
Total	1,599	100.0	100.0	1,647	100.0	100.0	-48

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

The size of Wallerawang - Lidsdale's labour force in 2006 was 919 persons, of which 268 were employed part-time (29.2%) and 533 were full time workers (58.0%).

Analysis of the employment status of the population in Wallerawang - Lidsdale in 2006 compared to Regional New South Wales shows that there was a smaller proportion in employment, and a larger proportion unemployed.

Overall, 90.7% of the labour force was employed (52.1% of the population aged 15+), and 9.3% unemployed (5.3% of the population aged 15+), compared with 93.0% and 7.0% respectively for Regional New South Wales.

Between 2001 and 2006, the number of people employed in Wallerawang - Lidsdale showed a decrease of 34 persons and the number unemployed showed a decrease of 2 persons.

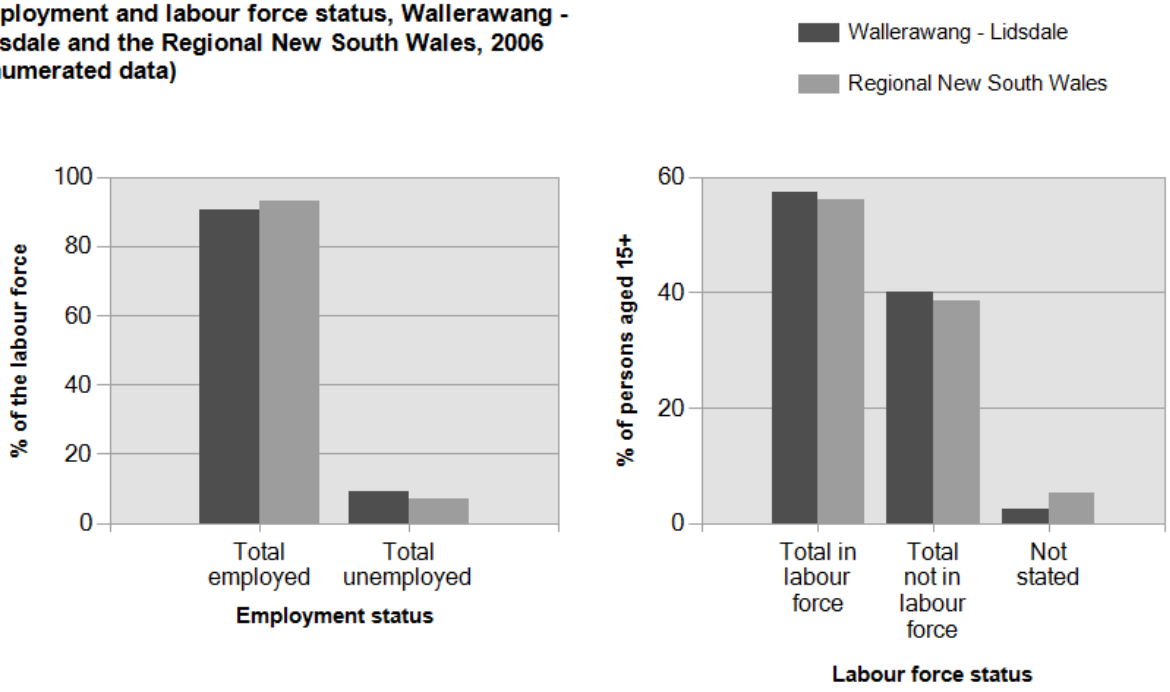
The labour force participation rate refers to the proportion of the population over 15 years of age that was employed or actively looking for work. "The labour force is a fundamental input to domestic production. Its size and composition are therefore crucial factors in economic growth. From the viewpoint of social development, earnings from paid work are a major influence on levels of economic well-being." (Australian

Bureau of Statistics, Australian Social Trends 1995).

Analysis of the labour force participation rate of the population in Wallerawang - Lidsdale in 2006 shows that there was a similar proportion in the labour force (57.5%) compared with Regional New South Wales (56.1%).

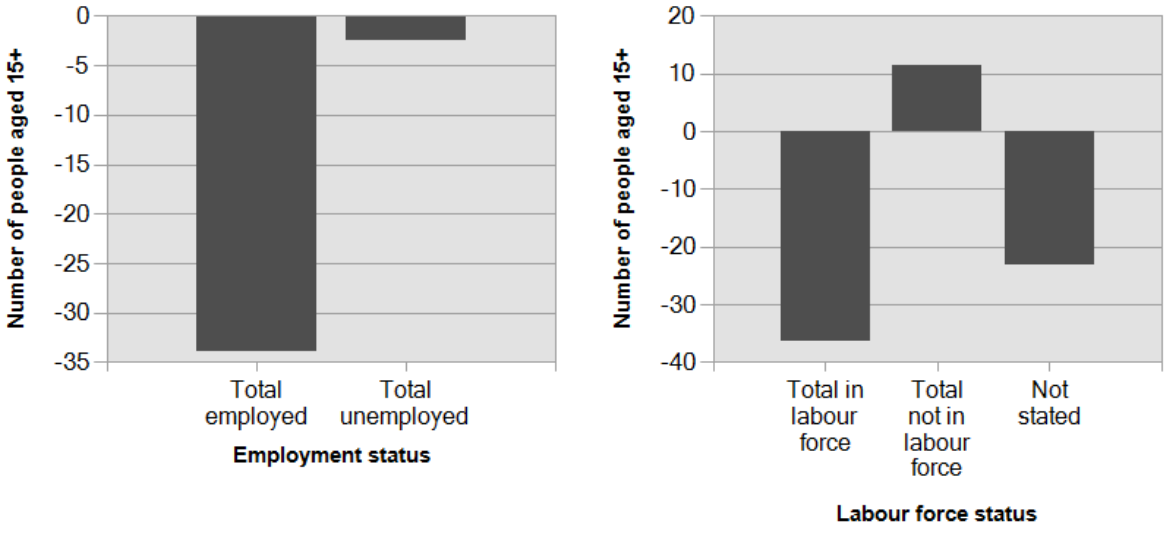
Between 2001 and 2006 in Wallerawang - Lidsdale the number of people in the labour force showed a decrease of 36 people, or -3.8%.

Employment and labour force status, Wallerawang - Lidsdale and the Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in employment and labour force status, Wallerawang - Lidsdale, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Wallerawang - Lidsdale

What industries do we work in? (Industry)

2006 industry categories

Derived from the two Census questions, *'[What] best describes the business of [your] employer?'* and *'What are the main goods produced or main services provided by [your] employer's business?'* and relates only to persons aged 15 years or more.

The Industry data identifies the industries in which the residents of an area work (this may be within the residing area or elsewhere). The Industry Structure of the work force is indicative of the skill base and (to some extent) the socio-economic status and industry structure of an area.

The industries that are prominent in an area are strongly related to a range of factors including:

- the economic base and employment opportunities available in the general region;
- the educational levels of the local population; and
- the working and social aspirations of the population.

Industries are classified by grouping businesses which carry out similar productive activities. The 2006 Australian and New Zealand Standard Industrial Classification (ANZSIC) provides the current framework for industry classification in Australia. This classification provides a contemporary and internationally comparable industrial classification system which includes information about "new economy" industries such as Information, Media and Telecommunications. As this is a new classification *only 2006 data is available*.

Time series industry data (based on the 1993 ANZSIC classification) is available in the tab above named 'Time series industries'.

Industry, 2006 ANZSIC(employed persons)	Wallerawang - Lidsdale		
	2006		
Enumerated data	number	%	Regional New South Wales %
Agriculture, Forestry & Fishing	16	2.0	6.9
Mining	118	14.1	1.7
Manufacturing	81	9.7	9.2
Electricity, Gas, Water and Waste Services	55	6.5	1.3
Construction	47	5.7	7.8
Retail Trade	79	9.4	12.3
Wholesale Trade	9	1.0	3.1
Accommodation and Food Services	58	6.9	7.5
Transport, Postal and Warehousing	53	6.3	4.3
Information Media and Telecommunications	6	0.8	1.2
Financial and Insurance Services	18	2.1	2.3
Rental, Hiring and Real Estate Services	10	1.2	1.5
Professional, Scientific and Technical Services	12	1.4	4.4
Administrative and Support Services	23	2.8	2.5
Public Administration and Safety	72	8.7	6.9
Education and Training	31	3.7	8.2
Health Care and Social Assistance	81	9.7	11.5
Arts and Recreation Services	13	1.6	1.2
Other Services	36	4.3	3.9
Inadequately described or Not stated	18	2.1	2.3
Total	**836**	**100.0**	**100.0**

Source: Australian Bureau of Statistics, Census of Population and Housing 2006.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

An analysis of the jobs held by the resident population in Wallerawang - Lidsdale in 2006 shows the three most popular industry sectors were:

- Mining (118 persons or 14.1%)
- Health Care and Social Assistance (81 persons or 9.7%)
- Manufacturing (81 persons or 9.7%)

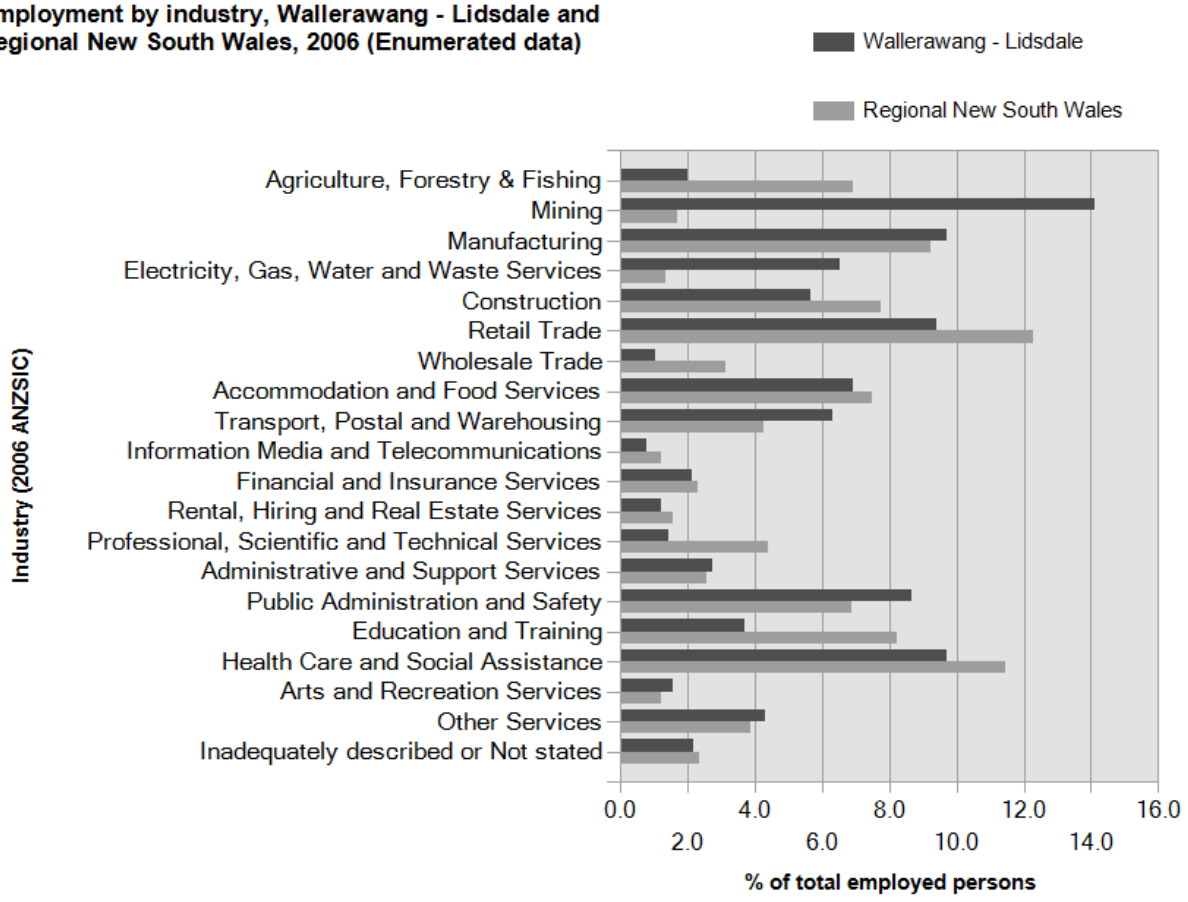
In combination these three industries employed 280 people in total or 33.5% of the employed resident population.

In comparison, Regional New South Wales employed 1.7% in Mining; 11.5% in Health Care and Social Assistance; and 9.2% in Manufacturing.

The major differences between the jobs held by the population of Wallerawang - Lidsdale and Regional New South Wales were:

- A *larger* percentage persons employed in Mining (14.1% compared to 1.7%);
- A *larger* percentage persons employed in Electricity, Gas, Water and Waste Services (6.5% compared to 1.3%);
- A *smaller* percentage persons employed in Agriculture, Forestry & Fishing (2.0% compared to 6.9%), and;
- A *smaller* percentage persons employed in Education and Training (3.7% compared to 8.2%).

Employment by industry, Wallerawang - Lidsdale and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Wallerawang - Lidsdale

What are our occupations? (Occupation)

2006 occupation categories

Derived from the two Census questions, *'In the main job held last week, what was the person's occupation?'* and *'What are the main tasks that the person himself/herself usually performs in that occupation?'* and relates only to persons aged 15 years or more.

The Occupation data identifies the occupations in which the residents of an area work (this may be within the residing area or elsewhere). The occupational structure of the work force is an important indicator of the characteristics of the labour force. With other indicators, such as Educational Qualifications and Income, Occupation is a key component of evaluating the socio-economic status and skill base of an area. The occupations held by a workforce are linked to a range of factors including:

- the economic base and employment opportunities available in the area;
- the educational qualification levels of the population; and
- the working and social aspirations of the population.

Occupations are classified using a combination of skill level and skill specialisation to form meaningful groups. The 2006 Australian and New Zealand Standard Classification of Occupations (ANZSCO) provides the current framework for occupation classification in Australia. This classification provides a contemporary occupation classification system. As this is a new classification *only 2006 data is available*.

Time series occupation data (based on the ASCO Second Edition classification) is available in the tab above named 'Time series occupations'.

Occupation, 2006 ANZSCO(employed persons)	Wallerawang - Lidsdale		
	2006		
Enumerated data	number	%	Regional New South Wales %
Managers	70	8.3	14.4
Professionals	65	7.8	16.4
Technicians and Trades Workers	160	19.2	15.4
Community and Personal Service Workers	103	12.4	9.7
Clerical and Administrative Workers	123	14.7	12.9
Sales Workers	57	6.8	10.1
Machinery Operators And Drivers	130	15.5	7.3
Labourers	114	13.6	12.3
Inadequately described or Not stated	14	1.7	1.6
Total	**836**	**100.0**	**100.0**

Source: Australian Bureau of Statistics, Census of Population and Housing 2006.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

An analysis of the occupations held by the resident population in Wallerawang - Lidsdale in 2006 shows the three most popular occupations were:

- Technicians and Trades Workers (160 persons or 19.2%)
- Machinery Operators And Drivers (130 persons or 15.5%)
- Clerical and Administrative Workers (123 persons or 14.7%)

In combination these three occupations accounted for 413 people in total or 49.4% of the employed resident population.

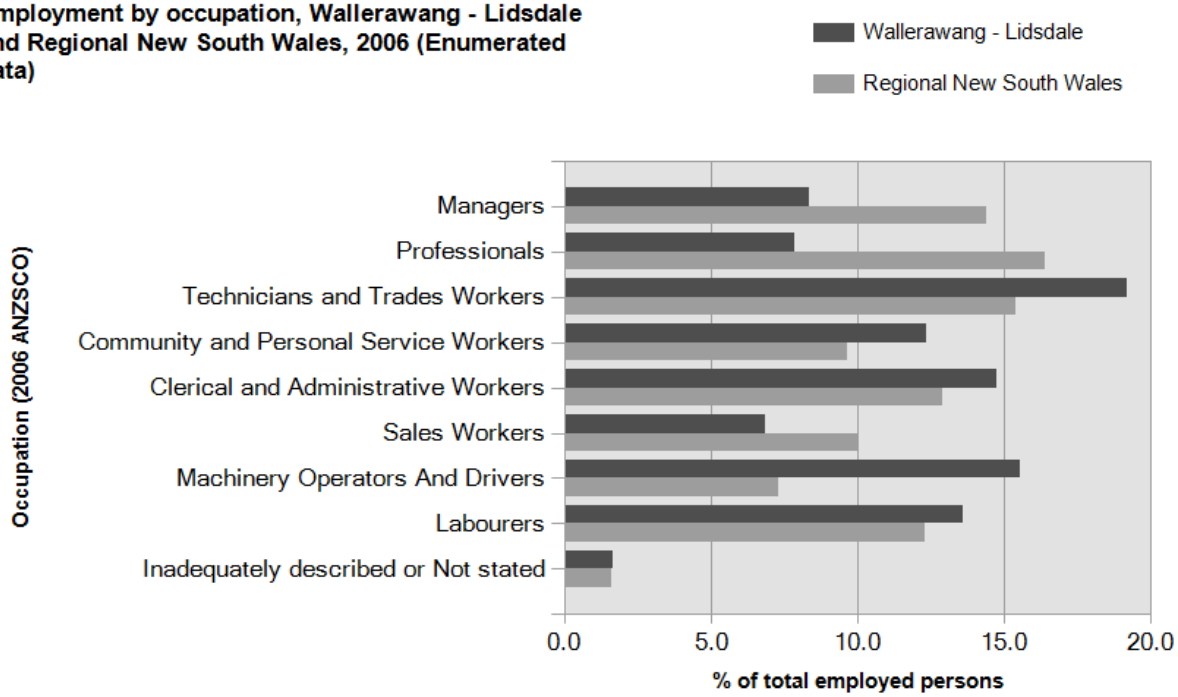
In comparison, Regional New South Wales employed 15.4% as Technicians and Trades Workers; 7.3% as

Machinery Operators And Drivers; and 12.9% as Clerical and Administrative Workers.

The major differences between the occupations of the population of Wallerawang - Lidsdale and Regional New South Wales were

- A *larger* percentage persons employed as Machinery Operators And Drivers (15.5% compared to 7.3%);
- A *larger* percentage persons employed as Technicians and Trades Workers (19.2% compared to 15.4%);
- A *smaller* percentage persons employed as Professionals (7.8% compared to 16.4%), and;
- A *smaller* percentage persons employed as Managers (8.3% compared to 14.4%).

Employment by occupation, Wallerawang - Lidsdale and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Wallerawang - Lidsdale

How do we get to work? (Method of travel to work)

Derived from the Census question, *'How did the person get to work on Tuesday, 8 August 2006?'* and relates only to persons aged 15 years or more.

This data reveals the main Modes of Transport used by residents to get to work. This data is very useful in transport planning as it informs decision-makers on the effectiveness and availability of local public transport. There are a number of reasons why people use different Modes of Transport to get to work including:

- the availability of affordable and effective public transport options;
- the number of motor vehicles available within a household; and
- the travel distance to work, which for example, can allow people to walk or bicycle to their place of employment.

Note that respondents to the Census can nominate up to three methods of travel. The data presented here include people using multiple methods, but shows only one method. A hierarchy is used in which public transport is assumed to be the dominant mode if it is used. Hence people driving their car to a station or taking a taxi to the ferry are included under "Train" and "Tram or Ferry" respectively, rather than "Car" or "Taxi".

Travel to work(includes multi-mode journeys)	Wallerawang - Lidsdale						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Train	6	0.8	0.8	1	0.1	0.9	6
Bus	3	0.4	0.8	1	0.1	1.0	2
Tram or Ferry	0	0	0	0	0	0	0
Taxi	10	1.2	0.2	0	0	0.2	10
Car - as driver	565	67.7	61.6	575	67.5	58.2	-10
Car - as passenger	36	4.4	6.6	51	5.9	7.2	-14
Truck	14	1.7	2.0	16	1.9	2.6	-2
Motorbike	3	0.4	0.7	3	0.4	0.8	0
Bicycle	9	1.1	0.8	8	0.9	0.9	1
Walked only	36	4.3	4.7	34	4.0	4.9	2
Other	4	0.5	1.2	10	1.2	1.7	-6
Worked at home	24	2.9	6.4	35	4.1	7.2	-10
Did not go to work	98	11.7	12.2	107	12.6	12.4	-10
Not stated	26	3.1	1.9	12	1.4	1.9	14
Total	835	100.0	100.0	851	100.0	100.0	-16

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

In 2006, there were 9 people who caught public transport to work (train, bus, tram or ferry) in Wallerawang - Lidsdale, compared with 618 who drove in private vehicles (car –as driver, car – as passenger, motorbike, or truck).

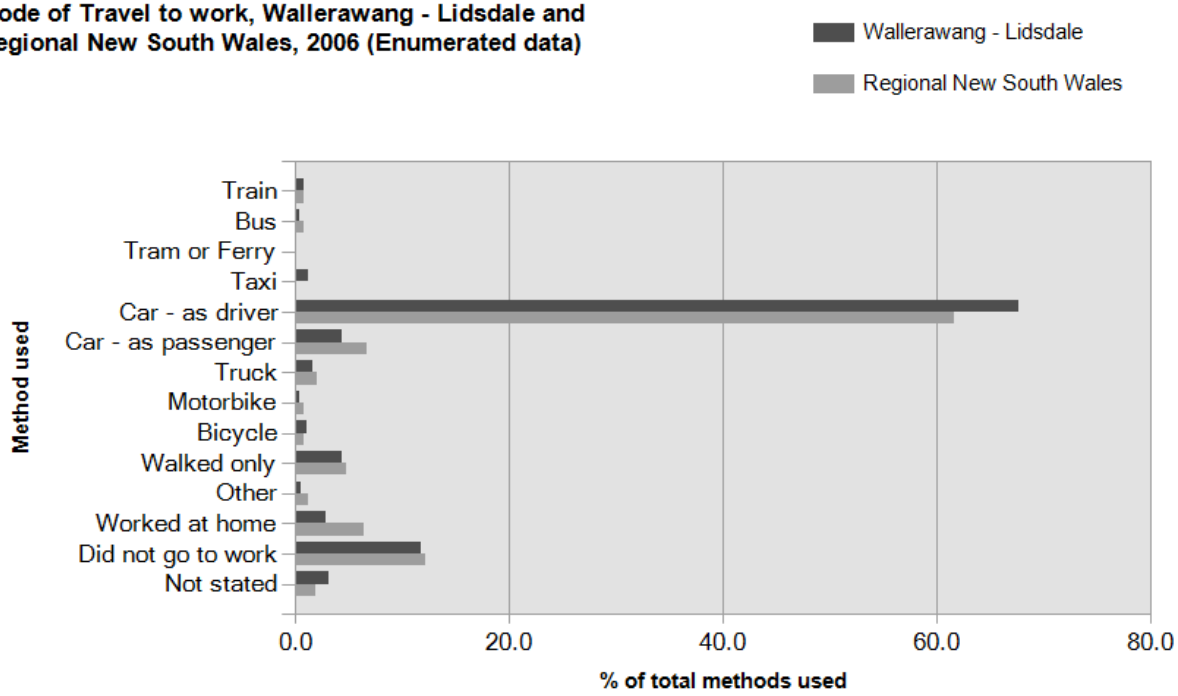
Analysis of the method of travel to work of the residents in Wallerawang - Lidsdale in 2006 compared to Regional New South Wales shows that 1.2% used public transport, while 74.2% used a private vehicle, compared with 1.6% and 70.9% respectively in Regional New South Wales.

The major differences between the method of travel to work of Wallerawang - Lidsdale and Regional New South Wales were:

- A *larger* percentage of car - as driver commuters (67.7% compared to 61.6%), and;
- A *smaller* percentage of people who worked at home (2.9% compared to 6.4%).

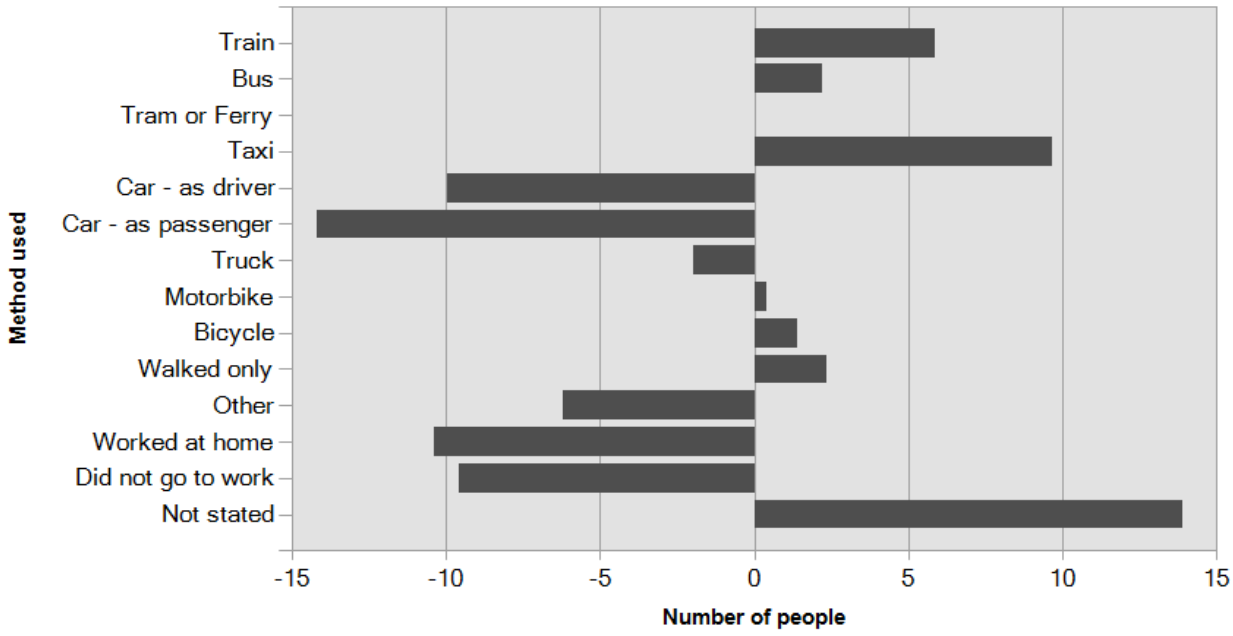
Between 2001 and 2006 there were no numerically significant changes in Wallerawang - Lidsdale's travel to work data.

Mode of Travel to work, Wallerawang - Lidsdale and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in mode of travel to work, Wallerawang - Lidsdale, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Wallerawang - Lidsdale

What type of households do we live in? (Household and family types)

Derived from the Census question, *'What is the person's relationship [to each other person in the household]?'*

The Household and Family structure of the population is an indicator of an area's residential role and function (relating to the types of housing markets attracted to the area). It is usually indicative of the area's era of settlement and provides key insights into the level of demand for services and facilities (as most services and facilities are age- and household type-specific).

To get a more complete picture of the demographic characteristics of an area, the Household and Family Type data should be viewed in conjunction with Age Structure data.

Household types(households)	Wallerawang - Lidsdale						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Couples with child(ren) under 15 years	212	37.5	29.0	201	34.6	31.5	11
Couples with child(ren) 15 years and over	77	13.6	12.2	91	15.6	12.1	-14
Total couples with child(ren)	289	51.2	41.2	293	50.2	43.6	-3
One parent families with child(ren) under 15 years	59	10.4	10.1	63	10.8	10.1	-4
One parent families with child(ren) 15 years and over	20	3.6	6.7	24	4.1	6.0	-3
Total one parent families	79	14.0	16.8	87	14.9	16.1	-8
Couples without child(ren)	193	34.2	40.7	197	33.8	38.9	-3
Other families	3	0.6	1.3	6	1.1	1.4	-3
Total families	565	100.0	100.0	583	100.0	100.0	-17
One family households	557	72.4	68.0	575	76.7	68.2	-18
Two or more family households	3	0.4	1.0	4	0.6	0.7	-1
Total family households	560	72.7	69.0	579	77.3	68.9	-19
Lone person households	174	22.6	25.1	139	18.5	23.9	36
Group households	19	2.5	2.9	11	1.5	2.9	8
Other not classifiable households	16	2.1	2.9	20	2.7	4.3	-4
Total households	769	100.0	100.0	749	100.0	100.0	20

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of the **family types** in Wallerawang - Lidsdale in 2006 compared to Regional New South Wales shows that there was a larger proportion of couple families with child(ren) but a smaller proportion of one-parent families.

Overall, 51.2% of total families were couple families with child(ren), and 14.0% were one-parent families, compared with 41.2% and 16.8% respectively for Regional New South Wales.

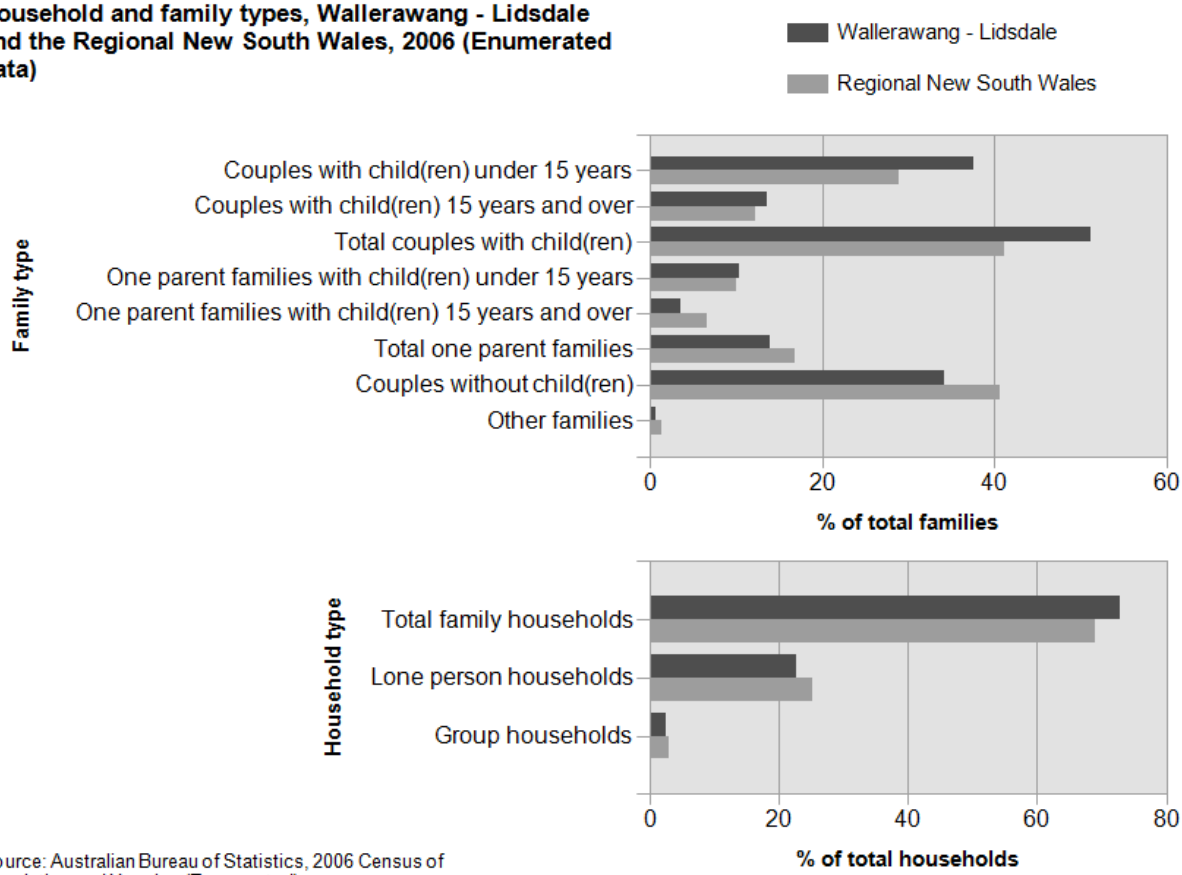
Between 2001 and 2006 there were no numerically significant changes in Wallerawang - Lidsdale's household types data.

Comparing **Household types** between Wallerawang - Lidsdale and Regional New South Wales in 2006

reveals a larger proportion of Family households, but a smaller proportion of lone person households. Family households accounted for 72.7% of total households in Wallerawang - Lidsdale while lone person households comprised 22.6%, (69.0% and 25.1% respectively for Regional New South Wales).

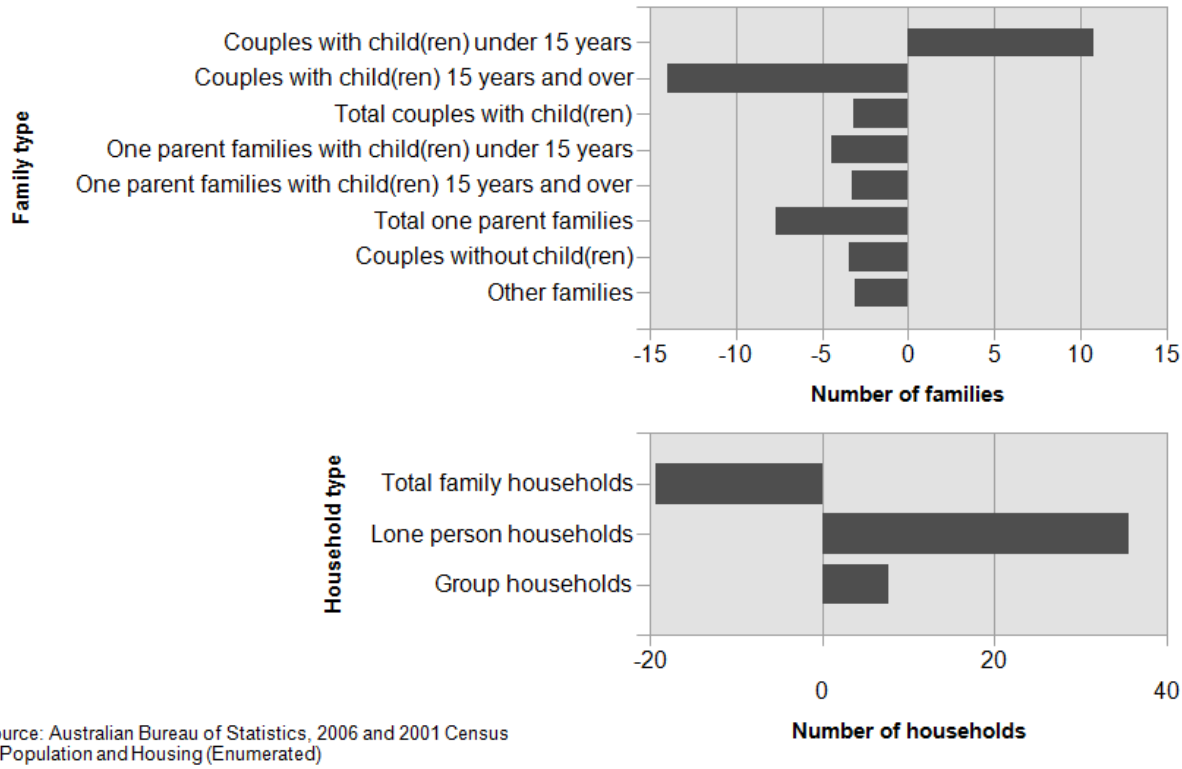
Between 2001 and 2006 in Wallerawang - Lidsdale, there was a decrease in the number of Family households (-19), an increase in lone person households (36) and an increase in group households (8).

Household and family types, Wallerawang - Lidsdale and the Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in household and family types, Wallerawang - Lidsdale, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Wallerawang - Lidsdale

How many people live in each household? (Number of persons usually resident)

Derived from the three Census questions, *'Name of each person including visitors who spent the night of Tuesday, 8 August 2006 in this dwelling*', and *'Where does the person usually live?*', and *'Are there any persons who usually live in this dwelling who were absent on Census Night (Tuesday, 8 August 2006)?*'

The size of households in general follows the life-cycle of families. Households are usually small at the stage of relationship formation (early marriage), and then increase in size with the advent of children. They later reduce in size again as these children reach adulthood and leave home. However, household size can also be influenced by a lack, (or abundance) of affordable housing. Further, overseas migrants and indigenous persons often have a tradition of living with extended family members and/or other families.

Household size(number of persons usually resident)	Wallerawang - Lidsdale						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
1 Person	176	23.3	25.9	139	19.0	25.0	37
2 Persons	241	31.8	36.3	237	32.4	35.3	4
3 Persons	117	15.5	14.5	125	17.1	15.0	-8
4 Persons	136	18.1	14.0	128	17.6	14.5	8
5 Persons	61	8.1	6.5	73	10.0	7.1	-12
6 or more Persons	24	3.2	2.8	28	3.9	3.1	-4
Total	756	100.0	100.0	731	100.0	100.0	25

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

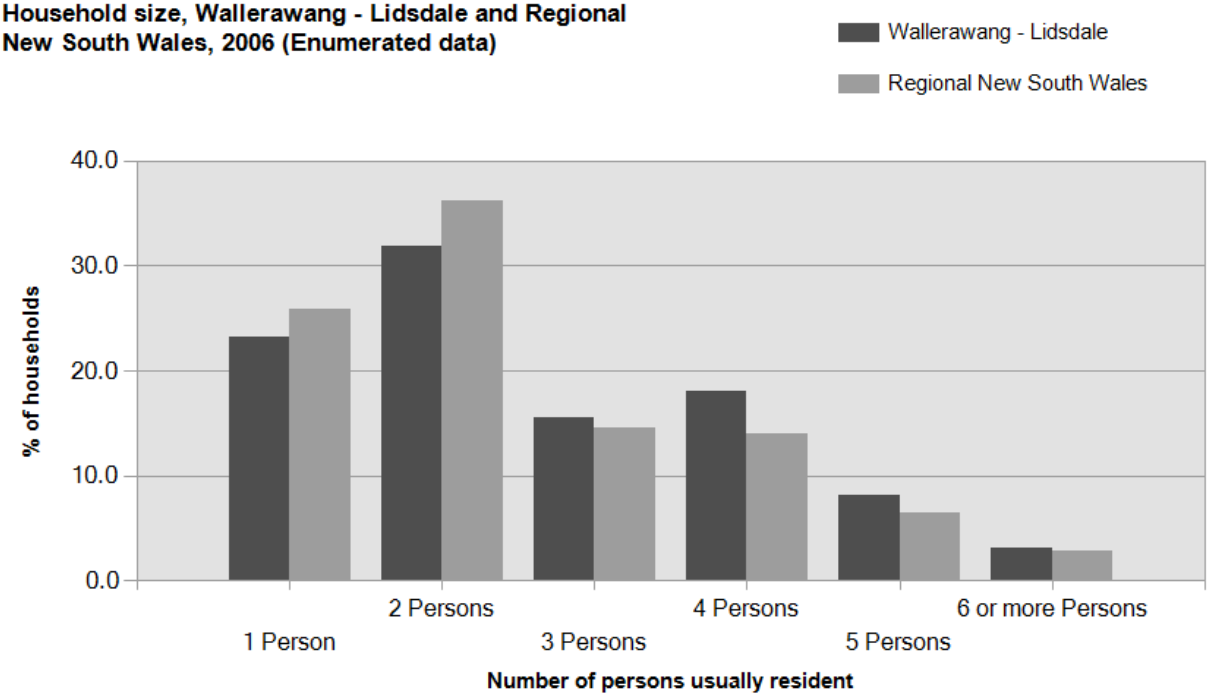
Analysis of the number of persons usually resident in a household in the Wallerawang - Lidsdale compared with Regional New South Wales shows that there were a smaller proportion of lone person households, and a larger proportion of larger households (those with 4 persons or more). Overall there were 23.3% of lone person households, and 29.4% of larger households, compared with 25.9% and 23.3% respectively for Regional New South Wales.

The major differences in the household size for Wallerawang - Lidsdale and Regional New South Wales were:

- A *larger* percentage of 4 person households (18.1% compared to 14.0%), and;
- A *smaller* percentage of 2 person households (31.8% compared to 36.3%).

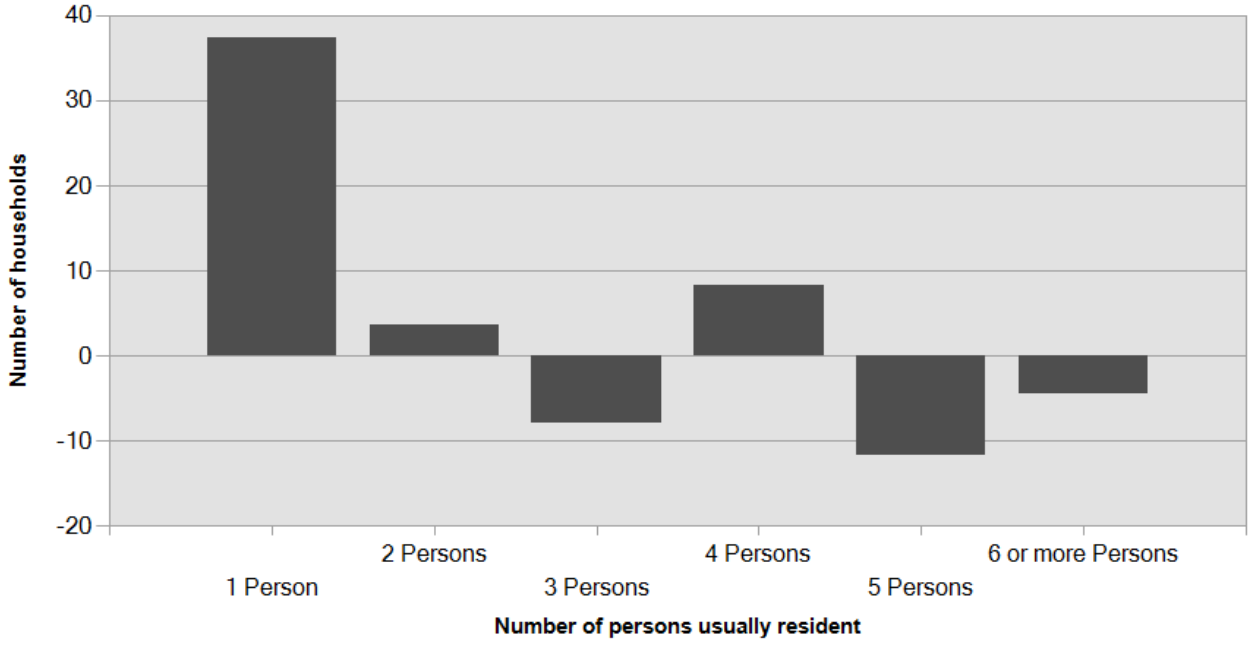
Between 2001 and 2006 there were no numerically significant changes in Wallerawang - Lidsdale's household size data.

Household size, Wallerawang - Lidsdale and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in household size, Wallerawang - Lidsdale, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Wallerawang - Lidsdale

Are we owners, renters or buyers? (Housing tenure)

Derived from the Census questions, *'Is this dwelling [owned outright, owned with a mortgage etc]'*, and *'If this dwelling is being rented, who is it rented from?'*

Tenure data, to some extent, provide insights into the socio-economic status of an area as well as the role that the area plays in the housing market. For example, a high concentration of private renters may indicate an area attractive to specific housing markets such as young singles and couples, while a concentration of home owners indicates a more settled area (i.e. less transitory), with mature families and empty-nester household types. Tenure can also reflect built form, with a significantly higher share of renters in high density housing and a substantially larger proportion of home-owners in separate houses, although this is not a mutually exclusive pattern.

In conjunction with other socio-economic status information tenure data is useful for analysing a wide range of issues, including housing market analysis (in conjunction with Household and Family Type data) and for identifying public housing areas.

Housing tenure(households)	Wallerawang - Lidsdale						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Owned	276	35.6	38.3	323	43.6	44.4	-47
Being purchased	264	34.0	28.7	192	26.0	22.7	72
Renting - Govt	75	9.7	4.3	76	10.3	4.6	-1
Renting - Other	119	15.4	20.8	99	13.3	20.4	21
Renting - Not stated	7	0.9	1.1	3	0.4	0.3	4
Renting - Total	**202**	**26.0**	**26.2**	**178**	**24.0**	**25.3**	**24**
Other tenure type	0	0.1	1.0	18	2.4	3.4	-17
Not stated	33	4.3	5.9	30	4.0	4.2	4
Total	**776**	**100.0**	**100.0**	**740**	**100.0**	**100.0**	**35**

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Care should be taken when analysing change over time for 'Owned' and 'Being purchased' categories as changes to the wording of the responses in the Census questionaire between 2001 and 2006 may have resulted in skewed data. Please see the specific data notes for more detail.

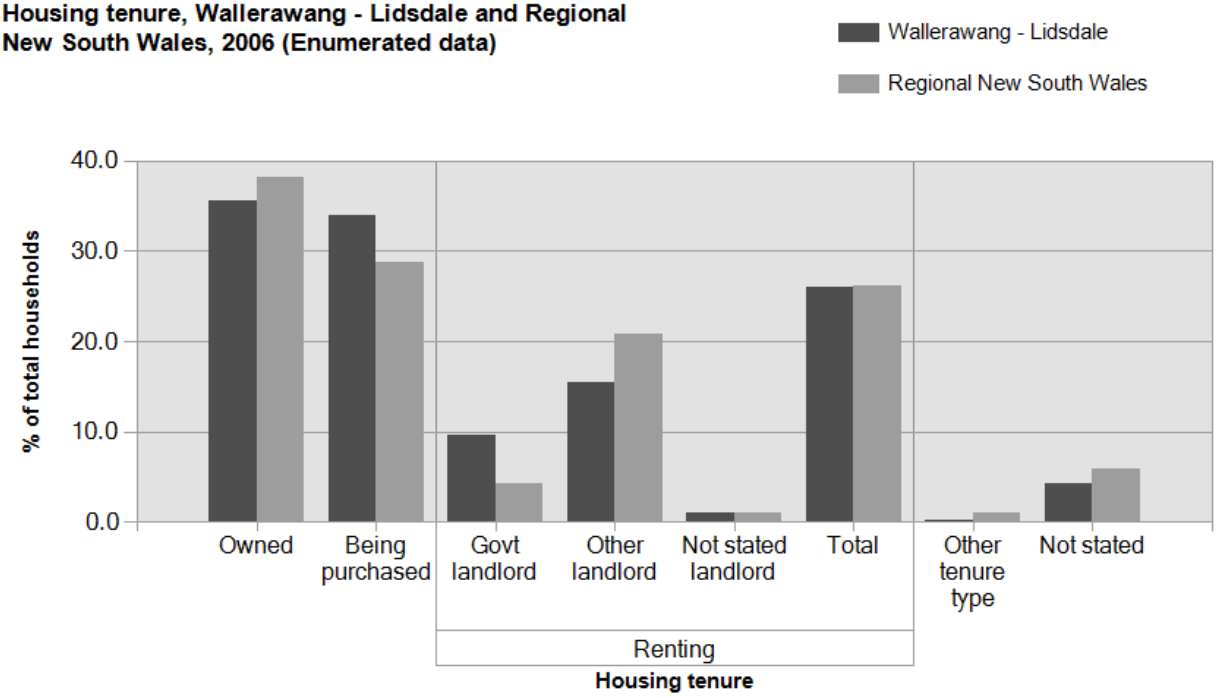
Analysis of the housing tenure of the population of Wallerawang - Lidsdale in 2006 compared to Regional New South Wales shows that there was a smaller proportion of households who owned their dwelling; a larger proportion purchasing their dwelling; and a similar proportion who were renters.

Overall, 35.6% of the population owned their dwelling; 34.0% were purchasing, and 26.0% were renting, compared with 38.3%, 28.7% and 26.2% respectively for Regional New South Wales.

The largest change in housing tenure categories for the households in Wallerawang - Lidsdale between 2001 and 2006 were:

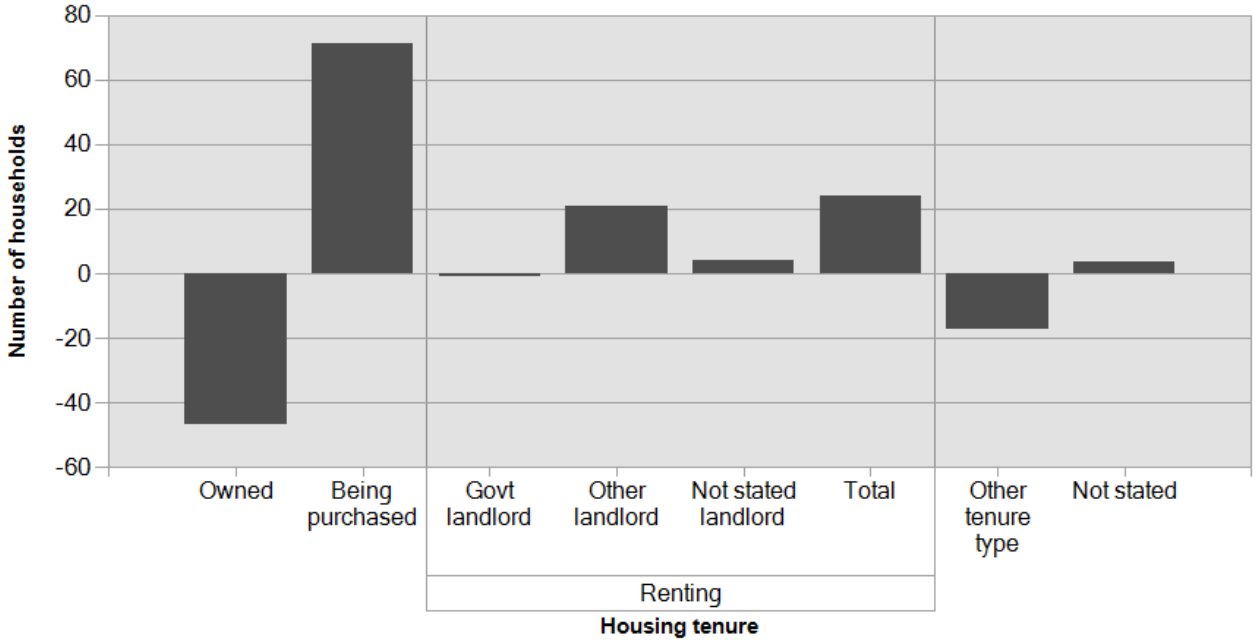
- Being purchased (+72 households).

Housing tenure, Wallerawang - Lidsdale and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in housing tenure, Wallerawang - Lidsdale, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Wallerawang - Lidsdale

What type of dwellings do we live in? (Dwelling types)

Dwelling Type is derived from an assessment by the Census Collector who observes and records the type of dwelling structure.

The types of dwellings that are common to areas are important determinants in the role and function that the area plays in the housing market. A greater concentration of higher density dwellings is likely to attract more young adults and smaller households; while larger, detached or separate dwellings are more likely to have families and prospective families living in them, although this is not a mutually exclusive pattern.

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

Dwelling structure(private dwellings)	Wallerawang - Lidsdale						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Separate house	730	82.9	72.1	707	84.6	72.3	23
Medium density	34	3.8	11.4	21	2.5	11.3	13
High density	0	0	1.6	0	0	1.5	0
Caravans, cabin, houseboat	5	0.5	1.8	0	0	2.1	5
Other	10	1.1	0.5	20	2.4	0.6	-10
Not stated	0	0	0.1	3	0.3	0.6	-3
TOTAL occupied private dwellings	779	88.5	87.5	751	89.8	88.3	28
TOTAL unoccupied Dwellings	102	11.5	12.5	85	10.2	11.7	17
TOTAL Dwellings	881	100.0	100.0	836	100.0	100.0	45

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

(a) 'Medium density' includes all semi-detached, row, terrace, townhouses and villa units, plus flats and apartments in blocks of 1 or 2 storeys, and flats attached to houses.

(b) 'High density' includes flats and apartments in 3 storey and larger blocks.

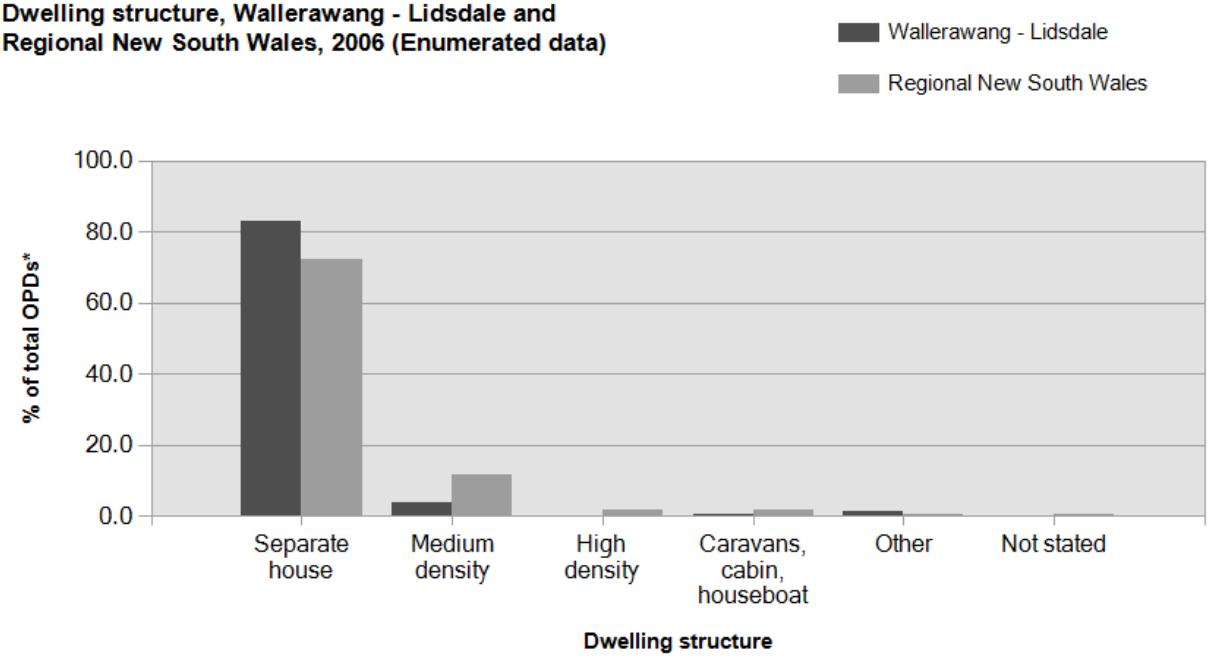
NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

In 2006, there were 730 households who occupied a separate house in the area, while 34 occupied a medium density dwelling, and 0 occupied high density flats and apartments.

Analysis of the types of dwellings of the households in Wallerawang - Lidsdale in 2006 compared to Regional New South Wales shows that 82.9% occupied a separate house; 3.8% occupied a medium density dwelling; while 0.0% occupied high density dwellings, compared with 72.1%, 11.4%, and 1.6% respectively in Regional New South Wales.

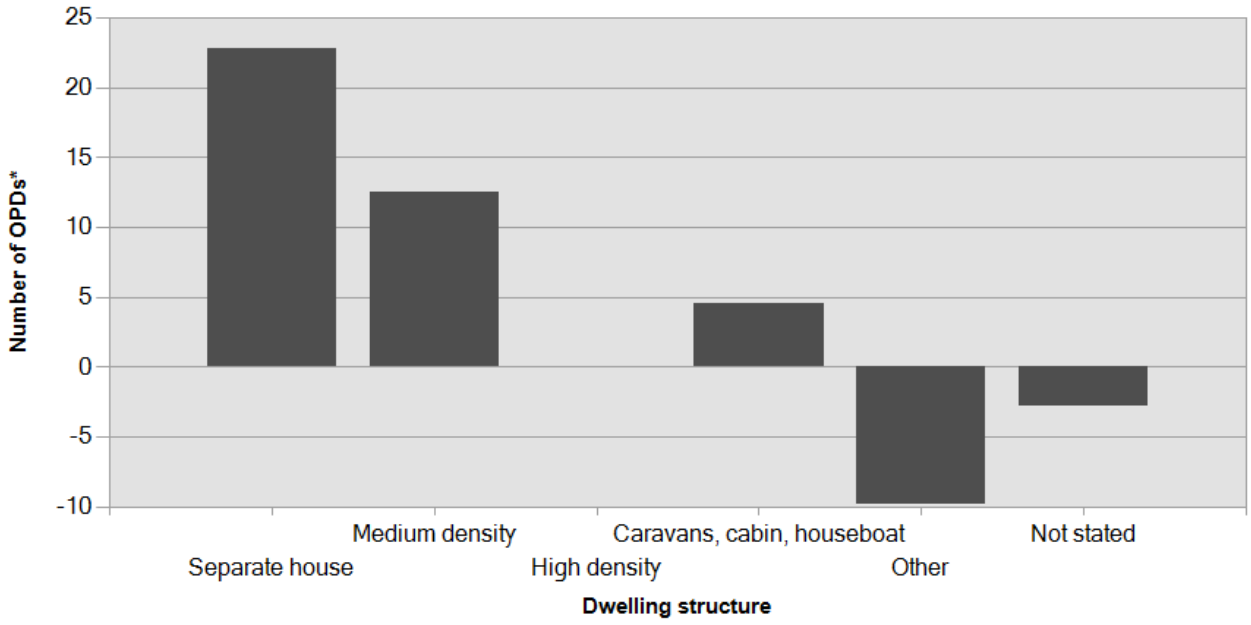
Between 2001 and 2006 there were no numerically significant changes in Wallerawang - Lidsdale's dwellings data.

Dwelling structure, Wallerawang - Lidsdale and Regional New South Wales, 2006 (Enumerated data)



*OPDs refers to Occupied Private Dwellings.
Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in dwelling structure, Wallerawang - Lidsdale, 2001 to 2006 (Enumerated data)



*OPDs refers to Occupied Private Dwellings.
Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Geography notes

Census data is available at a variety of different geographic levels, for example, State; Local Government; and Census Collector District (a unit of around 200 households). Rarely do these boundaries match actual 'communities', 'suburbs' or 'service catchments' needed for effective decision making.

The Community Profile combines data for Lithgow City along with customised suburbs/localities, aggregated from Census Collector Districts for the Census years: 2006, 2001, 1996, and 1991.

Lithgow City has 9 small areas:

- Bowenfels
- Lithgow - Hermitage Flat and District
- Morts Estate - Oaky Park - Vale Of Clwydd
- Portland
- Rural North - Marrangaroo
- Rural South - Little Hartley
- South Bowenfels - Littleton - South Littleton
- Wallerawang - Lidsdale
- Lithgow Urban Area

Suburb/locality geography

The suburbs and localities in the Community Profile tables are aggregations of 2006 Census Collection Districts (CDs). Where CDs did not fit exactly into the suburb or locality boundaries, estimates were made of the number of dwellings to be included. These estimates use aerial photography, dwelling counts, planning schemes, and street directories to determine what percentage of a CD goes into each suburb. The resulting data provides the most accurate population information for suburbs and localities.

NOTE: The geography in the Community Profile tables may not match the Australian Bureau of Statistics (ABS) suburb boundaries for 2006, which are based on aggregation of whole CDs.

Data notes

All data in this Profile is sourced from the Australian Bureau of Statistics, copyright in ABS data vests in the Commonwealth of Australia.

Population figures

The most comprehensive population count available in Australia is derived from the Census of Population and Housing, conducted by the Australian Bureau of Statistics every 5 years. It is an official count of all people and dwellings in Australia on Census night, and collects details of age, sex and other characteristics of the population. The last Census was conducted on 8 August 2006 and was the 15th national Census for Australia. The next Census will be conducted on 7 August 2011.

Census statistics are used as the basis for estimating the population at national, state and local government levels, for electoral purposes and the distribution of government funds. They are used by individuals and organisations in the public and private sectors for planning, administration, research and decision making.

Populations are estimated in various ways. It is important to understand how a population has been derived when you are using the data.

Census data in the Community Profile section of profile.id® includes **enumerated** and **usual residence** data. The **estimated resident population** can be found in the Additional Information section of this website.

Enumerated Population

The 'Enumerated Population' represents where people were counted on Census Night (8 August 2006), which may not be where they usually live. This population figure generally includes overseas visitors and visitors to the area from within Australia, but excludes Australians overseas.

This type of count provides a snapshot at a given point in time. The Census is timed to attempt to capture the typical situation, however, holiday resort areas, such as the Gold Coast and snow fields, may show a large enumeration count compared with the usual residence count.

Where enumerated population data is used in the profile, overseas visitors have been specifically excluded from the tables, but visitors from within Australia are included.

For detailed information about Enumerated population please refer to the ABS Fact Sheet – Population Measures.

Usual Residence Population

This population is derived from the Census. It is the place where a person usually lives, rather than the place where they were counted on Census night. Each person completing the Census is required to state their address of usual residence and this information is used to derive the Usual Residence population.

Census counts compiled on this basis are less likely to be influenced by seasonal factors, such as holiday seasons and snow seasons, and provide information about the usual residents of an area.

In 2006 all Census data are provided for usual residence as well as enumerated population. Previously household information was released as enumerated only (please see the detailed note for household and family type). Additionally, data about usual residence were not published for any data sets prior to 2001. Consequently, a time series has been provided for non-household data comparing 2006 and 2001 data only.

For detailed information about usual residence and enumerated population please refer to the ABS Fact Sheet – Population Measures.

Estimated Resident Population

The Estimated Resident Population (ERP) is the official ABS estimate of the Australian population. The ERP is based on results of the Census and is compiled as at 30 June of each Census year. It is updated between Censuses - quarterly for state and national figures, and annually for local government areas. ERP provides a population figure between Censuses.

The ERP is based on the usual residence population and includes adjustments for Census undercount,

Australian residents who were temporarily overseas on Census night, and backdates the population to 30 June. Each year's updates take into account births, deaths and both internal and overseas migration.

ERPs can be found under the 'Additional Information' section of the menu in the Community Profile.

For detailed information about ERPs please refer to the ABS publication Demographic Estimates and Projections: Concepts, Sources and Methods, 1999.

Randomisation

The information presented in the tables in the Community Profile is based on detailed tables produced by the Australian Bureau of Statistics at the Local Government Area level, and at the Census Collection District (CD) level for suburbs and small areas.

Note: The raw CD level data are then recalculated to exactly reflect the selected boundaries as shown on the maps within the Community Profile.

The Australian Bureau of Statistics (ABS) will randomise information it provides to preserve confidentiality. All cells are slightly adjusted to prevent any identification of personal details. Methodologies for doing this have changed between 2001 and 2006.

- Data tables released prior to the 2006 Census had small numbers (values of 1 or 2) randomly adjusted to either 0 or 3 by the ABS. As tables are randomly adjusted independently of each other, totals differ slightly across tables with the same population. The affect of randomisation is increased with the aggregation of Census Collector Districts into suburbs.
- In relation to the 2006 data, a new method called "perturbation" has been introduced. All figures included within any table may be randomly adjusted by a small amount. These adjustments result in small introduced random errors. Although the information value of the table as a whole is not impaired, care should be taken when interpreting very small numbers, since randomisation will affect the relative size of small numbers far more than larger numbers. The effect of the randomisation methodology also ensures that values of 1 and 2 do not appear in tables.

No reliance should be placed on small cells as they are impacted by random adjustment, respondent and processing errors.

Table totals and subtotals will be internally consistent but discrepancies may be observed between tables cross-tabulating the same population by different variables. While randomisation compromises the table totals by making them appear inconsistent, this is the best available socio-demographic data at the suburb level. This level of compromise is not statistically significant and should not impact on decision makers making effective resource allocation and planning decisions.

Overseas visitors

Enumerated data from the 2001 and 2006 Censuses are published by the ABS with "Overseas visitors" appearing as a separate category in many tables. To improve usability of the information the category "Overseas visitors" has been removed from all tables and calculations.

Table totals and rounding

Table totals may not equate with other similar tables due to randomisation of small numbers and percentages may not total to 100 due to rounding of decimal places. All discrepancies are minimal and are statistically insignificant.

Household and Family Composition

This variable describes the type of household within a dwelling. Household composition indicates whether a family is present and whether other unrelated household members are present. Any household, including lone person households, can contain visitors. 'Visitor only' households can contain overseas visitors (ABS Census Dictionary 2006).

The 'Other not classifiable' category includes those households which were occupied on Census night but where the Census collector could not make contact; households that contained only persons aged under 15 years; and households which could not be classified elsewhere in this classification because there was

insufficient information on the Census form. (ABS Census Dictionary 2006).

The household and family data are essentially the same for both Usual Residence and Enumerated population counts. The person who fills in the form identifies all persons who are present on Census night and their relationship within the household. Anyone who is temporarily absent is separately identified on the form, so that the type of household and number of usual residents can be identified. However, any table examining the characteristics of people by the type of household they live in will exclude these people as few demographic variables are collected for persons temporarily absent.

Persons who are away from home, will be counted in the household they are present in on Census night (generally in a non-private dwelling or as a visitor in a private dwelling). Although the ABS will know their usual address, and they will be coded back to their area of usual residence, the ABS is not able to impute that person's relationship to other people also resident at that address. Unlike the Enumerated count, Usual Residence household data does not include 'visitor only' households.

Specific notes

All data in the Community Profile is sourced from the Australian Bureau of Statistics, copyright in ABS data vests in the Commonwealth of Australia.

How many people live here?

Key Statistics

The summary statistics table contains 'Total population', ‘Overseas population’ 'Gender', 'Indigenous population', ‘Institutional population’ and 'Average household size'; along with a summary of data contained elsewhere in the Profile.

'Total population' and 'Gender' data are shown both including and excluding 'Overseas Visitors'.

'Indigenous population' refers to persons of Aboriginal and/or Torres Strait Islander origin.

‘Institutional population’ refers to people living in non-private dwellings. These types of dwellings are establishments which provide a communal type of accommodation. Examples of categories are hotel, motel, boarding house, private hotel, public hospital (not psychiatric), and childcare institution.

'Average household size' is calculated on the basis of the number people counted in occupied private dwellings (excluding overseas visitors), divided by the number of occupied private dwellings (excluding non-private dwellings, such as institutions and hotels etc).

For notes on other variables in the 'Key statistics' table please see the specific data notes for each of the relevant sections.

How old are we?

Includes all persons except 'Overseas Visitors'.

Between the 2001 and the 2006 Censuses, there was a small change in the way that the question regarding your age was phrased. The 2001 Census asked your age last birthday. In 2006, the question asked either your age last birthday or your date of birth. This change in the way age structure has been collected has not had an impact on the data produced; if date of birth was completed, then the ABS calculated age as at your last birthday. 2006 age data are comparable to prior Censuses.

Who are we?

Where were we born?

Includes all persons except 'Overseas Visitors'.

The 'United Kingdom' includes England, Scotland, Wales, Northern Ireland, Channel Islands, Isle of Man, and 'United Kingdom not further defined'.

'Former Federal Republic of Yugoslavia' includes Serbia and Montenegro, as well as 'South Eastern Europe nfd' in 2006. Those people categorised to South Eastern Europe in 2006 were primarily those who stated their birthplace as Yugoslavia, which did not exist as a nation in 2006. In 2001 it includes all people who listed their birthplace as Yugoslavia, while it is not available for 1996 and 1991 due to considerable changes to national boundaries in this region.

'Total Overseas born' includes 'inadequately described', 'at sea', and 'not elsewhere classified'.

'Main English speaking countries' includes Canada, Ireland, New Zealand, South Africa, the United Kingdom, and the United States of America.

'Non-English speaking backgrounds' refers to persons born in countries not included in 'Main English speaking countries'.

'China (excl. Taiwan Province) ' also excludes the Special Administrative Regions of Hong Kong and Macau.

Birthplace is coded using the Standard Australian Classification of Countries (SACC) 1998.

How many recently arrived?

Excludes persons who did not state their birthplace, and persons born in Australia or in other Australian territories.

Includes Australian residents born overseas who will be in Australia for more than one year.

How well do we speak English?

This is derived from the Census question, 'How well does the person speak English?' and applies to all persons who speak a language other than English at home. The table in the profile has been further restricted to refer only to persons born overseas and aged over 5 years (excluding overseas visitors).

English proficiency aims to measure the ability of persons who speak 'English as a Second Language' to also speak English. The data, when viewed with other ethnic and cultural indicators, tends to reflect the ethnic composition of the population and the number of years of residence in Australia. In general, an area with a higher proportion of persons born in English-speaking countries or who emigrated from non-English speaking countries several decades ago is likely to have greater English-speaking proficiency.

Note: A person's English proficiency is based on a subjective assessment and should therefore be treated with caution.

Responses to the question on Proficiency in English in the Census are subjective. For example, one respondent may consider that a response of 'Well' is appropriate if they can communicate well enough to do the shopping, while another respondent may consider such a response appropriate only for people who can hold a social conversation. Proficiency in English should be considered as an indicator of a person's ability to speak English and not a definitive measure of this ability.

For more information on proficiency in English, please refer to the ABS Census Dictionary (2901.0).

What language do we speak at home?

Includes all persons except 'Overseas Visitors'.

Language spoken at home is coded using the Australian Standard Classification of Languages (ASCL), 2005-06.

'Filipino' was recorded as a separate language from 'Tagalog' in the 2006 Census, but no such distinction was made in earlier Censuses. profile.id® combines the two languages together as 'Tagalog'. Filipino is a standardised version of Tagalog, incorporating words from other indigenous languages within the Philippines.

'Dari' was recorded as a separate language from 'Persian' in the 2006 Census, but no distinction was made in earlier Censuses. profile.id® combines the two languages together as 'Persian'. Dari is a localised name for Persian in Afghanistan.

What is our religion?

Includes all persons except 'Overseas Visitors'.

Religion is coded using the Australian Standard Classification of Religious Groups (ASCRG), 2005.

The religion question in the Census is an optional question and so has quite a high rate of 'Not Stated' responses.

The 2006 Census recorded 'Eastern Orthodox', which is a new designation for those churches previously described as 'Orthodox'.

The 2006 Census recorded 'Assyrian Apostolic' as a separate religious category. Previously, all religions falling under this category were recorded as 'Oriental Christian'.

The 2006 Census introduces a new designation called 'Oriental Orthodox'. The majority of the churches in this group were formerly known as 'Oriental Christian'. This includes:

- Oriental Orthodox, nfd
- Armenian Apostolic
- Coptic Orthodox Church
- Syrian Orthodox Church
- Ethiopian Orthodox Church
- Oriental Orthodox, nec

'Christian nfd' refers to a Christian religion 'not further defined', and includes:

- Apostolic Church, so described
- Church of God, so described
- Australian Christian Churches, so described
- New Church Alliance, so described

What is our individual income?

This data includes total gross income (including pensions and allowances) that a person usually receives each week.

This data applies only to people aged 15 years and over and excludes overseas visitors.

Individual incomes are collected as ranges in the Census.

Individual income quartiles

Individual income groups are not comparable over time because of the influences of economic change such as wage level fluctuations and inflation. The income quartile method has been adopted as the most objective method of comparing change in the income profile of a community over time.

Individual income quartiles look at the distribution of incomes in Lithgow City relative to Regional New South Wales. Quartiles split the total population into four equal parts for the Regional New South Wales. The table shows the number and proportion of individuals in Lithgow City falling into each segment for the benchmark area.

The table gives a clear picture of where individual incomes in Lithgow City sit relative to Regional New South Wales. For the Regional New South Wales, 25% of persons fall into each category. If, for example, Lithgow City has 30% in the top category and only 20% in the lowest, this indicates that Lithgow City has proportionally more higher-income individuals and less lower-income individuals.

Individual income quartile definitions(Annual income ranges)

	2006	2001	1996	1991
Lowest group	Nil to $10,593	Nil to $9,213	Nil to $7,449	Nil to $6,248
Medium lowest	$10,594 to$20,166	$9,214 to$16,237	$7,450 to$12,898	$6,249 to$11,681
Medium highest	$20,167 to$38,532	$16,238 to$30,456	$12,899 to$24,972	$11,682 to$22,218
Highest group	$38,533 and over	$30,457 and over	$24,973 and over	$22,219 and over

What is our household income?

Household income comprises the total of incomes of all persons in the household who stated an income.

Excludes ‘Visitor only households’ and ‘Other non classifiable households’.

'Not stated' includes 'Partial income not stated' and 'All incomes not stated'.

'Partial income not stated' includes households where at least one, but not all, member(s) aged 15 years and over did not state an income and / or at least one household member aged 15 years and over was temporarily absent. In these cases, the aggregate of all stated individual incomes would be less than the true household income so these households are excluded from the classification.

'All incomes not stated' includes households where no members present stated an income.

Household income quartiles

Household income groups are not comparable over time because of the influences of economic change such as wage level fluctuations and inflation. The income quartile method has been adopted as the most objective method of comparing change in the income profile of a community over time.

Household income quartiles look at the distribution of incomes in Lithgow City relative to Regional New South Wales. Quartiles split the total number of households into four equal parts for the Regional New South Wales. The table shows the number and proportion of households in Lithgow City falling into each segment.

The table gives a clear picture of where household incomes in Lithgow City sit relative to Regional New South Wales. For the Regional New South Wales, 25% of households fall into each category. If, for example, Lithgow City has 30% in the top category and only 20% in the lowest, this indicates that Lithgow City has proportionally more higher-income households and less lower-income households.

Household income quartile definitions(Annual income ranges)

	2006	2001	1996	1991
Lowest group	Nil to $22,618	Nil to $18,647	Nil to $14,904	Nil to $14,014
Medium lowest	$22,619 to$41,382	$18,648 to$32,914	$14,905 to$26,949	$14,015 to$24,525
Medium highest	$41,383 to$71,642	$32,915 to$57,579	$26,950 to$46,984	$24,526 to$42,010
Highest group	$71,643 and over	$57,580 and over	$46,985 and over	$42,011 and over

What are our qualifications?

Includes persons aged 15 years and over.

Excludes 'Overseas Visitors'.

Excludes schooling up to Year 12.

'No qualifications' refers to persons still studying for their first qualification, persons who do not have a qualification, and persons who have a qualification out of the scope of the Census version of the Australian Standard Classification of Education (ASCED), 2001.

What is the highest secondary school year we have completed?

Includes persons aged 15 years and over.

'Schooling' refers to Primary and Secondary schooling.

Excludes 'Overseas Visitors'.

There is no time series for this particular data set owing to differences in the way that the data was recorded. The 2001 Census did not record people who were over 15 years and still at school as having completed a particular year of schooling. Instead they were counted as “Still at school”. However, in 2006 they were coded to the highest year already completed, making the data non-comparable. This means that if an individual is still in the process of completing year 11 during a Census year, they are recorded as having completed year 10. This also means that the number of people who have completed year 10 cannot be treated as being indicative of the number of people who left school after completing year 10 as it will include people who were in the process of completing year 11.

Where are we learning?

Excludes 'Overseas Visitors'.

'Independent' refers to private and other non-Government schools.

‘Catholic’ refers to infant, primary and secondary schools run independently by the Catholic Church.

'TAFE' refers to 'Technical and Further Education' institutions.

Do we need assistance?

This data identifies people who report a need for assistance due to a 'profound or severe core activity limitation'. This population is defined as people who need assistance in their day to day lives with any or all of the following activities – self-care, body movements or communication – because of a disability, long-term health condition, or old age.

This question relies on people evaluating themselves, (or their carers), as being in need of assistance. Consequently this question provides an indication of the characteristics of people who report, or are reported as requiring, a need for assistance; but cannot be relied upon to provide details as to the total number of people with a 'profound or severe core activity limitation'.

Persons under the age of 40 whose only stated reason for need for assistance was ‘old or young age’ are included under ‘no need for assistance’.

Excludes 'Overseas Visitors'.

What do we do?

Do we do unpaid work?

This data includes help willingly given in the form of time, service or skills, to a club, organisation or association including:

- assisting at events and with sports organisations
- helping with school events and activities
- assisting in churches, hospitals, nursing homes and charities
- other kinds of volunteer work (e.g. emergency services, etc.).

Voluntary work excludes unpaid work done through a club, organisation or association mainly in order to qualify for government benefits such as Newstart Allowance. It also excludes any activity which is part of a person's paid employment or family business. ABS Census Dictionary 2006.

This data applies to persons aged 15 years and over and to **voluntary work undertaken in the 12 months prior to the Census**.

This data excludes 'Overseas Visitors'.

Unpaid domestic work

This data includes all the domestic work a person does without pay in their own home and in other places, for themselves, their family and other people in their household.

This data only applies to persons aged 15 years and over and to **domestic work performed in the week prior to Census**.

Unpaid domestic work can include meal preparation, service and clean-up; washing, ironing and managing clothes; other housework; gardening, mowing and yard work; home maintenance; car and bike maintenance; household shopping and managing household financial affairs.

This data excludes 'Overseas Visitors'.

Unpaid care

Unpaid care (unpaid assistance to a person with a disability, a long term illness or problems related to old age), includes the unpaid help a person gives to another person to assist them with their daily activities. It can include assistance with:

- bathing, dressing, toileting and feeding;
- mobility;
- understanding or being understood by others;
- emotional support;
- medication;
- dressing wounds
- food
- housework
- driving

This data applies to persons aged 15 years and over and to **care given in the two weeks prior to Census**.

This data excludes 'Overseas Visitors'.

Unpaid childcare

This data includes the time a person spends caring for a child or children without being paid. This can include people caring for their own children, whether they usually live with them or not. It can also include people looking after their own grandchildren or the children of other relatives or the children of friends or neighbours.

This data only applies to persons aged 15 years and over and to **child care given in the two weeks prior to Census**.

This data excludes 'Overseas Visitors'.

What is our employment status?

Excludes 'Overseas Visitors'

Includes persons aged 15 years and over.

'Employed full time' is defined as having worked 35 hours or more in all jobs during the week prior to Census night.

'Employed part time' is defined as having worked less than 35 hours in all jobs during the week prior to Census night.

The 'Labour force' is defined as all persons aged 15 years and over who are looking for work, or are employed, either full time, part time or casually.

What industries do we work in?

This data describes the industries in which employed people work. It applies only to people aged 15 and over who were employed in the week prior to Census.

Data for industry are coded using the Australia and New Zealand Standard Industrial Classification (ANZSIC). The industry classification is updated periodically to take account of emerging industries and changes in the structure of the economy.

For the 2006 Census, the updated ANZSIC06 classification was used, which includes more industry divisions which better reflect the structure of the Australian economy. Data are presented using this classification as an option. However for time series, data are also presented on the older ANZSIC93 classification, as this classification was used in earlier censuses.

For more information please refer to the 2006 Census Dictionary, and ANZSIC classification.

Time series industry categories

This data describes the industries in which employed people work. It applies only to people aged 15 and over who were employed in the week prior to Census.

Data for industry are coded using the Australia and New Zealand Standard Industrial Classification (ANZSIC). The industry classification is updated periodically to take account of emerging industries and changes in the structure of the economy.

For the 2006 Census, the updated ANZSIC06 classification was used, but people were also coded to the older ANZSIC93 classification. Data in the profiles is presented using both classifications; data for 2006 alone uses ANZSIC06, while time series data uses ANZSIC93 for comparability.

For more information please refer to the 2006 Census Dictionary, and ANZSIC classification.

What are our occupations?

This data describes the occupations of employed people. It applies only to people aged 15 and over who were employed in the week prior to Census.

Data for occupation are coded using the Australian and New Zealand Standard Classification of Occupations (ANZSCO). The occupation classification is updated periodically to take account of emerging occupation groups and changes to the structure of the labour force.

Data are presented for the broad occupation groupings. For 2006 these were coded using ANZSCO, the most recent classification. These are presented in profile.id® where no time series is required. For time series, the data are presented using the older ASCO 2nd edition classification, to ensure data comparability.

For more information please refer to the 2006 Census Dictionary, and the 2006 Australian and New Zealand Standard Classification of Occupations (ANZSCO).

Time series occupation categories

This data describes the occupations of employed people. It applies only to people aged 15 and over who were employed in the week prior to Census.

Data for occupation are coded using the Australian and New Zealand Standard Classification of Occupations (ANZSCO). The occupation classification is updated periodically to take account of emerging occupation groups and changes to the structure of the labour force.

Data are presented for the broad occupation groupings. For 2006 these were coded using ANZSCO, the most recent classification. These are presented in profile.id® where no time series is required. For time series, the data are presented using the older ASCO 2nd edition classification, to ensure data comparability.

How do we get to work?

This data looks at the method of travel to work of employed people. It applies only to people aged 15 and over who were employed in the week prior to Census.

Method of travel relates specifically to the journey to work on the morning of Census day. This differs to the industry and occupation data which relates to the main job held in the week prior to Census.

Respondents can nominate up to three modes of travel. For data presented in the profile, the following aggregations have been used:

- 'Train' includes any journey involving a train, whether or not other methods were used.
- 'Bus' includes any journey involving a bus, except for those also involving a train.
- The remaining categories, except for 'Other', only refer to a single method of travel (e.g. 'Car as driver'

when no other method was used).

- 'Other' refers to any method not listed in the standard categories, plus any combination of two or three methods NOT involving a bus or train.

Note that the categories "Walked only", "Worked at home" and "Did not go to work" are exclusive and are never combined with other methods.

'Tram or Ferry' includes light rail.

This data excludes 'Overseas Visitors'.

For more information please refer to the Census Dictionary 2006.

How do we live?

What type of households do we live in?

This data describes the type of family and non-family households within a dwelling.

The first section of the table counts family units in family households, and breaks them down by the presence of couples, single parents, and children. This classification of a family includes persons who are temporarily absent from the family on Census night.

The second section counts households. Households can contain up to three families, or a lone person, group of unrelated individuals (flatmates etc.) or other household.

The 'Other not classifiable' category includes those households which were occupied on Census Night but where the Census collector could not make contact; households that contained only persons aged under 15 years; and households which could not be classified elsewhere in this classification because there was insufficient information on the Census form. (ABS Census Dictionary 2006).

'Couple with child(ren) 15 years and under' and 'One parent family with child(ren) 15 years and under' refers to families with at least one child aged 15 years or younger. These families may also have older children living at home.

'One parent family with child(ren) over 15 years' and 'Couple with child(ren) over 15 years' refers to families with no children under the age of 15 years.

Data includes same sex couple families.

This data excludes 'Overseas Visitors'.

As the data are counting households, only enumerated counts are applicable.

How many people live in each household?

This data includes enumerated households by the number of persons usually resident, (includes up to three residents who were temporarily absent on Census night).

A household is defined as one or more persons, at least one of whom is at least 15 years of age, usually resident in the same private dwelling.

This data excludes ‘Visitor only’ and 'Other not classifiable' households.

Are we owners, renters or buyers?

This data presents the tenure type of occupied private dwellings, and for those dwellings being rented, provides a breakdown of the type of landlord the dwelling is being rented from.

‘Being purchased’ includes dwellings being purchased under a rent/buy scheme.

'Renting – Govt' refers to households renting from a State/Territory Government housing authority.

'Renting – Other' refers to households renting from private landlords, real estate agents and employers.

'Rented – Not stated' refers to rented dwellings where the landlord type was not stated.

‘Life tenure’ in 2006 has been included under ‘Other tenure type’

Tenure type changes between 2001 and 2006: Though the classification for Census data has remained the same, between 2001 and 2006 there was a change to the wording of dwelling ownership responses to the Tenure Type question on the Census questionnaire. "Fully Owned" in 2001 became "Owned Outright" in 2006, while "Being Purchased" became "Owned with a mortgage". This change in wording may have resulted in more accurate responses to this question, however it has made comparison over time difficult and such analysis should be done with caution. Looking at Australia as a whole, comparing 2006 to 2001 data, the "Being Purchased" category has increased by 5.7%, to 32.2% of private dwellings, while the "Fully Owned" category has decreased by 7.1%, to 32.6% of private dwellings. It is expected that a large part of this change is due to the change in wording, rather than representing change in the real world.

It is recommended that any analysis of change over time in these categories look only at the relative differences between change in local populations and the Australia-wide or state-based benchmarks, rather making inferences about local populations based on their numbers alone. Other categories in the Tenure Type classification are unaffected.

How much do we pay on our housing loan?

This data shows housing loan repayments being paid on a monthly basis by a household to purchase the dwelling in which it was enumerated (also applicable to caravans).

This data only applies to households (occupied private dwellings) who are purchasing their dwelling. It also includes households who are purchasing their dwelling under a 'rent/buy' scheme.

'Other not classifiable' households are excluded from this data.

Housing loan quartiles

Housing loan payments are not comparable over time because of the influences of economic change such as inflation. The loan payment quartile method has been adopted as the most objective method of comparing change in the cost of housing of a community over time.

Housing loan repayment quartiles look at the distribution of housing loan repayments in Lithgow City relative to Regional New South Wales. Quartiles split the total number of households into four equal parts for the Regional New South Wales. The table shows the number and proportion of households in Lithgow City falling into each segment.

The table gives a clear picture of the level of housing loan repayments in Lithgow City relative to Regional New South Wales. For the Regional New South Wales, the categories are split so that 25% of households fall into each category, so by comparison, the table will show if there are more or less households in Lithgow City with high repayments than in Regional New South Wales. If, for example, Lithgow City has 30% in the top category and only 20% in the lowest, this indicates that Lithgow City has proportionally more households with ‘top quarter’ repayments on their home loans, and less paying relatively low amounts.

Housing loan quartile definitions(Annual payment ranges)

	2006	2001	1996
Lowest group	Nil to $9,419	Nil to $7,093	Nil to $6,152
Medium lowest	$9,420 to$14,414	$7,094 to$10,081	$6,153 to$9,055
Medium highest	$14,415 to$21,029	$10,082 to$13,822	$9,056 to$12,273
Highest group	$21,030 and over	$13,823 and over	$12,274 and over

How much do we pay on our housing rental?

This data shows the amount of rent paid by households on a weekly basis for the dwelling in which they were enumerated on Census night (also applicable to caravans).

This data only applies to households (occupied private dwellings) renting their dwelling.

'Other not classifiable' households are excluded from this data.

Note that rent is shown on a **weekly** basis while housing loan repayments are on a **monthly** basis.

Housing rental quartiles

Rental payments are not comparable over time because of the influences of economic change such as inflation. The rental payment quartile method has been adopted as the most objective method of comparing change in the cost of rental housing of a community over time.

Rent quartiles look at the distribution of rental payments in Lithgow City relative to Regional New South Wales. Quartiles split the total number of households into four equal parts for the Regional New South Wales. The table shows the number and proportion of households in Lithgow City falling into each segment relative to the Regional New South Wales.

The table gives a clear picture of the level of rental payments in Lithgow City relative to Regional New South Wales. For the Regional New South Wales, 25% of households fall into each category, so by comparison, the table will show if there are more or less households in Lithgow City with high (or low) rent than in Regional New South Wales. If, for example, Lithgow City has 30% in the top category and only 20% in the lowest, this indicates that Lithgow City has proportionally more households paying ‘top-quarter’ rents, and less paying ‘bottom-quarter’ rents.

Housing rental quartile definitions(Annual payment ranges)

	2006	2001
Lowest group	Nil to $5,647	Nil to $4,682
Medium lowest	$5,648 to$8,528	$4,683 to$6,843
Medium highest	$8,529 to$11,416	$6,844 to$9,083
Highest group	$11,417 and over	$9,084 and over

What type of internet connection do we have?

This data relates to the question 'Can the Internet be accessed at this dwelling?' The question also asked for the type of connection:

- 'Broadband connection' - includes ADSL, Cable, Wireless and Satellite connection,
- 'Dial-up connection' - includes analog modem and ISDN connections
- 'Other' - includes Internet access through mobile phones, set-top boxes, games machines or connections other than dial-up or broadband.

This question was asked for the first time in the 2006 Census, replacing the questions in the 2001 Census relating to internet use and computer use. Owing to this there is no time series data available. Unlike the 2001 questions, the data relate to dwellings and not individuals.

How many cars do we own?

This data applies only to households in occupied private dwellings.

This data identifies the number of registered motor vehicles owned or used by household members, garaged, parked at or near private dwellings on Census night. It includes company owned vehicles.

The data excludes motorbikes, scooters and tractors.

What type of dwellings do we live in?

Dwelling structure looks at the type of dwelling for all occupied private dwellings. This data is classified by the Census collector on visiting the household, and the categories are broadly based on the density of the

housing types.

‘Separate house’ includes all free-standing dwellings separated from neighboring dwellings by a gap of at least half a metre.

‘Medium density’ includes all semi-detached, row, terrace, townhouses and villa units, plus flats and apartments in blocks of 1 or 2 storeys, and flats attached to houses.

‘High density’ includes flats and apartments in 3 storey and larger blocks.

‘Caravans, cabins, houseboats’ includes all such mobile accommodation, both inside and outside caravan parks.

‘Other’ includes houses and flats attached to shops or offices, and improvised homes, tents and sleepers out on Census night.

Unoccupied dwellings are shown separately in the table.

The Census classification for dwelling structure is based on the ABS Standard Dwelling Classification.

Lithgow City Council

COMMUNITY PROFILE

2006 and 2001 Enumerated Census information for:

Portland

The Lithgow City Council Community Profile is designed to inform community groups, Council, investors, business, students and the general public. To achieve this, the Profile is formatted to present the data in simple, clear tables and charts with concise factual commentary. The Community Profile is based on the 2006 Census of Population and Housing published by the Australian Bureau of Statistics.

profile.id®

.id

Contents:

How many people live here? 3

Introduction and summary 3
Key Statistics 4
How old are we? 5
What is our individual income? 7
What is our household income? 9
What are our qualifications? 11
What is the highest secondary school year we have completed? 13
What is our employment status? 15
What industries do we work in? 17
What are our occupations? 19
How do we get to work? 21
What type of households do we live in? 23
How many people live in each household? 26
Are we owners, renters or buyers? 28
What type of dwellings do we live in? 30

Explanatory notes 32

Geography notes 32
Data notes 33
Specific notes 36

DISCLAIMER: Whilst all due care has been taken to ensure the content of this report is accurate and Current, there may be errors or omissions in it and no legal responsibility is accepted for the information and opinions in this website.

Copyright © id.consulting pty ltd - www.id.com.au 2010

Date created: 17/09/2010

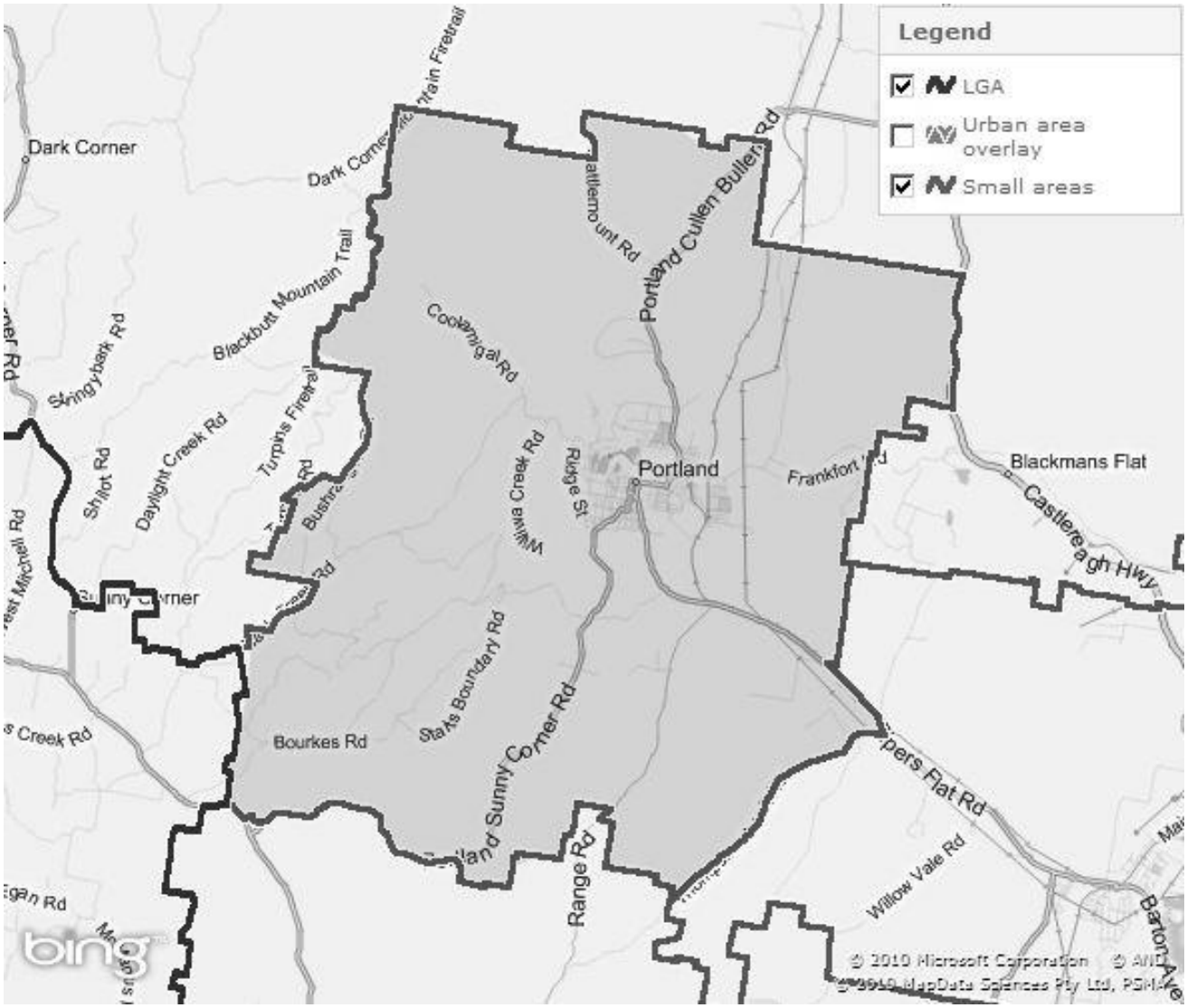
Portland

Introduction and summary (Map and key statistics)

Portland encompasses a township area, some industrial land use, and surrounding rural areas. Portland is bounded by the localities of Dark Corner and Cullen Bullen in the north, the Castlereagh Highway, the localities of Blackmans Flat and Wallerawang, Pipers Flat Road and Thompsons Creek Road in the east, the locality of Meadow Flat and Portland-Sunny Corner Road in the south, and the Bathurst Regional Council area, the locality of Dark Corner and Daylight Creek in the west. Portland is believed to be named after the Isle of Portland in Dorset, England or possibly after the Portland cement making process.

Settlement of the area dates from the 1830s, although population was minimal until the 1860s, when limestone was first mined. Growth took place during the late 1800s and early 1900s as the township developed, spurred by industrial growth, the opening of a cement factory, and the extension of the railway line. Expansion continued during the immediate post-war years. The population declined slightly during the 1990s, impacted by the closing of the cement factory. The population was then was relatively stable between 2001 and 2006, a result of few new dwellings being added to the area and a decline in the average number of persons living in each dwelling. Rural land is used largely for sheep and cattle grazing and coal mining.

Major features of the area include Mount Piper Power Station & Energy Expo, Portland Golf Club, Portland & District Olympic Pool, The Glen or Charlie Pinch Museum, Portland Town Common, Kremer Park, Portland Showground, Roxburgh Street Reserve, Thompson Street Reserve, Sunny Corner State Forest, Williwa Creek and two schools.



Portland:	**Land Area:** 9,894 hectares	**Density:** 0.22 people per hectare (2006)

Portland

Introduction and summary (Map and key statistics)

The 'Key statistics' table presented below contains summary statistics for Portland. By default the table displays 2001 and 2006 data as both absolute numbers and percentages (where applicable), along with the change in number between these years.

Key statistics(summary statistics)	Portland						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Enumerated population, including overseas visitors							
Total population (a)	2,135	100.0	100.0	2,105	100.0	100.0	30
Males (a)	1,088	50.9	49.4	1,058	50.3	49.6	30
Females (a)	1,047	49.1	50.6	1,047	49.7	50.4	1
Overseas visitors	3	0.1	0.4	3	0.1	0.5	0
Enumerated population, excluding overseas visitors							
Total population (b)	2,132	100.0	100.0	2,105	100.1	100.0	27
Males (b)	1,088	51.0	49.4	1,058	50.3	49.6	30
Females (b)	1,044	49.0	50.6	1,047	49.8	50.4	-2
Population characteristics							
Indigenous population	70	3.3	3.9	64	3.1	3.4	5
Australian born	1,761	82.6	83.8	1,848	87.9	84.5	-87
Overseas born	153	7.2	10.3	128	6.1	10.2	25
Australian citizens	1,857	87.1	91.1	1,954	93.0	92.2	-96
Australian citizens aged 18+	1,411	66.2	68.4	1,428	68.0	67.9	-18
Institutional population	25	1.2	3.9	22	1.0	3.6	3
Age structure							
Infants 0 to 4 years	127	6.0	6.2	150	7.1	6.7	-23
Children 5 to 17 years	394	18.5	18.6	429	20.4	19.6	-35
Adults 18 to 64 years	1,270	59.6	58.7	1,217	57.9	58.6	54
Mature adults 65 to 84 years	311	14.6	14.6	267	12.7	13.7	43
Senior citizens 85 years and over	34	1.6	1.9	17	0.8	1.5	18
Households and dwellings							
Owned	390	45.1	38.3	436	53.7	44.4	-47
Purchasing	240	27.7	28.7	201	24.7	22.7	39
Renting	141	16.3	26.2	116	14.2	25.3	25
Households (occupied private dwellings)	864	--	--	813	--	--	51
Persons counted in households	2,113	--	--	2,084	--	--	29
Average household size (persons)	2.45	--	--	2.56	--	--	-0.12
Total Dwellings	991	100.0	100.0	953	100.0	100.0	38

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the

Portland

How old are we? (Age structure)

Derived from the Census question, *'What is the person's date of birth (or age last birthday)?'*

The Age Structure of the population is the most widely used component of the Census. It is an indicator of an area's residential role and function and how it is likely to change in the future. The age structure of a population is usually indicative of an area's era of settlement and provides key insights into the level of demand for services and facilities (as most services and facilities are age-specific).

To get a more complete picture of the demographic characteristics of an area the age structure should be viewed in conjunction with Households and Family types.

Age structureage group (years)	Portland						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
0 to 4	127	6.0	6.2	150	7.2	6.7	-23
5 to 11	208	9.7	9.7	227	10.9	10.6	-19
12 to 17	186	8.7	8.9	203	9.7	9.0	-17
18 to 24	103	4.8	8.1	141	6.8	8.0	-38
25 to 34	239	11.2	10.8	231	11.1	12.0	8
35 to 49	457	21.4	20.9	463	22.3	21.6	-6
50 to 59	321	15.0	13.5	270	13.0	12.1	51
60 to 69	256	12.0	10.2	215	10.3	9.2	41
70 to 84	205	9.6	9.9	165	7.9	9.4	41
85 and over	34	1.6	1.9	17	0.8	1.5	18
Total	2,136	100.0	100.0	2,080	100.0	100.0	56

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of the age structure of Portland in 2006 compared to Regional New South Wales shows that there was a similar proportion of people in the younger age groups (0 to 17) but a larger proportion of people in the older age groups (60+).

Overall, 24.4% of the population was aged between 0 and 17, and 23.2% were aged 60 years and over, compared with 24.8% and 22.0% respectively for Regional New South Wales.

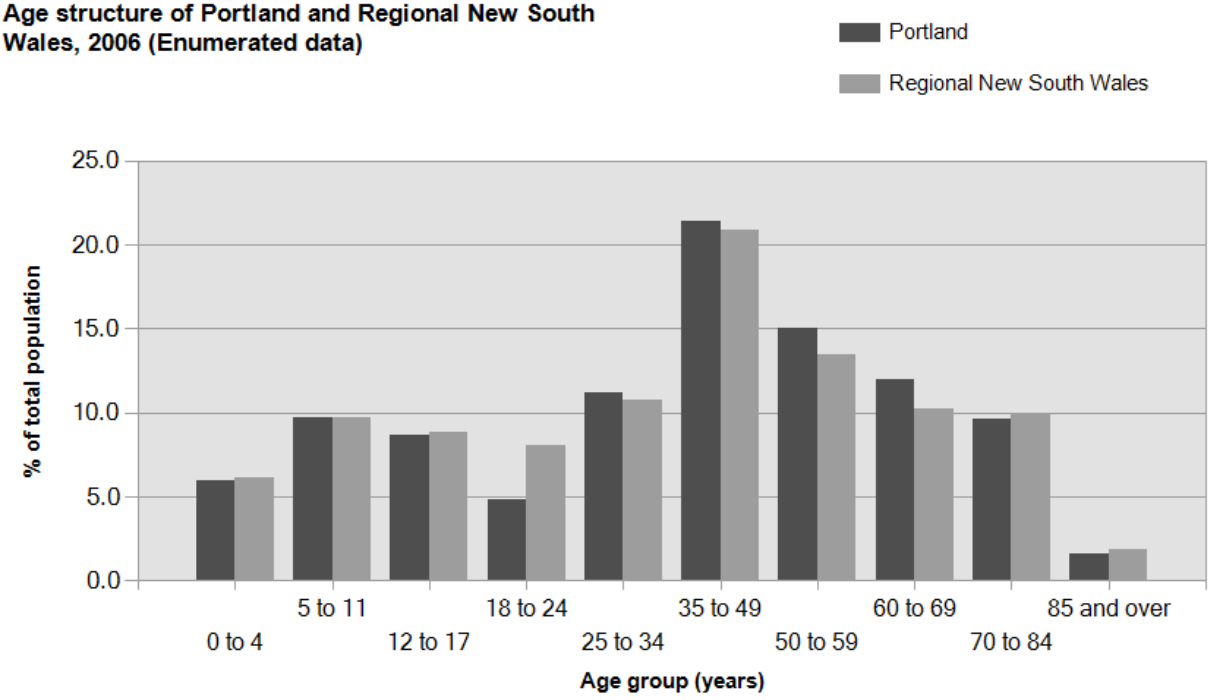
The major differences between the age structure of Portland and Regional New South Wales were:

- A *larger* percentage of 60 to 69 year olds (12.0% compared to 10.2%);
- A *larger* percentage of 50 to 59 year olds (15.0% compared to 13.5%), and;
- A *smaller* percentage of 18 to 24 year olds (4.8% compared to 8.1%).

The largest change in age structure in this area between 2001 and 2006 was in the age group:

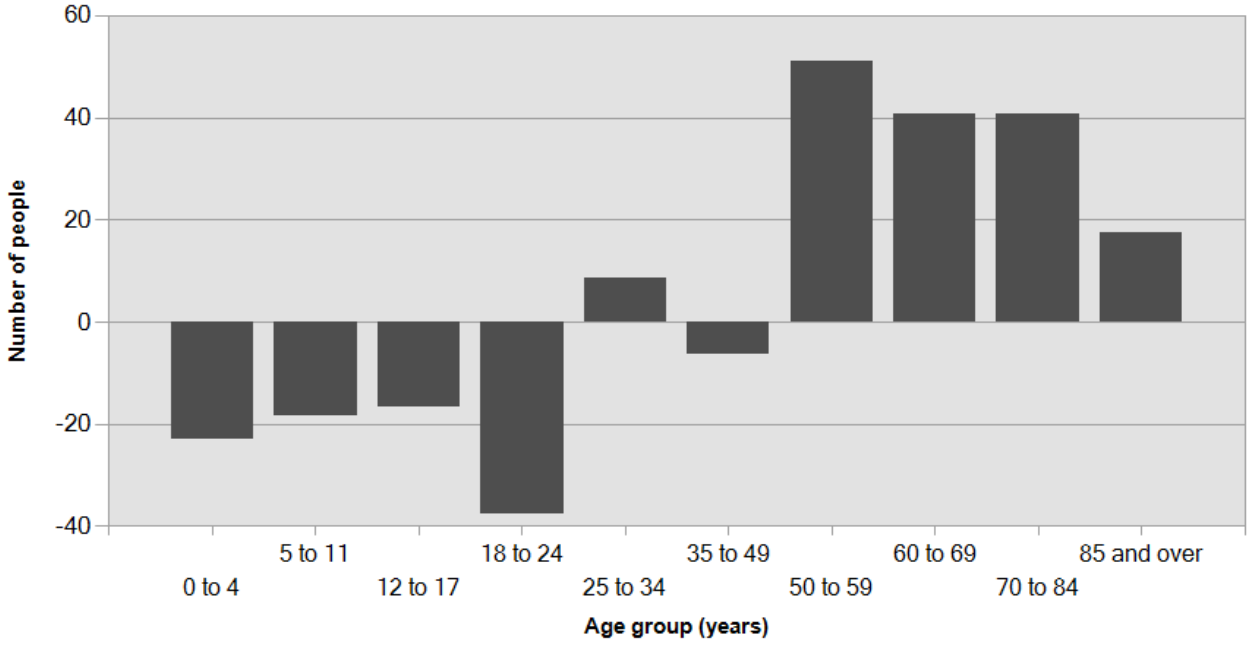
- 50 to 59 (+51 persons).

Age structure of Portland and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in age structure of Portland, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Portland

What is our individual income? (Weekly individual income)

Weekly individual income 2006

Derived from the Census question, *'What is the total of all wages/salaries, government benefits, pensions, allowances and other income the person usually receives?'* This is the gross amount and relates only to persons aged 15 years or more.

Individual Income is an indicator of socio-economic status. With other data sources, such as Household Income, Educational Qualifications and Occupation, it helps to evaluate the economic opportunities and socio-economic status of an area. The amount of income an individual receives is linked to a number of factors including the person's:

- employment status;
- age (as for instance students and retirees often receive a lower income);
- qualifications; and
- the type of employment undertaken by the person.

It is interesting to view individual income data in relation to both household income and number of persons usually resident. Areas with relatively high household income may be the result of multiple earners in the household contributing to that household income, so it is possible that some areas that have relatively high household incomes will have relatively low levels of individual income.

To enable a comparison of Individual Income levels of an area over time, Individual Income quartiles have been calculated and presented in the 'Individual income quartiles tab'.

Weekly individual incomeincome groups (persons)	Portland		
	2006		
Enumerated data	number	%	Regional New South Wales %
negative/nil income	118	6.9	6.4
$1 to $149	118	6.9	7.1
$150 to $249	373	21.8	17.8
$250 to $399	282	16.5	16.1
$400 to $599	188	11.0	14.8
$600 to $799	124	7.3	9.9
$800 to $999	85	5.0	6.5
$1,000 to $1,299	93	5.4	6.1
$1,300 to $1,599	48	2.8	3.7
$1,600 to $1,999	39	2.3	1.9
$2,000 or more	30	1.8	2.0
not stated	214	12.5	7.7
Total	1,712	100.0	100.0

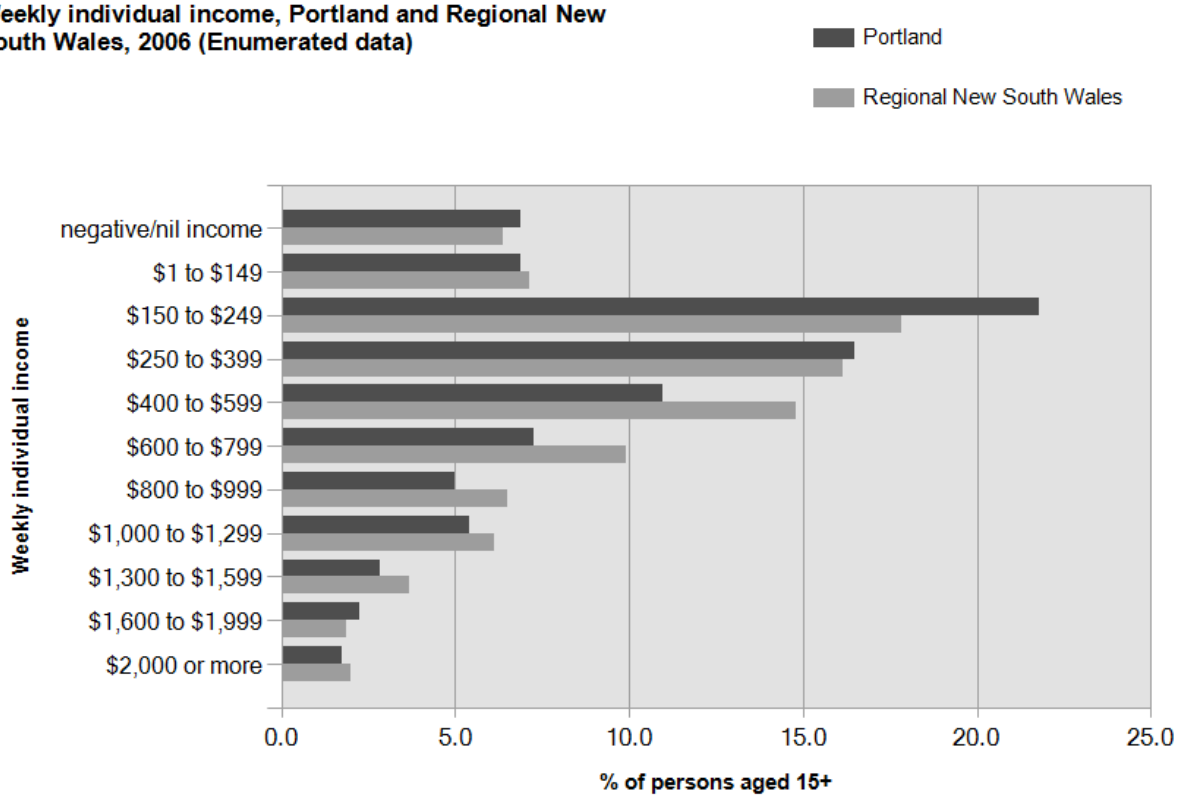
Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of individual income levels in Portland in 2006 compared to Regional New South Wales shows that there was a smaller proportion of persons earning a high income (those earning $1,000 per week or more) but a larger proportion of low income persons (those earning less than $400 per week).

Overall, 12.3% of the population earned a high income, and 52.1% earned a low income, compared with 13.7% and 47.4% respectively for Regional New South Wales.

Weekly individual income, Portland and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Portland

What is our household income? (Weekly household income)

Weekly household income 2006

Derived from the Census question, *'What is the total of all wages/salaries, government benefits, pensions, allowances and other income the person usually receives?'.* This is the gross amount and relates only to persons aged 15 years or more.

Household Income is one of the most important indicators of socio-economic status. With other data sources, such as Educational Qualifications and Occupation, it helps to evaluate the economic opportunities and socio-economic status of an area. The amount of income a household generates is linked to a number of factors:

- the number of workers in the household;
- the percentage of people unemployed or on other income support benefits; and
- the type of employment undertaken by the household members.

Note: It is important to remember that households vary in size, so that some areas have a greater number of dependents per income generated than others. If the area has a large number of retirees then this will produce a higher proportion of households with low income. This is not necessarily a measure of retirees' affluence, as retirees often have capital resources. Refer to the Age Structure section to understand this element.

To enable a comparison of Household Income levels of an area over time, Household Income quartiles have been calculated and presented in the 'Household income quartiles tab'.

Weekly household incomeincome groups (households)	Portland	2006	
Enumerated data	number	%	Regional New South Wales %
Negative / Nil income	3	0.4	1.1
$1 to $149	16	2.0	1.6
$150 to $249	79	9.9	6.5
$250 to $349	81	10.2	8.9
$350 to $499	80	10.1	7.1
$500 to $649	76	9.5	12.7
$650 to $799	53	6.7	6.6
$800 to $999	46	5.9	6.9
$1000 to $1199	78	9.8	10.5
$1200 to $1399	32	4.0	5.2
$1400 to $1699	49	6.2	6.4
$1700 to $1999	33	4.1	4.9
$2000 to $2499	29	3.7	4.5
$2500 to $2999	36	4.5	3.3
$3000 or more	13	1.6	2.6
Partial income stated	59	7.4	7.7
All incomes not stated	30	3.8	3.4
Total	792	100.0	100.0

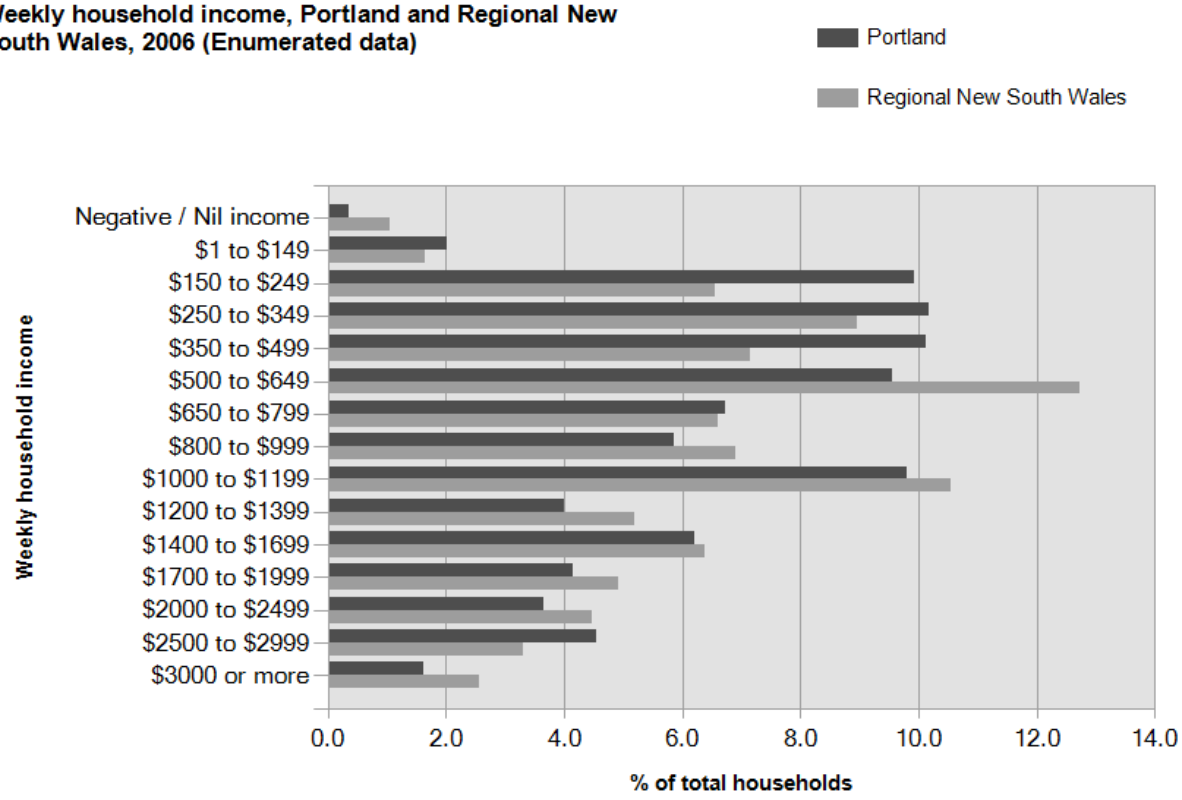
Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of household income levels in Portland in 2006 compared to Regional New South Wales shows that there was a similar proportion of high income households (those earning $1,700 per week or more) but a larger proportion of low income households (those earning less than $500 per week).

Overall, 13.9% of the households earned a high income, and 32.6% were low income households, compared with 15.3% and 25.2% respectively for Regional New South Wales.

Weekly household income, Portland and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Portland

What are our qualifications? (Highest education qualification achieved)

Derived from the Census question, *'What is the level of the highest qualification the person has completed?'* and relates only to persons aged 15 years or more.

Educational Qualifications are one of the most important indicators of socio-economic status. With other data sources, such as Income and Occupation, Educational Qualifications help to evaluate the economic opportunities and socio-economic status of an area. Level of Educational Qualifications in a population relate to a number of factors including:

- the age of the population (e.g. older people tend to have more vocational qualifications, while people in their twenties and thirties are more likely to have a university degree);
- the professional or working ambitions of people (to seek education as youth or retraining as adults);
- the opportunities afforded to people to continue studying beyond compulsory schooling.

Highest qualification achieved (persons aged 15 years and over)	Portland	2006		2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Bachelor or Higher degree	68	4.0	10.4	57	3.5	8.6	11
Advanced Diploma or Diploma	57	3.3	6.2	44	2.7	5.2	13
Vocational	329	19.2	20.1	277	17.1	18.2	52
No qualifications	949	55.5	50.3	1,050	64.7	56.2	-101
Not Stated	307	18.0	12.9	195	12.0	11.8	112
Total	1,710	100.0	100.0	1,623	100.0	100.0	87

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of the qualifications of the population in Portland in 2006 compared to Regional New South Wales shows that there was a smaller proportion of people holding formal qualifications (Bachelor or higher degree; Advanced Diploma or Diploma; or Vocational qualifications) and a larger proportion of people with no formal qualifications.

Overall, 26.5% of the population held educational qualifications, and 55.5% had no qualifications, compared with 36.7% and 50.3% respectively for Regional New South Wales.

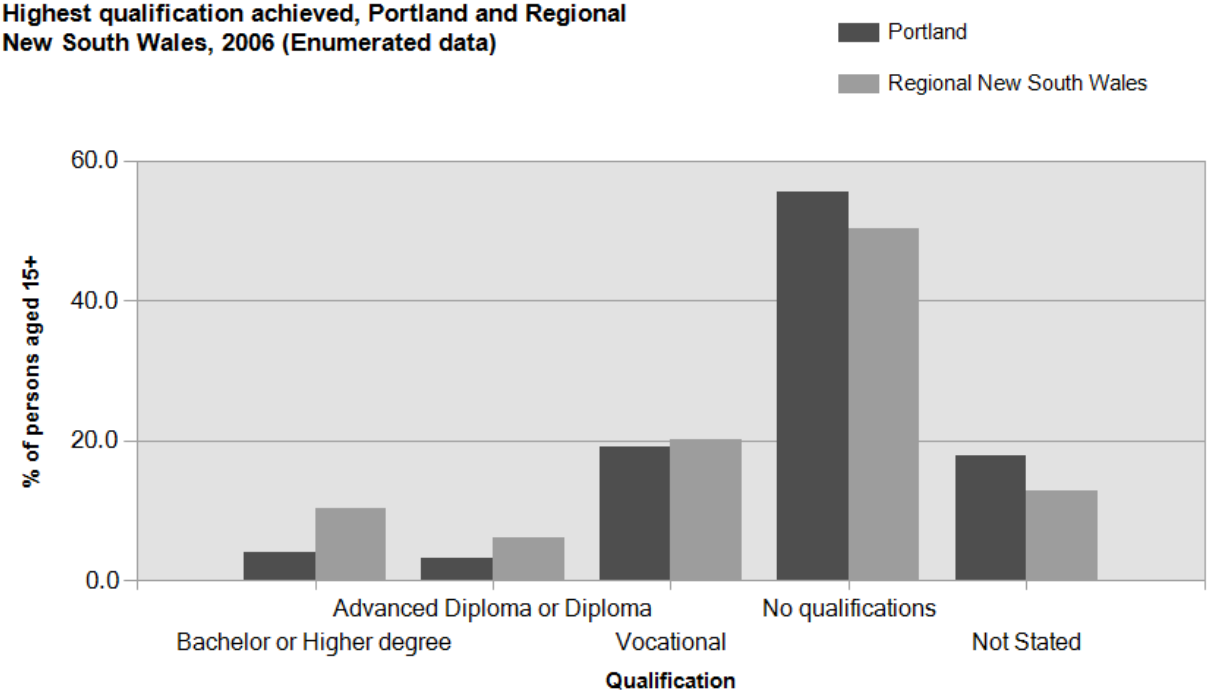
The major difference between the qualifications held by the population in Portland and Regional New South Wales was:

- A *smaller* percentage of people with Bachelor or Higher degrees (4.0% compared to 10.4%).

The largest changes in the qualifications of the population in Portland between 2001 and 2006 were in those with:

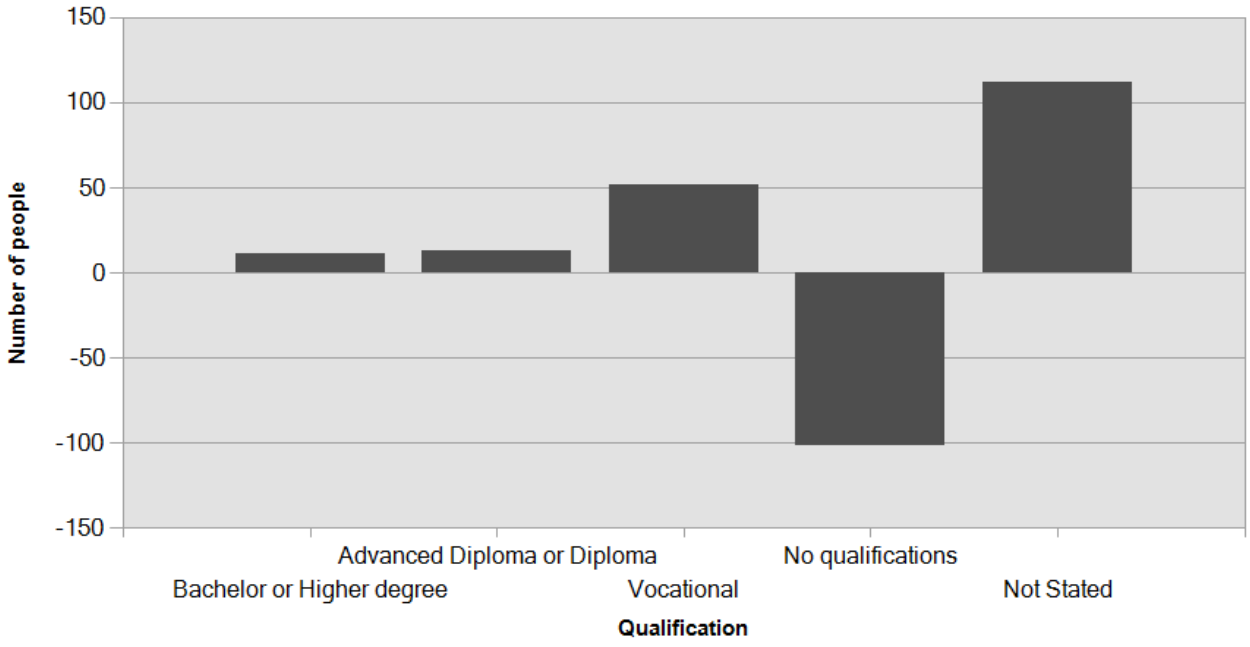
- Vocational qualifications (+52 persons), and;
- No qualifications (-101 persons).

Highest qualification achieved, Portland and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in highest qualification achieved, Portland, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Portland

What is the highest secondary school year we have completed? (Highest level of schooling completed)

Derived from the Census question, '*What is the highest year of primary or secondary school the person has completed?*' and relates only to persons aged 15 years or more.

The Year of Schooling data is a useful indicator of socio-economic status of an area. With other indicators, such as proficiency in English, the data informs planners and decision-makers as to people's ability to access services. Combined with Educational Qualifications it also allows assessment of the skill base of the population. The reasons for differences in Year of Schooling completed across areas are linked to a number of factors including:

- the age of the population, as over time there has been a greater emphasis on acquiring higher education in order to find employment;
- the working and social aspirations of the population; and
- a lack of access to further education opportunities due to financial constraints or distance to schools.

Unfortunately this data is only available for 2006 as there is no comparable data for previous Census years. Please see specific data notes for further detail.

Highest level of schooling completed(persons aged 15 years and over)	Portland		
	2006		
Enumerated data	number	%	Regional New South Wales %
Year 8 or below	184	10.7	8.4
Year 9 or equivalent	208	12.1	11.0
Year 10 or equivalent	635	37.1	33.0
Year 11 or equivalent	117	6.8	6.9
Year 12 or equivalent	316	18.4	31.0
Did not go to school	0	0	0.5
Not Stated	254	14.8	9.2
Total	1,713	100.0	100.0

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

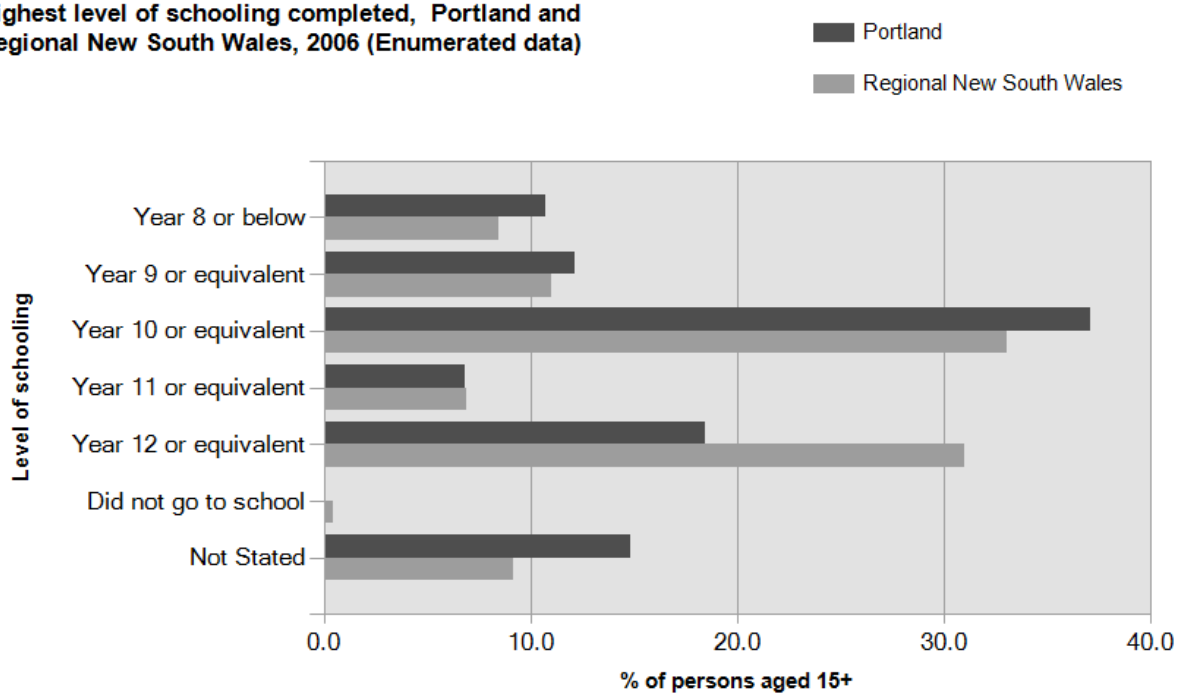
Analysis of the highest level of schooling attained by the population in Portland in 2006 compared to Regional New South Wales shows that there was a larger proportion of people who had left school at an early level (Year 10 or less) but a smaller proportion of people who completed Year 12 or equivalent.

Overall, 59.9% of the population left school at Year 10 or below, and 18.4% went on to complete Year 12 or equivalent, compared with 52.4% and 31.0% respectively for Regional New South Wales.

The major differences between the level of schooling attained by the population in Portland and Regional New South Wales were:

- A *larger* percentage of people who left school at Year 10 or equivalent (37.1% compared to 33.0%);
- A *larger* percentage of people who left school at Year 8 or below (10.7% compared to 8.4%), and;
- A *smaller* percentage of people who left school at Year 12 or equivalent (18.4% compared to 31.0%).

Highest level of schooling completed, Portland and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Portland

What is our employment status? (Employment status)

Derived from the Census question, *'Last week did the person have a full time or part time job of any kind?'* and relates only to persons aged 15 years or more.

The Employment Status of the population is an important indicator of the socio-economic status of an area. It represents the share of the population that is employed full-time, part-time or unemployed, as well as changes over time in the labour force. Employment Status is linked to a number of factors:

- the age structure of the population, which for example influences the number of persons in the workforce (i.e. population 15 years or more) or retired (i.e. population over 60 years);
- the economic base and employment opportunities available in the area; and
- the education and skill base of the population.

Census Employment Status data should be analysed in conjunction with Income, Occupation and Education Qualifications data to identify the relative socio-economic status of an area.

Employment status(persons aged 15 years and over)	Portland	2006		2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Employed full time	456	56.5	56.6	454	58.1	56.2	2
Employed part time	253	31.3	33.8	232	29.7	31.7	21
Employed not stated	23	2.8	2.6	26	3.3	2.8	-3
Total employed	732	90.6	93.0	711	91.1	90.7	21
Total unemployed	76	9.4	7.0	70	8.9	9.3	6
Total labour force	808	100.0	100.0	781	100.0	100.0	27
Total in labour force	808	47.2	56.1	781	48.7	55.6	27
Total not in labour force	721	42.1	38.6	757	47.2	40.5	-36
Not stated	185	10.8	5.3	66	4.1	3.9	118
Total	1,713	100.0	100.0	1,604	100.0	100.0	109

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

The size of Portland's labour force in 2006 was 808 persons, of which 253 were employed part-time (31.3%) and 456 were full time workers (56.5%).

Analysis of the employment status of the population in Portland in 2006 compared to Regional New South Wales shows that there was a smaller proportion in employment, and a larger proportion unemployed.

Overall, 90.6% of the labour force was employed (42.7% of the population aged 15+), and 9.4% unemployed (4.4% of the population aged 15+), compared with 93.0% and 7.0% respectively for Regional New South Wales.

Between 2001 and 2006, the number of people employed in Portland showed an increase of 21 persons and the number unemployed showed an increase of 6 persons.

The labour force participation rate refers to the proportion of the population over 15 years of age that was employed or actively looking for work. "The labour force is a fundamental input to domestic production. Its size and composition are therefore crucial factors in economic growth. From the viewpoint of social development, earnings from paid work are a major influence on levels of economic well-being." (Australian Bureau of Statistics, Australian Social Trends 1995).

Analysis of the labour force participation rate of the population in Portland in 2006 shows that there was a smaller proportion in the labour force (47.2%) compared with Regional New South Wales (56.1%).

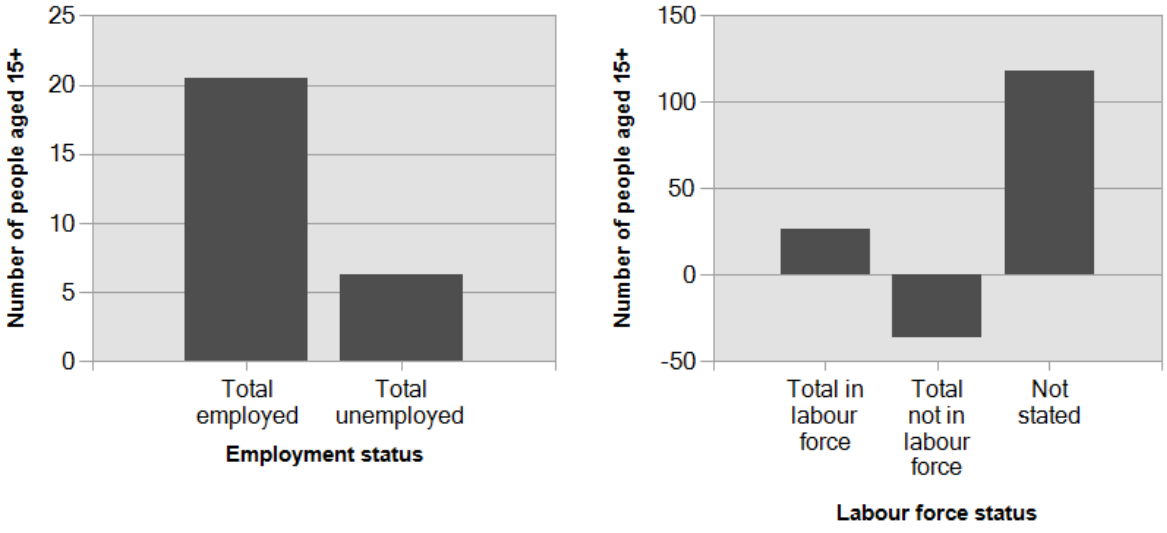
Between 2001 and 2006 in Portland the number of people in the labour force showed an increase of 27 people, or 3.5%.

Employment and labour force status, Portland and the Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in employment and labour force status, Portland, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Portland

What industries do we work in? (Industry)

2006 industry categories

Derived from the two Census questions, *'[What] best describes the business of [your] employer?'* and *'What are the main goods produced or main services provided by [your] employer's business?'* and relates only to persons aged 15 years or more.

The Industry data identifies the industries in which the residents of an area work (this may be within the residing area or elsewhere). The Industry Structure of the work force is indicative of the skill base and (to some extent) the socio-economic status and industry structure of an area.

The industries that are prominent in an area are strongly related to a range of factors including:

- the economic base and employment opportunities available in the general region;
- the educational levels of the local population; and
- the working and social aspirations of the population.

Industries are classified by grouping businesses which carry out similar productive activities. The 2006 Australian and New Zealand Standard Industrial Classification (ANZSIC) provides the current framework for industry classification in Australia. This classification provides a contemporary and internationally comparable industrial classification system which includes information about "new economy" industries such as Information, Media and Telecommunications. As this is a new classification *only 2006 data is available*.

Time series industry data (based on the 1993 ANZSIC classification) is available in the tab above named 'Time series industries'.

Industry, 2006 ANZSIC(employed persons)	Portland	2006	
Enumerated data	number	%	Regional New South Wales %
Agriculture, Forestry & Fishing	30	4.1	6.9
Mining	75	10.2	1.7
Manufacturing	80	10.9	9.2
Electricity, Gas, Water and Waste Services	61	8.3	1.3
Construction	41	5.6	7.8
Retail Trade	72	9.9	12.3
Wholesale Trade	16	2.2	3.1
Accommodation and Food Services	48	6.6	7.5
Transport, Postal and Warehousing	35	4.8	4.3
Information Media and Telecommunications	1	0.2	1.2
Financial and Insurance Services	5	0.7	2.3
Rental, Hiring and Real Estate Services	1	0.1	1.5
Professional, Scientific and Technical Services	24	3.2	4.4
Administrative and Support Services	20	2.7	2.5
Public Administration and Safety	63	8.6	6.9
Education and Training	39	5.3	8.2
Health Care and Social Assistance	75	10.2	11.5
Arts and Recreation Services	10	1.4	1.2
Other Services	17	2.3	3.9
Inadequately described or Not stated	21	2.8	2.3
Total	**732**	**100.0**	**100.0**

Source: Australian Bureau of Statistics, Census of Population and Housing 2006.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

An analysis of the jobs held by the resident population in Portland in 2006 shows the three most popular industry sectors were:

- Manufacturing (80 persons or 10.9%)
- Health Care and Social Assistance (75 persons or 10.2%)
- Mining (75 persons or 10.2%)

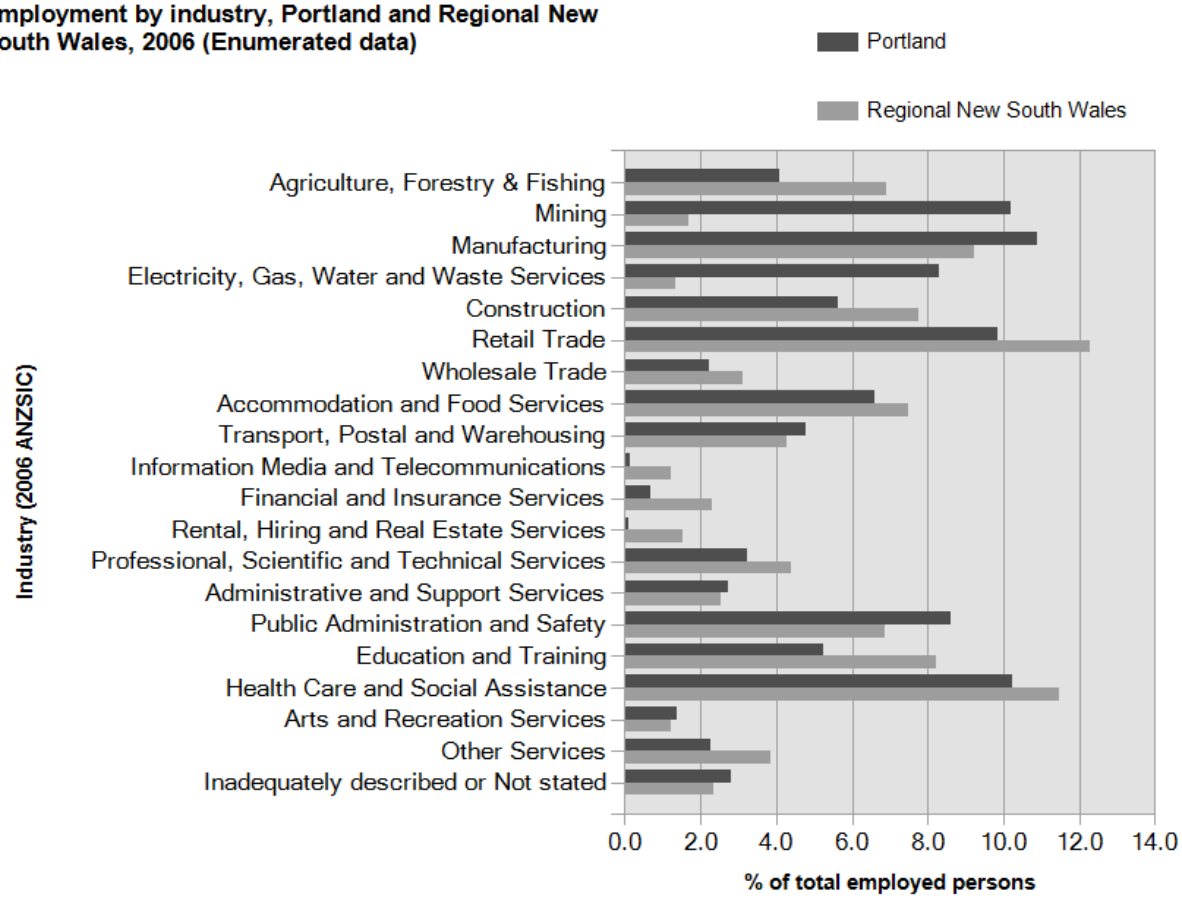
In combination these three industries employed 230 people in total or 31.3% of the employed resident population.

In comparison, Regional New South Wales employed 9.2% in Manufacturing; 11.5% in Health Care and Social Assistance; and 1.7% in Mining.

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

- A *larger* percentage persons employed in Mining (10.2% compared to 1.7%);
- A *larger* percentage persons employed in Electricity, Gas, Water and Waste Services (8.3% compared to 1.3%);
- A *smaller* percentage persons employed in Education and Training (5.3% compared to 8.2%), and;
- A *smaller* percentage persons employed in Agriculture, Forestry & Fishing (4.1% compared to 6.9%).

Employment by industry, Portland and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Portland

What are our occupations? (Occupation)

2006 occupation categories

Derived from the two Census questions, *'In the main job held last week, what was the person's occupation?'* and *'What are the main tasks that the person himself/herself usually performs in that occupation?'* and relates only to persons aged 15 years or more.

The Occupation data identifies the occupations in which the residents of an area work (this may be within the residing area or elsewhere). The occupational structure of the work force is an important indicator of the characteristics of the labour force. With other indicators, such as Educational Qualifications and Income, Occupation is a key component of evaluating the socio-economic status and skill base of an area. The occupations held by a workforce are linked to a range of factors including:

- the economic base and employment opportunities available in the area;
- the educational qualification levels of the population; and
- the working and social aspirations of the population.

Occupations are classified using a combination of skill level and skill specialisation to form meaningful groups. The 2006 Australian and New Zealand Standard Classification of Occupations (ANZSCO) provides the current framework for occupation classification in Australia. This classification provides a contemporary occupation classification system. As this is a new classification *only 2006 data is available*.

Time series occupation data (based on the ASCO Second Edition classification) is available in the tab above named 'Time series occupations'.

Occupation, 2006 ANZSCO(employed persons)	Portland		
	2006		
Enumerated data	number	%	Regional New South Wales %
Managers	64	8.8	14.4
Professionals	62	8.5	16.4
Technicians and Trades Workers	141	19.2	15.4
Community and Personal Service Workers	83	11.4	9.7
Clerical and Administrative Workers	81	11.1	12.9
Sales Workers	51	7.0	10.1
Machinery Operators And Drivers	112	15.3	7.3
Labourers	120	16.4	12.3
Inadequately described or Not stated	18	2.4	1.6
Total	**732**	**100.0**	**100.0**

Source: Australian Bureau of Statistics, Census of Population and Housing 2006.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

An analysis of the occupations held by the resident population in Portland in 2006 shows the three most popular occupations were:

- Technicians and Trades Workers (141 persons or 19.2%)
- Labourers (120 persons or 16.4%)
- Machinery Operators And Drivers (112 persons or 15.3%)

In combination these three occupations accounted for 372 people in total or 50.9% of the employed resident population.

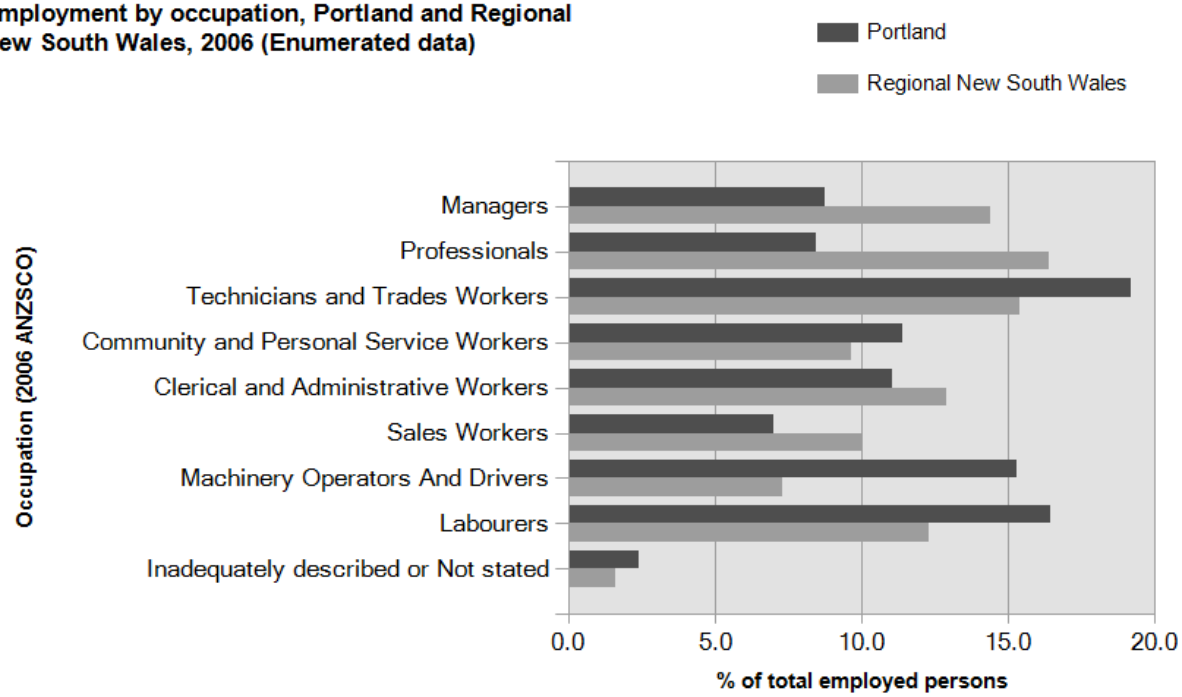
In comparison, Regional New South Wales employed 15.4% as Technicians and Trades Workers; 12.3%

as Labourers; and 7.3% as Machinery Operators And Drivers.

The major differences between the occupations of the population of Portland and Regional New South Wales were

- A *larger* percentage persons employed as Machinery Operators And Drivers (15.3% compared to 7.3%);
- A *larger* percentage persons employed as Labourers (16.4% compared to 12.3%);
- A *smaller* percentage persons employed as Professionals (8.5% compared to 16.4%), and;
- A *smaller* percentage persons employed as Managers (8.8% compared to 14.4%).

Employment by occupation, Portland and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Portland

How do we get to work? (Method of travel to work)

Derived from the Census question, *'How did the person get to work on Tuesday, 8 August 2006?'* and relates only to persons aged 15 years or more.

This data reveals the main Modes of Transport used by residents to get to work. This data is very useful in transport planning as it informs decision-makers on the effectiveness and availability of local public transport. There are a number of reasons why people use different Modes of Transport to get to work including:

- the availability of affordable and effective public transport options;
- the number of motor vehicles available within a household; and
- the travel distance to work, which for example, can allow people to walk or bicycle to their place of employment.

Note that respondents to the Census can nominate up to three methods of travel. The data presented here include people using multiple methods, but shows only one method. A hierarchy is used in which public transport is assumed to be the dominant mode if it is used. Hence people driving their car to a station or taking a taxi to the ferry are included under "Train" and "Tram or Ferry" respectively, rather than "Car" or "Taxi".

Travel to work(includes multi-mode journeys)	Portland	2006		2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Train	0	0	0.8	3	0.4	0.9	-3
Bus	0	0	0.8	6	0.8	1.0	-6
Tram or Ferry	0	0	0	0	0	0	0
Taxi	0	0	0.2	0	0	0.2	0
Car - as driver	467	64.0	61.6	455	63.3	58.2	12
Car - as passenger	52	7.1	6.6	56	7.8	7.2	-4
Truck	18	2.5	2.0	17	2.3	2.6	1
Motorbike	8	1.0	0.7	3	0.4	0.8	5
Bicycle	3	0.4	0.8	5	0.7	0.9	-2
Walked only	17	2.3	4.7	23	3.2	4.9	-7
Other	4	0.5	1.2	9	1.2	1.7	-5
Worked at home	36	4.9	6.4	31	4.3	7.2	5
Did not go to work	115	15.8	12.2	96	13.4	12.4	19
Not stated	11	1.4	1.9	16	2.2	1.9	-5
Total	730	100.0	100.0	720	100.0	100.0	11

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

In 2006, there were 0 people who caught public transport to work (train, bus, tram or ferry) in Portland, compared with 545 who drove in private vehicles (car –as driver, car – as passenger, motorbike, or truck).

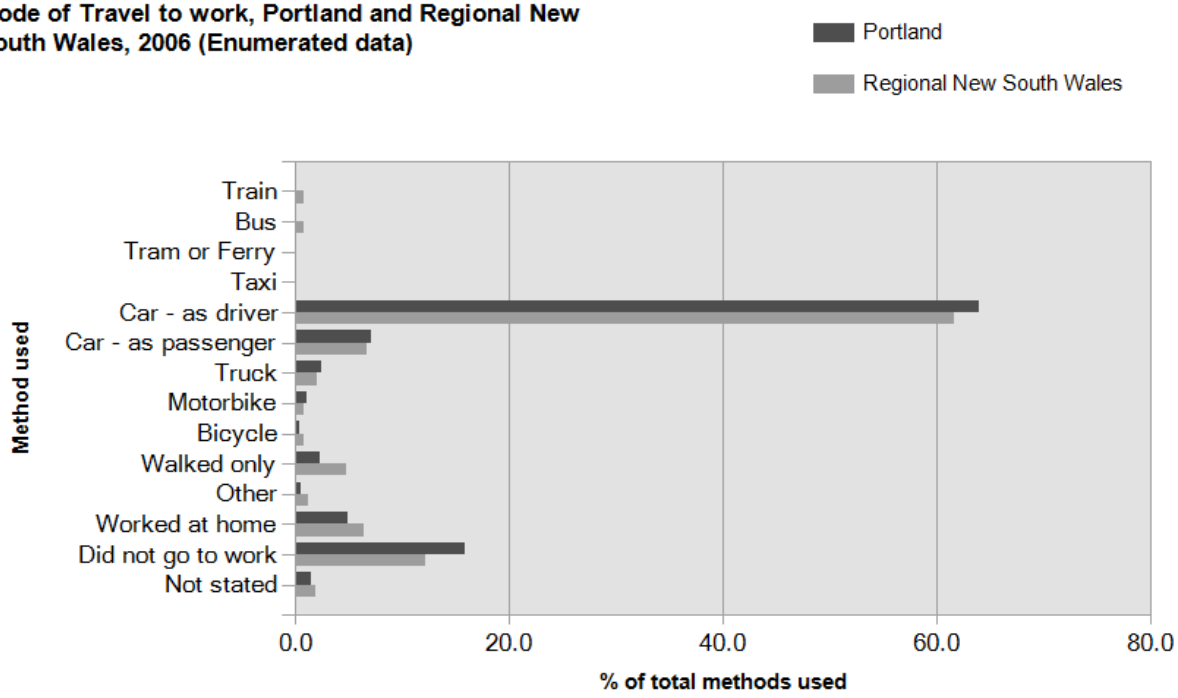
Analysis of the method of travel to work of the residents in Portland in 2006 compared to Regional New South Wales shows that 0.0% used public transport, while 74.6% used a private vehicle, compared with 1.6% and 70.9% respectively in Regional New South Wales.

The major difference between the method of travel to work of Portland and Regional New South Wales was:

- A *larger* percentage of people who did not go to work (15.8% compared to 12.2%).

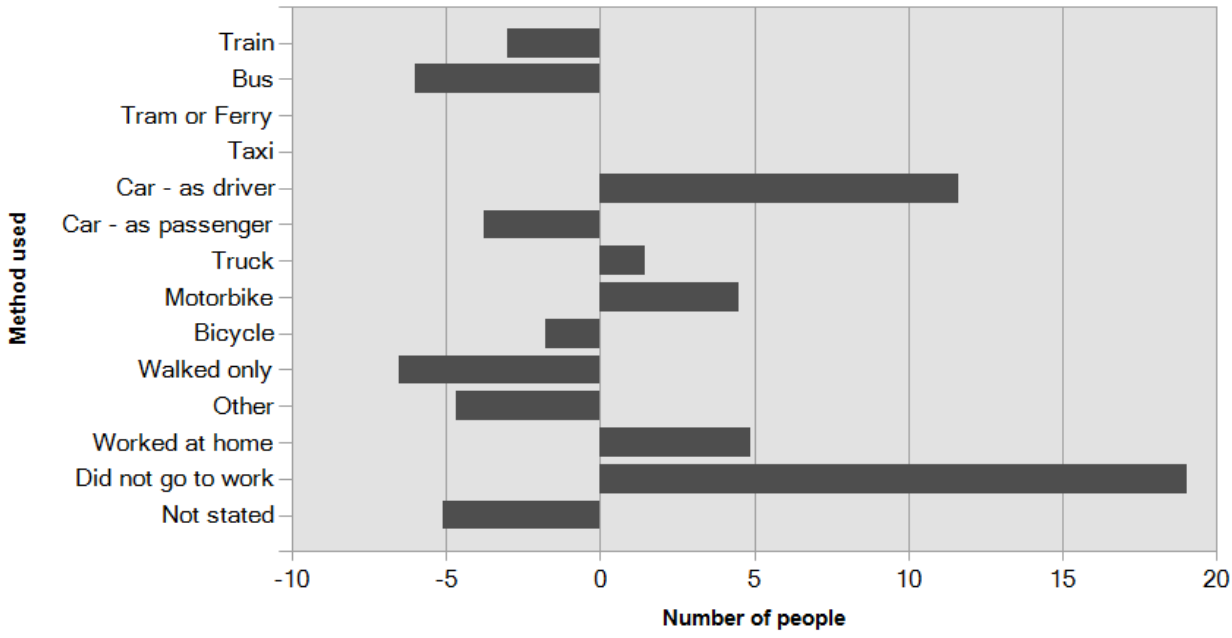
Between 2001 and 2006 there were no numerically significant changes in Portland's travel to work data.

Mode of Travel to work, Portland and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in mode of travel to work, Portland, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Portland

What type of households do we live in? (Household and family types)

Derived from the Census question, *'What is the person's relationship [to each other person in the household]?'*

The Household and Family structure of the population is an indicator of an area's residential role and function (relating to the types of housing markets attracted to the area). It is usually indicative of the area's era of settlement and provides key insights into the level of demand for services and facilities (as most services and facilities are age- and household type-specific).

To get a more complete picture of the demographic characteristics of an area, the Household and Family Type data should be viewed in conjunction with Age Structure data.

Household types(households)	Portland						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Couples with child(ren) under 15 years	168	30.4	29.0	181	31.2	31.5	-13
Couples with child(ren) 15 years and over	75	13.5	12.2	79	13.7	12.1	-5
Total couples with child(ren)	243	43.9	41.2	261	44.9	43.6	-18
One parent families with child(ren) under 15 years	32	5.7	10.1	69	11.9	10.1	-38
One parent families with child(ren) 15 years and over	36	6.5	6.7	35	6.0	6.0	1
Total one parent families	67	12.2	16.8	104	17.9	16.1	-37
Couples without child(ren)	230	41.5	40.7	200	34.4	38.9	30
Other families	14	2.4	1.3	16	2.8	1.4	-3
Total families	554	100.0	100.0	581	100.0	100.0	-27
One family households	550	63.8	68.0	551	67.8	68.2	-2
Two or more family households	1	0.1	1.0	9	1.1	0.7	-8
Total family households	551	64.0	69.0	560	68.9	68.9	-9
Lone person households	221	25.7	25.1	216	26.6	23.9	5
Group households	21	2.4	2.9	15	1.8	2.9	6
Other not classifiable households	68	7.9	2.9	22	2.7	4.3	47
Total households	861	100.0	100.0	813	100.0	100.0	48

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of the **family types** in Portland in 2006 compared to Regional New South Wales shows that there was a larger proportion of couple families with child(ren) but a smaller proportion of one-parent families.

Overall, 43.9% of total families were couple families with child(ren), and 12.2% were one-parent families, compared with 41.2% and 16.8% respectively for Regional New South Wales.

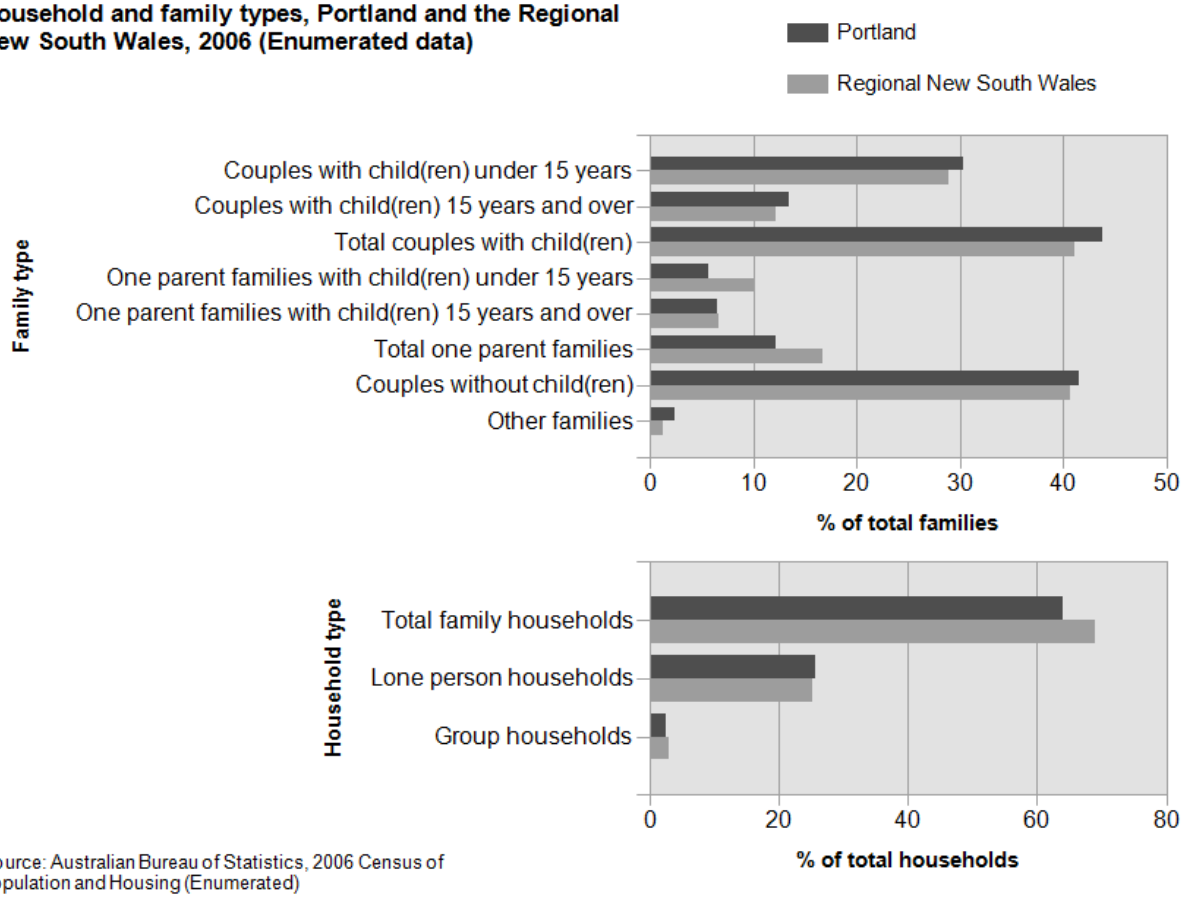
Between 2001 and 2006 there were no numerically significant changes in Portland's household types data.

Comparing **Household types** between Portland and Regional New South Wales in 2006 reveals a smaller proportion of Family households, but a similar proportion of lone person households. Family households accounted for 64.0% of total households in Portland while lone person households comprised 25.7%,

(69.0% and 25.1% respectively for Regional New South Wales).

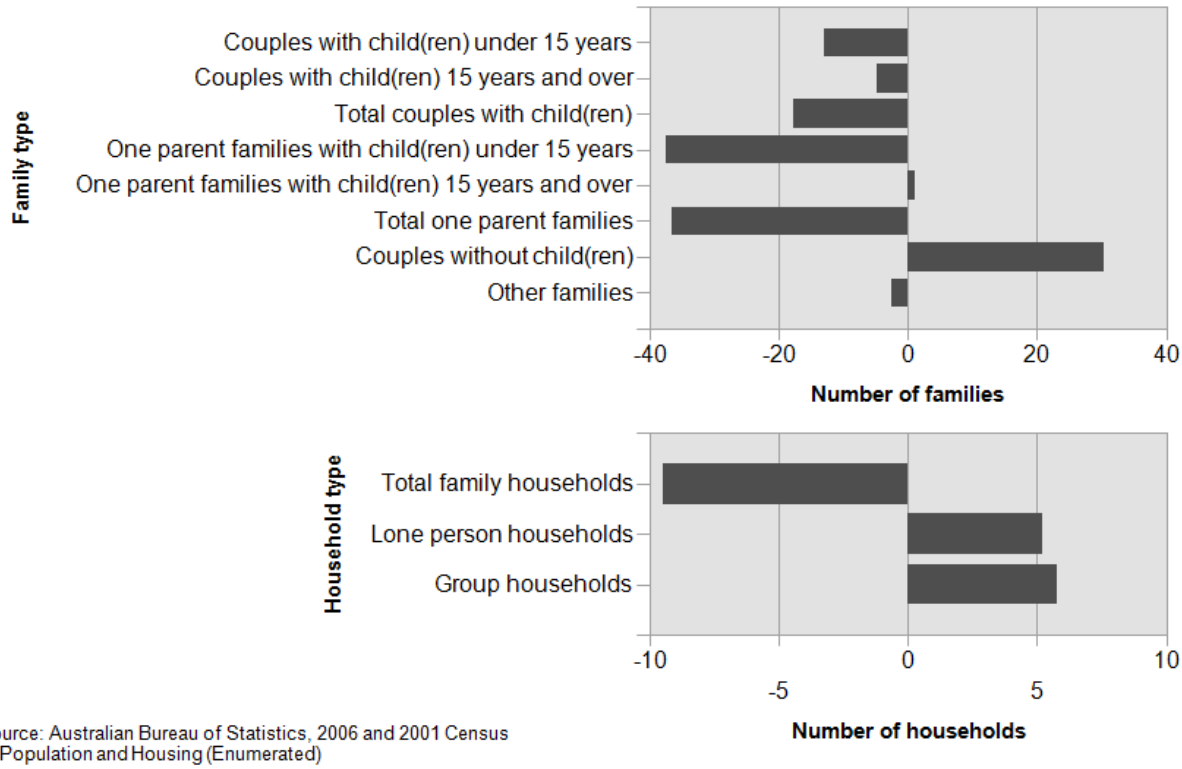
Between 2001 and 2006 in Portland, there was a decrease in the number of Family households (-9), an increase in lone person households (5) and an increase in group households (6).

Household and family types, Portland and the Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in household and family types, Portland, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Portland

How many people live in each household? (Number of persons usually resident)

Derived from the three Census questions, *'Name of each person including visitors who spent the night of Tuesday, 8 August 2006 in this dwelling*', and *'Where does the person usually live?*', and *'Are there any persons who usually live in this dwelling who were absent on Census Night (Tuesday, 8 August 2006)?*'

The size of households in general follows the life-cycle of families. Households are usually small at the stage of relationship formation (early marriage), and then increase in size with the advent of children. They later reduce in size again as these children reach adulthood and leave home. However, household size can also be influenced by a lack, (or abundance) of affordable housing. Further, overseas migrants and indigenous persons often have a tradition of living with extended family members and/or other families.

Household size(number of persons usually resident)	Portland						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
1 Person	218	27.5	25.9	216	27.3	25.0	2
2 Persons	276	34.9	36.3	252	31.8	35.3	24
3 Persons	115	14.5	14.5	117	14.7	15.0	-2
4 Persons	115	14.5	14.0	113	14.3	14.5	2
5 Persons	46	5.8	6.5	57	7.2	7.1	-11
6 or more Persons	21	2.7	2.8	36	4.6	3.1	-15
Total	791	100.0	100.0	791	100.0	100.0	0

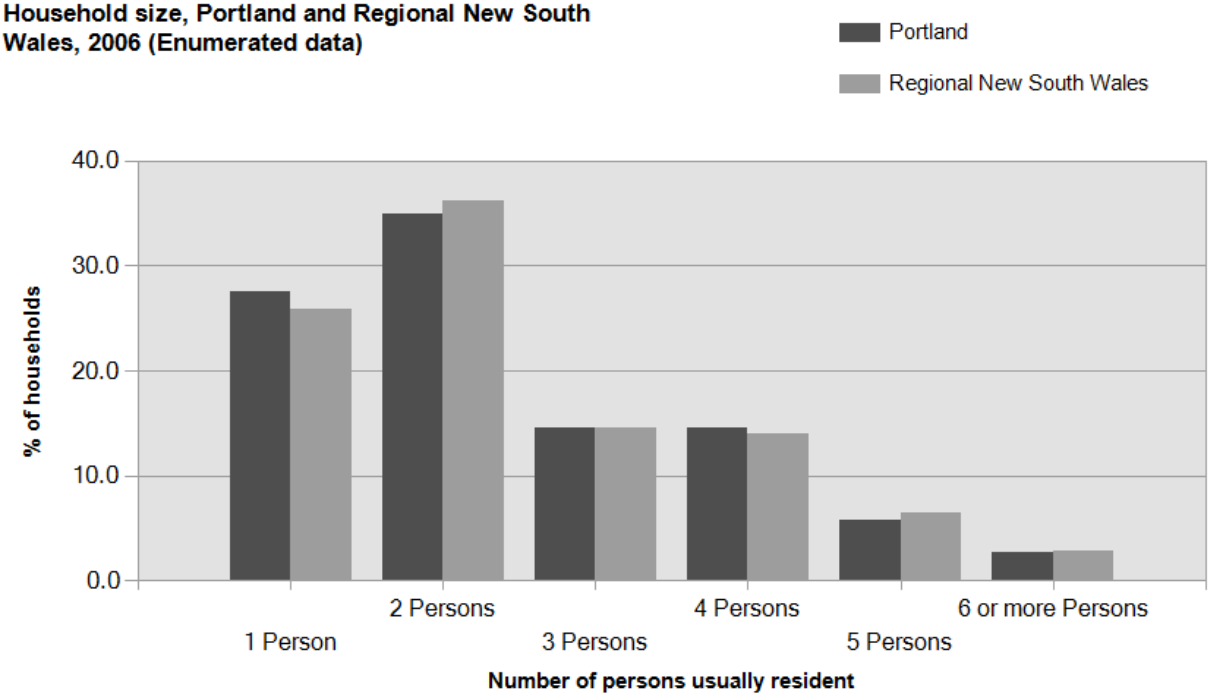
Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of the number of persons usually resident in a household in the Portland compared with Regional New South Wales shows that there were a larger proportion of lone person households, and a similar proportion of larger households (those with 4 persons or more). Overall there were 27.5% of lone person households, and 23.0% of larger households, compared with 25.9% and 23.3% respectively for Regional New South Wales.

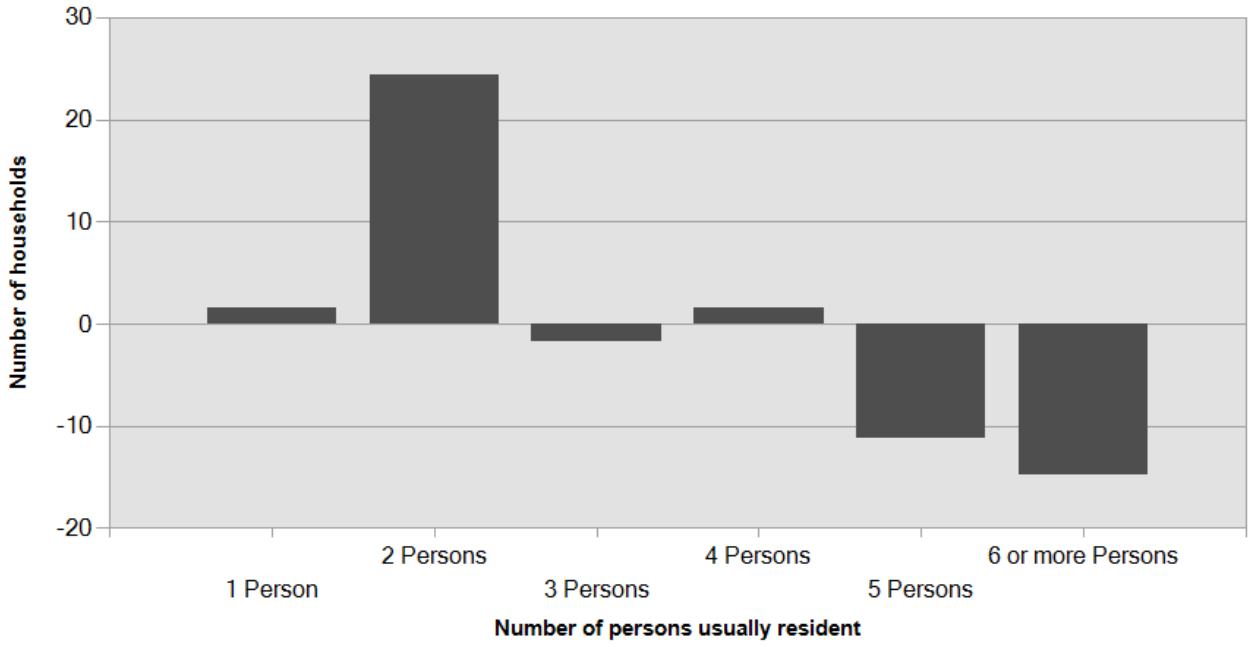
There were no major differences between Portland and Regional New South Wales's household size data in 2006, and there were no numerically significant changes between 2001 and 2006.

Household size, Portland and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in household size, Portland, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Portland

Are we owners, renters or buyers? (Housing tenure)

Derived from the Census questions, *'Is this dwelling [owned outright, owned with a mortgage etc]'*, and *'If this dwelling is being rented, who is it rented from?'*

Tenure data, to some extent, provide insights into the socio-economic status of an area as well as the role that the area plays in the housing market. For example, a high concentration of private renters may indicate an area attractive to specific housing markets such as young singles and couples, while a concentration of home owners indicates a more settled area (i.e. less transitory), with mature families and empty-nester household types. Tenure can also reflect built form, with a significantly higher share of renters in high density housing and a substantially larger proportion of home-owners in separate houses, although this is not a mutually exclusive pattern.

In conjunction with other socio-economic status information tenure data is useful for analysing a wide range of issues, including housing market analysis (in conjunction with Household and Family Type data) and for identifying public housing areas.

Housing tenure(households)	Portland						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Owned	390	45.2	38.3	436	53.7	44.4	-47
Being purchased	240	27.8	28.7	201	24.7	22.7	39
Renting - Govt	15	1.7	4.3	15	1.8	4.6	0
Renting - Other	119	13.8	20.8	101	12.4	20.4	19
Renting - Not stated	7	0.8	1.1	0	0	0.3	7
Renting - Total	**141**	**16.3**	**26.2**	**116**	**14.2**	**25.3**	**25**
Other tenure type	3	0.3	1.0	16	2.0	3.4	-13
Not stated	89	10.3	5.9	44	5.4	4.2	45
Total	**862**	**100.0**	**100.0**	**813**	**100.0**	**100.0**	**49**

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

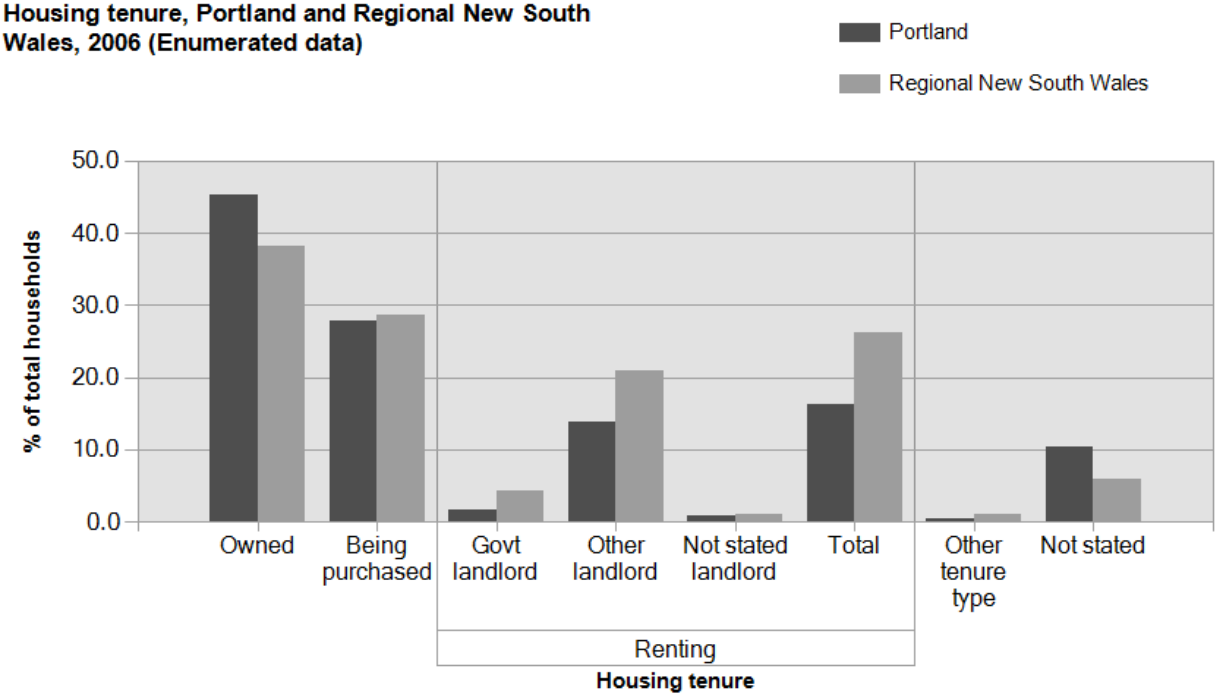
Care should be taken when analysing change over time for 'Owned' and 'Being purchased' categories as changes to the wording of the responses in the Census questionaire between 2001 and 2006 may have resulted in skewed data. Please see the specific data notes for more detail.

Analysis of the housing tenure of the population of Portland in 2006 compared to Regional New South Wales shows that there was a larger proportion of households who owned their dwelling; a similar proportion purchasing their dwelling; and a smaller proportion who were renters.

Overall, 45.2% of the population owned their dwelling; 27.8% were purchasing, and 16.3% were renting, compared with 38.3%, 28.7% and 26.2% respectively for Regional New South Wales.

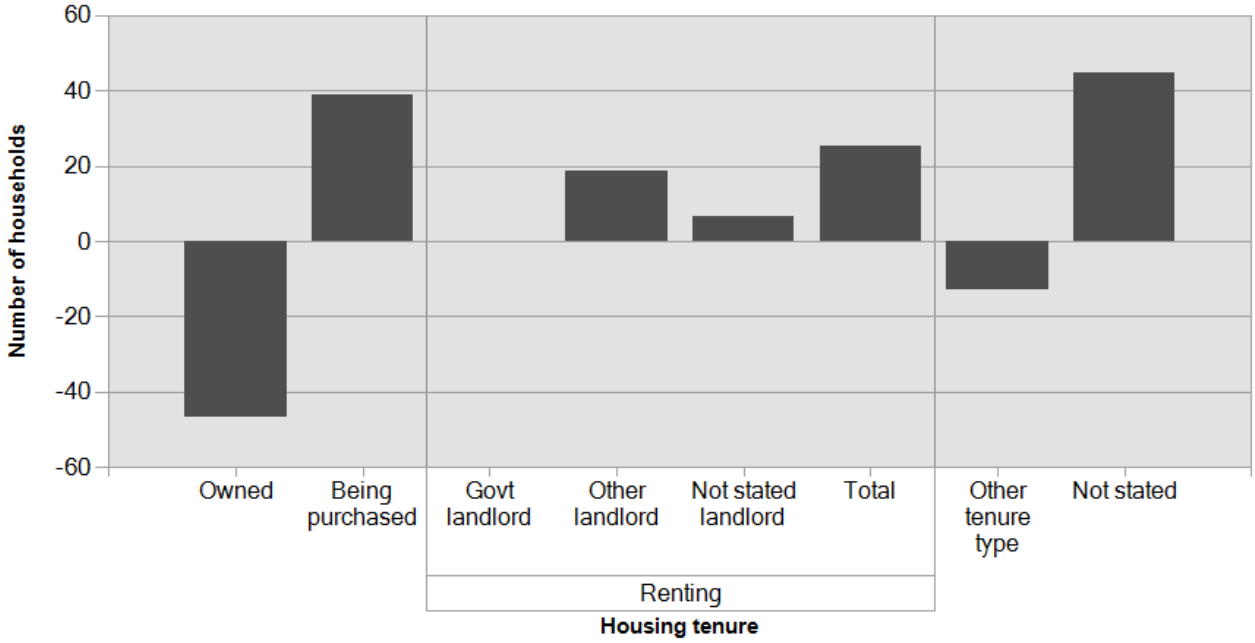
Between 2001 and 2006 there were no numerically significant changes in Portland's housing tenure data.

Housing tenure, Portland and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in housing tenure, Portland, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Portland

What type of dwellings do we live in? (Dwelling types)

Dwelling Type is derived from an assessment by the Census Collector who observes and records the type of dwelling structure.

The types of dwellings that are common to areas are important determinants in the role and function that the area plays in the housing market. A greater concentration of higher density dwellings is likely to attract more young adults and smaller households; while larger, detached or separate dwellings are more likely to have families and prospective families living in them, although this is not a mutually exclusive pattern.

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

Dwelling structure(private dwellings)	Portland						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Separate house	854	86.2	72.1	784	82.3	72.3	69
Medium density	4	0.4	11.4	3	0.3	11.3	1
High density	0	0	1.6	0	0	1.5	0
Caravans, cabin, houseboat	4	0.4	1.8	0	0	2.1	4
Other	0	0	0.5	3	0.3	0.6	-3
Not stated	0	0	0.1	17	1.8	0.6	-17
TOTAL occupied private dwellings	864	87.2	87.5	808	84.7	88.3	57
TOTAL unoccupied Dwellings	127	12.8	12.5	146	15.3	11.7	-19
TOTAL Dwellings	991	100.0	100.0	953	100.0	100.0	38

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

(a) 'Medium density' includes all semi-detached, row, terrace, townhouses and villa units, plus flats and apartments in blocks of 1 or 2 storeys, and flats attached to houses.

(b) 'High density' includes flats and apartments in 3 storey and larger blocks.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

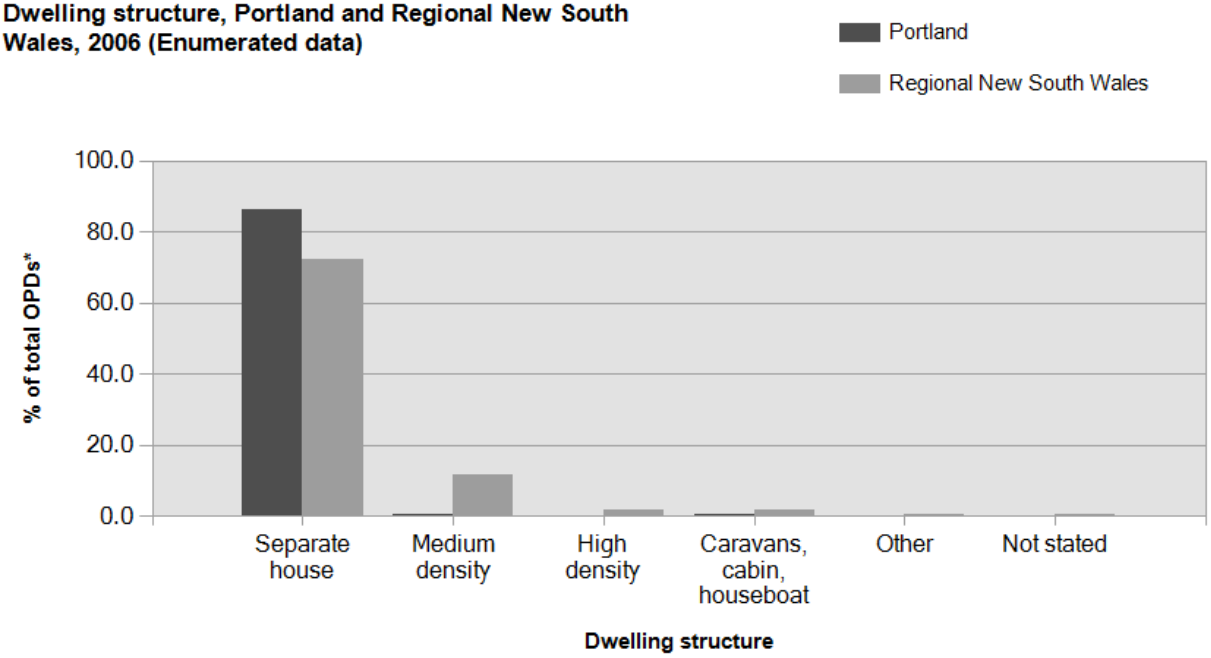
In 2006, there were 854 households who occupied a separate house in the area, while 4 occupied a medium density dwelling, and 0 occupied high density flats and apartments.

Analysis of the types of dwellings of the households in Portland in 2006 compared to Regional New South Wales shows that 86.2% occupied a separate house; 0.4% occupied a medium density dwelling; while 0.0% occupied high density dwellings, compared with 72.1%, 11.4%, and 1.6% respectively in Regional New South Wales.

The largest change in the type of dwellings occupied by households in Portland between 2001 and 2006 were for those occupying a:

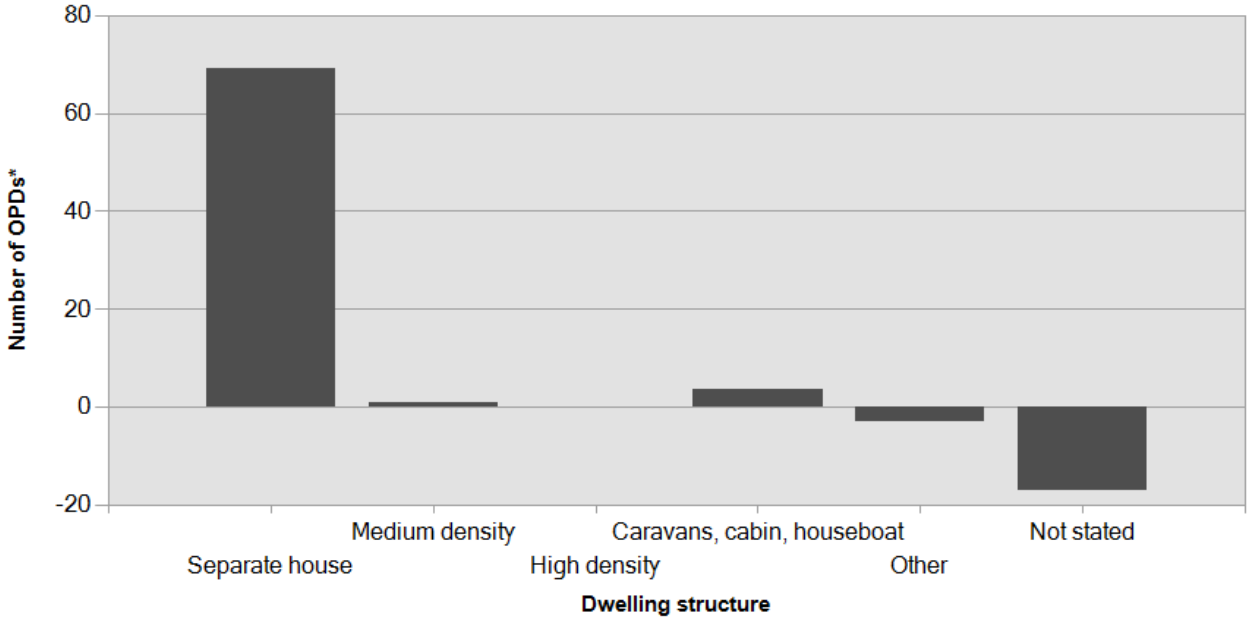
- Separate house (+69 dwellings).

Dwelling structure, Portland and Regional New South Wales, 2006 (Enumerated data)



*OPDs refers to Occupied Private Dwellings.
Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in dwelling structure, Portland, 2001 to 2006 (Enumerated data)



*OPDs refers to Occupied Private Dwellings.
Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Geography notes

Census data is available at a variety of different geographic levels, for example, State; Local Government; and Census Collector District (a unit of around 200 households). Rarely do these boundaries match actual 'communities', 'suburbs' or 'service catchments' needed for effective decision making.

The Community Profile combines data for Lithgow City along with customised suburbs/localities, aggregated from Census Collector Districts for the Census years: 2006, 2001, 1996, and 1991.

Lithgow City has 9 small areas:

- Bowenfels
- Lithgow - Hermitage Flat and District
- Morts Estate - Oaky Park - Vale Of Clwydd
- Portland
- Rural North - Marrangaroo
- Rural South - Little Hartley
- South Bowenfels - Littleton - South Littleton
- Wallerawang - Lidsdale
- Lithgow Urban Area

Suburb/locality geography

The suburbs and localities in the Community Profile tables are aggregations of 2006 Census Collection Districts (CDs). Where CDs did not fit exactly into the suburb or locality boundaries, estimates were made of the number of dwellings to be included. These estimates use aerial photography, dwelling counts, planning schemes, and street directories to determine what percentage of a CD goes into each suburb. The resulting data provides the most accurate population information for suburbs and localities.

NOTE: The geography in the Community Profile tables may not match the Australian Bureau of Statistics (ABS) suburb boundaries for 2006, which are based on aggregation of whole CDs.

Data notes

All data in this Profile is sourced from the Australian Bureau of Statistics, copyright in ABS data vests in the Commonwealth of Australia.

Population figures

The most comprehensive population count available in Australia is derived from the Census of Population and Housing, conducted by the Australian Bureau of Statistics every 5 years. It is an official count of all people and dwellings in Australia on Census night, and collects details of age, sex and other characteristics of the population. The last Census was conducted on 8 August 2006 and was the 15th national Census for Australia. The next Census will be conducted on 7 August 2011.

Census statistics are used as the basis for estimating the population at national, state and local government levels, for electoral purposes and the distribution of government funds. They are used by individuals and organisations in the public and private sectors for planning, administration, research and decision making.

Populations are estimated in various ways. It is important to understand how a population has been derived when you are using the data.

Census data in the Community Profile section of profile.id® includes **enumerated** and **usual residence** data. The **estimated resident population** can be found in the Additional Information section of this website.

Enumerated Population

The 'Enumerated Population' represents where people were counted on Census Night (8 August 2006), which may not be where they usually live. This population figure generally includes overseas visitors and visitors to the area from within Australia, but excludes Australians overseas.

This type of count provides a snapshot at a given point in time. The Census is timed to attempt to capture the typical situation, however, holiday resort areas, such as the Gold Coast and snow fields, may show a large enumeration count compared with the usual residence count.

Where enumerated population data is used in the profile, overseas visitors have been specifically excluded from the tables, but visitors from within Australia are included.

For detailed information about Enumerated population please refer to the ABS Fact Sheet – Population Measures.

Usual Residence Population

This population is derived from the Census. It is the place where a person usually lives, rather than the place where they were counted on Census night. Each person completing the Census is required to state their address of usual residence and this information is used to derive the Usual Residence population.

Census counts compiled on this basis are less likely to be influenced by seasonal factors, such as holiday seasons and snow seasons, and provide information about the usual residents of an area.

In 2006 all Census data are provided for usual residence as well as enumerated population. Previously household information was released as enumerated only (please see the detailed note for household and family type). Additionally, data about usual residence were not published for any data sets prior to 2001. Consequently, a time series has been provided for non-household data comparing 2006 and 2001 data only.

For detailed information about usual residence and enumerated population please refer to the ABS Fact Sheet – Population Measures.

Estimated Resident Population

The Estimated Resident Population (ERP) is the official ABS estimate of the Australian population. The ERP is based on results of the Census and is compiled as at 30 June of each Census year. It is updated between Censuses - quarterly for state and national figures, and annually for local government areas. ERP provides a population figure between Censuses.

The ERP is based on the usual residence population and includes adjustments for Census undercount,

Australian residents who were temporarily overseas on Census night, and backdates the population to 30 June. Each year's updates take into account births, deaths and both internal and overseas migration.

ERPs can be found under the 'Additional Information' section of the menu in the Community Profile.

For detailed information about ERPs please refer to the ABS publication Demographic Estimates and Projections: Concepts, Sources and Methods, 1999.

Randomisation

The information presented in the tables in the Community Profile is based on detailed tables produced by the Australian Bureau of Statistics at the Local Government Area level, and at the Census Collection District (CD) level for suburbs and small areas.

Note: The raw CD level data are then recalculated to exactly reflect the selected boundaries as shown on the maps within the Community Profile.

The Australian Bureau of Statistics (ABS) will randomise information it provides to preserve confidentiality. All cells are slightly adjusted to prevent any identification of personal details. Methodologies for doing this have changed between 2001 and 2006.

- Data tables released prior to the 2006 Census had small numbers (values of 1 or 2) randomly adjusted to either 0 or 3 by the ABS. As tables are randomly adjusted independently of each other, totals differ slightly across tables with the same population. The affect of randomisation is increased with the aggregation of Census Collector Districts into suburbs.
- In relation to the 2006 data, a new method called "perturbation" has been introduced. All figures included within any table may be randomly adjusted by a small amount. These adjustments result in small introduced random errors. Although the information value of the table as a whole is not impaired, care should be taken when interpreting very small numbers, since randomisation will affect the relative size of small numbers far more than larger numbers. The effect of the randomisation methodology also ensures that values of 1 and 2 do not appear in tables.

No reliance should be placed on small cells as they are impacted by random adjustment, respondent and processing errors.

Table totals and subtotals will be internally consistent but discrepancies may be observed between tables cross-tabulating the same population by different variables. While randomisation compromises the table totals by making them appear inconsistent, this is the best available socio-demographic data at the suburb level. This level of compromise is not statistically significant and should not impact on decision makers making effective resource allocation and planning decisions.

Overseas visitors

Enumerated data from the 2001 and 2006 Censuses are published by the ABS with "Overseas visitors" appearing as a separate category in many tables. To improve usability of the information the category "Overseas visitors" has been removed from all tables and calculations.

Table totals and rounding

Table totals may not equate with other similar tables due to randomisation of small numbers and percentages may not total to 100 due to rounding of decimal places. All discrepancies are minimal and are statistically insignificant.

Household and Family Composition

This variable describes the type of household within a dwelling. Household composition indicates whether a family is present and whether other unrelated household members are present. Any household, including lone person households, can contain visitors. 'Visitor only' households can contain overseas visitors (ABS Census Dictionary 2006).

The 'Other not classifiable' category includes those households which were occupied on Census night but where the Census collector could not make contact; households that contained only persons aged under 15 years; and households which could not be classified elsewhere in this classification because there was

insufficient information on the Census form. (ABS Census Dictionary 2006).

The household and family data are essentially the same for both Usual Residence and Enumerated population counts. The person who fills in the form identifies all persons who are present on Census night and their relationship within the household. Anyone who is temporarily absent is separately identified on the form, so that the type of household and number of usual residents can be identified. However, any table examining the characteristics of people by the type of household they live in will exclude these people as few demographic variables are collected for persons temporarily absent.

Persons who are away from home, will be counted in the household they are present in on Census night (generally in a non-private dwelling or as a visitor in a private dwelling). Although the ABS will know their usual address, and they will be coded back to their area of usual residence, the ABS is not able to impute that person's relationship to other people also resident at that address. Unlike the Enumerated count, Usual Residence household data does not include 'visitor only' households.

Specific notes

All data in the Community Profile is sourced from the Australian Bureau of Statistics, copyright in ABS data vests in the Commonwealth of Australia.

How many people live here?

Key Statistics

The summary statistics table contains 'Total population', ‘Overseas population’ 'Gender', 'Indigenous population', ‘Institutional population’ and 'Average household size'; along with a summary of data contained elsewhere in the Profile.

'Total population' and 'Gender' data are shown both including and excluding 'Overseas Visitors'.

'Indigenous population' refers to persons of Aboriginal and/or Torres Strait Islander origin.

‘Institutional population’ refers to people living in non-private dwellings. These types of dwellings are establishments which provide a communal type of accommodation. Examples of categories are hotel, motel, boarding house, private hotel, public hospital (not psychiatric), and childcare institution.

'Average household size' is calculated on the basis of the number people counted in occupied private dwellings (excluding overseas visitors), divided by the number of occupied private dwellings (excluding non-private dwellings, such as institutions and hotels etc).

For notes on other variables in the 'Key statistics' table please see the specific data notes for each of the relevant sections.

How old are we?

Includes all persons except 'Overseas Visitors'.

Between the 2001 and the 2006 Censuses, there was a small change in the way that the question regarding your age was phrased. The 2001 Census asked your age last birthday. In 2006, the question asked either your age last birthday or your date of birth. This change in the way age structure has been collected has not had an impact on the data produced; if date of birth was completed, then the ABS calculated age as at your last birthday. 2006 age data are comparable to prior Censuses.

Who are we?

Where were we born?

Includes all persons except 'Overseas Visitors'.

The 'United Kingdom' includes England, Scotland, Wales, Northern Ireland, Channel Islands, Isle of Man, and 'United Kingdom not further defined'.

'Former Federal Republic of Yugoslavia' includes Serbia and Montenegro, as well as 'South Eastern Europe nfd' in 2006. Those people categorised to South Eastern Europe in 2006 were primarily those who stated their birthplace as Yugoslavia, which did not exist as a nation in 2006. In 2001 it includes all people who listed their birthplace as Yugoslavia, while it is not available for 1996 and 1991 due to considerable changes to national boundaries in this region.

'Total Overseas born' includes 'inadequately described', 'at sea', and 'not elsewhere classified'.

'Main English speaking countries' includes Canada, Ireland, New Zealand, South Africa, the United Kingdom, and the United States of America.

'Non-English speaking backgrounds' refers to persons born in countries not included in 'Main English speaking countries'.

'China (excl. Taiwan Province) ' also excludes the Special Administrative Regions of Hong Kong and Macau.

Birthplace is coded using the Standard Australian Classification of Countries (SACC) 1998.

How many recently arrived?

Excludes persons who did not state their birthplace, and persons born in Australia or in other Australian territories.

Includes Australian residents born overseas who will be in Australia for more than one year.

How well do we speak English?

This is derived from the Census question, 'How well does the person speak English?' and applies to all persons who speak a language other than English at home. The table in the profile has been further restricted to refer only to persons born overseas and aged over 5 years (excluding overseas visitors).

English proficiency aims to measure the ability of persons who speak 'English as a Second Language' to also speak English. The data, when viewed with other ethnic and cultural indicators, tends to reflect the ethnic composition of the population and the number of years of residence in Australia. In general, an area with a higher proportion of persons born in English-speaking countries or who emigrated from non-English speaking countries several decades ago is likely to have greater English-speaking proficiency.

Note: A person's English proficiency is based on a subjective assessment and should therefore be treated with caution.

Responses to the question on Proficiency in English in the Census are subjective. For example, one respondent may consider that a response of 'Well' is appropriate if they can communicate well enough to do the shopping, while another respondent may consider such a response appropriate only for people who can hold a social conversation. Proficiency in English should be considered as an indicator of a person's ability to speak English and not a definitive measure of this ability.

For more information on proficiency in English, please refer to the ABS Census Dictionary (2901.0).

What language do we speak at home?

Includes all persons except 'Overseas Visitors'.

Language spoken at home is coded using the Australian Standard Classification of Languages (ASCL), 2005-06.

'Filipino' was recorded as a separate language from 'Tagalog' in the 2006 Census, but no such distinction was made in earlier Censuses. profile.id® combines the two languages together as 'Tagalog'. Filipino is a standardised version of Tagalog, incorporating words from other indigenous languages within the Philippines.

'Dari' was recorded as a separate language from 'Persian' in the 2006 Census, but no distinction was made in earlier Censuses. profile.id® combines the two languages together as 'Persian'. Dari is a localised name for Persian in Afghanistan.

What is our religion?

Includes all persons except 'Overseas Visitors'.

Religion is coded using the Australian Standard Classification of Religious Groups (ASCRG), 2005.

The religion question in the Census is an optional question and so has quite a high rate of 'Not Stated' responses.

The 2006 Census recorded 'Eastern Orthodox', which is a new designation for those churches previously described as 'Orthodox'.

The 2006 Census recorded 'Assyrian Apostolic' as a separate religious category. Previously, all religions falling under this category were recorded as 'Oriental Christian'.

The 2006 Census introduces a new designation called 'Oriental Orthodox'. The majority of the churches in this group were formerly known as 'Oriental Christian'. This includes:

- Oriental Orthodox, nfd
- Armenian Apostolic
- Coptic Orthodox Church
- Syrian Orthodox Church
- Ethiopian Orthodox Church
- Oriental Orthodox, nec

'Christian nfd' refers to a Christian religion 'not further defined', and includes:

- Apostolic Church, so described
- Church of God, so described
- Australian Christian Churches, so described
- New Church Alliance, so described

What is our individual income?

This data includes total gross income (including pensions and allowances) that a person usually receives each week.

This data applies only to people aged 15 years and over and excludes overseas visitors.

Individual incomes are collected as ranges in the Census.

Individual income quartiles

Individual income groups are not comparable over time because of the influences of economic change such as wage level fluctuations and inflation. The income quartile method has been adopted as the most objective method of comparing change in the income profile of a community over time.

Individual income quartiles look at the distribution of incomes in Lithgow City relative to Regional New South Wales. Quartiles split the total population into four equal parts for the Regional New South Wales. The table shows the number and proportion of individuals in Lithgow City falling into each segment for the benchmark area.

The table gives a clear picture of where individual incomes in Lithgow City sit relative to Regional New South Wales. For the Regional New South Wales, 25% of persons fall into each category. If, for example, Lithgow City has 30% in the top category and only 20% in the lowest, this indicates that Lithgow City has proportionally more higher-income individuals and less lower-income individuals.

Individual income quartile definitions(Annual income ranges)

	2006	2001	1996	1991
Lowest group	Nil to $10,593	Nil to $9,213	Nil to $7,449	Nil to $6,248
Medium lowest	$10,594 to$20,166	$9,214 to$16,237	$7,450 to$12,898	$6,249 to$11,681
Medium highest	$20,167 to$38,532	$16,238 to$30,456	$12,899 to$24,972	$11,682 to$22,218
Highest group	$38,533 and over	$30,457 and over	$24,973 and over	$22,219 and over

What is our household income?

Household income comprises the total of incomes of all persons in the household who stated an income.

Excludes ‘Visitor only households’ and ‘Other non classifiable households’.

'Not stated' includes 'Partial income not stated' and 'All incomes not stated'.

'Partial income not stated' includes households where at least one, but not all, member(s) aged 15 years and over did not state an income and / or at least one household member aged 15 years and over was temporarily absent. In these cases, the aggregate of all stated individual incomes would be less than the true household income so these households are excluded from the classification.

'All incomes not stated' includes households where no members present stated an income.

Household income quartiles

Household income groups are not comparable over time because of the influences of economic change such as wage level fluctuations and inflation. The income quartile method has been adopted as the most objective method of comparing change in the income profile of a community over time.

Household income quartiles look at the distribution of incomes in Lithgow City relative to Regional New South Wales. Quartiles split the total number of households into four equal parts for the Regional New South Wales. The table shows the number and proportion of households in Lithgow City falling into each segment.

The table gives a clear picture of where household incomes in Lithgow City sit relative to Regional New South Wales. For the Regional New South Wales, 25% of households fall into each category. If, for example, Lithgow City has 30% in the top category and only 20% in the lowest, this indicates that Lithgow City has proportionally more higher-income households and less lower-income households.

Household income quartile definitions(Annual income ranges)

	2006	2001	1996	1991
Lowest group	Nil to $22,618	Nil to $18,647	Nil to $14,904	Nil to $14,014
Medium lowest	$22,619 to$41,382	$18,648 to$32,914	$14,905 to$26,949	$14,015 to$24,525
Medium highest	$41,383 to$71,642	$32,915 to$57,579	$26,950 to$46,984	$24,526 to$42,010
Highest group	$71,643 and over	$57,580 and over	$46,985 and over	$42,011 and over

What are our qualifications?

Includes persons aged 15 years and over.

Excludes 'Overseas Visitors'.

Excludes schooling up to Year 12.

'No qualifications' refers to persons still studying for their first qualification, persons who do not have a qualification, and persons who have a qualification out of the scope of the Census version of the Australian Standard Classification of Education (ASCED), 2001.

What is the highest secondary school year we have completed?

Includes persons aged 15 years and over.

'Schooling' refers to Primary and Secondary schooling.

Excludes 'Overseas Visitors'.

There is no time series for this particular data set owing to differences in the way that the data was recorded. The 2001 Census did not record people who were over 15 years and still at school as having completed a particular year of schooling. Instead they were counted as “Still at school”. However, in 2006 they were coded to the highest year already completed, making the data non-comparable. This means that if an individual is still in the process of completing year 11 during a Census year, they are recorded as having completed year 10. This also means that the number of people who have completed year 10 cannot be treated as being indicative of the number of people who left school after completing year 10 as it will include people who were in the process of completing year 11.

Where are we learning?

Excludes 'Overseas Visitors'.

'Independent' refers to private and other non-Government schools.

‘Catholic’ refers to infant, primary and secondary schools run independently by the Catholic Church.

'TAFE' refers to 'Technical and Further Education' institutions.

Do we need assistance?

This data identifies people who report a need for assistance due to a 'profound or severe core activity limitation'. This population is defined as people who need assistance in their day to day lives with any or all of the following activities – self-care, body movements or communication – because of a disability, long-term health condition, or old age.

This question relies on people evaluating themselves, (or their carers), as being in need of assistance. Consequently this question provides an indication of the characteristics of people who report, or are reported as requiring, a need for assistance; but cannot be relied upon to provide details as to the total number of people with a 'profound or severe core activity limitation'.

Persons under the age of 40 whose only stated reason for need for assistance was ‘old or young age’ are included under ‘no need for assistance’.

Excludes 'Overseas Visitors'.

What do we do?

Do we do unpaid work?

This data includes help willingly given in the form of time, service or skills, to a club, organisation or association including:

- assisting at events and with sports organisations
- helping with school events and activities
- assisting in churches, hospitals, nursing homes and charities
- other kinds of volunteer work (e.g. emergency services, etc.).

Voluntary work excludes unpaid work done through a club, organisation or association mainly in order to qualify for government benefits such as Newstart Allowance. It also excludes any activity which is part of a person's paid employment or family business. ABS Census Dictionary 2006.

This data applies to persons aged 15 years and over and to **voluntary work undertaken in the 12 months prior to the Census**.

This data excludes 'Overseas Visitors'.

Unpaid domestic work

This data includes all the domestic work a person does without pay in their own home and in other places, for themselves, their family and other people in their household.

This data only applies to persons aged 15 years and over and to **domestic work performed in the week prior to Census**.

Unpaid domestic work can include meal preparation, service and clean-up; washing, ironing and managing clothes; other housework; gardening, mowing and yard work; home maintenance; car and bike maintenance; household shopping and managing household financial affairs.

This data excludes 'Overseas Visitors'.

Unpaid care

Unpaid care (unpaid assistance to a person with a disability, a long term illness or problems related to old age), includes the unpaid help a person gives to another person to assist them with their daily activities. It can include assistance with:

- bathing, dressing, toileting and feeding;
- mobility;
- understanding or being understood by others;
- emotional support;
- medication;
- dressing wounds
- food
- housework
- driving

This data applies to persons aged 15 years and over and to **care given in the two weeks prior to Census**.

This data excludes 'Overseas Visitors'.

Unpaid childcare

This data includes the time a person spends caring for a child or children without being paid. This can include people caring for their own children, whether they usually live with them or not. It can also include people looking after their own grandchildren or the children of other relatives or the children of friends or neighbours.

This data only applies to persons aged 15 years and over and to **child care given in the two weeks prior to Census**.

This data excludes 'Overseas Visitors'.

What is our employment status?

Excludes 'Overseas Visitors'

Includes persons aged 15 years and over.

'Employed full time' is defined as having worked 35 hours or more in all jobs during the week prior to Census night.

'Employed part time' is defined as having worked less than 35 hours in all jobs during the week prior to Census night.

The 'Labour force' is defined as all persons aged 15 years and over who are looking for work, or are employed, either full time, part time or casually.

What industries do we work in?

This data describes the industries in which employed people work. It applies only to people aged 15 and over who were employed in the week prior to Census.

Data for industry are coded using the Australia and New Zealand Standard Industrial Classification (ANZSIC). The industry classification is updated periodically to take account of emerging industries and changes in the structure of the economy.

For the 2006 Census, the updated ANZSIC06 classification was used, which includes more industry divisions which better reflect the structure of the Australian economy. Data are presented using this classification as an option. However for time series, data are also presented on the older ANZSIC93 classification, as this classification was used in earlier censuses.

For more information please refer to the 2006 Census Dictionary, and ANZSIC classification.

Time series industry categories

This data describes the industries in which employed people work. It applies only to people aged 15 and over who were employed in the week prior to Census.

Data for industry are coded using the Australia and New Zealand Standard Industrial Classification (ANZSIC). The industry classification is updated periodically to take account of emerging industries and changes in the structure of the economy.

For the 2006 Census, the updated ANZSIC06 classification was used, but people were also coded to the older ANZSIC93 classification. Data in the profiles is presented using both classifications; data for 2006 alone uses ANZSIC06, while time series data uses ANZSIC93 for comparability.

For more information please refer to the 2006 Census Dictionary, and ANZSIC classification.

What are our occupations?

This data describes the occupations of employed people. It applies only to people aged 15 and over who were employed in the week prior to Census.

Data for occupation are coded using the Australian and New Zealand Standard Classification of Occupations (ANZSCO). The occupation classification is updated periodically to take account of emerging occupation groups and changes to the structure of the labour force.

Data are presented for the broad occupation groupings. For 2006 these were coded using ANZSCO, the most recent classification. These are presented in profile.id® where no time series is required. For time series, the data are presented using the older ASCO 2nd edition classification, to ensure data comparability.

For more information please refer to the 2006 Census Dictionary, and the 2006 Australian and New Zealand Standard Classification of Occupations (ANZSCO).

Time series occupation categories

This data describes the occupations of employed people. It applies only to people aged 15 and over who were employed in the week prior to Census.

Data for occupation are coded using the Australian and New Zealand Standard Classification of Occupations (ANZSCO). The occupation classification is updated periodically to take account of emerging occupation groups and changes to the structure of the labour force.

Data are presented for the broad occupation groupings. For 2006 these were coded using ANZSCO, the most recent classification. These are presented in profile.id® where no time series is required. For time series, the data are presented using the older ASCO 2nd edition classification, to ensure data comparability.

How do we get to work?

This data looks at the method of travel to work of employed people. It applies only to people aged 15 and over who were employed in the week prior to Census.

Method of travel relates specifically to the journey to work on the morning of Census day. This differs to the industry and occupation data which relates to the main job held in the week prior to Census.

Respondents can nominate up to three modes of travel. For data presented in the profile, the following aggregations have been used:

- 'Train' includes any journey involving a train, whether or not other methods were used.
- 'Bus' includes any journey involving a bus, except for those also involving a train.
- The remaining categories, except for 'Other', only refer to a single method of travel (e.g. 'Car as driver'

when no other method was used).

- 'Other' refers to any method not listed in the standard categories, plus any combination of two or three methods NOT involving a bus or train.

Note that the categories "Walked only", "Worked at home" and "Did not go to work" are exclusive and are never combined with other methods.

'Tram or Ferry' includes light rail.

This data excludes 'Overseas Visitors'.

For more information please refer to the Census Dictionary 2006.

How do we live?

What type of households do we live in?

This data describes the type of family and non-family households within a dwelling.

The first section of the table counts family units in family households, and breaks them down by the presence of couples, single parents, and children. This classification of a family includes persons who are temporarily absent from the family on Census night.

The second section counts households. Households can contain up to three families, or a lone person, group of unrelated individuals (flatmates etc.) or other household.

The 'Other not classifiable' category includes those households which were occupied on Census Night but where the Census collector could not make contact; households that contained only persons aged under 15 years; and households which could not be classified elsewhere in this classification because there was insufficient information on the Census form. (ABS Census Dictionary 2006).

'Couple with child(ren) 15 years and under' and 'One parent family with child(ren) 15 years and under' refers to families with at least one child aged 15 years or younger. These families may also have older children living at home.

'One parent family with child(ren) over 15 years' and 'Couple with child(ren) over 15 years' refers to families with no children under the age of 15 years.

Data includes same sex couple families.

This data excludes 'Overseas Visitors'.

As the data are counting households, only enumerated counts are applicable.

How many people live in each household?

This data includes enumerated households by the number of persons usually resident, (includes up to three residents who were temporarily absent on Census night).

A household is defined as one or more persons, at least one of whom is at least 15 years of age, usually resident in the same private dwelling.

This data excludes ‘Visitor only’ and 'Other not classifiable' households.

Are we owners, renters or buyers?

This data presents the tenure type of occupied private dwellings, and for those dwellings being rented, provides a breakdown of the type of landlord the dwelling is being rented from.

‘Being purchased’ includes dwellings being purchased under a rent/buy scheme.

'Renting – Govt' refers to households renting from a State/Territory Government housing authority.

'Renting – Other' refers to households renting from private landlords, real estate agents and employers.

'Rented – Not stated' refers to rented dwellings where the landlord type was not stated.

‘Life tenure’ in 2006 has been included under ‘Other tenure type’

Tenure type changes between 2001 and 2006: Though the classification for Census data has remained the same, between 2001 and 2006 there was a change to the wording of dwelling ownership responses to the Tenure Type question on the Census questionnaire. "Fully Owned" in 2001 became "Owned Outright" in 2006, while "Being Purchased" became "Owned with a mortgage". This change in wording may have resulted in more accurate responses to this question, however it has made comparison over time difficult and such analysis should be done with caution. Looking at Australia as a whole, comparing 2006 to 2001 data, the "Being Purchased" category has increased by 5.7%, to 32.2% of private dwellings, while the "Fully Owned" category has decreased by 7.1%, to 32.6% of private dwellings. It is expected that a large part of this change is due to the change in wording, rather than representing change in the real world.

It is recommended that any analysis of change over time in these categories look only at the relative differences between change in local populations and the Australia-wide or state-based benchmarks, rather making inferences about local populations based on their numbers alone. Other categories in the Tenure Type classification are unaffected.

How much do we pay on our housing loan?

This data shows housing loan repayments being paid on a monthly basis by a household to purchase the dwelling in which it was enumerated (also applicable to caravans).

This data only applies to households (occupied private dwellings) who are purchasing their dwelling. It also includes households who are purchasing their dwelling under a 'rent/buy' scheme.

'Other not classifiable' households are excluded from this data.

Housing loan quartiles

Housing loan payments are not comparable over time because of the influences of economic change such as inflation. The loan payment quartile method has been adopted as the most objective method of comparing change in the cost of housing of a community over time.

Housing loan repayment quartiles look at the distribution of housing loan repayments in Lithgow City relative to Regional New South Wales. Quartiles split the total number of households into four equal parts for the Regional New South Wales. The table shows the number and proportion of households in Lithgow City falling into each segment.

The table gives a clear picture of the level of housing loan repayments in Lithgow City relative to Regional New South Wales. For the Regional New South Wales, the categories are split so that 25% of households fall into each category, so by comparison, the table will show if there are more or less households in Lithgow City with high repayments than in Regional New South Wales. If, for example, Lithgow City has 30% in the top category and only 20% in the lowest, this indicates that Lithgow City has proportionally more households with ‘top quarter’ repayments on their home loans, and less paying relatively low amounts.

Housing loan quartile definitions(Annual payment ranges)

	2006	2001	1996
Lowest group	Nil to $9,419	Nil to $7,093	Nil to $6,152
Medium lowest	$9,420 to$14,414	$7,094 to$10,081	$6,153 to$9,055
Medium highest	$14,415 to$21,029	$10,082 to$13,822	$9,056 to$12,273
Highest group	$21,030 and over	$13,823 and over	$12,274 and over

How much do we pay on our housing rental?

This data shows the amount of rent paid by households on a weekly basis for the dwelling in which they were enumerated on Census night (also applicable to caravans).

This data only applies to households (occupied private dwellings) renting their dwelling.

'Other not classifiable' households are excluded from this data.

Note that rent is shown on a **weekly** basis while housing loan repayments are on a **monthly** basis.

Housing rental quartiles

Rental payments are not comparable over time because of the influences of economic change such as inflation. The rental payment quartile method has been adopted as the most objective method of comparing change in the cost of rental housing of a community over time.

Rent quartiles look at the distribution of rental payments in Lithgow City relative to Regional New South Wales. Quartiles split the total number of households into four equal parts for the Regional New South Wales. The table shows the number and proportion of households in Lithgow City falling into each segment relative to the Regional New South Wales.

The table gives a clear picture of the level of rental payments in Lithgow City relative to Regional New South Wales. For the Regional New South Wales, 25% of households fall into each category, so by comparison, the table will show if there are more or less households in Lithgow City with high (or low) rent than in Regional New South Wales. If, for example, Lithgow City has 30% in the top category and only 20% in the lowest, this indicates that Lithgow City has proportionally more households paying ‘top-quarter’ rents, and less paying ‘bottom-quarter’ rents.

Housing rental quartile definitions(Annual payment ranges)

	2006	2001
Lowest group	Nil to $5,647	Nil to $4,682
Medium lowest	$5,648 to$8,528	$4,683 to$6,843
Medium highest	$8,529 to$11,416	$6,844 to$9,083
Highest group	$11,417 and over	$9,084 and over

What type of internet connection do we have?

This data relates to the question 'Can the Internet be accessed at this dwelling?' The question also asked for the type of connection:

- 'Broadband connection' - includes ADSL, Cable, Wireless and Satellite connection,
- 'Dial-up connection' - includes analog modem and ISDN connections
- 'Other' - includes Internet access through mobile phones, set-top boxes, games machines or connections other than dial-up or broadband.

This question was asked for the first time in the 2006 Census, replacing the questions in the 2001 Census relating to internet use and computer use. Owing to this there is no time series data available. Unlike the 2001 questions, the data relate to dwellings and not individuals.

How many cars do we own?

This data applies only to households in occupied private dwellings.

This data identifies the number of registered motor vehicles owned or used by household members, garaged, parked at or near private dwellings on Census night. It includes company owned vehicles.

The data excludes motorbikes, scooters and tractors.

What type of dwellings do we live in?

Dwelling structure looks at the type of dwelling for all occupied private dwellings. This data is classified by the Census collector on visiting the household, and the categories are broadly based on the density of the

housing types.

‘Separate house’ includes all free-standing dwellings separated from neighboring dwellings by a gap of at least half a metre.

‘Medium density’ includes all semi-detached, row, terrace, townhouses and villa units, plus flats and apartments in blocks of 1 or 2 storeys, and flats attached to houses.

‘High density’ includes flats and apartments in 3 storey and larger blocks.

‘Caravans, cabins, houseboats’ includes all such mobile accommodation, both inside and outside caravan parks.

‘Other’ includes houses and flats attached to shops or offices, and improvised homes, tents and sleepers out on Census night.

Unoccupied dwellings are shown separately in the table.

The Census classification for dwelling structure is based on the ABS Standard Dwelling Classification.

Lithgow City Council

COMMUNITY PROFILE

2006 and 2001 Enumerated Census information for:

Rural North - Marrangaroo

The Lithgow City Council Community Profile is designed to inform community groups, Council, investors, business, students and the general public. To achieve this, the Profile is formatted to present the data in simple, clear tables and charts with concise factual commentary. The Community Profile is based on the 2006 Census of Population and Housing published by the Australian Bureau of Statistics.

profile.id®

.id

Contents:

How many people live here? 3

Introduction and summary 3
Key Statistics 5
How old are we? 7
What is our individual income? 9
What is our household income? 11
What are our qualifications? 13
What is the highest secondary school year we have completed? 15
What is our employment status? 17
What industries do we work in? 19
What are our occupations? 21
How do we get to work? 23
What type of households do we live in? 25
How many people live in each household? 28
Are we owners, renters or buyers? 30
What type of dwellings do we live in? 32

Explanatory notes

Geography notes 34
Data notes 35
Specific notes 38

DISCLAIMER: Whilst all due care has been taken to ensure the content of this report is accurate and Current, there may be errors or omissions in it and no legal responsibility is accepted for the information and opinions in this website.

Copyright © id.consulting pty ltd - www.id.com.au 2010

Date created: 17/09/2010

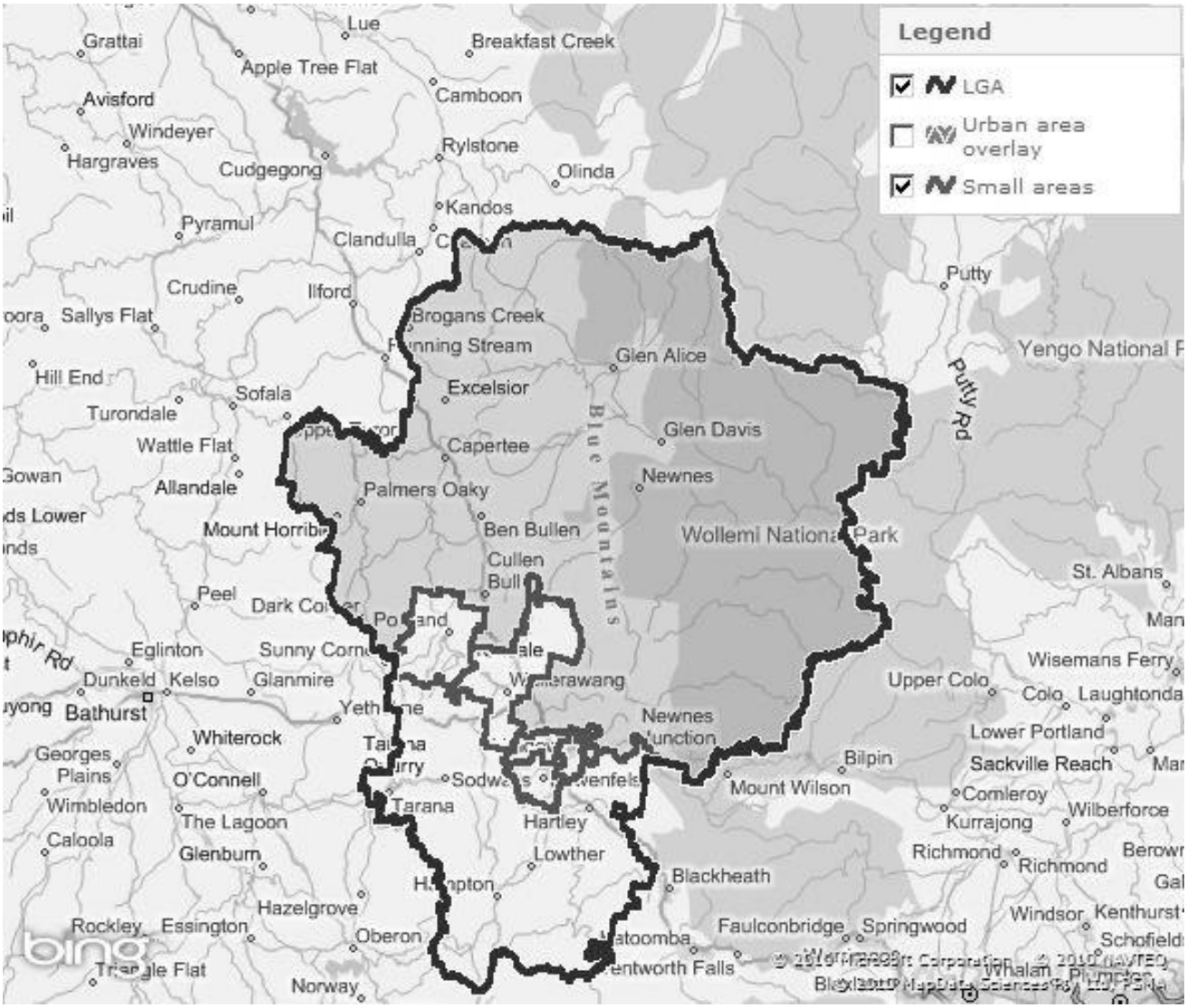
Rural North - Marrangaroo

Introduction and summary (Map and key statistics)

Rural North - Marrangaroo is a rural and national park area, which includes several small villages. Rural North - Marrangaroo is bounded by the Mid-Western Regional Council area and Army Road in the north, the Singleton Council area, Wollemi Creek, the Colo River and the Wollangambe River in the east, Blue Mountains City, the localities of Dargan, Hartley, Vale of Clwydd, Corney Town, Oaky Park, Morts Estate, Lithgow, Cobar Park, Bowenfels, Wallerawang, Lidsdale and Portland in the south, and the Bathurst and Mid-Western Regional Council areas in the west. This small area includes the localities of Bell (part), Ben Bullen, Blackmans Flat, Bogee, Brogans Creek (part), Capertee, Clarence, Cullen Bullen, Dark Corner, Dunville Loop (part), Glen Alice, Glen Davis, Marrangaroo, Mount Marsden (part), Newnes, Newnes Plateau, Palmers Oaky, Round Swamp (part), Springvale, State Mine Gully, Sunny Corner (part), Upper Nile, Upper Turon (part), Wirraba, Wolgan Valley, Wollangambe and Wollemi (part).

Settlement of the area dates from the late 1820s, although population was minimal until the 1840s, with land used mainly for sheep grazing and mining. Gradual growth took place during the late 1800s, particularly in villages near the railway stations, spurred by the construction of the railway line. Expansion continued during the early 1900s and the immediate post-war years, aided by oil-shale mining and the refining and production of fuel. The population decreased from the mid 1950s, due to a decline in mining. The population increased slightly from the early 1990s, a result of new dwellings being added to the area. Rural land is used largely for cattle grazing, farming and mining (particularly coal mining).

Major features of the area include Blue Mountains National Park, Gardens of Stone National Park, Turon National Park, Wollemi National Park, Glow Worm Tunnel, Capertree Valley, Snow Gum Flora Reserve, Lithgow Valley Reserve, Lithgow Golf Club, Happy Valley Motorcross Track, Zig Zag Railway, Simmo’s Museum, Glen Davis ruins, Newnes Shale Oil ruins, various state forests and several schools.



Rural North - Marrangaroo:	**Land Area:** 343,841 hectares	**Density:** 0.01 people per hectare (2006)

Rural North - Marrangaroo

Introduction and summary (Map and key statistics)

The 'Key statistics' table presented below contains summary statistics for Rural North - Marrangaroo. By default the table displays 2001 and 2006 data as both absolute numbers and percentages (where applicable), along with the change in number between these years.

Key statistics(summary statistics)	Rural North - Marrangaroo						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Enumerated population, including overseas visitors							
Total population (a)	2,135	100.0	100.0	1,977	100.0	100.0	158
Males (a)	1,237	57.9	49.4	1,168	59.1	49.6	69
Females (a)	898	42.1	50.6	809	40.9	50.4	89
Overseas visitors	3	0.2	0.4	0	0.0	0.5	3
Enumerated population, excluding overseas visitors							
Total population (b)	2,131	100.0	100.0	1,977	100.0	100.0	154
Males (b)	1,234	57.9	49.4	1,168	59.1	49.6	66
Females (b)	897	42.1	50.6	809	40.9	50.4	88
Population characteristics							
Indigenous population	88	4.1	3.9	99	5.0	3.4	-11
Australian born	1,706	80.0	83.8	1,653	83.6	84.5	53
Overseas born	267	12.5	10.3	196	9.9	10.2	71
Australian citizens	1,668	78.2	91.1	1,585	80.2	92.2	83
Australian citizens aged 18+	1,214	57.0	68.4	1,142	57.8	67.9	72
Institutional population	281	13.2	3.9	317	16.0	3.6	-36
Age structure							
Infants 0 to 4 years	106	5.0	6.2	83	4.2	6.7	22
Children 5 to 17 years	380	17.8	18.6	368	18.6	19.6	11
Adults 18 to 64 years	1,454	68.2	58.7	1,290	65.2	58.6	164
Mature adults 65 to 84 years	203	9.5	14.6	193	9.8	13.7	9
Senior citizens 85 years and over	18	0.8	1.9	15	0.8	1.5	3
Households and dwellings							
Owned	354	49.6	38.3	341	55.2	44.4	13
Purchasing	200	28.0	28.7	138	22.2	22.7	63
Renting	75	10.5	26.2	70	11.3	25.3	5
Households (occupied private dwellings)	714	--	--	618	--	--	96
Persons counted in households	1,851	--	--	1,660	--	--	191
Average household size (persons)	2.59	--	--	2.68	--	--	-0.09
Total Dwellings	917	100.0	100.0	850	100.0	100.0	67

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the

specific data notes for more information.

Rural North - Marrangaroo

How old are we? (Age structure)

Derived from the Census question, *'What is the person's date of birth (or age last birthday)?'*

The Age Structure of the population is the most widely used component of the Census. It is an indicator of an area's residential role and function and how it is likely to change in the future. The age structure of a population is usually indicative of an area's era of settlement and provides key insights into the level of demand for services and facilities (as most services and facilities are age-specific).

To get a more complete picture of the demographic characteristics of an area the age structure should be viewed in conjunction with Households and Family types.

Age structureage group (years)	Rural North - Marrangaroo						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
0 to 4	106	4.9	6.2	83	4.3	6.7	22
5 to 11	197	9.1	9.7	200	10.2	10.6	-3
12 to 17	182	8.4	8.9	169	8.7	9.0	14
18 to 24	121	5.6	8.1	102	5.2	8.0	20
25 to 34	260	12.1	10.8	318	16.3	12.0	-58
35 to 49	544	25.2	20.9	517	26.5	21.6	27
50 to 59	383	17.7	13.5	275	14.1	12.1	108
60 to 69	224	10.4	10.2	148	7.6	9.2	76
70 to 84	124	5.7	9.9	123	6.3	9.4	1
85 and over	18	0.8	1.9	15	0.8	1.5	3
Total	2,160	100.0	100.0	1,949	100.0	100.0	210

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of the age structure of Rural North - Marrangaroo in 2006 compared to Regional New South Wales shows that there was a smaller proportion of people in the younger age groups (0 to 17) as well as a smaller proportion of people in the older age groups (60+).

Overall, 22.4% of the population was aged between 0 and 17, and 16.9% were aged 60 years and over, compared with 24.8% and 22.0% respectively for Regional New South Wales.

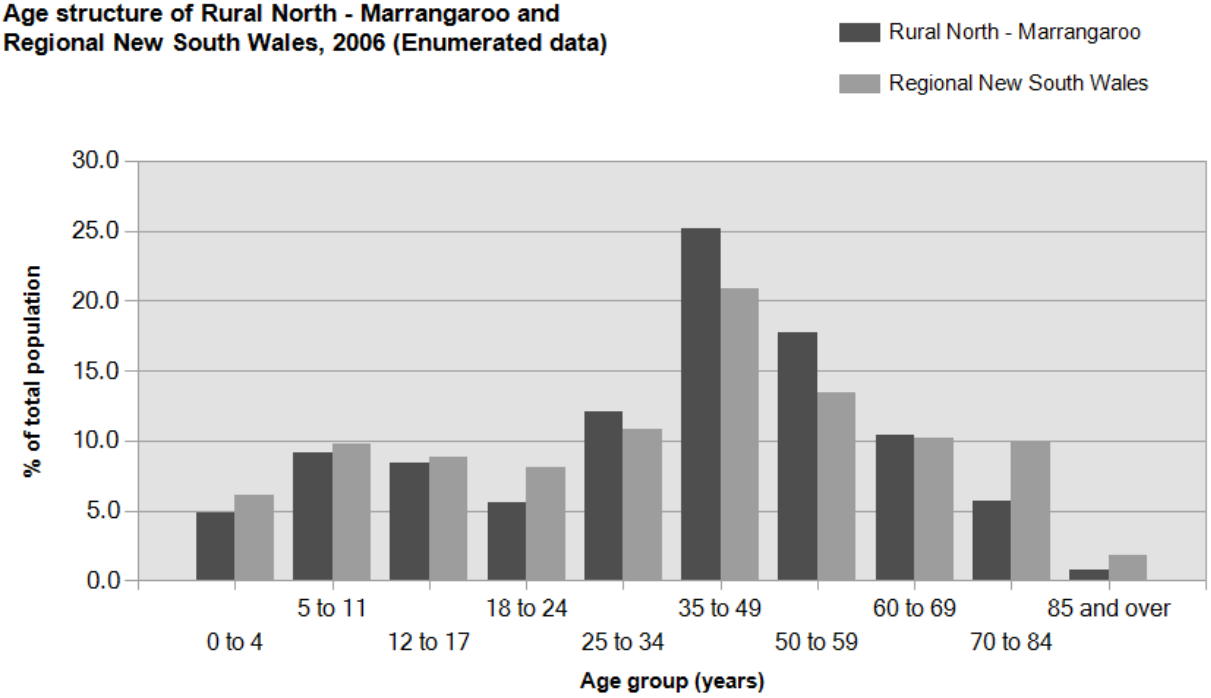
The major differences between the age structure of Rural North - Marrangaroo and Regional New South Wales were:

- A *larger* percentage of 35 to 49 year olds (25.2% compared to 20.9%);
- A *larger* percentage of 50 to 59 year olds (17.7% compared to 13.5%);
- A *smaller* percentage of 70 to 84 year olds (5.7% compared to 9.9%), and;
- A *smaller* percentage of 18 to 24 year olds (5.6% compared to 8.1%).

The largest changes in age structure in this area between 2001 and 2006 were in the age groups:

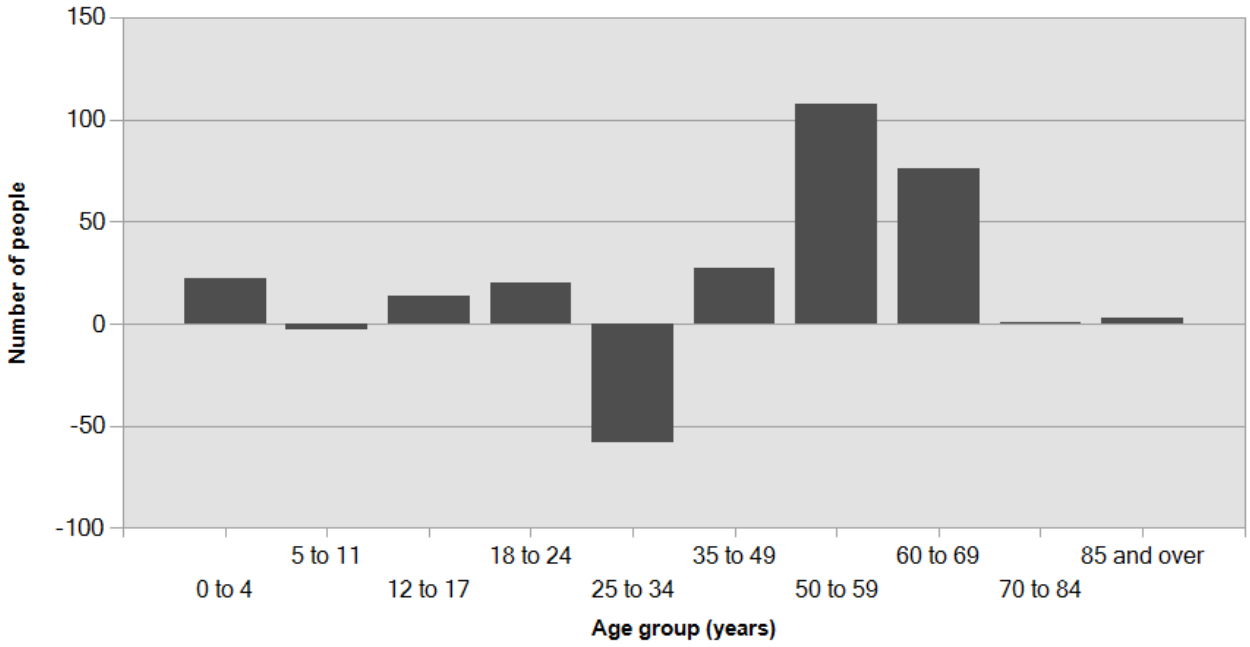
- 50 to 59 (+108 persons);
- 60 to 69 (+76 persons), and;
- 25 to 34 (-58 persons).

Age structure of Rural North - Marrangaroo and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in age structure of Rural North - Marrangaroo, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Rural North - Marrangaroo

What is our individual income? (Weekly individual income)

Weekly individual income 2006

Derived from the Census question, *'What is the total of all wages/salaries, government benefits, pensions, allowances and other income the person usually receives?'* This is the gross amount and relates only to persons aged 15 years or more.

Individual Income is an indicator of socio-economic status. With other data sources, such as Household Income, Educational Qualifications and Occupation, it helps to evaluate the economic opportunities and socio-economic status of an area. The amount of income an individual receives is linked to a number of factors including the person's:

- employment status;
- age (as for instance students and retirees often receive a lower income);
- qualifications; and
- the type of employment undertaken by the person.

It is interesting to view individual income data in relation to both household income and number of persons usually resident. Areas with relatively high household income may be the result of multiple earners in the household contributing to that household income, so it is possible that some areas that have relatively high household incomes will have relatively low levels of individual income.

To enable a comparison of Individual Income levels of an area over time, Individual Income quartiles have been calculated and presented in the 'Individual income quartiles tab'.

Weekly individual incomeincome groups (persons)	Rural North - Marrangaroo		
	2006		
Enumerated data	number	%	Regional New South Wales %
negative/nil income	130	7.5	6.4
$1 to $149	109	6.3	7.1
$150 to $249	258	14.9	17.8
$250 to $399	195	11.3	16.1
$400 to $599	180	10.4	14.8
$600 to $799	110	6.3	9.9
$800 to $999	80	4.6	6.5
$1,000 to $1,299	87	5.0	6.1
$1,300 to $1,599	74	4.3	3.7
$1,600 to $1,999	55	3.2	1.9
$2,000 or more	48	2.8	2.0
not stated	402	23.3	7.7
Total	1,728	100.0	100.0

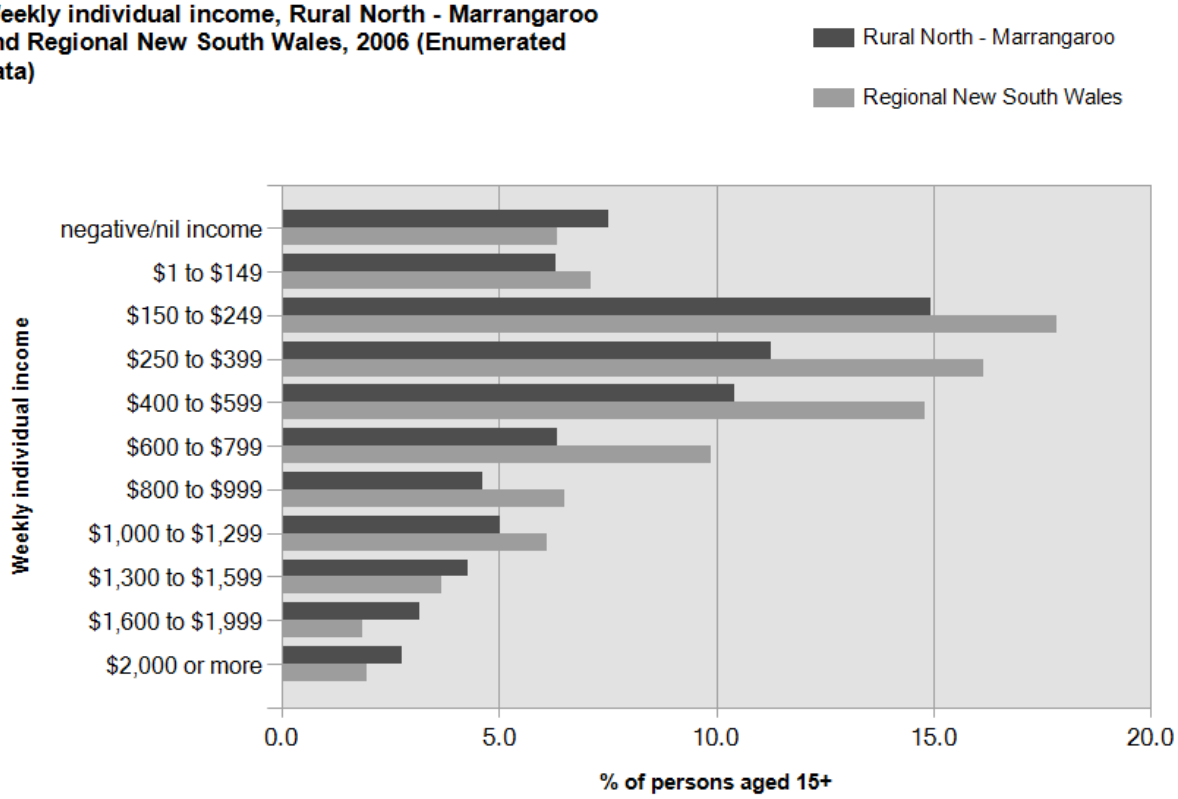
Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of individual income levels in Rural North - Marrangaroo in 2006 compared to Regional New South Wales shows that there was a larger proportion of persons earning a high income (those earning $1,000 per week or more) but a smaller proportion of low income persons (those earning less than $400 per week).

Overall, 15.3% of the population earned a high income, and 40.0% earned a low income, compared with 13.7% and 47.4% respectively for Regional New South Wales.

Weekly individual income, Rural North - Marrangaroo and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Rural North - Marrangaroo

What is our household income? (Weekly household income)

Weekly household income 2006

Derived from the Census question, *'What is the total of all wages/salaries, government benefits, pensions, allowances and other income the person usually receives?'.* This is the gross amount and relates only to persons aged 15 years or more.

Household Income is one of the most important indicators of socio-economic status. With other data sources, such as Educational Qualifications and Occupation, it helps to evaluate the economic opportunities and socio-economic status of an area. The amount of income a household generates is linked to a number of factors:

- the number of workers in the household;
- the percentage of people unemployed or on other income support benefits; and
- the type of employment undertaken by the household members.

Note: It is important to remember that households vary in size, so that some areas have a greater number of dependents per income generated than others. If the area has a large number of retirees then this will produce a higher proportion of households with low income. This is not necessarily a measure of retirees' affluence, as retirees often have capital resources. Refer to the Age Structure section to understand this element.

To enable a comparison of Household Income levels of an area over time, Household Income quartiles have been calculated and presented in the 'Household income quartiles tab'.

Weekly household incomeincome groups (households)	Rural North - Marrangaroo		
	2006		
Enumerated data	number	%	Regional New South Wales %
Negative / Nil income	11	1.6	1.1
$1 to $149	15	2.3	1.6
$150 to $249	44	6.7	6.5
$250 to $349	58	8.8	8.9
$350 to $499	40	6.1	7.1
$500 to $649	70	10.6	12.7
$650 to $799	43	6.5	6.6
$800 to $999	22	3.3	6.9
$1000 to $1199	50	7.5	10.5
$1200 to $1399	32	4.8	5.2
$1400 to $1699	46	6.9	6.4
$1700 to $1999	42	6.4	4.9
$2000 to $2499	51	7.8	4.5
$2500 to $2999	35	5.3	3.3
$3000 or more	33	5.1	2.6
Partial income stated	58	8.8	7.7
All incomes not stated	10	1.6	3.4
Total	659	100.0	100.0

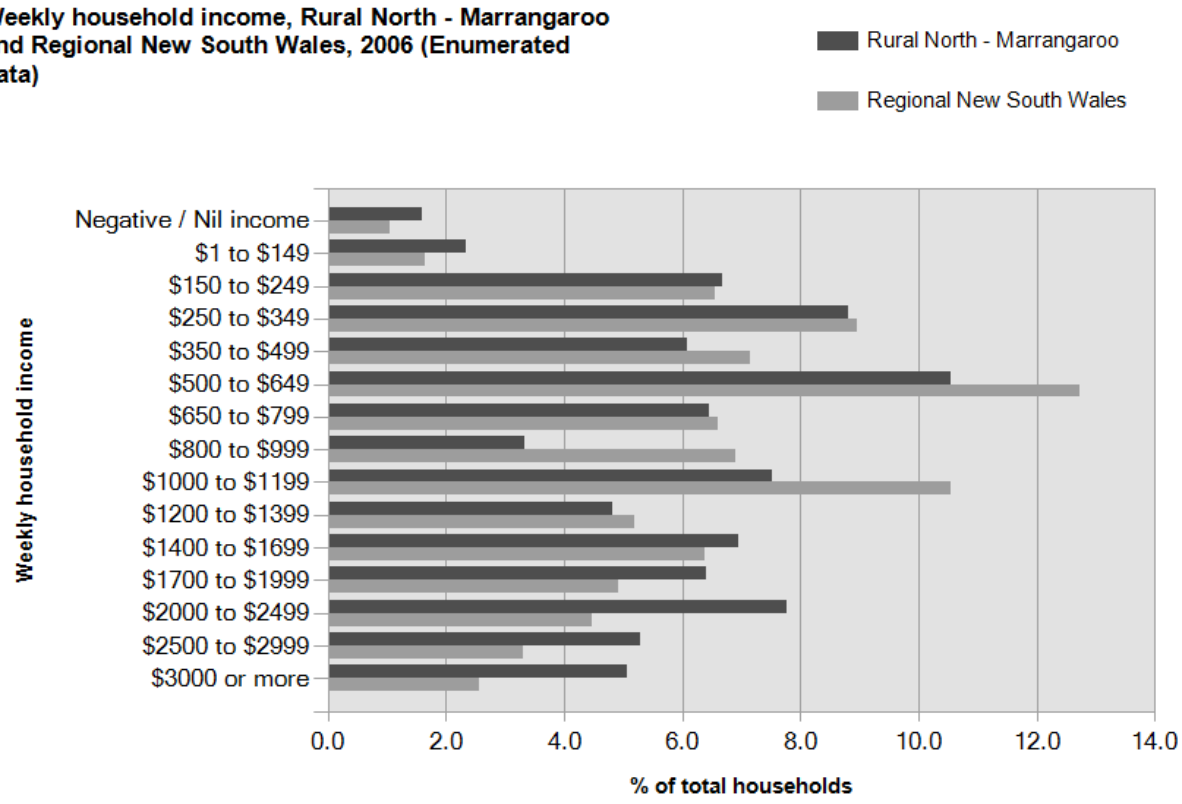
Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of household income levels in Rural North - Marrangaroo in 2006 compared to Regional New South Wales shows that there was a larger proportion of high income households (those earning $1,700 per week or more) but a similar proportion of low income households (those earning less than $500 per week).

Overall, 24.6% of the households earned a high income, and 25.5% were low income households, compared with 15.3% and 25.2% respectively for Regional New South Wales.

Weekly household income, Rural North - Marrangaroo and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Rural North - Marrangaroo

What are our qualifications? (Highest education qualification achieved)

Derived from the Census question, *'What is the level of the highest qualification the person has completed?'* and relates only to persons aged 15 years or more.

Educational Qualifications are one of the most important indicators of socio-economic status. With other data sources, such as Income and Occupation, Educational Qualifications help to evaluate the economic opportunities and socio-economic status of an area. Level of Educational Qualifications in a population relate to a number of factors including:

- the age of the population (e.g. older people tend to have more vocational qualifications, while people in their twenties and thirties are more likely to have a university degree);
- the professional or working ambitions of people (to seek education as youth or retraining as adults);
- the opportunities afforded to people to continue studying beyond compulsory schooling.

Highest qualification achieved (persons aged 15 years and over)	Rural North - Marrangaroo						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Bachelor or Higher degree	98	5.6	10.4	89	5.6	8.6	9
Advanced Diploma or Diploma	82	4.6	6.2	79	5.0	5.2	3
Vocational	342	19.4	20.1	279	17.5	18.2	63
No qualifications	741	42.1	50.3	744	46.6	56.2	-3
Not Stated	496	28.2	12.9	405	25.4	11.8	90
Total	1,759	100.0	100.0	1,597	100.0	100.0	162

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of the qualifications of the population in Rural North - Marrangaroo in 2006 compared to Regional New South Wales shows that there was a smaller proportion of people holding formal qualifications (Bachelor or higher degree; Advanced Diploma or Diploma; or Vocational qualifications) and a smaller proportion of people with no formal qualifications.

Overall, 29.6% of the population held educational qualifications, and 42.1% had no qualifications, compared with 36.7% and 50.3% respectively for Regional New South Wales.

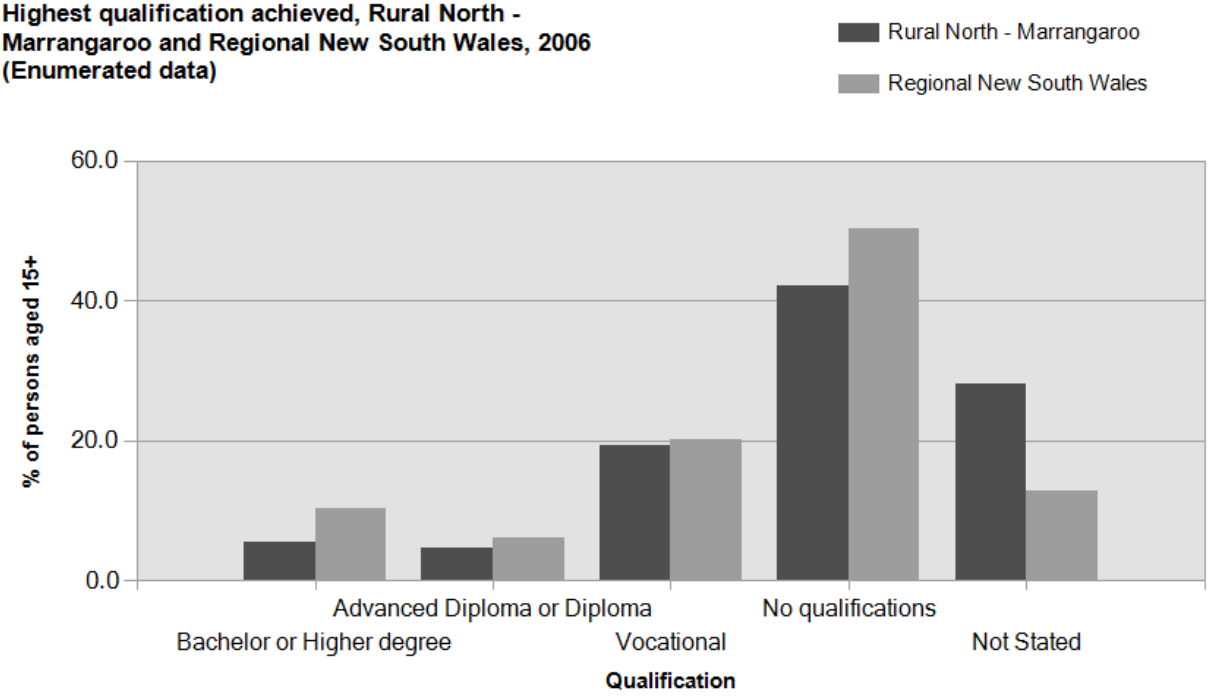
The major differences between the qualifications held by the population in Rural North - Marrangaroo and Regional New South Wales were:

- A *smaller* percentage of people with No qualifications (42.1% compared to 50.3%), and;
- A *smaller* percentage of people with Bachelor or Higher degrees (5.6% compared to 10.4%).

The largest change in the qualifications of the population in Rural North - Marrangaroo between 2001 and 2006 was in those with:

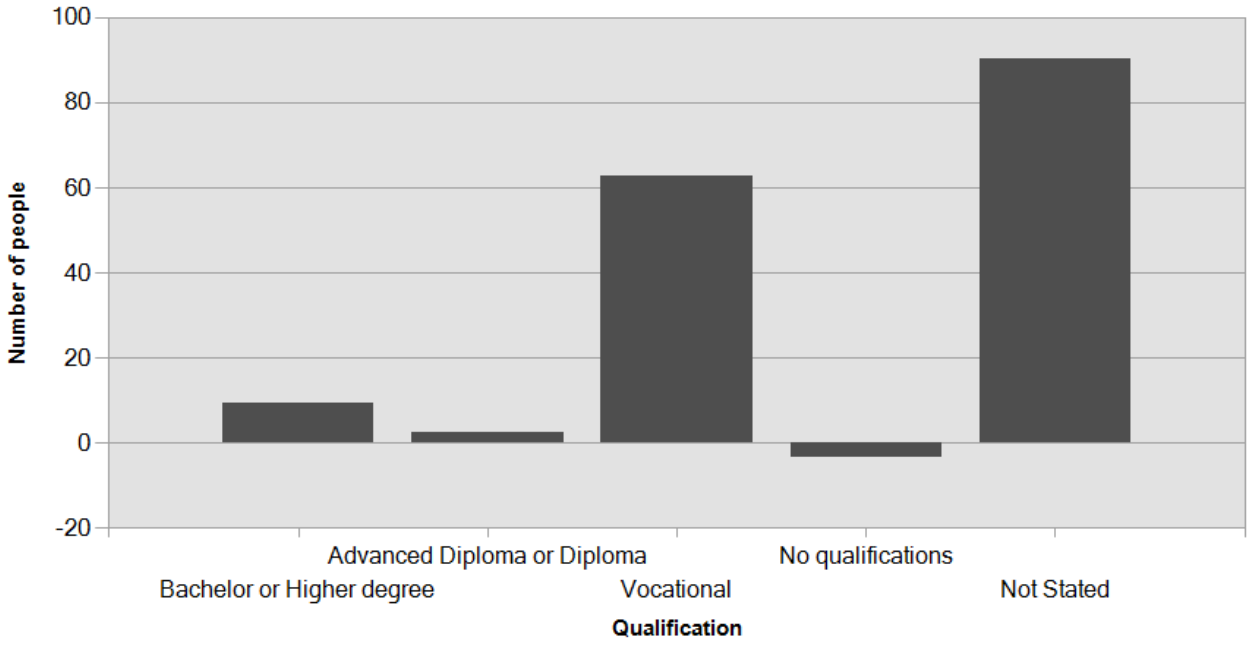
- Vocational qualifications (+63 persons).

Highest qualification achieved, Rural North - Marrangaroo and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in highest qualification achieved, Rural North - Marrangaroo, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Rural North - Marrangaroo

What is the highest secondary school year we have completed? (Highest level of schooling completed)

Derived from the Census question, '*What is the highest year of primary or secondary school the person has completed?*' and relates only to persons aged 15 years or more.

The Year of Schooling data is a useful indicator of socio-economic status of an area. With other indicators, such as proficiency in English, the data informs planners and decision-makers as to people's ability to access services. Combined with Educational Qualifications it also allows assessment of the skill base of the population. The reasons for differences in Year of Schooling completed across areas are linked to a number of factors including:

- the age of the population, as over time there has been a greater emphasis on acquiring higher education in order to find employment;
- the working and social aspirations of the population; and
- a lack of access to further education opportunities due to financial constraints or distance to schools.

Unfortunately this data is only available for 2006 as there is no comparable data for previous Census years. Please see specific data notes for further detail.

Highest level of schooling completed(persons aged 15 years and over)	Rural North - Marrangaroo		
	2006		
Enumerated data	number	%	Regional New South Wales %
Year 8 or below	126	7.4	8.4
Year 9 or equivalent	166	9.7	11.0
Year 10 or equivalent	543	31.6	33.0
Year 11 or equivalent	88	5.1	6.9
Year 12 or equivalent	349	20.3	31.0
Did not go to school	6	0.3	0.5
Not Stated	441	25.7	9.2
Total	1,719	100.0	100.0

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

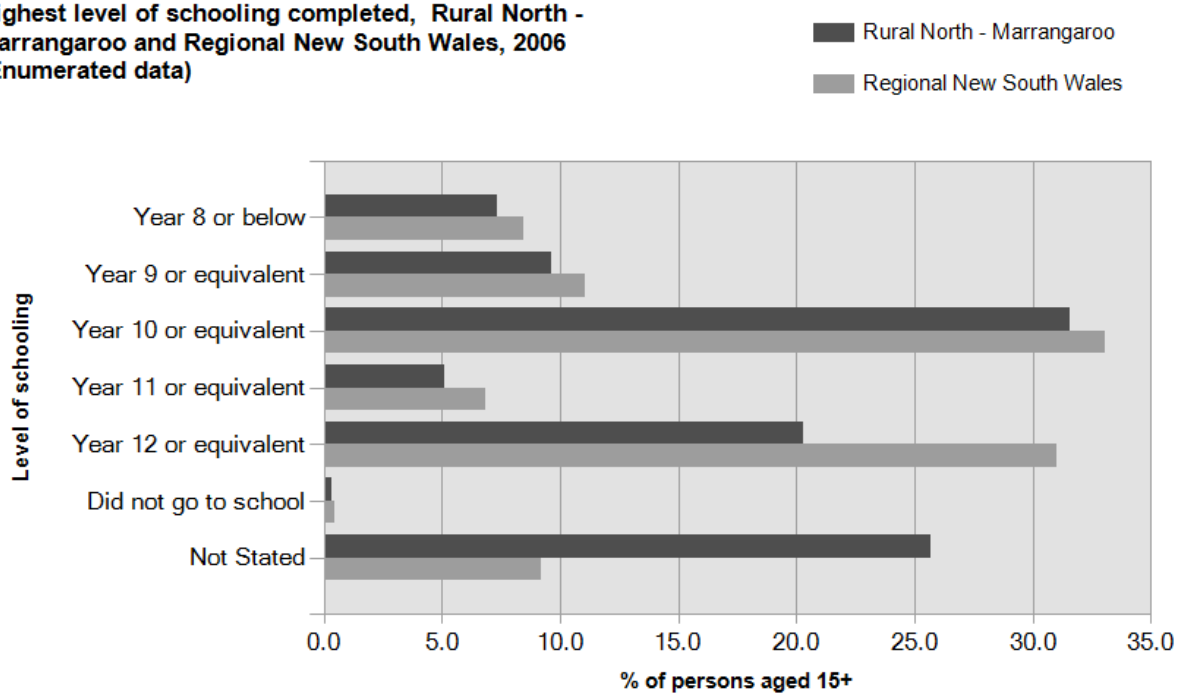
Analysis of the highest level of schooling attained by the population in Rural North - Marrangaroo in 2006 compared to Regional New South Wales shows that there was a smaller proportion of people who had left school at an early level (Year 10 or less) as well as a smaller proportion of people who completed Year 12 or equivalent.

Overall, 48.7% of the population left school at Year 10 or below, and 20.3% went on to complete Year 12 or equivalent, compared with 52.4% and 31.0% respectively for Regional New South Wales.

The major differences between the level of schooling attained by the population in Rural North - Marrangaroo and Regional New South Wales were:

- A *smaller* percentage of people who left school at Year 12 or equivalent (20.3% compared to 31.0%);
- A *smaller* percentage of people who left school at Year 11 or equivalent (5.1% compared to 6.9%), and;
- A *smaller* percentage of people who left school at Year 10 or equivalent (31.6% compared to 33.0%).

Highest level of schooling completed, Rural North - Marrangaroo and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Rural North - Marrangaroo

What is our employment status? (Employment status)

Derived from the Census question, *'Last week did the person have a full time or part time job of any kind?'* and relates only to persons aged 15 years or more.

The Employment Status of the population is an important indicator of the socio-economic status of an area. It represents the share of the population that is employed full-time, part-time or unemployed, as well as changes over time in the labour force. Employment Status is linked to a number of factors:

- the age structure of the population, which for example influences the number of persons in the workforce (i.e. population 15 years or more) or retired (i.e. population over 60 years);
- the economic base and employment opportunities available in the area; and
- the education and skill base of the population.

Census Employment Status data should be analysed in conjunction with Income, Occupation and Education Qualifications data to identify the relative socio-economic status of an area.

Employment status(persons aged 15 years and over)	Rural North - Marrangaroo						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Employed full time	511	60.0	56.6	468	61.1	56.2	43
Employed part time	248	29.1	33.8	218	28.4	31.7	30
Employed not stated	33	3.9	2.6	23	3.0	2.8	10
Total employed	791	92.9	93.0	708	92.4	90.7	83
Total unemployed	60	7.1	7.0	58	7.6	9.3	3
Total labour force	852	100.0	100.0	766	100.0	100.0	86
Total in labour force	852	49.4	56.1	766	48.3	55.6	86
Total not in labour force	758	44.0	38.6	777	49.0	40.5	-18
Not stated	113	6.6	5.3	44	2.8	3.9	70
Total	1,723	100.0	100.0	1,587	100.0	100.0	137

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

The size of Rural North - Marrangaroo's labour force in 2006 was 852 persons, of which 248 were employed part-time (29.1%) and 511 were full time workers (60.0%).

Analysis of the employment status of the population in Rural North - Marrangaroo in 2006 compared to Regional New South Wales shows that there was a similar proportion in employment, and a similar proportion unemployed.

Overall, 92.9% of the labour force was employed (45.9% of the population aged 15+), and 7.1% unemployed (3.5% of the population aged 15+), compared with 93.0% and 7.0% respectively for Regional New South Wales.

Between 2001 and 2006, the number of people employed in Rural North - Marrangaroo showed an increase of 83 persons and the number unemployed showed an increase of 3 persons.

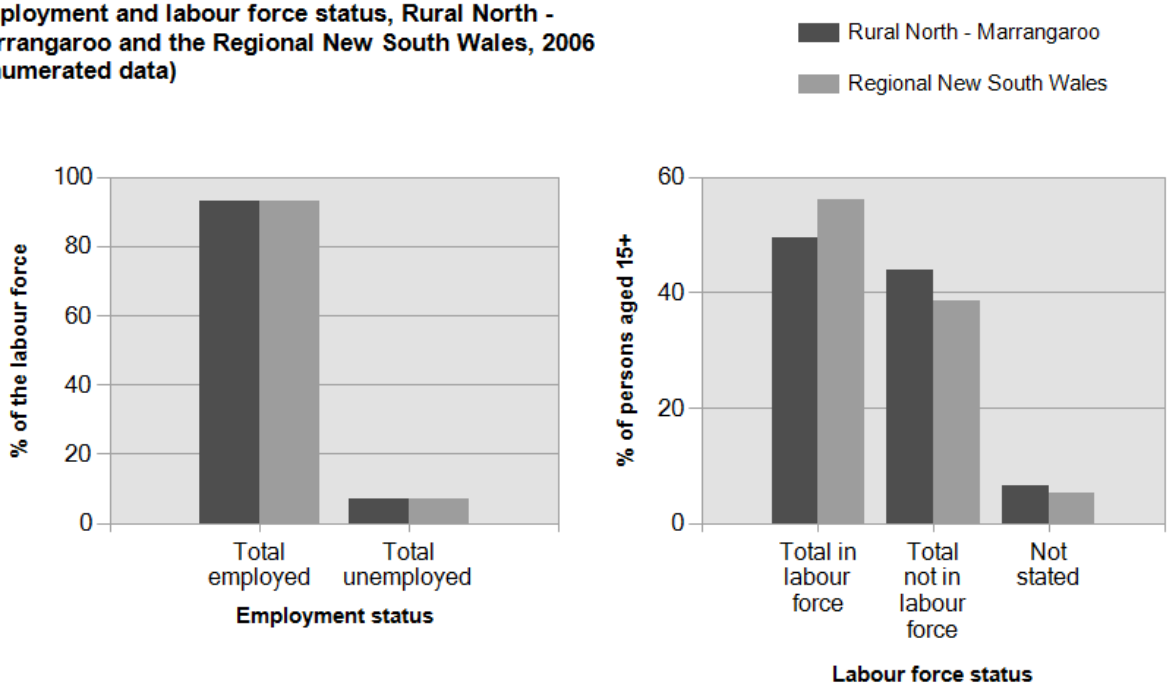
The labour force participation rate refers to the proportion of the population over 15 years of age that was employed or actively looking for work. "The labour force is a fundamental input to domestic production. Its size and composition are therefore crucial factors in economic growth. From the viewpoint of social development, earnings from paid work are a major influence on levels of economic well-being." (Australian

Bureau of Statistics, Australian Social Trends 1995).

Analysis of the labour force participation rate of the population in Rural North - Marrangaroo in 2006 shows that there was a smaller proportion in the labour force (49.4%) compared with Regional New South Wales (56.1%).

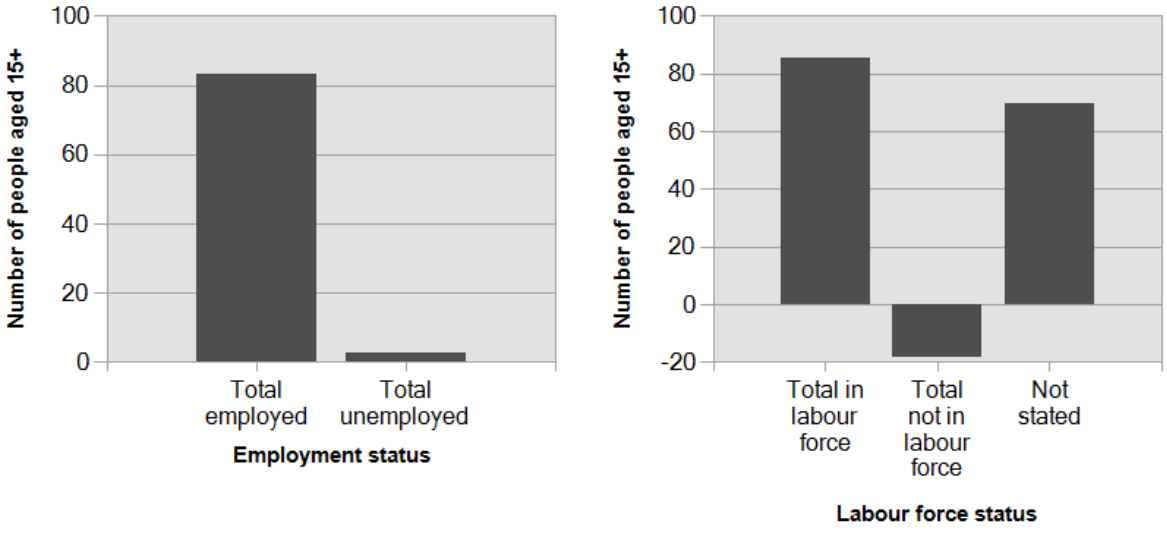
Between 2001 and 2006 in Rural North - Marrangaroo the number of people in the labour force showed an increase of 86 people, or 11.2%.

Employment and labour force status, Rural North - Marrangaroo and the Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in employment and labour force status, Rural North - Marrangaroo, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Rural North - Marrangaroo

What industries do we work in? (Industry)

2006 industry categories

Derived from the two Census questions, *'[What] best describes the business of [your] employer?'* and *'What are the main goods produced or main services provided by [your] employer's business?'* and relates only to persons aged 15 years or more.

The Industry data identifies the industries in which the residents of an area work (this may be within the residing area or elsewhere). The Industry Structure of the work force is indicative of the skill base and (to some extent) the socio-economic status and industry structure of an area.

The industries that are prominent in an area are strongly related to a range of factors including:

- the economic base and employment opportunities available in the general region;
- the educational levels of the local population; and
- the working and social aspirations of the population.

Industries are classified by grouping businesses which carry out similar productive activities. The 2006 Australian and New Zealand Standard Industrial Classification (ANZSIC) provides the current framework for industry classification in Australia. This classification provides a contemporary and internationally comparable industrial classification system which includes information about "new economy" industries such as Information, Media and Telecommunications. As this is a new classification *only 2006 data is available*.

Time series industry data (based on the 1993 ANZSIC classification) is available in the tab above named 'Time series industries'.

Industry, 2006 ANZSIC(employed persons)	Rural North - Marrangaroo		
	2006		
Enumerated data	number	%	Regional New South Wales %
Agriculture, Forestry & Fishing	78	9.7	6.9
Mining	98	12.2	1.7
Manufacturing	57	7.2	9.2
Electricity, Gas, Water and Waste Services	53	6.6	1.3
Construction	44	5.5	7.8
Retail Trade	52	6.4	12.3
Wholesale Trade	18	2.2	3.1
Accommodation and Food Services	58	7.2	7.5
Transport, Postal and Warehousing	33	4.1	4.3
Information Media and Telecommunications	9	1.2	1.2
Financial and Insurance Services	3	0.4	2.3
Rental, Hiring and Real Estate Services	20	2.5	1.5
Professional, Scientific and Technical Services	34	4.2	4.4
Administrative and Support Services	19	2.4	2.5
Public Administration and Safety	68	8.5	6.9
Education and Training	60	7.5	8.2
Health Care and Social Assistance	64	7.9	11.5
Arts and Recreation Services	2	0.2	1.2
Other Services	11	1.4	3.9
Inadequately described or Not stated	20	2.5	2.3
Total	**801**	**100.0**	**100.0**

Source: Australian Bureau of Statistics, Census of Population and Housing 2006.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

An analysis of the jobs held by the resident population in Rural North - Marrangaroo in 2006 shows the three most popular industry sectors were:

- Mining (98 persons or 12.2%)
- Agriculture, Forestry & Fishing (78 persons or 9.7%)
- Public Administration and Safety (68 persons or 8.5%)

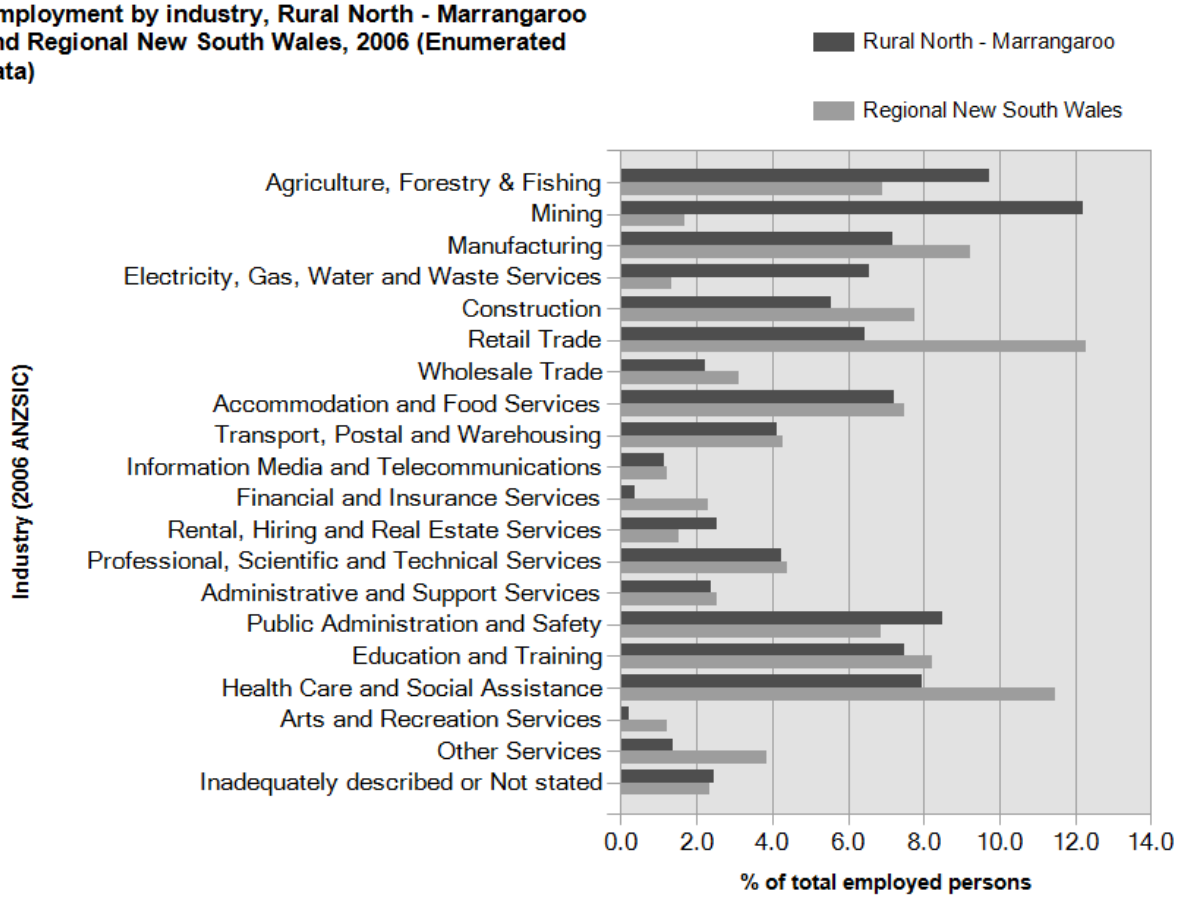
In combination these three industries employed 244 people in total or 30.4% of the employed resident population.

In comparison, Regional New South Wales employed 1.7% in Mining; 6.9% in Agriculture, Forestry & Fishing; and 6.9% in Public Administration and Safety.

The major differences between the jobs held by the population of Rural North - Marrangaroo and Regional New South Wales were:

- A *larger* percentage persons employed in Mining (12.2% compared to 1.7%);
- A *larger* percentage persons employed in Electricity, Gas, Water and Waste Services (6.6% compared to 1.3%);
- A *smaller* percentage persons employed in Retail Trade (6.4% compared to 12.3%), and;
- A *smaller* percentage persons employed in Health Care and Social Assistance (7.9% compared to 11.5%).

Employment by industry, Rural North - Marrangaroo and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Rural North - Marrangaroo

What are our occupations? (Occupation)

2006 occupation categories

Derived from the two Census questions, *'In the main job held last week, what was the person's occupation?'* and *'What are the main tasks that the person himself/herself usually performs in that occupation?'* and relates only to persons aged 15 years or more.

The Occupation data identifies the occupations in which the residents of an area work (this may be within the residing area or elsewhere). The occupational structure of the work force is an important indicator of the characteristics of the labour force. With other indicators, such as Educational Qualifications and Income, Occupation is a key component of evaluating the socio-economic status and skill base of an area. The occupations held by a workforce are linked to a range of factors including:

- the economic base and employment opportunities available in the area;
- the educational qualification levels of the population; and
- the working and social aspirations of the population.

Occupations are classified using a combination of skill level and skill specialisation to form meaningful groups. The 2006 Australian and New Zealand Standard Classification of Occupations (ANZSCO) provides the current framework for occupation classification in Australia. This classification provides a contemporary occupation classification system. As this is a new classification *only 2006 data is available*.

Time series occupation data (based on the ASCO Second Edition classification) is available in the tab above named 'Time series occupations'.

Occupation, 2006 ANZSCO(employed persons)	Rural North - Marrangaroo		
	2006		
Enumerated data	number	%	Regional New South Wales %
Managers	150	18.7	14.4
Professionals	94	11.8	16.4
Technicians and Trades Workers	128	15.9	15.4
Community and Personal Service Workers	82	10.2	9.7
Clerical and Administrative Workers	101	12.6	12.9
Sales Workers	50	6.3	10.1
Machinery Operators And Drivers	98	12.2	7.3
Labourers	86	10.7	12.3
Inadequately described or Not stated	13	1.6	1.6
Total	**801**	**100.0**	**100.0**

Source: Australian Bureau of Statistics, Census of Population and Housing 2006.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

An analysis of the occupations held by the resident population in Rural North - Marrangaroo in 2006 shows the three most popular occupations were:

- Managers (150 persons or 18.7%)
- Technicians and Trades Workers (128 persons or 15.9%)
- Clerical and Administrative Workers (101 persons or 12.6%)

In combination these three occupations accounted for 379 people in total or 47.2% of the employed resident population.

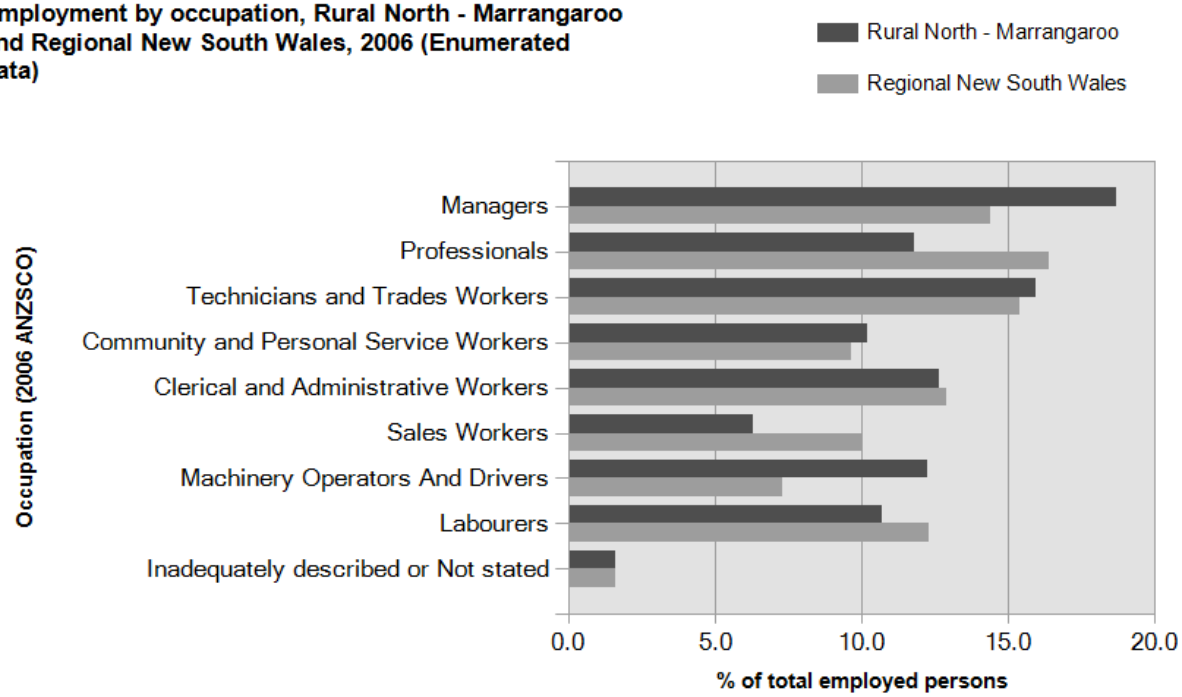
In comparison, Regional New South Wales employed 14.4% as Managers; 15.4% as Technicians and

Trades Workers; and 12.9% as Clerical and Administrative Workers.

The major differences between the occupations of the population of Rural North - Marrangaroo and Regional New South Wales were

- A *larger* percentage persons employed as Machinery Operators And Drivers (12.2% compared to 7.3%);
- A *larger* percentage persons employed as Managers (18.7% compared to 14.4%);
- A *smaller* percentage persons employed as Professionals (11.8% compared to 16.4%), and;
- A *smaller* percentage persons employed as Sales Workers (6.3% compared to 10.1%).

Employment by occupation, Rural North - Marrangaroo and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Rural North - Marrangaroo

How do we get to work? (Method of travel to work)

Derived from the Census question, *'How did the person get to work on Tuesday, 8 August 2006?'* and relates only to persons aged 15 years or more.

This data reveals the main Modes of Transport used by residents to get to work. This data is very useful in transport planning as it informs decision-makers on the effectiveness and availability of local public transport. There are a number of reasons why people use different Modes of Transport to get to work including:

- the availability of affordable and effective public transport options;
- the number of motor vehicles available within a household; and
- the travel distance to work, which for example, can allow people to walk or bicycle to their place of employment.

Note that respondents to the Census can nominate up to three methods of travel. The data presented here include people using multiple methods, but shows only one method. A hierarchy is used in which public transport is assumed to be the dominant mode if it is used. Hence people driving their car to a station or taking a taxi to the ferry are included under "Train" and "Tram or Ferry" respectively, rather than "Car" or "Taxi".

Travel to work(includes multi-mode journeys)	Rural North - Marrangaroo						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Train	1	0.2	0.8	2	0.3	0.9	-1
Bus	0	0	0.8	5	0.7	1.0	-5
Tram or Ferry	0	0	0	0	0	0	0
Taxi	0	0	0.2	1	0.1	0.2	-1
Car - as driver	509	63.9	61.6	389	55.1	58.2	120
Car - as passenger	38	4.8	6.6	49	6.9	7.2	-11
Truck	24	3.0	2.0	28	4.0	2.6	-5
Motorbike	5	0.6	0.7	0	0	0.8	5
Bicycle	0	0	0.8	2	0.3	0.9	-2
Walked only	24	3.0	4.7	27	3.9	4.9	-4
Other	7	0.9	1.2	11	1.5	1.7	-3
Worked at home	80	10.0	6.4	95	13.5	7.2	-15
Did not go to work	91	11.4	12.2	93	13.1	12.4	-2
Not stated	18	2.2	1.9	4	0.6	1.9	13
Total	797	100.0	100.0	707	100.0	100.0	90

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

In 2006, there were 1 people who caught public transport to work (train, bus, tram or ferry) in Rural North - Marrangaroo, compared with 576 who drove in private vehicles (car –as driver, car – as passenger, motorbike, or truck).

Analysis of the method of travel to work of the residents in Rural North - Marrangaroo in 2006 compared to Regional New South Wales shows that 0.2% used public transport, while 72.3% used a private vehicle, compared with 1.6% and 70.9% respectively in Regional New South Wales.

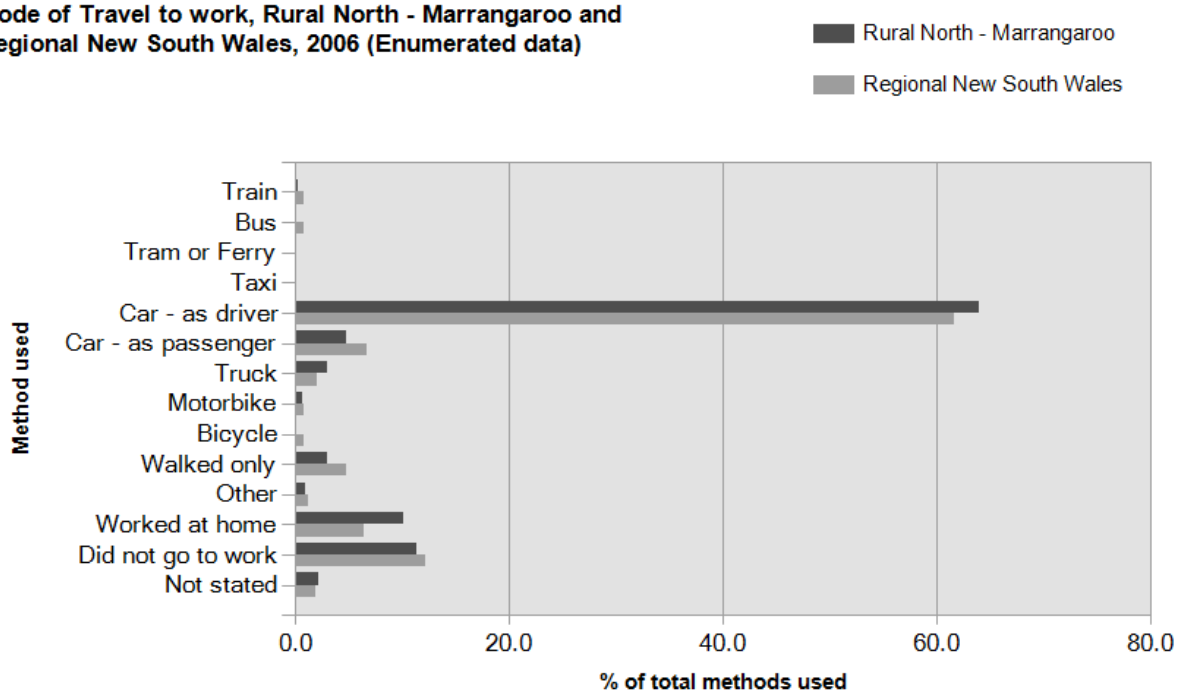
The major difference between the method of travel to work of Rural North - Marrangaroo and Regional New South Wales was:

- A *larger* percentage of people who worked at home (10.0% compared to 6.4%).

The largest change in the method of travel to work by resident population in Rural North - Marrangaroo between 2001 and 2006 were for those nominated:

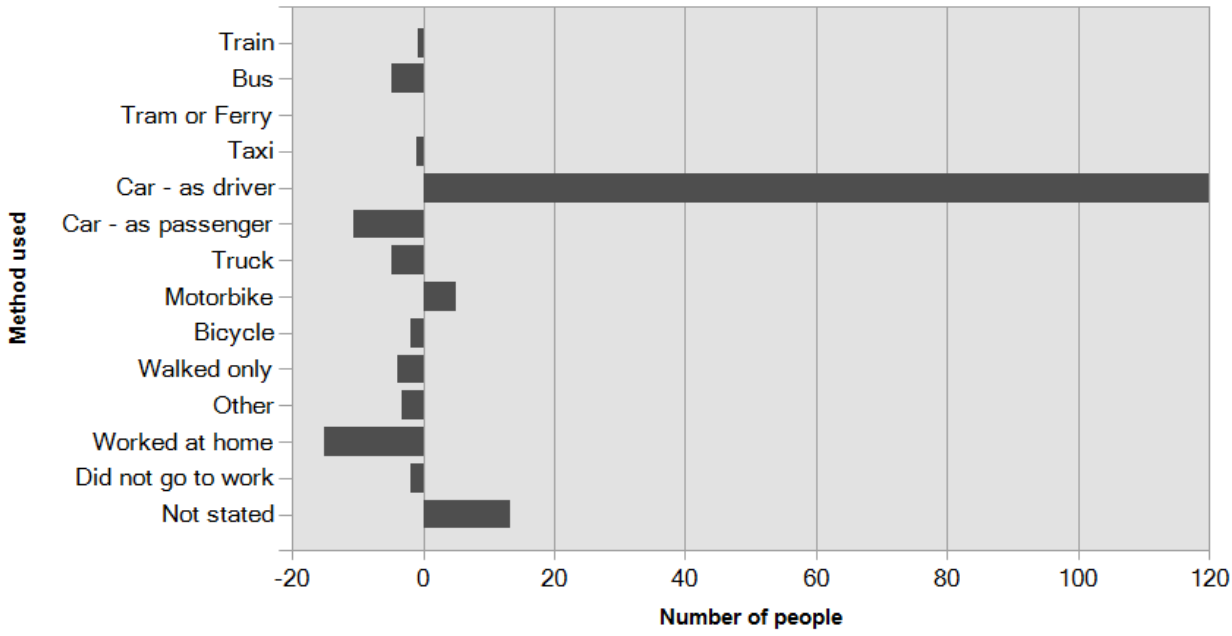
- Car - as driver (+120 persons).

Mode of Travel to work, Rural North - Marrangaroo and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in mode of travel to work, Rural North - Marrangaroo, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Rural North - Marrangaroo

What type of households do we live in? (Household and family types)

Derived from the Census question, *'What is the person's relationship [to each other person in the household]?'*

The Household and Family structure of the population is an indicator of an area's residential role and function (relating to the types of housing markets attracted to the area). It is usually indicative of the area's era of settlement and provides key insights into the level of demand for services and facilities (as most services and facilities are age- and household type-specific).

To get a more complete picture of the demographic characteristics of an area, the Household and Family Type data should be viewed in conjunction with Age Structure data.

Household types(households)	Rural North - Marrangaroo						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Couples with child(ren) under 15 years	179	34.2	29.0	164	35.4	31.5	15
Couples with child(ren) 15 years and over	68	13.0	12.2	67	14.4	12.1	1
Total couples with child(ren)	247	47.2	41.2	230	49.8	43.6	16
One parent families with child(ren) under 15 years	32	6.1	10.1	28	6.1	10.1	3
One parent families with child(ren) 15 years and over	26	5.0	6.7	19	4.1	6.0	7
Total one parent families	58	11.1	16.8	47	10.2	16.1	11
Couples without child(ren)	213	40.8	40.7	174	37.7	38.9	39
Other families	5	1.0	1.3	10	2.2	1.4	-5
Total families	522	100.0	100.0	462	100.0	100.0	61
One family households	484	69.2	68.0	445	73.3	68.2	40
Two or more family households	5	0.7	1.0	6	0.9	0.7	-1
Total family households	489	69.9	69.0	450	74.2	68.9	39
Lone person households	148	21.1	25.1	114	18.7	23.9	34
Group households	12	1.6	2.9	15	2.5	2.9	-4
Other not classifiable households	52	7.4	2.9	28	4.6	4.3	24
Total households	700	100.0	100.0	607	100.0	100.0	93

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of the **family types** in Rural North - Marrangaroo in 2006 compared to Regional New South Wales shows that there was a larger proportion of couple families with child(ren) but a smaller proportion of one-parent families.

Overall, 47.2% of total families were couple families with child(ren), and 11.1% were one-parent families, compared with 41.2% and 16.8% respectively for Regional New South Wales.

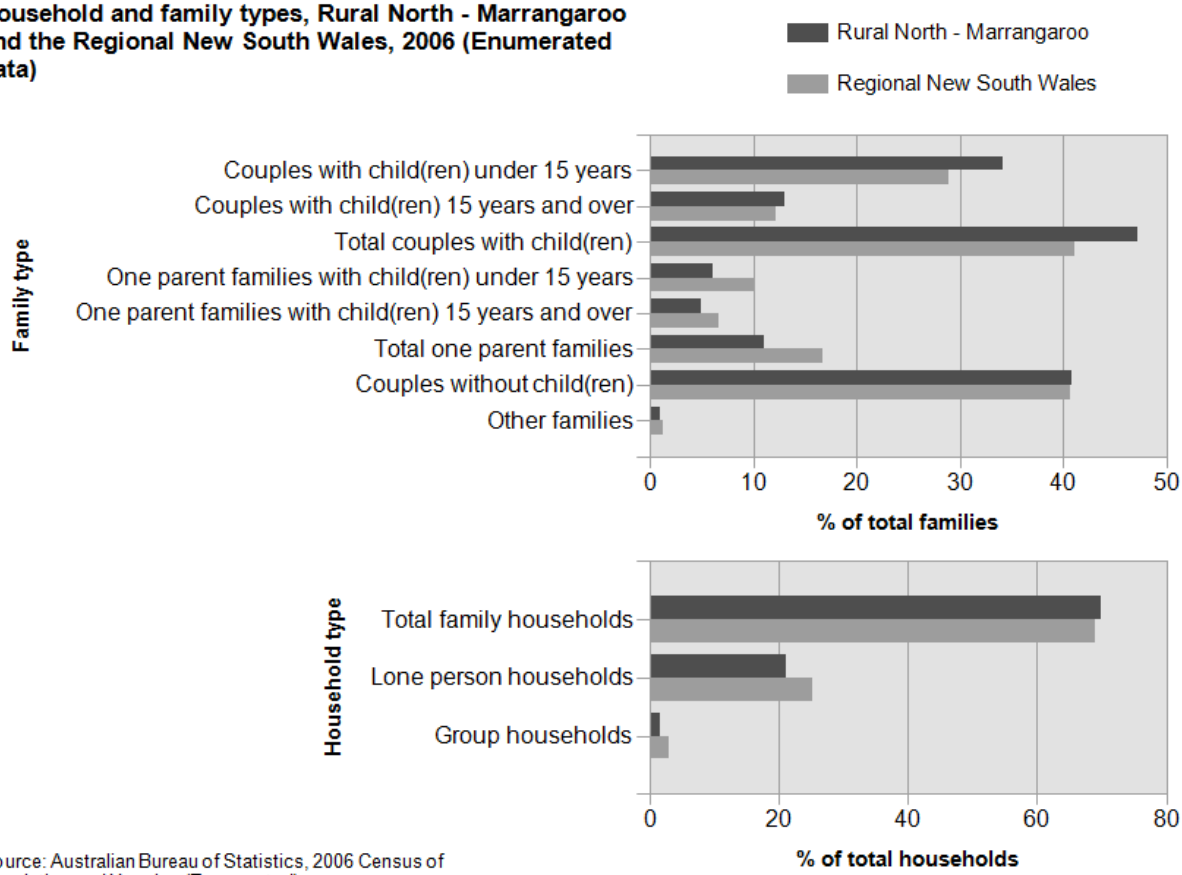
Between 2001 and 2006 there were no numerically significant changes in Rural North - Marrangaroo's household types data.

Comparing **Household types** between Rural North - Marrangaroo and Regional New South Wales in 2006

reveals a similar proportion of Family households, but a smaller proportion of lone person households. Family households accounted for 69.9% of total households in Rural North - Marrangaroo while lone person households comprised 21.1%, (69.0% and 25.1% respectively for Regional New South Wales).

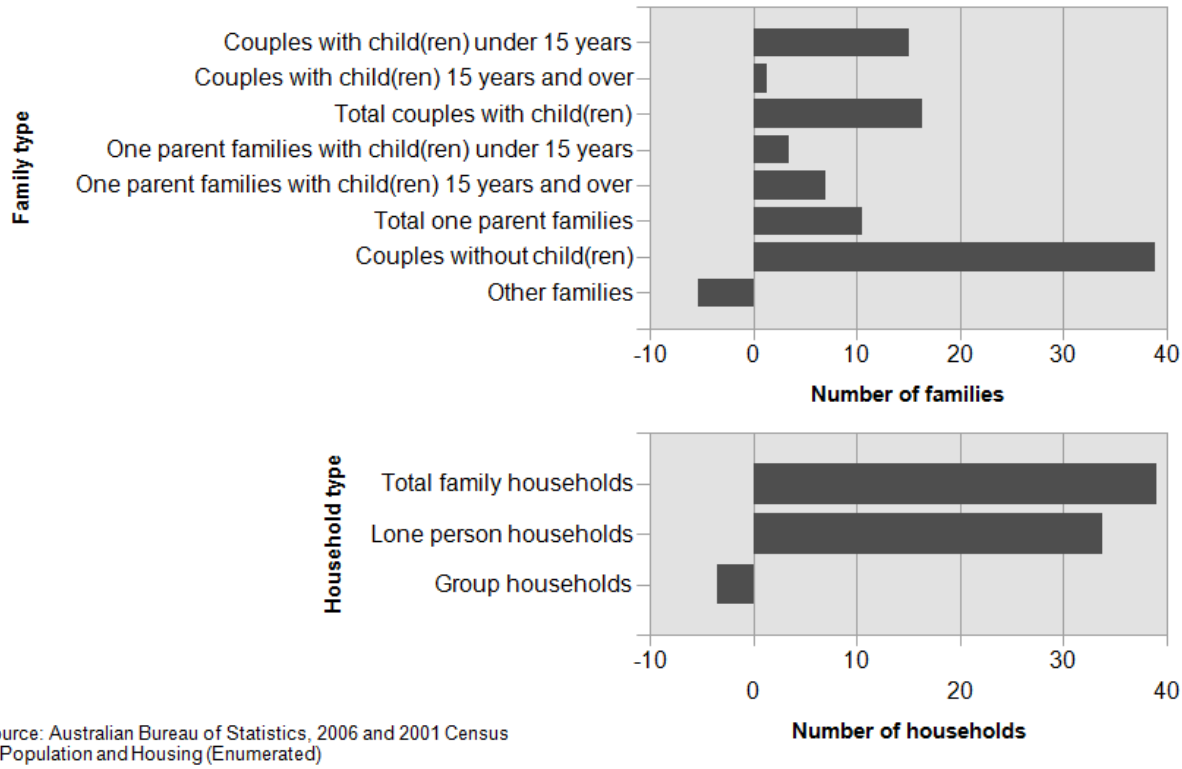
Between 2001 and 2006 in Rural North - Marrangaroo, there was an increase in the number of Family households (39), an increase in lone person households (34) and a decrease in group households (-4).

Household and family types, Rural North - Marrangaroo and the Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in household and family types, Rural North - Marrangaroo, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Rural North - Marrangaroo

How many people live in each household? (Number of persons usually resident)

Derived from the three Census questions, *'Name of each person including visitors who spent the night of Tuesday, 8 August 2006 in this dwelling*', and *'Where does the person usually live?*', and *'Are there any persons who usually live in this dwelling who were absent on Census Night (Tuesday, 8 August 2006)?*'

The size of households in general follows the life-cycle of families. Households are usually small at the stage of relationship formation (early marriage), and then increase in size with the advent of children. They later reduce in size again as these children reach adulthood and leave home. However, household size can also be influenced by a lack, (or abundance) of affordable housing. Further, overseas migrants and indigenous persons often have a tradition of living with extended family members and/or other families.

Household size(number of persons usually resident)	Rural North - Marrangaroo						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
1 Person	147	22.5	25.9	114	19.8	25.0	33
2 Persons	230	35.3	36.3	201	34.9	35.3	30
3 Persons	98	15.0	14.5	88	15.3	15.0	10
4 Persons	101	15.5	14.0	101	17.6	14.5	-1
5 Persons	48	7.4	6.5	57	9.9	7.1	-9
6 or more Persons	28	4.3	2.8	15	2.6	3.1	13
Total	651	100.0	100.0	575	100.0	100.0	76

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

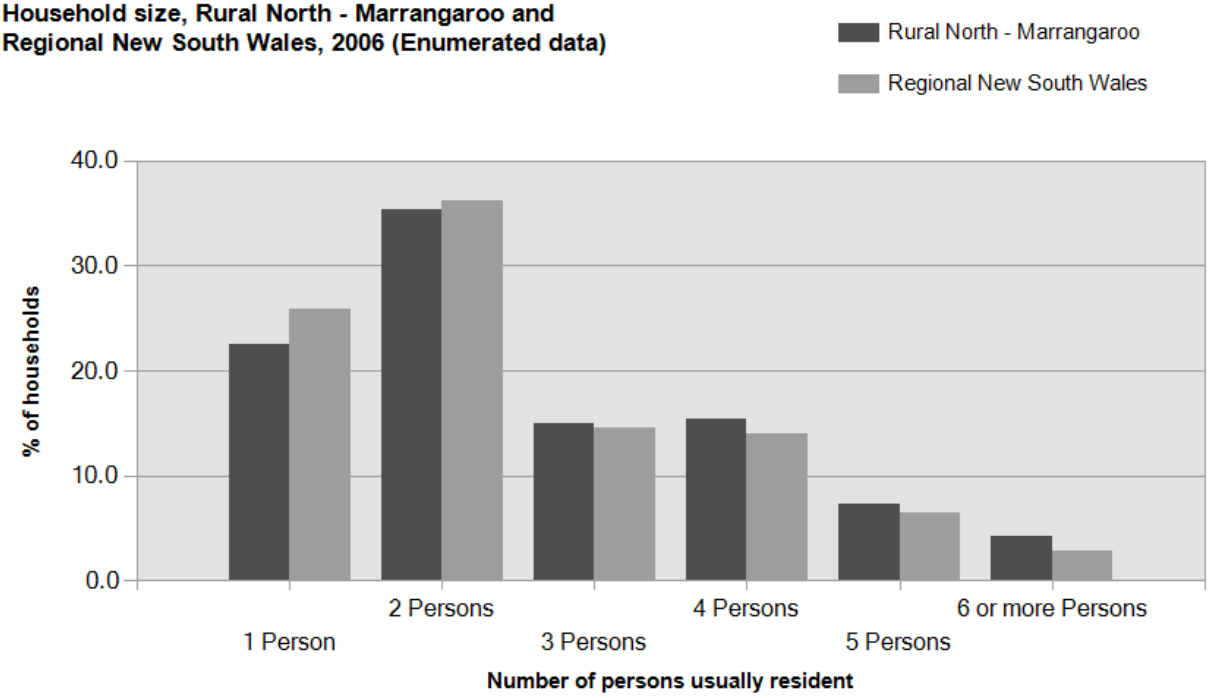
Analysis of the number of persons usually resident in a household in the Rural North - Marrangaroo compared with Regional New South Wales shows that there were a smaller proportion of lone person households, and a larger proportion of larger households (those with 4 persons or more). Overall there were 22.5% of lone person households, and 27.2% of larger households, compared with 25.9% and 23.3% respectively for Regional New South Wales.

The major difference in the household size for Rural North - Marrangaroo and Regional New South Wales was:

- A *smaller* percentage of 1 Person households (22.5% compared to 25.9%).

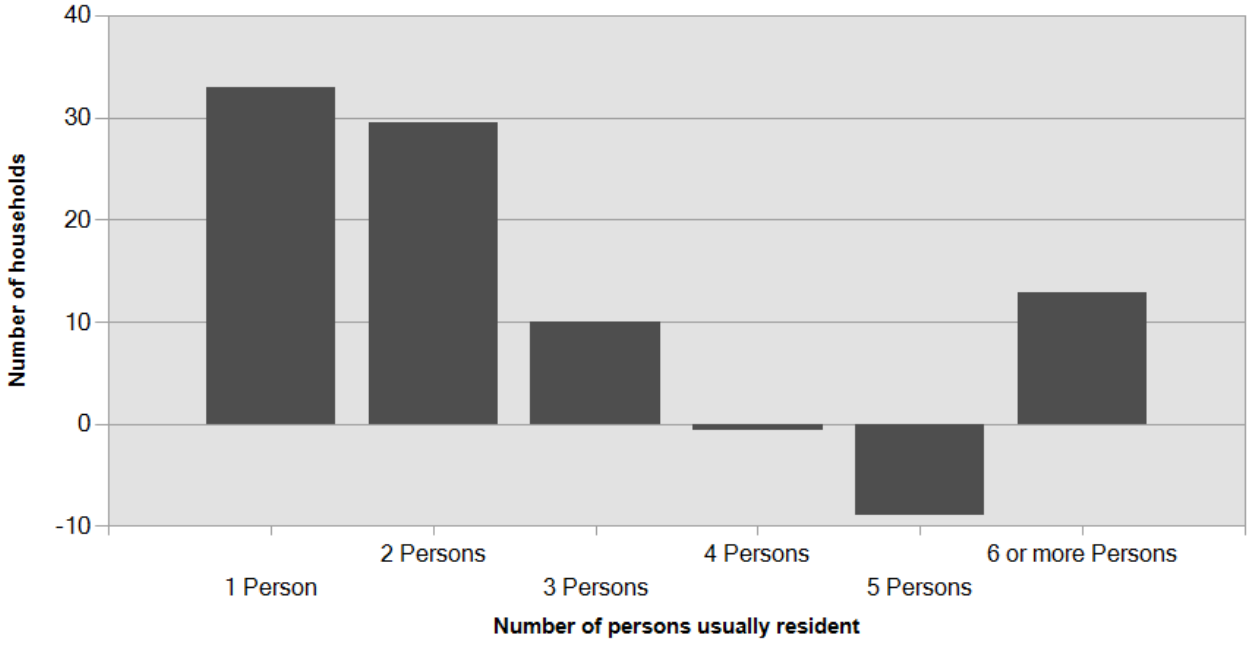
Between 2001 and 2006 there were no numerically significant changes in Rural North - Marrangaroo's household size data.

Household size, Rural North - Marrangaroo and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in household size, Rural North - Marrangaroo, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Rural North - Marrangaroo

Are we owners, renters or buyers? (Housing tenure)

Derived from the Census questions, *'Is this dwelling [owned outright, owned with a mortgage etc]'*, and *'If this dwelling is being rented, who is it rented from?'*

Tenure data, to some extent, provide insights into the socio-economic status of an area as well as the role that the area plays in the housing market. For example, a high concentration of private renters may indicate an area attractive to specific housing markets such as young singles and couples, while a concentration of home owners indicates a more settled area (i.e. less transitory), with mature families and empty-nester household types. Tenure can also reflect built form, with a significantly higher share of renters in high density housing and a substantially larger proportion of home-owners in separate houses, although this is not a mutually exclusive pattern.

In conjunction with other socio-economic status information tenure data is useful for analysing a wide range of issues, including housing market analysis (in conjunction with Household and Family Type data) and for identifying public housing areas.

Housing tenure(households)	Rural North - Marrangaroo						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Owned	354	50.1	38.3	341	55.2	44.4	13
Being purchased	200	28.3	28.7	138	22.2	22.7	63
Renting - Govt	0	0	4.3	0	0	4.6	0
Renting - Other	62	8.7	20.8	70	11.3	20.4	-8
Renting - Not stated	13	1.9	1.1	0	0	0.3	13
Renting - Total	**75**	**10.6**	**26.2**	**70**	**11.3**	**25.3**	**5**
Other tenure type	9	1.3	1.0	35	5.7	3.4	-26
Not stated	69	9.7	5.9	35	5.6	4.2	34
Total	**707**	**100.0**	**100.0**	**618**	**100.0**	**100.0**	**89**

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Care should be taken when analysing change over time for 'Owned' and 'Being purchased' categories as changes to the wording of the responses in the Census questionaire between 2001 and 2006 may have resulted in skewed data. Please see the specific data notes for more detail.

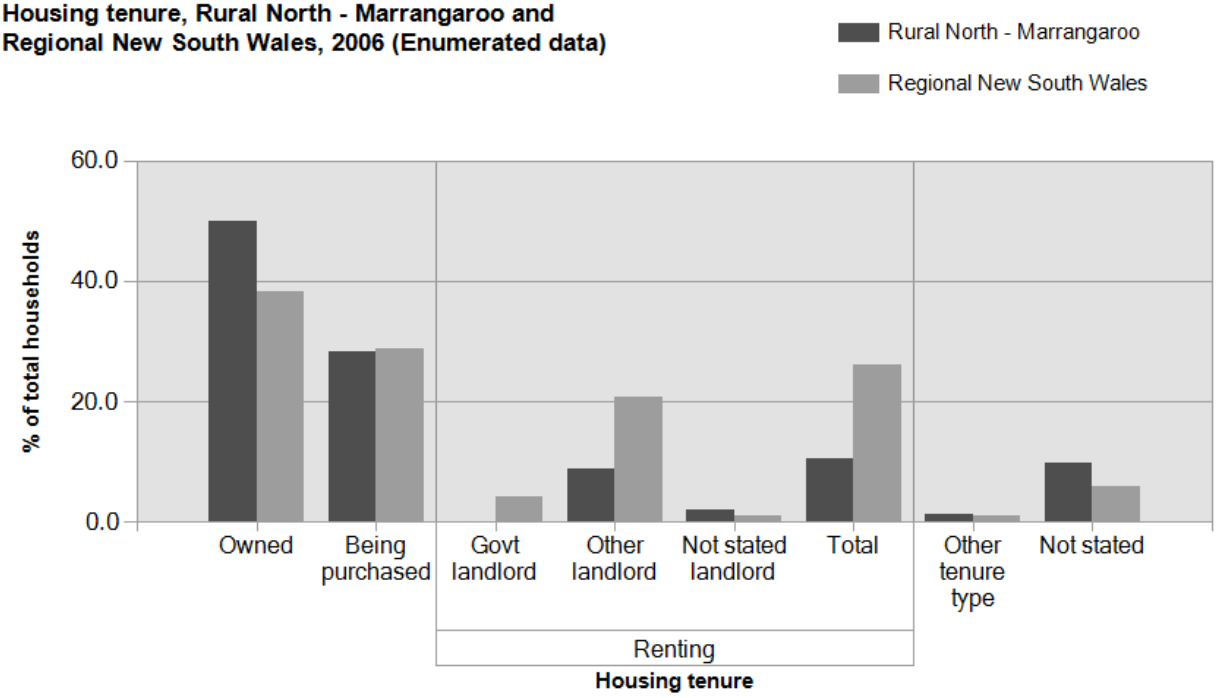
Analysis of the housing tenure of the population of Rural North - Marrangaroo in 2006 compared to Regional New South Wales shows that there was a larger proportion of households who owned their dwelling; a similar proportion purchasing their dwelling; and a smaller proportion who were renters.

Overall, 50.1% of the population owned their dwelling; 28.3% were purchasing, and 10.6% were renting, compared with 38.3%, 28.7% and 26.2% respectively for Regional New South Wales.

The largest change in housing tenure categories for the households in Rural North - Marrangaroo between 2001 and 2006 were:

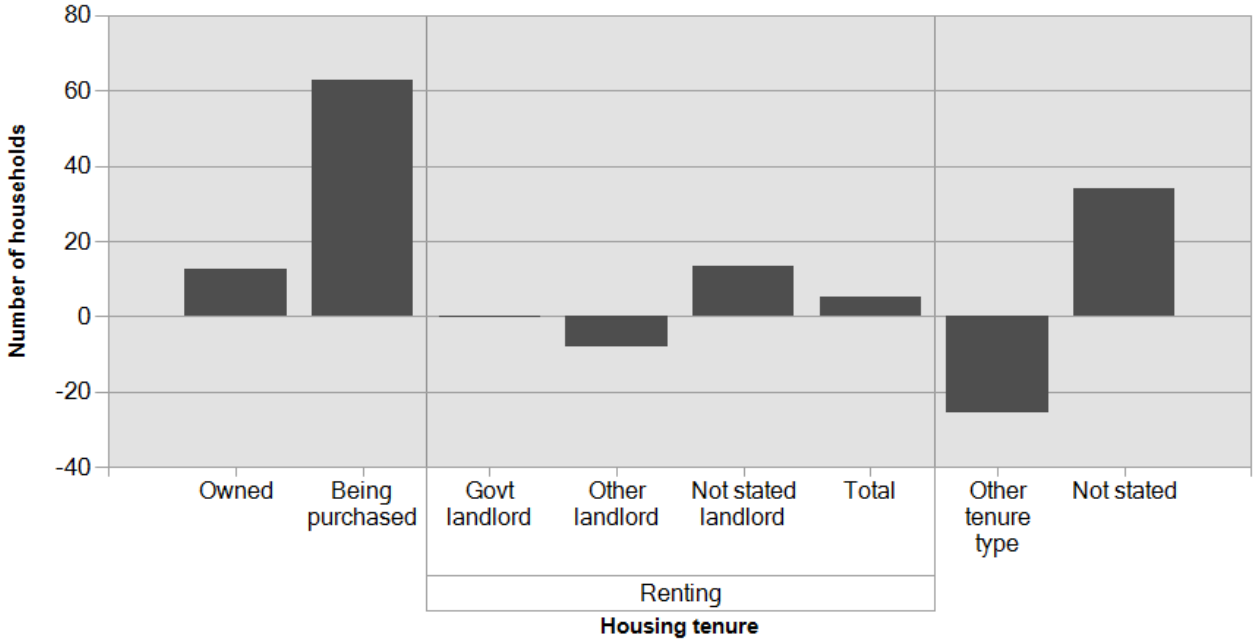
- Being purchased (+63 households).

Housing tenure, Rural North - Marrangaroo and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in housing tenure, Rural North - Marrangaroo, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Rural North - Marrangaroo

What type of dwellings do we live in? (Dwelling types)

Dwelling Type is derived from an assessment by the Census Collector who observes and records the type of dwelling structure.

The types of dwellings that are common to areas are important determinants in the role and function that the area plays in the housing market. A greater concentration of higher density dwellings is likely to attract more young adults and smaller households; while larger, detached or separate dwellings are more likely to have families and prospective families living in them, although this is not a mutually exclusive pattern.

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

Dwelling structure(private dwellings)	Rural North - Marrangaroo						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Separate house	696	75.9	72.1	589	69.3	72.3	106
Medium density	4	0.4	11.4	0	0	11.3	3
High density	0	0	1.6	0	0	1.5	0
Caravans, cabin, houseboat	4	0.4	1.8	0	0	2.1	4
Other	0	0	0.5	11	1.3	0.6	-11
Not stated	5	0.5	0.1	10	1.2	0.6	-5
TOTAL occupied private dwellings	714	77.8	87.5	611	71.9	88.3	102
TOTAL unoccupied Dwellings	203	22.2	12.5	239	28.1	11.7	-35
TOTAL Dwellings	917	100.0	100.0	850	100.0	100.0	67

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

(a) 'Medium density' includes all semi-detached, row, terrace, townhouses and villa units, plus flats and apartments in blocks of 1 or 2 storeys, and flats attached to houses.

(b) 'High density' includes flats and apartments in 3 storey and larger blocks.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

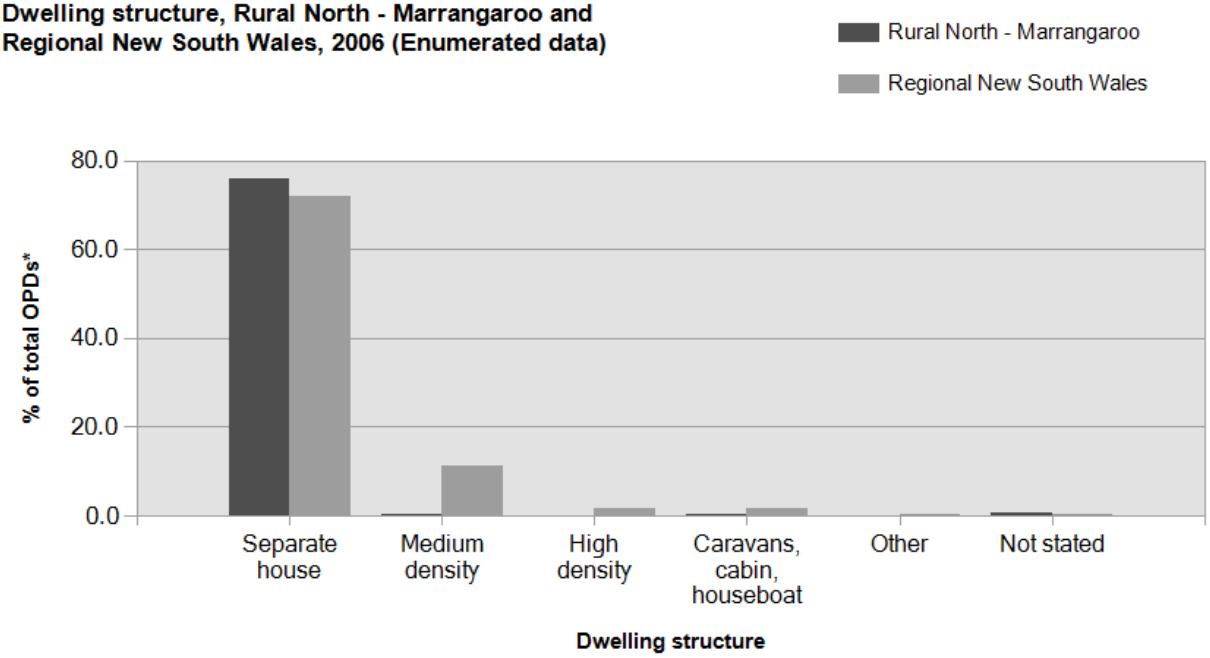
In 2006, there were 696 households who occupied a separate house in the area, while 4 occupied a medium density dwelling, and 0 occupied high density flats and apartments.

Analysis of the types of dwellings of the households in Rural North - Marrangaroo in 2006 compared to Regional New South Wales shows that 75.9% occupied a separate house; 0.4% occupied a medium density dwelling; while 0.0% occupied high density dwellings, compared with 72.1%, 11.4%, and 1.6% respectively in Regional New South Wales.

The largest change in the type of dwellings occupied by households in Rural North - Marrangaroo between 2001 and 2006 were for those occupying a:

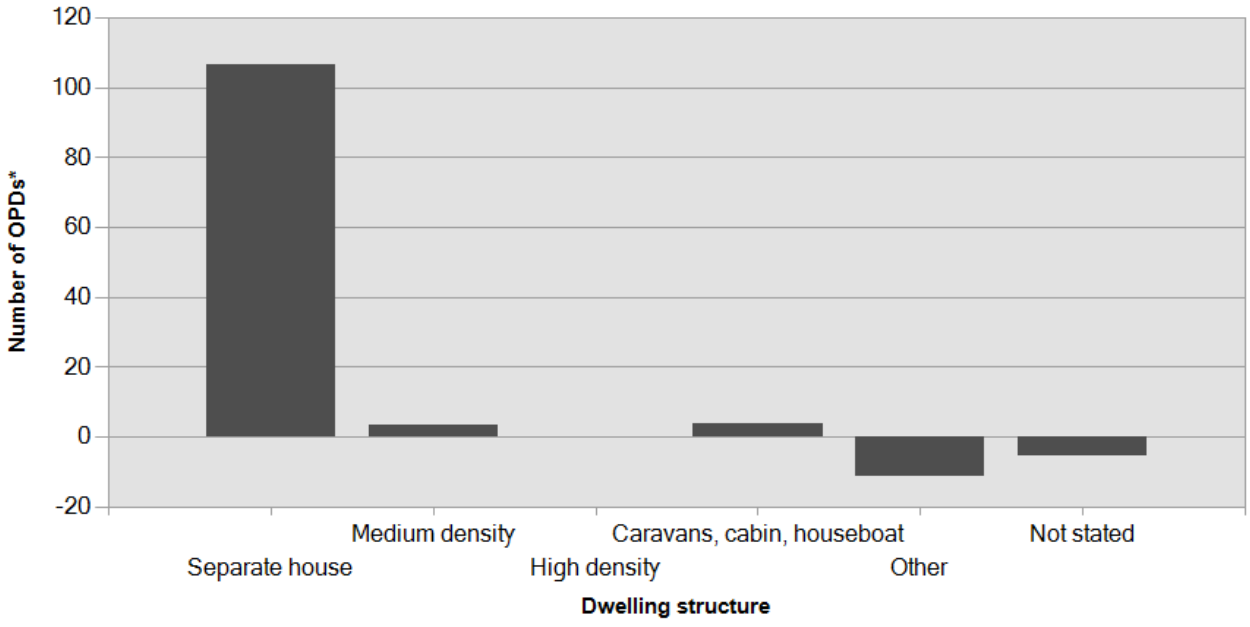
- Separate house (+106 dwellings).

Dwelling structure, Rural North - Marrangaroo and Regional New South Wales, 2006 (Enumerated data)



*OPDs refers to Occupied Private Dwellings.
Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in dwelling structure, Rural North - Marrangaroo, 2001 to 2006 (Enumerated data)



*OPDs refers to Occupied Private Dwellings.
Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Geography notes

Census data is available at a variety of different geographic levels, for example, State; Local Government; and Census Collector District (a unit of around 200 households). Rarely do these boundaries match actual 'communities', 'suburbs' or 'service catchments' needed for effective decision making.

The Community Profile combines data for Lithgow City along with customised suburbs/localities, aggregated from Census Collector Districts for the Census years: 2006, 2001, 1996, and 1991.

Lithgow City has 9 small areas:

- Bowenfels
- Lithgow - Hermitage Flat and District
- Morts Estate - Oaky Park - Vale Of Clwydd
- Portland
- Rural North - Marrangaroo
- Rural South - Little Hartley
- South Bowenfels - Littleton - South Littleton
- Wallerawang - Lidsdale
- Lithgow Urban Area

Suburb/locality geography

The suburbs and localities in the Community Profile tables are aggregations of 2006 Census Collection Districts (CDs). Where CDs did not fit exactly into the suburb or locality boundaries, estimates were made of the number of dwellings to be included. These estimates use aerial photography, dwelling counts, planning schemes, and street directories to determine what percentage of a CD goes into each suburb. The resulting data provides the most accurate population information for suburbs and localities.

NOTE: The geography in the Community Profile tables may not match the Australian Bureau of Statistics (ABS) suburb boundaries for 2006, which are based on aggregation of whole CDs.

Data notes

All data in this Profile is sourced from the Australian Bureau of Statistics, copyright in ABS data vests in the Commonwealth of Australia.

Population figures

The most comprehensive population count available in Australia is derived from the Census of Population and Housing, conducted by the Australian Bureau of Statistics every 5 years. It is an official count of all people and dwellings in Australia on Census night, and collects details of age, sex and other characteristics of the population. The last Census was conducted on 8 August 2006 and was the 15th national Census for Australia. The next Census will be conducted on 7 August 2011.

Census statistics are used as the basis for estimating the population at national, state and local government levels, for electoral purposes and the distribution of government funds. They are used by individuals and organisations in the public and private sectors for planning, administration, research and decision making.

Populations are estimated in various ways. It is important to understand how a population has been derived when you are using the data.

Census data in the Community Profile section of profile.id® includes **enumerated** and **usual residence** data. The **estimated resident population** can be found in the Additional Information section of this website.

Enumerated Population

The 'Enumerated Population' represents where people were counted on Census Night (8 August 2006), which may not be where they usually live. This population figure generally includes overseas visitors and visitors to the area from within Australia, but excludes Australians overseas.

This type of count provides a snapshot at a given point in time. The Census is timed to attempt to capture the typical situation, however, holiday resort areas, such as the Gold Coast and snow fields, may show a large enumeration count compared with the usual residence count.

Where enumerated population data is used in the profile, overseas visitors have been specifically excluded from the tables, but visitors from within Australia are included.

For detailed information about Enumerated population please refer to the ABS Fact Sheet – Population Measures.

Usual Residence Population

This population is derived from the Census. It is the place where a person usually lives, rather than the place where they were counted on Census night. Each person completing the Census is required to state their address of usual residence and this information is used to derive the Usual Residence population.

Census counts compiled on this basis are less likely to be influenced by seasonal factors, such as holiday seasons and snow seasons, and provide information about the usual residents of an area.

In 2006 all Census data are provided for usual residence as well as enumerated population. Previously household information was released as enumerated only (please see the detailed note for household and family type). Additionally, data about usual residence were not published for any data sets prior to 2001. Consequently, a time series has been provided for non-household data comparing 2006 and 2001 data only.

For detailed information about usual residence and enumerated population please refer to the ABS Fact Sheet – Population Measures.

Estimated Resident Population

The Estimated Resident Population (ERP) is the official ABS estimate of the Australian population. The ERP is based on results of the Census and is compiled as at 30 June of each Census year. It is updated between Censuses - quarterly for state and national figures, and annually for local government areas. ERP provides a population figure between Censuses.

The ERP is based on the usual residence population and includes adjustments for Census undercount,

Australian residents who were temporarily overseas on Census night, and backdates the population to 30 June. Each year's updates take into account births, deaths and both internal and overseas migration.

ERPs can be found under the 'Additional Information' section of the menu in the Community Profile.

For detailed information about ERPs please refer to the ABS publication Demographic Estimates and Projections: Concepts, Sources and Methods, 1999.

Randomisation

The information presented in the tables in the Community Profile is based on detailed tables produced by the Australian Bureau of Statistics at the Local Government Area level, and at the Census Collection District (CD) level for suburbs and small areas.

Note: The raw CD level data are then recalculated to exactly reflect the selected boundaries as shown on the maps within the Community Profile.

The Australian Bureau of Statistics (ABS) will randomise information it provides to preserve confidentiality. All cells are slightly adjusted to prevent any identification of personal details. Methodologies for doing this have changed between 2001 and 2006.

- Data tables released prior to the 2006 Census had small numbers (values of 1 or 2) randomly adjusted to either 0 or 3 by the ABS. As tables are randomly adjusted independently of each other, totals differ slightly across tables with the same population. The affect of randomisation is increased with the aggregation of Census Collector Districts into suburbs.
- In relation to the 2006 data, a new method called "perturbation" has been introduced. All figures included within any table may be randomly adjusted by a small amount. These adjustments result in small introduced random errors. Although the information value of the table as a whole is not impaired, care should be taken when interpreting very small numbers, since randomisation will affect the relative size of small numbers far more than larger numbers. The effect of the randomisation methodology also ensures that values of 1 and 2 do not appear in tables.

No reliance should be placed on small cells as they are impacted by random adjustment, respondent and processing errors.

Table totals and subtotals will be internally consistent but discrepancies may be observed between tables cross-tabulating the same population by different variables. While randomisation compromises the table totals by making them appear inconsistent, this is the best available socio-demographic data at the suburb level. This level of compromise is not statistically significant and should not impact on decision makers making effective resource allocation and planning decisions.

Overseas visitors

Enumerated data from the 2001 and 2006 Censuses are published by the ABS with "Overseas visitors" appearing as a separate category in many tables. To improve usability of the information the category "Overseas visitors" has been removed from all tables and calculations.

Table totals and rounding

Table totals may not equate with other similar tables due to randomisation of small numbers and percentages may not total to 100 due to rounding of decimal places. All discrepancies are minimal and are statistically insignificant.

Household and Family Composition

This variable describes the type of household within a dwelling. Household composition indicates whether a family is present and whether other unrelated household members are present. Any household, including lone person households, can contain visitors. 'Visitor only' households can contain overseas visitors (ABS Census Dictionary 2006).

The 'Other not classifiable' category includes those households which were occupied on Census night but where the Census collector could not make contact; households that contained only persons aged under 15 years; and households which could not be classified elsewhere in this classification because there was

insufficient information on the Census form. (ABS Census Dictionary 2006).

The household and family data are essentially the same for both Usual Residence and Enumerated population counts. The person who fills in the form identifies all persons who are present on Census night and their relationship within the household. Anyone who is temporarily absent is separately identified on the form, so that the type of household and number of usual residents can be identified. However, any table examining the characteristics of people by the type of household they live in will exclude these people as few demographic variables are collected for persons temporarily absent.

Persons who are away from home, will be counted in the household they are present in on Census night (generally in a non-private dwelling or as a visitor in a private dwelling). Although the ABS will know their usual address, and they will be coded back to their area of usual residence, the ABS is not able to impute that person's relationship to other people also resident at that address. Unlike the Enumerated count, Usual Residence household data does not include 'visitor only' households.

Specific notes

All data in the Community Profile is sourced from the Australian Bureau of Statistics, copyright in ABS data vests in the Commonwealth of Australia.

How many people live here?

Key Statistics

The summary statistics table contains 'Total population', ‘Overseas population’ 'Gender', 'Indigenous population', ‘Institutional population’ and 'Average household size'; along with a summary of data contained elsewhere in the Profile.

'Total population' and 'Gender' data are shown both including and excluding 'Overseas Visitors'.

'Indigenous population' refers to persons of Aboriginal and/or Torres Strait Islander origin.

‘Institutional population’ refers to people living in non-private dwellings. These types of dwellings are establishments which provide a communal type of accommodation. Examples of categories are hotel, motel, boarding house, private hotel, public hospital (not psychiatric), and childcare institution.

'Average household size' is calculated on the basis of the number people counted in occupied private dwellings (excluding overseas visitors), divided by the number of occupied private dwellings (excluding non-private dwellings, such as institutions and hotels etc).

For notes on other variables in the 'Key statistics' table please see the specific data notes for each of the relevant sections.

How old are we?

Includes all persons except 'Overseas Visitors'.

Between the 2001 and the 2006 Censuses, there was a small change in the way that the question regarding your age was phrased. The 2001 Census asked your age last birthday. In 2006, the question asked either your age last birthday or your date of birth. This change in the way age structure has been collected has not had an impact on the data produced; if date of birth was completed, then the ABS calculated age as at your last birthday. 2006 age data are comparable to prior Censuses.

Who are we?

Where were we born?

Includes all persons except 'Overseas Visitors'.

The 'United Kingdom' includes England, Scotland, Wales, Northern Ireland, Channel Islands, Isle of Man, and 'United Kingdom not further defined'.

'Former Federal Republic of Yugoslavia' includes Serbia and Montenegro, as well as 'South Eastern Europe nfd' in 2006. Those people categorised to South Eastern Europe in 2006 were primarily those who stated their birthplace as Yugoslavia, which did not exist as a nation in 2006. In 2001 it includes all people who listed their birthplace as Yugoslavia, while it is not available for 1996 and 1991 due to considerable changes to national boundaries in this region.

'Total Overseas born' includes 'inadequately described', 'at sea', and 'not elsewhere classified'.

'Main English speaking countries' includes Canada, Ireland, New Zealand, South Africa, the United Kingdom, and the United States of America.

'Non-English speaking backgrounds' refers to persons born in countries not included in 'Main English speaking countries'.

'China (excl. Taiwan Province) ' also excludes the Special Administrative Regions of Hong Kong and Macau.

Birthplace is coded using the Standard Australian Classification of Countries (SACC) 1998.

How many recently arrived?

Excludes persons who did not state their birthplace, and persons born in Australia or in other Australian territories.

Includes Australian residents born overseas who will be in Australia for more than one year.

How well do we speak English?

This is derived from the Census question, 'How well does the person speak English?' and applies to all persons who speak a language other than English at home. The table in the profile has been further restricted to refer only to persons born overseas and aged over 5 years (excluding overseas visitors).

English proficiency aims to measure the ability of persons who speak 'English as a Second Language' to also speak English. The data, when viewed with other ethnic and cultural indicators, tends to reflect the ethnic composition of the population and the number of years of residence in Australia. In general, an area with a higher proportion of persons born in English-speaking countries or who emigrated from non-English speaking countries several decades ago is likely to have greater English-speaking proficiency.

Note: A person's English proficiency is based on a subjective assessment and should therefore be treated with caution.

Responses to the question on Proficiency in English in the Census are subjective. For example, one respondent may consider that a response of 'Well' is appropriate if they can communicate well enough to do the shopping, while another respondent may consider such a response appropriate only for people who can hold a social conversation. Proficiency in English should be considered as an indicator of a person's ability to speak English and not a definitive measure of this ability.

For more information on proficiency in English, please refer to the ABS Census Dictionary (2901.0).

What language do we speak at home?

Includes all persons except 'Overseas Visitors'.

Language spoken at home is coded using the Australian Standard Classification of Languages (ASCL), 2005-06.

'Filipino' was recorded as a separate language from 'Tagalog' in the 2006 Census, but no such distinction was made in earlier Censuses. profile.id® combines the two languages together as 'Tagalog'. Filipino is a standardised version of Tagalog, incorporating words from other indigenous languages within the Philippines.

'Dari' was recorded as a separate language from 'Persian' in the 2006 Census, but no distinction was made in earlier Censuses. profile.id® combines the two languages together as 'Persian'. Dari is a localised name for Persian in Afghanistan.

What is our religion?

Includes all persons except 'Overseas Visitors'.

Religion is coded using the Australian Standard Classification of Religious Groups (ASCRG), 2005.

The religion question in the Census is an optional question and so has quite a high rate of 'Not Stated' responses.

The 2006 Census recorded 'Eastern Orthodox', which is a new designation for those churches previously described as 'Orthodox'.

The 2006 Census recorded 'Assyrian Apostolic' as a separate religious category. Previously, all religions falling under this category were recorded as 'Oriental Christian'.

The 2006 Census introduces a new designation called 'Oriental Orthodox'. The majority of the churches in this group were formerly known as 'Oriental Christian'. This includes:

- Oriental Orthodox, nfd
- Armenian Apostolic
- Coptic Orthodox Church
- Syrian Orthodox Church
- Ethiopian Orthodox Church
- Oriental Orthodox, nec

'Christian nfd' refers to a Christian religion 'not further defined', and includes:

- Apostolic Church, so described
- Church of God, so described
- Australian Christian Churches, so described
- New Church Alliance, so described

What is our individual income?

This data includes total gross income (including pensions and allowances) that a person usually receives each week.

This data applies only to people aged 15 years and over and excludes overseas visitors.

Individual incomes are collected as ranges in the Census.

Individual income quartiles

Individual income groups are not comparable over time because of the influences of economic change such as wage level fluctuations and inflation. The income quartile method has been adopted as the most objective method of comparing change in the income profile of a community over time.

Individual income quartiles look at the distribution of incomes in Lithgow City relative to Regional New South Wales. Quartiles split the total population into four equal parts for the Regional New South Wales. The table shows the number and proportion of individuals in Lithgow City falling into each segment for the benchmark area.

The table gives a clear picture of where individual incomes in Lithgow City sit relative to Regional New South Wales. For the Regional New South Wales, 25% of persons fall into each category. If, for example, Lithgow City has 30% in the top category and only 20% in the lowest, this indicates that Lithgow City has proportionally more higher-income individuals and less lower-income individuals.

Individual income quartile definitions(Annual income ranges)

	2006	2001	1996	1991
Lowest group	Nil to $10,593	Nil to $9,213	Nil to $7,449	Nil to $6,248
Medium lowest	$10,594 to$20,166	$9,214 to$16,237	$7,450 to$12,898	$6,249 to$11,681
Medium highest	$20,167 to$38,532	$16,238 to$30,456	$12,899 to$24,972	$11,682 to$22,218
Highest group	$38,533 and over	$30,457 and over	$24,973 and over	$22,219 and over

What is our household income?

Household income comprises the total of incomes of all persons in the household who stated an income.

Excludes ‘Visitor only households’ and ‘Other non classifiable households’.

'Not stated' includes 'Partial income not stated' and 'All incomes not stated'.

'Partial income not stated' includes households where at least one, but not all, member(s) aged 15 years and over did not state an income and / or at least one household member aged 15 years and over was temporarily absent. In these cases, the aggregate of all stated individual incomes would be less than the true household income so these households are excluded from the classification.

'All incomes not stated' includes households where no members present stated an income.

Household income quartiles

Household income groups are not comparable over time because of the influences of economic change such as wage level fluctuations and inflation. The income quartile method has been adopted as the most objective method of comparing change in the income profile of a community over time.

Household income quartiles look at the distribution of incomes in Lithgow City relative to Regional New South Wales. Quartiles split the total number of households into four equal parts for the Regional New South Wales. The table shows the number and proportion of households in Lithgow City falling into each segment.

The table gives a clear picture of where household incomes in Lithgow City sit relative to Regional New South Wales. For the Regional New South Wales, 25% of households fall into each category. If, for example, Lithgow City has 30% in the top category and only 20% in the lowest, this indicates that Lithgow City has proportionally more higher-income households and less lower-income households.

Household income quartile definitions(Annual income ranges)

	2006	2001	1996	1991
Lowest group	Nil to $22,618	Nil to $18,647	Nil to $14,904	Nil to $14,014
Medium lowest	$22,619 to$41,382	$18,648 to$32,914	$14,905 to$26,949	$14,015 to$24,525
Medium highest	$41,383 to$71,642	$32,915 to$57,579	$26,950 to$46,984	$24,526 to$42,010
Highest group	$71,643 and over	$57,580 and over	$46,985 and over	$42,011 and over

What are our qualifications?

Includes persons aged 15 years and over.

Excludes 'Overseas Visitors'.

Excludes schooling up to Year 12.

'No qualifications' refers to persons still studying for their first qualification, persons who do not have a qualification, and persons who have a qualification out of the scope of the Census version of the Australian Standard Classification of Education (ASCED), 2001.

What is the highest secondary school year we have completed?

Includes persons aged 15 years and over.

'Schooling' refers to Primary and Secondary schooling.

Excludes 'Overseas Visitors'.

There is no time series for this particular data set owing to differences in the way that the data was recorded. The 2001 Census did not record people who were over 15 years and still at school as having completed a particular year of schooling. Instead they were counted as “Still at school”. However, in 2006 they were coded to the highest year already completed, making the data non-comparable. This means that if an individual is still in the process of completing year 11 during a Census year, they are recorded as having completed year 10. This also means that the number of people who have completed year 10 cannot be treated as being indicative of the number of people who left school after completing year 10 as it will include people who were in the process of completing year 11.

Where are we learning?

Excludes 'Overseas Visitors'.

'Independent' refers to private and other non-Government schools.

‘Catholic’ refers to infant, primary and secondary schools run independently by the Catholic Church.

'TAFE' refers to 'Technical and Further Education' institutions.

Do we need assistance?

This data identifies people who report a need for assistance due to a 'profound or severe core activity limitation'. This population is defined as people who need assistance in their day to day lives with any or all of the following activities – self-care, body movements or communication – because of a disability, long-term health condition, or old age.

This question relies on people evaluating themselves, (or their carers), as being in need of assistance. Consequently this question provides an indication of the characteristics of people who report, or are reported as requiring, a need for assistance; but cannot be relied upon to provide details as to the total number of people with a 'profound or severe core activity limitation'.

Persons under the age of 40 whose only stated reason for need for assistance was ‘old or young age’ are included under ‘no need for assistance’.

Excludes 'Overseas Visitors'.

What do we do?

Do we do unpaid work?

This data includes help willingly given in the form of time, service or skills, to a club, organisation or association including:

- assisting at events and with sports organisations
- helping with school events and activities
- assisting in churches, hospitals, nursing homes and charities
- other kinds of volunteer work (e.g. emergency services, etc.).

Voluntary work excludes unpaid work done through a club, organisation or association mainly in order to qualify for government benefits such as Newstart Allowance. It also excludes any activity which is part of a person's paid employment or family business. ABS Census Dictionary 2006.

This data applies to persons aged 15 years and over and to **voluntary work undertaken in the 12 months prior to the Census**.

This data excludes 'Overseas Visitors'.

Unpaid domestic work

This data includes all the domestic work a person does without pay in their own home and in other places, for themselves, their family and other people in their household.

This data only applies to persons aged 15 years and over and to **domestic work performed in the week prior to Census**.

Unpaid domestic work can include meal preparation, service and clean-up; washing, ironing and managing clothes; other housework; gardening, mowing and yard work; home maintenance; car and bike maintenance; household shopping and managing household financial affairs.

This data excludes 'Overseas Visitors'.

Unpaid care

Unpaid care (unpaid assistance to a person with a disability, a long term illness or problems related to old age), includes the unpaid help a person gives to another person to assist them with their daily activities. It can include assistance with:

- bathing, dressing, toileting and feeding;
- mobility;
- understanding or being understood by others;
- emotional support;
- medication;
- dressing wounds
- food
- housework
- driving

This data applies to persons aged 15 years and over and to **care given in the two weeks prior to Census**.

This data excludes 'Overseas Visitors'.

Unpaid childcare

This data includes the time a person spends caring for a child or children without being paid. This can include people caring for their own children, whether they usually live with them or not. It can also include people looking after their own grandchildren or the children of other relatives or the children of friends or neighbours.

This data only applies to persons aged 15 years and over and to **child care given in the two weeks prior to Census**.

This data excludes 'Overseas Visitors'.

What is our employment status?

Excludes 'Overseas Visitors'

Includes persons aged 15 years and over.

'Employed full time' is defined as having worked 35 hours or more in all jobs during the week prior to Census night.

'Employed part time' is defined as having worked less than 35 hours in all jobs during the week prior to Census night.

The 'Labour force' is defined as all persons aged 15 years and over who are looking for work, or are employed, either full time, part time or casually.

What industries do we work in?

This data describes the industries in which employed people work. It applies only to people aged 15 and over who were employed in the week prior to Census.

Data for industry are coded using the Australia and New Zealand Standard Industrial Classification (ANZSIC). The industry classification is updated periodically to take account of emerging industries and changes in the structure of the economy.

For the 2006 Census, the updated ANZSIC06 classification was used, which includes more industry divisions which better reflect the structure of the Australian economy. Data are presented using this classification as an option. However for time series, data are also presented on the older ANZSIC93 classification, as this classification was used in earlier censuses.

For more information please refer to the 2006 Census Dictionary, and ANZSIC classification.

Time series industry categories

This data describes the industries in which employed people work. It applies only to people aged 15 and over who were employed in the week prior to Census.

Data for industry are coded using the Australia and New Zealand Standard Industrial Classification (ANZSIC). The industry classification is updated periodically to take account of emerging industries and changes in the structure of the economy.

For the 2006 Census, the updated ANZSIC06 classification was used, but people were also coded to the older ANZSIC93 classification. Data in the profiles is presented using both classifications; data for 2006 alone uses ANZSIC06, while time series data uses ANZSIC93 for comparability.

For more information please refer to the 2006 Census Dictionary, and ANZSIC classification.

What are our occupations?

This data describes the occupations of employed people. It applies only to people aged 15 and over who were employed in the week prior to Census.

Data for occupation are coded using the Australian and New Zealand Standard Classification of Occupations (ANZSCO). The occupation classification is updated periodically to take account of emerging occupation groups and changes to the structure of the labour force.

Data are presented for the broad occupation groupings. For 2006 these were coded using ANZSCO, the most recent classification. These are presented in profile.id® where no time series is required. For time series, the data are presented using the older ASCO 2nd edition classification, to ensure data comparability.

For more information please refer to the 2006 Census Dictionary, and the 2006 Australian and New Zealand Standard Classification of Occupations (ANZSCO).

Time series occupation categories

This data describes the occupations of employed people. It applies only to people aged 15 and over who were employed in the week prior to Census.

Data for occupation are coded using the Australian and New Zealand Standard Classification of Occupations (ANZSCO). The occupation classification is updated periodically to take account of emerging occupation groups and changes to the structure of the labour force.

Data are presented for the broad occupation groupings. For 2006 these were coded using ANZSCO, the most recent classification. These are presented in profile.id® where no time series is required. For time series, the data are presented using the older ASCO 2nd edition classification, to ensure data comparability.

How do we get to work?

This data looks at the method of travel to work of employed people. It applies only to people aged 15 and over who were employed in the week prior to Census.

Method of travel relates specifically to the journey to work on the morning of Census day. This differs to the industry and occupation data which relates to the main job held in the week prior to Census.

Respondents can nominate up to three modes of travel. For data presented in the profile, the following aggregations have been used:

- 'Train' includes any journey involving a train, whether or not other methods were used.
- 'Bus' includes any journey involving a bus, except for those also involving a train.
- The remaining categories, except for 'Other', only refer to a single method of travel (e.g. 'Car as driver'

when no other method was used).

- 'Other' refers to any method not listed in the standard categories, plus any combination of two or three methods NOT involving a bus or train.

Note that the categories "Walked only", "Worked at home" and "Did not go to work" are exclusive and are never combined with other methods.

'Tram or Ferry' includes light rail.

This data excludes 'Overseas Visitors'.

For more information please refer to the Census Dictionary 2006.

How do we live?

What type of households do we live in?

This data describes the type of family and non-family households within a dwelling.

The first section of the table counts family units in family households, and breaks them down by the presence of couples, single parents, and children. This classification of a family includes persons who are temporarily absent from the family on Census night.

The second section counts households. Households can contain up to three families, or a lone person, group of unrelated individuals (flatmates etc.) or other household.

The 'Other not classifiable' category includes those households which were occupied on Census Night but where the Census collector could not make contact; households that contained only persons aged under 15 years; and households which could not be classified elsewhere in this classification because there was insufficient information on the Census form. (ABS Census Dictionary 2006).

'Couple with child(ren) 15 years and under' and 'One parent family with child(ren) 15 years and under' refers to families with at least one child aged 15 years or younger. These families may also have older children living at home.

'One parent family with child(ren) over 15 years' and 'Couple with child(ren) over 15 years' refers to families with no children under the age of 15 years.

Data includes same sex couple families.

This data excludes 'Overseas Visitors'.

As the data are counting households, only enumerated counts are applicable.

How many people live in each household?

This data includes enumerated households by the number of persons usually resident, (includes up to three residents who were temporarily absent on Census night).

A household is defined as one or more persons, at least one of whom is at least 15 years of age, usually resident in the same private dwelling.

This data excludes ‘Visitor only’ and 'Other not classifiable' households.

Are we owners, renters or buyers?

This data presents the tenure type of occupied private dwellings, and for those dwellings being rented, provides a breakdown of the type of landlord the dwelling is being rented from.

‘Being purchased’ includes dwellings being purchased under a rent/buy scheme.

'Renting – Govt' refers to households renting from a State/Territory Government housing authority.

'Renting – Other' refers to households renting from private landlords, real estate agents and employers.

'Rented – Not stated' refers to rented dwellings where the landlord type was not stated.

‘Life tenure’ in 2006 has been included under ‘Other tenure type’

Tenure type changes between 2001 and 2006: Though the classification for Census data has remained the same, between 2001 and 2006 there was a change to the wording of dwelling ownership responses to the Tenure Type question on the Census questionnaire. "Fully Owned" in 2001 became "Owned Outright" in 2006, while "Being Purchased" became "Owned with a mortgage". This change in wording may have resulted in more accurate responses to this question, however it has made comparison over time difficult and such analysis should be done with caution. Looking at Australia as a whole, comparing 2006 to 2001 data, the "Being Purchased" category has increased by 5.7%, to 32.2% of private dwellings, while the "Fully Owned" category has decreased by 7.1%, to 32.6% of private dwellings. It is expected that a large part of this change is due to the change in wording, rather than representing change in the real world.

It is recommended that any analysis of change over time in these categories look only at the relative differences between change in local populations and the Australia-wide or state-based benchmarks, rather making inferences about local populations based on their numbers alone. Other categories in the Tenure Type classification are unaffected.

How much do we pay on our housing loan?

This data shows housing loan repayments being paid on a monthly basis by a household to purchase the dwelling in which it was enumerated (also applicable to caravans).

This data only applies to households (occupied private dwellings) who are purchasing their dwelling. It also includes households who are purchasing their dwelling under a 'rent/buy' scheme.

'Other not classifiable' households are excluded from this data.

Housing loan quartiles

Housing loan payments are not comparable over time because of the influences of economic change such as inflation. The loan payment quartile method has been adopted as the most objective method of comparing change in the cost of housing of a community over time.

Housing loan repayment quartiles look at the distribution of housing loan repayments in Lithgow City relative to Regional New South Wales. Quartiles split the total number of households into four equal parts for the Regional New South Wales. The table shows the number and proportion of households in Lithgow City falling into each segment.

The table gives a clear picture of the level of housing loan repayments in Lithgow City relative to Regional New South Wales. For the Regional New South Wales, the categories are split so that 25% of households fall into each category, so by comparison, the table will show if there are more or less households in Lithgow City with high repayments than in Regional New South Wales. If, for example, Lithgow City has 30% in the top category and only 20% in the lowest, this indicates that Lithgow City has proportionally more households with ‘top quarter’ repayments on their home loans, and less paying relatively low amounts.

Housing loan quartile definitions(Annual payment ranges)

	2006	2001	1996
Lowest group	Nil to $9,419	Nil to $7,093	Nil to $6,152
Medium lowest	$9,420 to$14,414	$7,094 to$10,081	$6,153 to$9,055
Medium highest	$14,415 to$21,029	$10,082 to$13,822	$9,056 to$12,273
Highest group	$21,030 and over	$13,823 and over	$12,274 and over

How much do we pay on our housing rental?

This data shows the amount of rent paid by households on a weekly basis for the dwelling in which they were enumerated on Census night (also applicable to caravans).

This data only applies to households (occupied private dwellings) renting their dwelling.

'Other not classifiable' households are excluded from this data.

Note that rent is shown on a **weekly** basis while housing loan repayments are on a **monthly** basis.

Housing rental quartiles

Rental payments are not comparable over time because of the influences of economic change such as inflation. The rental payment quartile method has been adopted as the most objective method of comparing change in the cost of rental housing of a community over time.

Rent quartiles look at the distribution of rental payments in Lithgow City relative to Regional New South Wales. Quartiles split the total number of households into four equal parts for the Regional New South Wales. The table shows the number and proportion of households in Lithgow City falling into each segment relative to the Regional New South Wales.

The table gives a clear picture of the level of rental payments in Lithgow City relative to Regional New South Wales. For the Regional New South Wales, 25% of households fall into each category, so by comparison, the table will show if there are more or less households in Lithgow City with high (or low) rent than in Regional New South Wales. If, for example, Lithgow City has 30% in the top category and only 20% in the lowest, this indicates that Lithgow City has proportionally more households paying ‘top-quarter’ rents, and less paying ‘bottom-quarter’ rents.

Housing rental quartile definitions(Annual payment ranges)

	2006	2001
Lowest group	Nil to $5,647	Nil to $4,682
Medium lowest	$5,648 to$8,528	$4,683 to$6,843
Medium highest	$8,529 to$11,416	$6,844 to$9,083
Highest group	$11,417 and over	$9,084 and over

What type of internet connection do we have?

This data relates to the question 'Can the Internet be accessed at this dwelling?' The question also asked for the type of connection:

- 'Broadband connection' - includes ADSL, Cable, Wireless and Satellite connection,
- 'Dial-up connection' - includes analog modem and ISDN connections
- 'Other' - includes Internet access through mobile phones, set-top boxes, games machines or connections other than dial-up or broadband.

This question was asked for the first time in the 2006 Census, replacing the questions in the 2001 Census relating to internet use and computer use. Owing to this there is no time series data available. Unlike the 2001 questions, the data relate to dwellings and not individuals.

How many cars do we own?

This data applies only to households in occupied private dwellings.

This data identifies the number of registered motor vehicles owned or used by household members, garaged, parked at or near private dwellings on Census night. It includes company owned vehicles.

The data excludes motorbikes, scooters and tractors.

What type of dwellings do we live in?

Dwelling structure looks at the type of dwelling for all occupied private dwellings. This data is classified by the Census collector on visiting the household, and the categories are broadly based on the density of the

housing types.

‘Separate house’ includes all free-standing dwellings separated from neighboring dwellings by a gap of at least half a metre.

‘Medium density’ includes all semi-detached, row, terrace, townhouses and villa units, plus flats and apartments in blocks of 1 or 2 storeys, and flats attached to houses.

‘High density’ includes flats and apartments in 3 storey and larger blocks.

‘Caravans, cabins, houseboats’ includes all such mobile accommodation, both inside and outside caravan parks.

‘Other’ includes houses and flats attached to shops or offices, and improvised homes, tents and sleepers out on Census night.

Unoccupied dwellings are shown separately in the table.

The Census classification for dwelling structure is based on the ABS Standard Dwelling Classification.

Lithgow City Council

COMMUNITY PROFILE

2006 and 2001 Enumerated Census information for:

Rural South - Little Hartley

The Lithgow City Council Community Profile is designed to inform community groups, Council, investors, business, students and the general public. To achieve this, the Profile is formatted to present the data in simple, clear tables and charts with concise factual commentary. The Community Profile is based on the 2006 Census of Population and Housing published by the Australian Bureau of Statistics.

profile.id®

.id

Contents:

How many people live here? 3

Introduction and summary 3
Key Statistics 5
How old are we? 7
What is our individual income? 8
What is our household income? 10
What are our qualifications? 12
What is the highest secondary school year we have completed? 14
What is our employment status? 16
What industries do we work in? 18
What are our occupations? 22
How do we get to work? 24
What type of households do we live in? 26
How many people live in each household? 29
Are we owners, renters or buyers? 31
What type of dwellings do we live in? 34

Explanatory notes

Geography notes 35
Data notes 36
Specific notes 39

DISCLAIMER: Whilst all due care has been taken to ensure the content of this report is accurate and Current, there may be errors or omissions in it and no legal responsibility is accepted for the information and opinions in this website.

Copyright © id.consulting pty ltd - www.id.com.au 2010

Date created: 17/09/2010

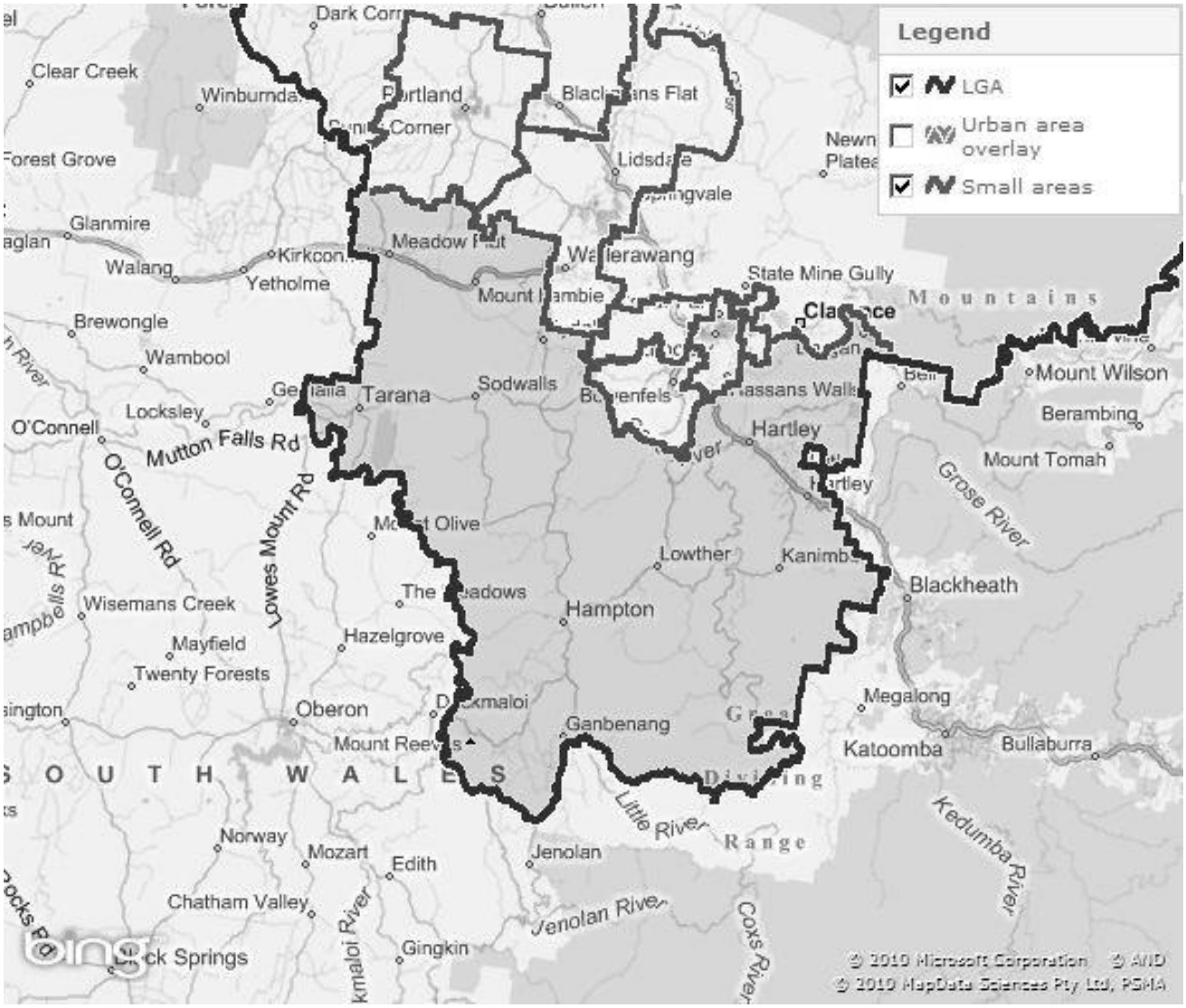
Rural South - Little Hartley

Introduction and summary (Map and key statistics)

Rural South - Little Hartley is a predominantly rural area, which includes several small villages. Rural South - Little Hartley is bounded by Portland-Sunny Corner Road, the localities of Portland and Wallerawang, Coxs River, Lyell Reservoir, Coxs River, Whites Creek, the localities of South Bowenfels, Hassans Walls, Doctors Gap and Vale of Clwydd, Bells Line of Road and the locality of Clarence in the north, Blue Mountains City and Coxs River in the east, the Oberon Council area in the south, and the Duckmaloi River, the Fish River and the Bathurst Regional Council area in the west. This small area includes the localities of Dargan, Ganbenang, Hampton, Hartley, Hartley Vale, Kanimbla, Little Hartley, Lowther, Meadow Flat (part), Mount Lambie, Rydal, Sodwalls and Tarana (part).

Settlement of the area dates from the 1820s, with land used mainly for farming. Population was minimal until the 1860s, when several small townships were established. Gradual growth took place in the townships during the late 1800s, spurred by mining and the construction of the railway line. The population declined during the early 1900s as mining waned. The population increased from the early 1990s, a result of new dwellings being added to the area. Rural land is used largely for farming, including fruit growing.

Major features of the area include Blue Mountains National Park, Evans Crown Nature Reserve, Lyell Reservoir, Hartley Vale Public Reserve, Hartley Historic Site, various state forests and one school.



Rural South - Little Hartley:	**Land Area:** 81,596 hectares	**Density:** 0.02 people per hectare (2006)

Rural South - Little Hartley

Introduction and summary (Map and key statistics)

The 'Key statistics' table presented below contains summary statistics for Rural South - Little Hartley. By default the table displays 2001 and 2006 data as both absolute numbers and percentages (where applicable), along with the change in number between these years.

Key statistics(summary statistics)	Rural South - Little Hartley						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Enumerated population, including overseas visitors							
Total population (a)	1,995	100.0	100.0	1,852	100.0	100.0	142
Males (a)	1,004	50.4	49.4	923	49.8	49.6	82
Females (a)	990	49.6	50.6	930	50.2	50.4	60
Overseas visitors	4	0.2	0.4	8	0.4	0.5	-4
Enumerated population, excluding overseas visitors							
Total population (b)	1,991	100.0	100.0	1,842	99.9	100.0	149
Males (b)	1,004	50.5	49.4	917	49.7	49.6	87
Females (b)	986	49.5	50.6	925	50.1	50.4	62
Population characteristics							
Indigenous population	22	1.1	3.9	19	1.0	3.4	3
Australian born	1,661	83.4	83.8	1,518	82.3	84.5	143
Overseas born	238	12.0	10.3	196	10.6	10.2	43
Australian citizens	1,837	92.3	91.1	1,671	90.6	92.2	166
Australian citizens aged 18+	1,356	68.1	68.4	1,184	64.2	67.9	171
Institutional population	15	0.7	3.9	32	1.7	3.6	-17
Age structure							
Infants 0 to 4 years	112	5.6	6.2	117	6.3	6.7	-5
Children 5 to 17 years	388	19.5	18.6	413	22.4	19.6	-25
Adults 18 to 64 years	1,236	62.1	58.7	1,147	62.2	58.6	89
Mature adults 65 to 84 years	230	11.6	14.6	186	10.1	13.7	44
Senior citizens 85 years and over	21	1.1	1.9	12	0.6	1.5	9
Households and dwellings							
Owned	324	43.7	38.3	335	49.9	44.4	-11
Purchasing	291	39.3	28.7	199	29.7	22.7	92
Renting	89	12.0	26.2	59	8.7	25.3	31
Households (occupied private dwellings)	741	--	--	671	--	--	70
Persons counted in households	1,976	--	--	1,821	--	--	155
Average household size (persons)	2.67	--	--	2.71	--	--	-0.05
Total Dwellings	1,073	100.0	100.0	878	100.0	100.0	196

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the

specific data notes for more information.

Rural South - Little Hartley

How old are we? (Age structure)

Derived from the Census question, *'What is the person's date of birth (or age last birthday)?'*

The Age Structure of the population is the most widely used component of the Census. It is an indicator of an area's residential role and function and how it is likely to change in the future. The age structure of a population is usually indicative of an area's era of settlement and provides key insights into the level of demand for services and facilities (as most services and facilities are age-specific).

To get a more complete picture of the demographic characteristics of an area the age structure should be viewed in conjunction with Households and Family types.

Age structureage group (years)	Rural South - Little Hartley						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
0 to 4	112	5.6	6.2	117	6.2	6.7	-5
5 to 11	181	9.1	9.7	216	11.5	10.6	-34
12 to 17	207	10.4	8.9	197	10.5	9.0	9
18 to 24	117	5.9	8.1	107	5.7	8.0	10
25 to 34	164	8.3	10.8	166	8.9	12.0	-2
35 to 49	490	24.7	20.9	495	26.4	21.6	-5
50 to 59	338	17.0	13.5	295	15.7	12.1	43
60 to 69	232	11.7	10.2	158	8.4	9.2	75
70 to 84	125	6.3	9.9	111	5.9	9.4	13
85 and over	21	1.1	1.9	12	0.6	1.5	9
Total	1,987	100.0	100.0	1,874	100.0	100.0	113

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of the age structure of Rural South - Little Hartley in 2006 compared to Regional New South Wales shows that there was a similar proportion of people in the younger age groups (0 to 17) but a smaller proportion of people in the older age groups (60+).

Overall, 25.1% of the population was aged between 0 and 17, and 19.1% were aged 60 years and over, compared with 24.8% and 22.0% respectively for Regional New South Wales.

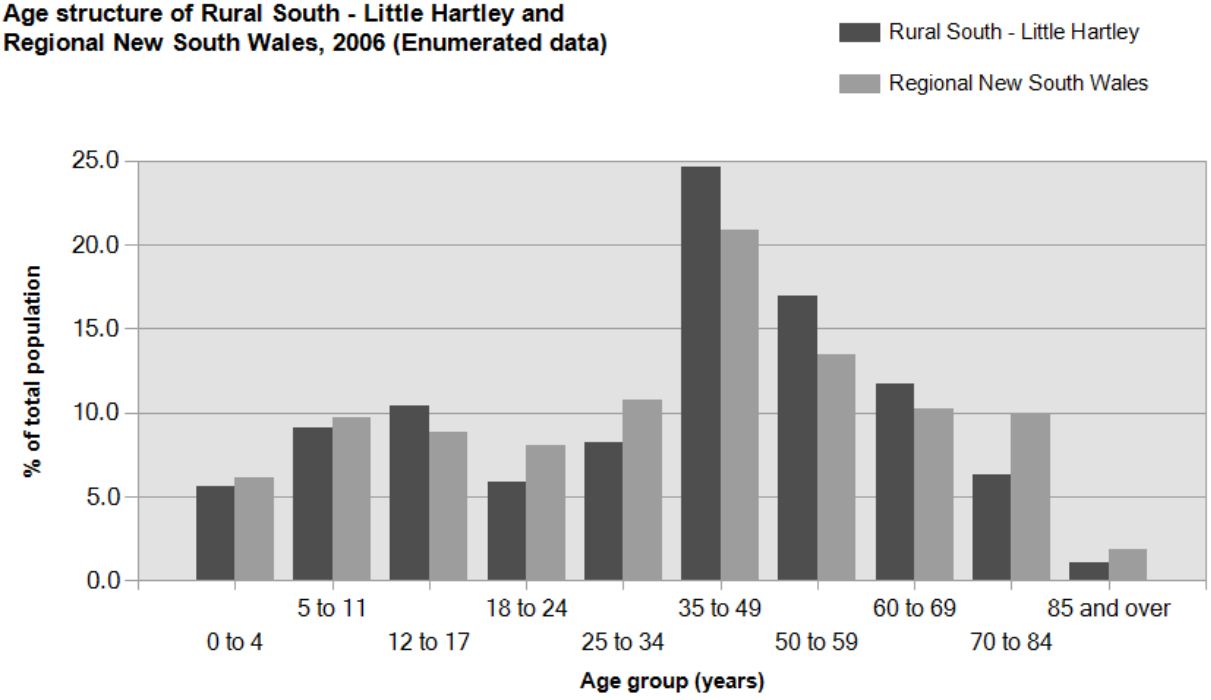
The major differences between the age structure of Rural South - Little Hartley and Regional New South Wales were:

- A *larger* percentage of 35 to 49 year olds (24.7% compared to 20.9%);
- A *larger* percentage of 50 to 59 year olds (17.0% compared to 13.5%);
- A *smaller* percentage of 70 to 84 year olds (6.3% compared to 9.9%), and;
- A *smaller* percentage of 25 to 34 year olds (8.3% compared to 10.8%).

The largest change in age structure in this area between 2001 and 2006 was in the age group:

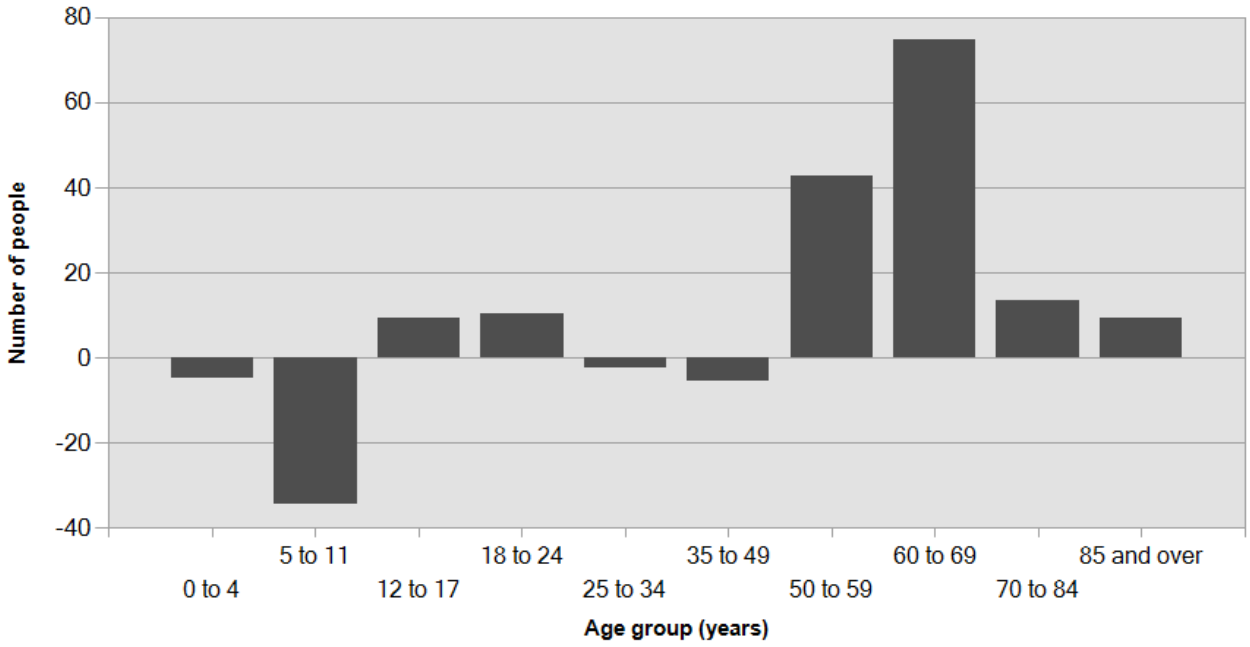
- 60 to 69 (+75 persons).

Age structure of Rural South - Little Hartley and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in age structure of Rural South - Little Hartley, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Rural South - Little Hartley

What is our individual income? (Weekly individual income)

Weekly individual income 2006

Derived from the Census question, *'What is the total of all wages/salaries, government benefits, pensions, allowances and other income the person usually receives?'* This is the gross amount and relates only to persons aged 15 years or more.

Individual Income is an indicator of socio-economic status. With other data sources, such as Household Income, Educational Qualifications and Occupation, it helps to evaluate the economic opportunities and socio-economic status of an area. The amount of income an individual receives is linked to a number of factors including the person's:

- employment status;
- age (as for instance students and retirees often receive a lower income);
- qualifications; and
- the type of employment undertaken by the person.

It is interesting to view individual income data in relation to both household income and number of persons usually resident. Areas with relatively high household income may be the result of multiple earners in the household contributing to that household income, so it is possible that some areas that have relatively high household incomes will have relatively low levels of individual income.

To enable a comparison of Individual Income levels of an area over time, Individual Income quartiles have been calculated and presented in the 'Individual income quartiles tab'.

Weekly individual incomeincome groups (persons)	Rural South - Little Hartley		
	2006		
Enumerated data	number	%	Regional New South Wales %
negative/nil income	146	9.2	6.4
$1 to $149	139	8.7	7.1
$150 to $249	207	13.0	17.8
$250 to $399	208	13.1	16.1
$400 to $599	210	13.2	14.8
$600 to $799	155	9.7	9.9
$800 to $999	115	7.2	6.5
$1,000 to $1,299	128	8.0	6.1
$1,300 to $1,599	93	5.8	3.7
$1,600 to $1,999	44	2.7	1.9
$2,000 or more	52	3.3	2.0
not stated	92	5.8	7.7
Total	1,586	100.0	100.0

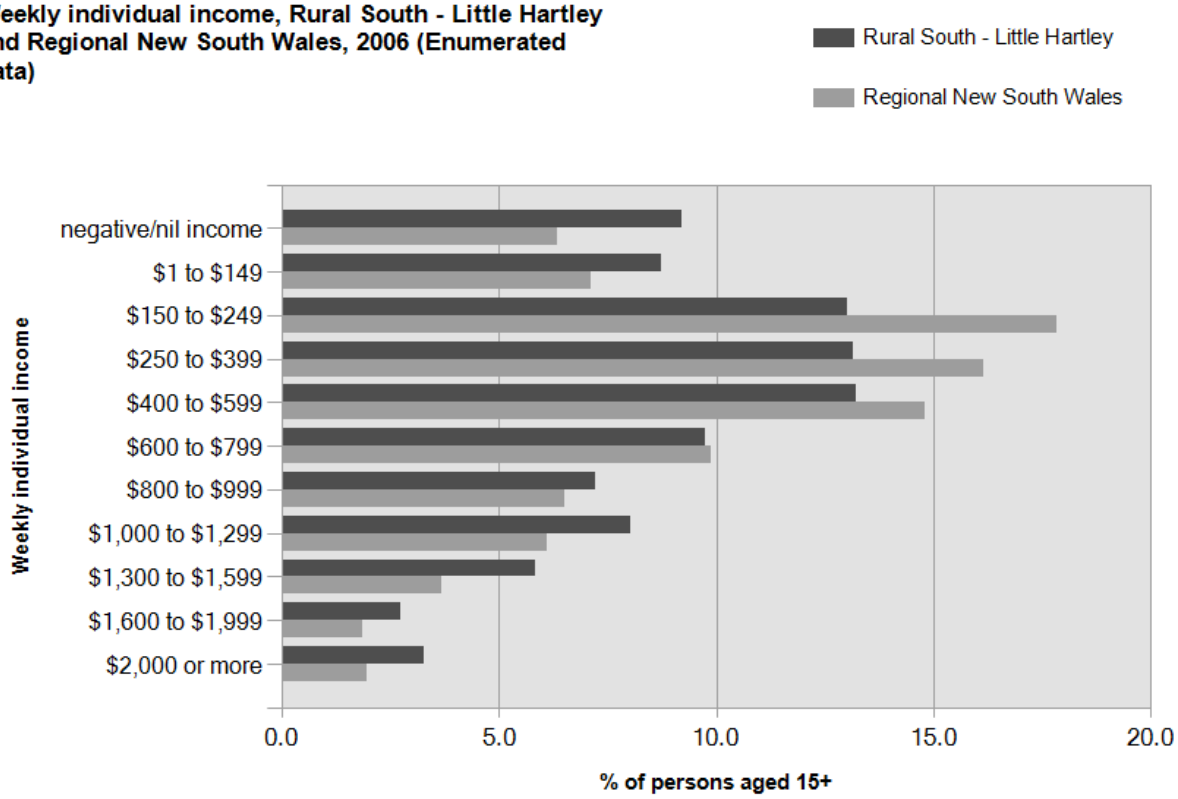
Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of individual income levels in Rural South - Little Hartley in 2006 compared to Regional New South Wales shows that there was a larger proportion of persons earning a high income (those earning $1,000 per week or more) but a smaller proportion of low income persons (those earning less than $400 per week).

Overall, 19.8% of the population earned a high income, and 44.0% earned a low income, compared with 13.7% and 47.4% respectively for Regional New South Wales.

Weekly individual income, Rural South - Little Hartley and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Rural South - Little Hartley

What is our household income? (Weekly household income)

Weekly household income 2006

Derived from the Census question, *'What is the total of all wages/salaries, government benefits, pensions, allowances and other income the person usually receives?'.* This is the gross amount and relates only to persons aged 15 years or more.

Household Income is one of the most important indicators of socio-economic status. With other data sources, such as Educational Qualifications and Occupation, it helps to evaluate the economic opportunities and socio-economic status of an area. The amount of income a household generates is linked to a number of factors:

- the number of workers in the household;
- the percentage of people unemployed or on other income support benefits; and
- the type of employment undertaken by the household members.

Note: It is important to remember that households vary in size, so that some areas have a greater number of dependents per income generated than others. If the area has a large number of retirees then this will produce a higher proportion of households with low income. This is not necessarily a measure of retirees' affluence, as retirees often have capital resources. Refer to the Age Structure section to understand this element.

To enable a comparison of Household Income levels of an area over time, Household Income quartiles have been calculated and presented in the 'Household income quartiles tab'.

Weekly household incomeincome groups (households)	Rural South - Little Hartley		
	2006		
Enumerated data	number	%	Regional New South Wales %
Negative / Nil income	20	2.8	1.1
$1 to $149	11	1.5	1.6
$150 to $249	30	4.2	6.5
$250 to $349	37	5.1	8.9
$350 to $499	31	4.3	7.1
$500 to $649	63	8.7	12.7
$650 to $799	47	6.5	6.6
$800 to $999	51	7.1	6.9
$1000 to $1199	56	7.7	10.5
$1200 to $1399	39	5.4	5.2
$1400 to $1699	64	8.8	6.4
$1700 to $1999	48	6.6	4.9
$2000 to $2499	56	7.7	4.5
$2500 to $2999	51	7.0	3.3
$3000 or more	35	4.8	2.6
Partial income stated	69	9.6	7.7
All incomes not stated	17	2.3	3.4
Total	725	100.0	100.0

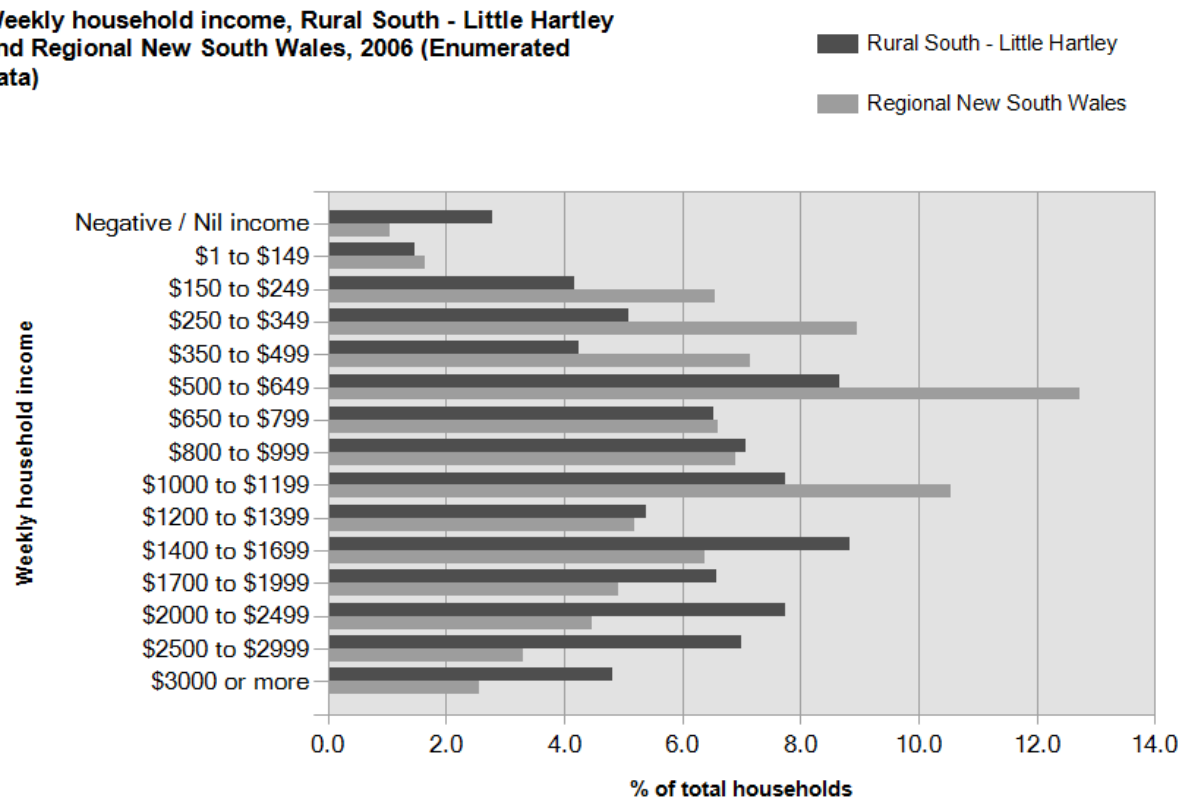
Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of household income levels in Rural South - Little Hartley in 2006 compared to Regional New South Wales shows that there was a larger proportion of high income households (those earning $1,700 per week or more) but a smaller proportion of low income households (those earning less than $500 per week).

Overall, 26.1% of the households earned a high income, and 17.9% were low income households, compared with 15.3% and 25.2% respectively for Regional New South Wales.

Weekly household income, Rural South - Little Hartley and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Rural South - Little Hartley

What are our qualifications? (Highest education qualification achieved)

Derived from the Census question, *'What is the level of the highest qualification the person has completed?'* and relates only to persons aged 15 years or more.

Educational Qualifications are one of the most important indicators of socio-economic status. With other data sources, such as Income and Occupation, Educational Qualifications help to evaluate the economic opportunities and socio-economic status of an area. Level of Educational Qualifications in a population relate to a number of factors including:

- the age of the population (e.g. older people tend to have more vocational qualifications, while people in their twenties and thirties are more likely to have a university degree);
- the professional or working ambitions of people (to seek education as youth or retraining as adults);
- the opportunities afforded to people to continue studying beyond compulsory schooling.

Highest qualification achieved (persons aged 15 years and over)	Rural South - Little Hartley						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Bachelor or Higher degree	232	14.5	10.4	180	12.8	8.6	52
Advanced Diploma or Diploma	133	8.4	6.2	90	6.4	5.2	43
Vocational	383	24.0	20.1	322	22.9	18.2	62
No qualifications	696	43.6	50.3	633	45.0	56.2	62
Not Stated	151	9.4	12.9	181	12.9	11.8	-31
Total	1,595	100.0	100.0	1,406	100.0	100.0	189

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of the qualifications of the population in Rural South - Little Hartley in 2006 compared to Regional New South Wales shows that there was a larger proportion of people holding formal qualifications (Bachelor or higher degree; Advanced Diploma or Diploma; or Vocational qualifications) and a smaller proportion of people with no formal qualifications.

Overall, 46.9% of the population held educational qualifications, and 43.6% had no qualifications, compared with 36.7% and 50.3% respectively for Regional New South Wales.

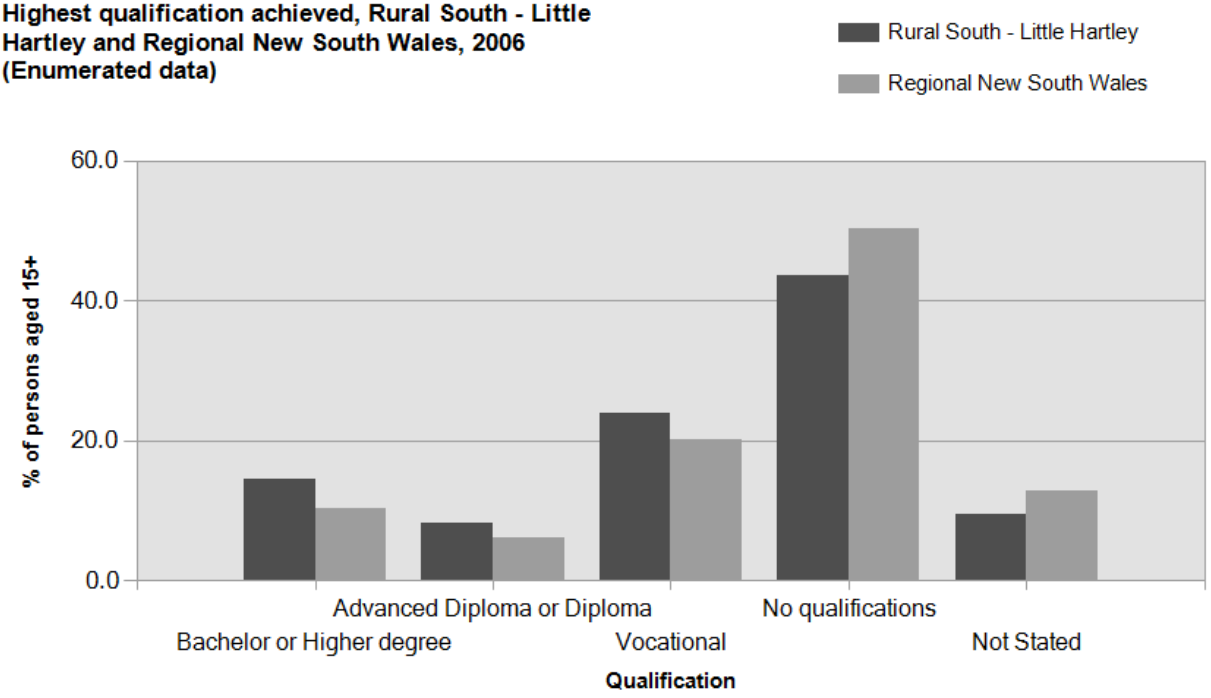
The major differences between the qualifications held by the population in Rural South - Little Hartley and Regional New South Wales were:

- A *larger* percentage of people with Bachelor or Higher degrees (14.5% compared to 10.4%), and;
- A *smaller* percentage of people with No qualifications (43.6% compared to 50.3%).

The largest changes in the qualifications of the population in Rural South - Little Hartley between 2001 and 2006 were in those with:

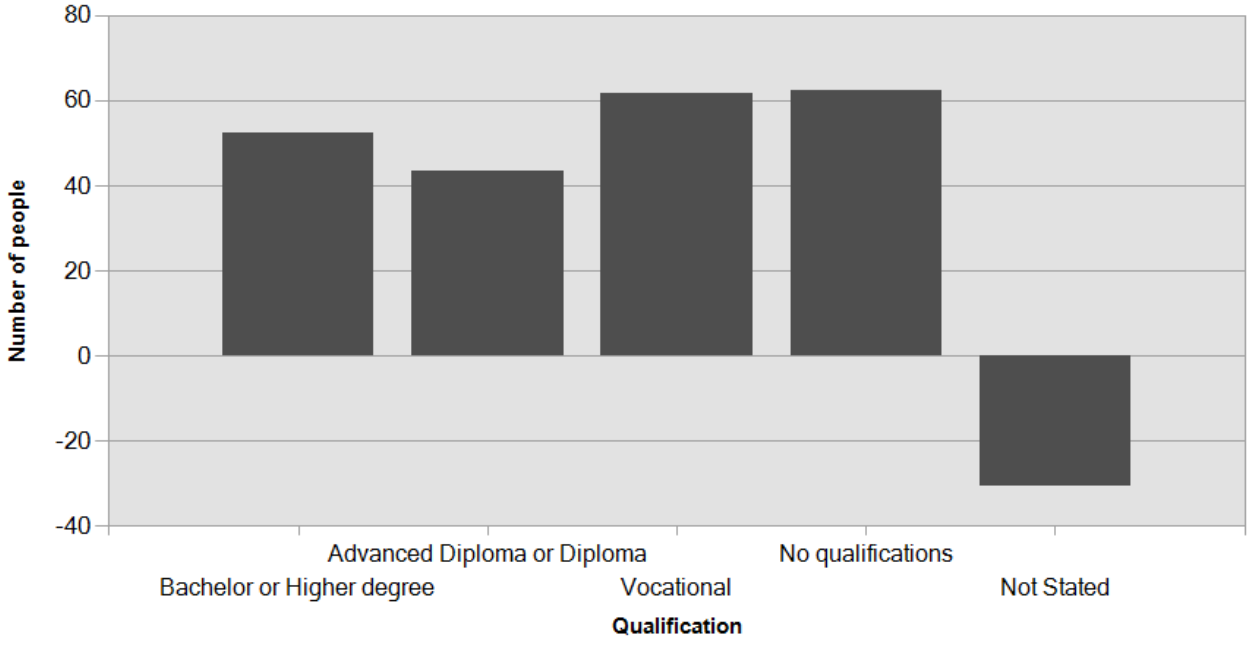
- No qualifications (+62 persons), and;
- Vocational qualifications (+62 persons).

Highest qualification achieved, Rural South - Little Hartley and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in highest qualification achieved, Rural South - Little Hartley, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Rural South - Little Hartley

What is the highest secondary school year we have completed? (Highest level of schooling completed)

Derived from the Census question, '*What is the highest year of primary or secondary school the person has completed?*' and relates only to persons aged 15 years or more.

The Year of Schooling data is a useful indicator of socio-economic status of an area. With other indicators, such as proficiency in English, the data informs planners and decision-makers as to people's ability to access services. Combined with Educational Qualifications it also allows assessment of the skill base of the population. The reasons for differences in Year of Schooling completed across areas are linked to a number of factors including:

- the age of the population, as over time there has been a greater emphasis on acquiring higher education in order to find employment;
- the working and social aspirations of the population; and
- a lack of access to further education opportunities due to financial constraints or distance to schools.

Unfortunately this data is only available for 2006 as there is no comparable data for previous Census years. Please see specific data notes for further detail.

Highest level of schooling completed(persons aged 15 years and over)	Rural South - Little Hartley		
	2006		
Enumerated data	number	%	Regional New South Wales %
Year 8 or below	80	5.1	8.4
Year 9 or equivalent	144	9.1	11.0
Year 10 or equivalent	609	38.5	33.0
Year 11 or equivalent	110	7.0	6.9
Year 12 or equivalent	550	34.8	31.0
Did not go to school	3	0.2	0.5
Not Stated	86	5.4	9.2
Total	1,582	100.0	100.0

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

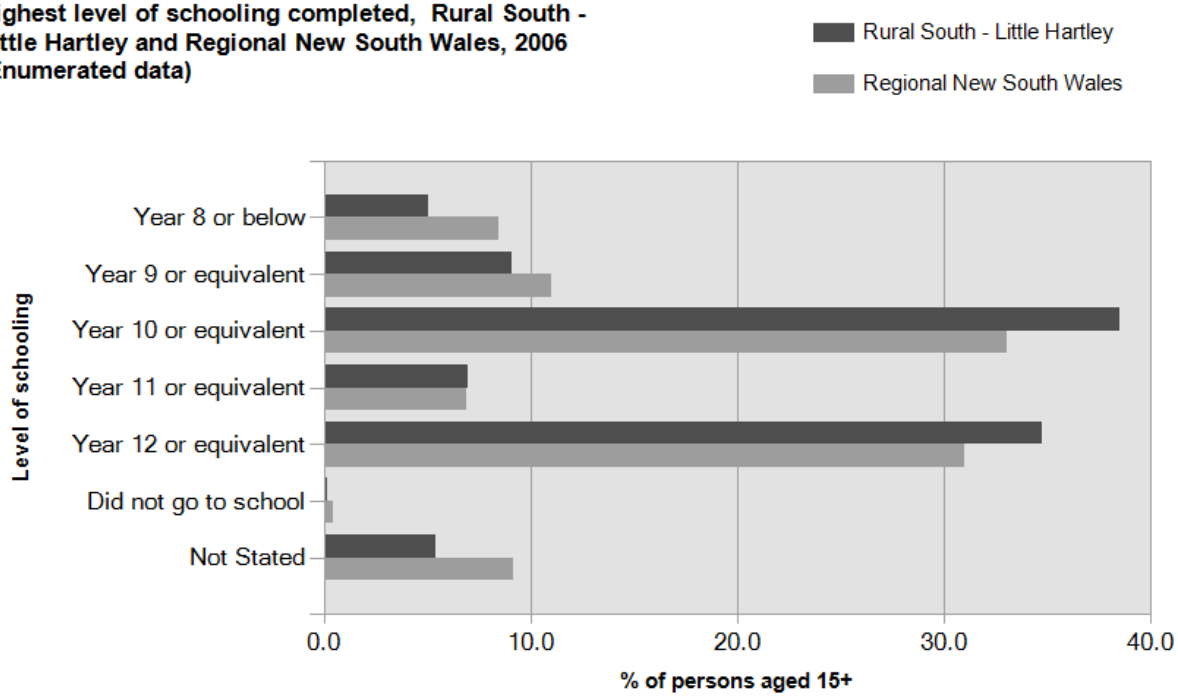
Analysis of the highest level of schooling attained by the population in Rural South - Little Hartley in 2006 compared to Regional New South Wales shows that there was a similar proportion of people who had left school at an early level (Year 10 or less) but a larger proportion of people who completed Year 12 or equivalent.

Overall, 52.7% of the population left school at Year 10 or below, and 34.8% went on to complete Year 12 or equivalent, compared with 52.4% and 31.0% respectively for Regional New South Wales.

The major differences between the level of schooling attained by the population in Rural South - Little Hartley and Regional New South Wales were:

- A *larger* percentage of people who left school at Year 10 or equivalent (38.5% compared to 33.0%);
- A *larger* percentage of people who left school at Year 12 or equivalent (34.8% compared to 31.0%);
- A *smaller* percentage of people who left school at Year 8 or below (5.1% compared to 8.4%), and;
- A *smaller* percentage of people who left school at Year 9 or equivalent (9.1% compared to 11.0%).

Highest level of schooling completed, Rural South - Little Hartley and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Rural South - Little Hartley

What is our employment status? (Employment status)

Derived from the Census question, *'Last week did the person have a full time or part time job of any kind?'* and relates only to persons aged 15 years or more.

The Employment Status of the population is an important indicator of the socio-economic status of an area. It represents the share of the population that is employed full-time, part-time or unemployed, as well as changes over time in the labour force. Employment Status is linked to a number of factors:

- the age structure of the population, which for example influences the number of persons in the workforce (i.e. population 15 years or more) or retired (i.e. population over 60 years);
- the economic base and employment opportunities available in the area; and
- the education and skill base of the population.

Census Employment Status data should be analysed in conjunction with Income, Occupation and Education Qualifications data to identify the relative socio-economic status of an area.

Employment status(persons aged 15 years and over)	Rural South - Little Hartley						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Employed full time	641	61.6	56.6	549	59.1	56.2	92
Employed part time	347	33.3	33.8	302	32.5	31.7	45
Employed not stated	18	1.7	2.6	33	3.5	2.8	-15
Total employed	1,006	96.6	93.0	884	95.2	90.7	122
Total unemployed	36	3.4	7.0	45	4.8	9.3	-9
Total labour force	1,041	100.0	100.0	929	100.0	100.0	113
Total in labour force	1,041	65.8	56.1	929	65.7	55.6	113
Total not in labour force	488	30.9	38.6	426	30.1	40.5	63
Not stated	52	3.3	5.3	60	4.2	3.9	-7
Total	1,582	100.0	100.0	1,414	100.0	100.0	168

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

The size of Rural South - Little Hartley's labour force in 2006 was 1,041 persons, of which 347 were employed part-time (33.3%) and 641 were full time workers (61.6%).

Analysis of the employment status of the population in Rural South - Little Hartley in 2006 compared to Regional New South Wales shows that there was a larger proportion in employment, and a smaller proportion unemployed.

Overall, 96.6% of the labour force was employed (63.6% of the population aged 15+), and 3.4% unemployed (2.3% of the population aged 15+), compared with 93.0% and 7.0% respectively for Regional New South Wales.

Between 2001 and 2006, the number of people employed in Rural South - Little Hartley showed an increase of 122 persons and the number unemployed showed a decrease of 9 persons.

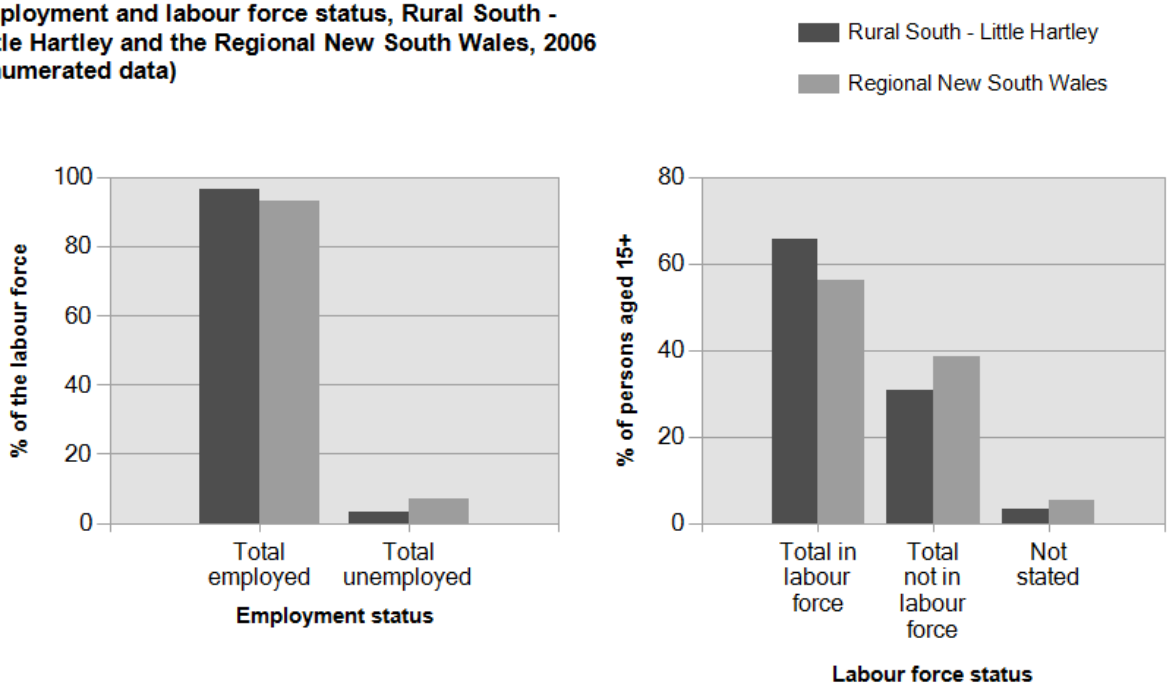
The labour force participation rate refers to the proportion of the population over 15 years of age that was employed or actively looking for work. "The labour force is a fundamental input to domestic production. Its size and composition are therefore crucial factors in economic growth. From the viewpoint of social development, earnings from paid work are a major influence on levels of economic well-being." (Australian

Bureau of Statistics, Australian Social Trends 1995).

Analysis of the labour force participation rate of the population in Rural South - Little Hartley in 2006 shows that there was a larger proportion in the labour force (65.8%) compared with Regional New South Wales (56.1%).

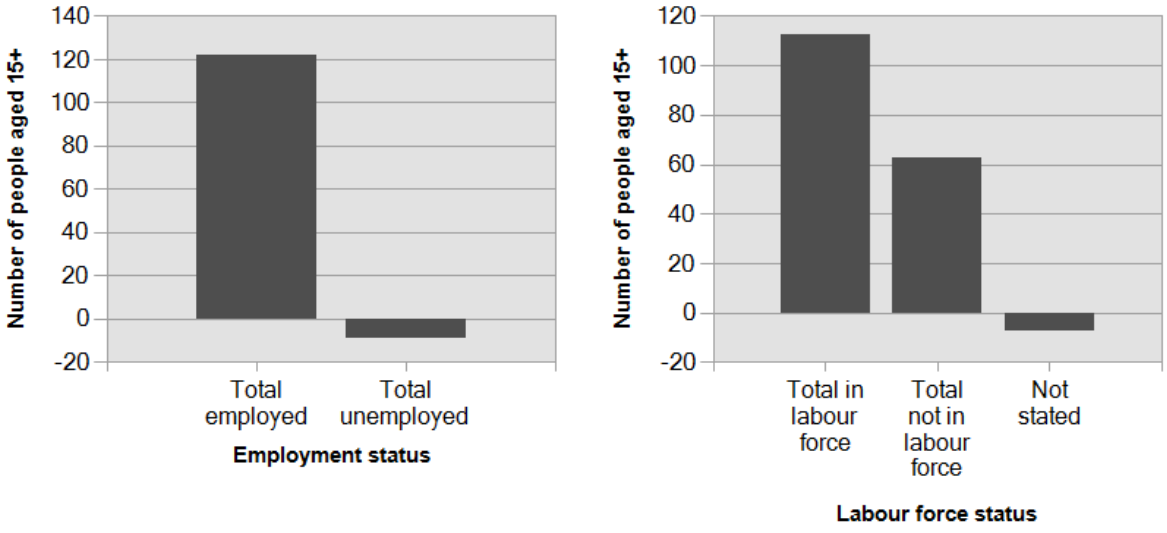
Between 2001 and 2006 in Rural South - Little Hartley the number of people in the labour force showed an increase of 113 people, or 12.2%.

Employment and labour force status, Rural South - Little Hartley and the Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in employment and labour force status, Rural South - Little Hartley, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Rural South - Little Hartley

What industries do we work in? (Industry)

2006 industry categories

Derived from the two Census questions, *'[What] best describes the business of [your] employer?'* and *'What are the main goods produced or main services provided by [your] employer's business?'* and relates only to persons aged 15 years or more.

The Industry data identifies the industries in which the residents of an area work (this may be within the residing area or elsewhere). The Industry Structure of the work force is indicative of the skill base and (to some extent) the socio-economic status and industry structure of an area.

The industries that are prominent in an area are strongly related to a range of factors including:

- the economic base and employment opportunities available in the general region;
- the educational levels of the local population; and
- the working and social aspirations of the population.

Industries are classified by grouping businesses which carry out similar productive activities. The 2006 Australian and New Zealand Standard Industrial Classification (ANZSIC) provides the current framework for industry classification in Australia. This classification provides a contemporary and internationally comparable industrial classification system which includes information about "new economy" industries such as Information, Media and Telecommunications. As this is a new classification *only 2006 data is available*.

Time series industry data (based on the 1993 ANZSIC classification) is available in the tab above named 'Time series industries'.

Industry, 2006 ANZSIC(employed persons)	Rural South - Little Hartley 2006		
Enumerated data	number	%	Regional New South Wales %
Agriculture, Forestry & Fishing	100	9.9	6.9
Mining	66	6.5	1.7
Manufacturing	58	5.7	9.2
Electricity, Gas, Water and Waste Services	23	2.3	1.3
Construction	67	6.7	7.8
Retail Trade	86	8.5	12.3
Wholesale Trade	32	3.1	3.1
Accommodation and Food Services	85	8.4	7.5
Transport, Postal and Warehousing	32	3.2	4.3
Information Media and Telecommunications	9	0.9	1.2
Financial and Insurance Services	22	2.2	2.3
Rental, Hiring and Real Estate Services	13	1.3	1.5
Professional, Scientific and Technical Services	50	4.9	4.4
Administrative and Support Services	36	3.6	2.5
Public Administration and Safety	70	7.0	6.9
Education and Training	84	8.4	8.2
Health Care and Social Assistance	105	10.5	11.5
Arts and Recreation Services	20	2.0	1.2
Other Services	36	3.5	3.9
Inadequately described or Not stated	13	1.3	2.3
Total	**1,006**	**100.0**	**100.0**

Source: Australian Bureau of Statistics, Census of Population and Housing 2006.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

An analysis of the jobs held by the resident population in Rural South - Little Hartley in 2006 shows the three most popular industry sectors were:

- Health Care and Social Assistance (105 persons or 10.5%)
- Agriculture, Forestry & Fishing (100 persons or 9.9%)
- Retail Trade (86 persons or 8.5%)

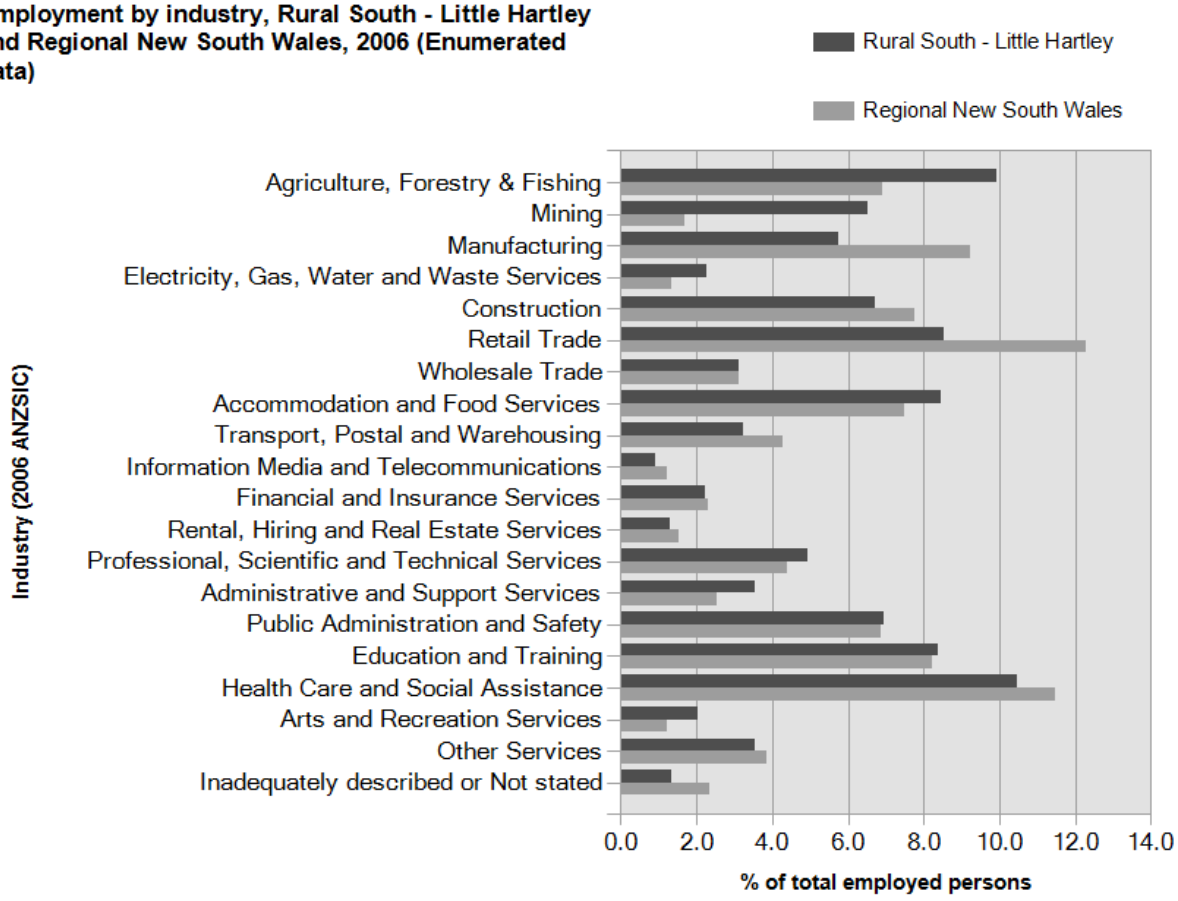
In combination these three industries employed 291 people in total or 28.9% of the employed resident population.

In comparison, Regional New South Wales employed 11.5% in Health Care and Social Assistance; 6.9% in Agriculture, Forestry & Fishing; and 12.3% in Retail Trade.

The major differences between the jobs held by the population of Rural South - Little Hartley and Regional New South Wales were:

- A *larger* percentage persons employed in Mining (6.5% compared to 1.7%);
- A *larger* percentage persons employed in Agriculture, Forestry & Fishing (9.9% compared to 6.9%);
- A *smaller* percentage persons employed in Retail Trade (8.5% compared to 12.3%), and;
- A *smaller* percentage persons employed in Manufacturing (5.7% compared to 9.2%).

Employment by industry, Rural South - Little Hartley and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

In combination these three occupations accounted for 479 people in total or 47.7% of the employed resident population.

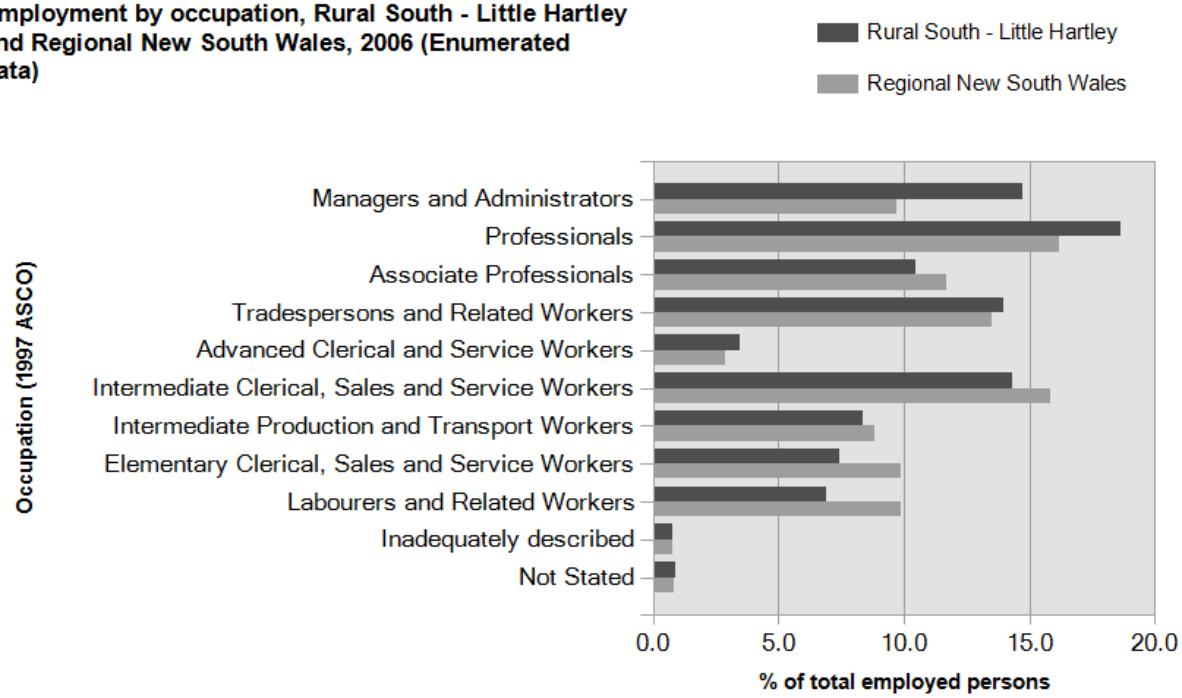
In comparison, Regional New South Wales employed 16.2% as Professionals; 9.7% as Managers and Administrators; and 15.9% as Intermediate Clerical, Sales and Service Workers.

The major differences between the occupations of the population of Rural South - Little Hartley and Regional New South Wales were

- A *larger* percentage persons employed as Managers and Administrators (14.7% compared to 9.7%);
- A *larger* percentage persons employed as Professionals (18.6% compared to 16.2%);
- A *smaller* percentage persons employed as Labourers and Related Workers (6.9% compared to 9.9%), and;
- A *smaller* percentage persons employed as Elementary Clerical, Sales and Service Workers (7.4% compared to 9.9%).

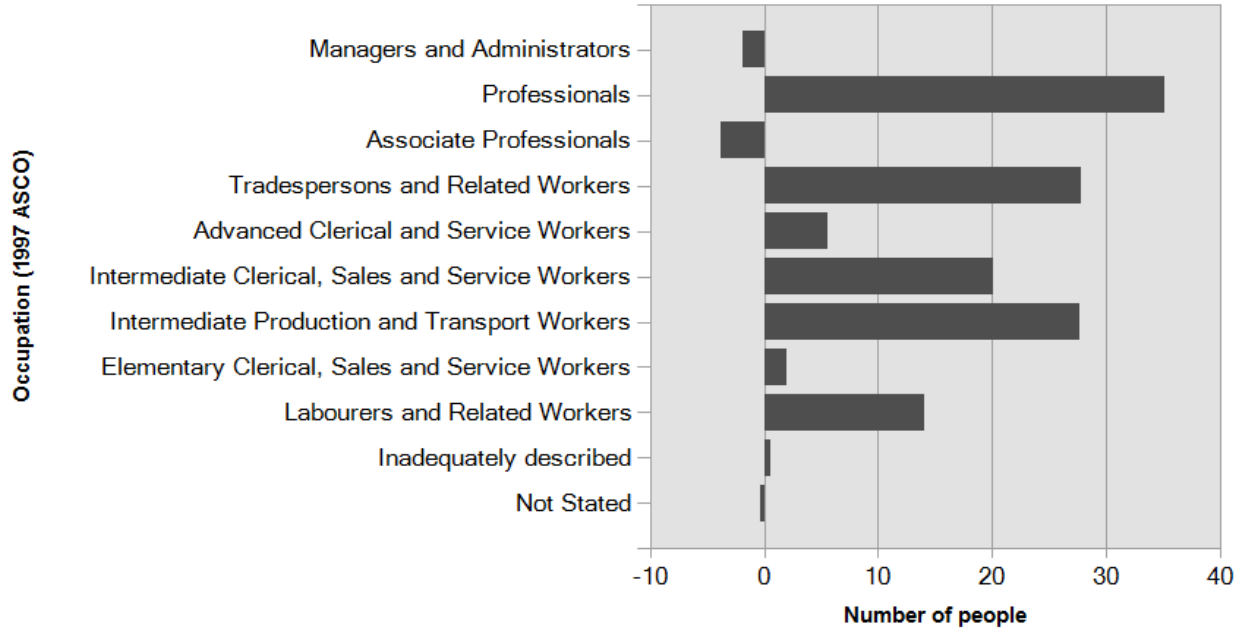
Between 2001 and 2006 there were no numerically significant changes in Rural South - Little Hartley's occupation (2001 categories) data.

Employment by occupation, Rural South - Little Hartley and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in employment by occupation, Rural South - Little Hartley, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Rural South - Little Hartley

What are our occupations? (Occupation)

2006 occupation categories

Derived from the two Census questions, *'In the main job held last week, what was the person's occupation?'* and *'What are the main tasks that the person himself/herself usually performs in that occupation?'* and relates only to persons aged 15 years or more.

The Occupation data identifies the occupations in which the residents of an area work (this may be within the residing area or elsewhere). The occupational structure of the work force is an important indicator of the characteristics of the labour force. With other indicators, such as Educational Qualifications and Income, Occupation is a key component of evaluating the socio-economic status and skill base of an area. The occupations held by a workforce are linked to a range of factors including:

- the economic base and employment opportunities available in the area;
- the educational qualification levels of the population; and
- the working and social aspirations of the population.

Occupations are classified using a combination of skill level and skill specialisation to form meaningful groups. The 2006 Australian and New Zealand Standard Classification of Occupations (ANZSCO) provides the current framework for occupation classification in Australia. This classification provides a contemporary occupation classification system. As this is a new classification *only 2006 data is available*.

Time series occupation data (based on the ASCO Second Edition classification) is available in the tab above named 'Time series occupations'.

Occupation, 2006 ANZSCO(employed persons)	Rural South - Little Hartley		
	2006		
Enumerated data	number	%	Regional New South Wales %
Managers	185	18.3	14.4
Professionals	186	18.5	16.4
Technicians and Trades Workers	155	15.4	15.4
Community and Personal Service Workers	86	8.6	9.7
Clerical and Administrative Workers	137	13.6	12.9
Sales Workers	77	7.7	10.1
Machinery Operators And Drivers	84	8.3	7.3
Labourers	81	8.1	12.3
Inadequately described or Not stated	16	1.6	1.6
Total	**1,006**	**100.0**	**100.0**

Source: Australian Bureau of Statistics, Census of Population and Housing 2006.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

An analysis of the occupations held by the resident population in Rural South - Little Hartley in 2006 shows the three most popular occupations were:

- Professionals (186 persons or 18.5%)
- Managers (185 persons or 18.3%)
- Technicians and Trades Workers (155 persons or 15.4%)

In combination these three occupations accounted for 526 people in total or 52.2% of the employed resident population.

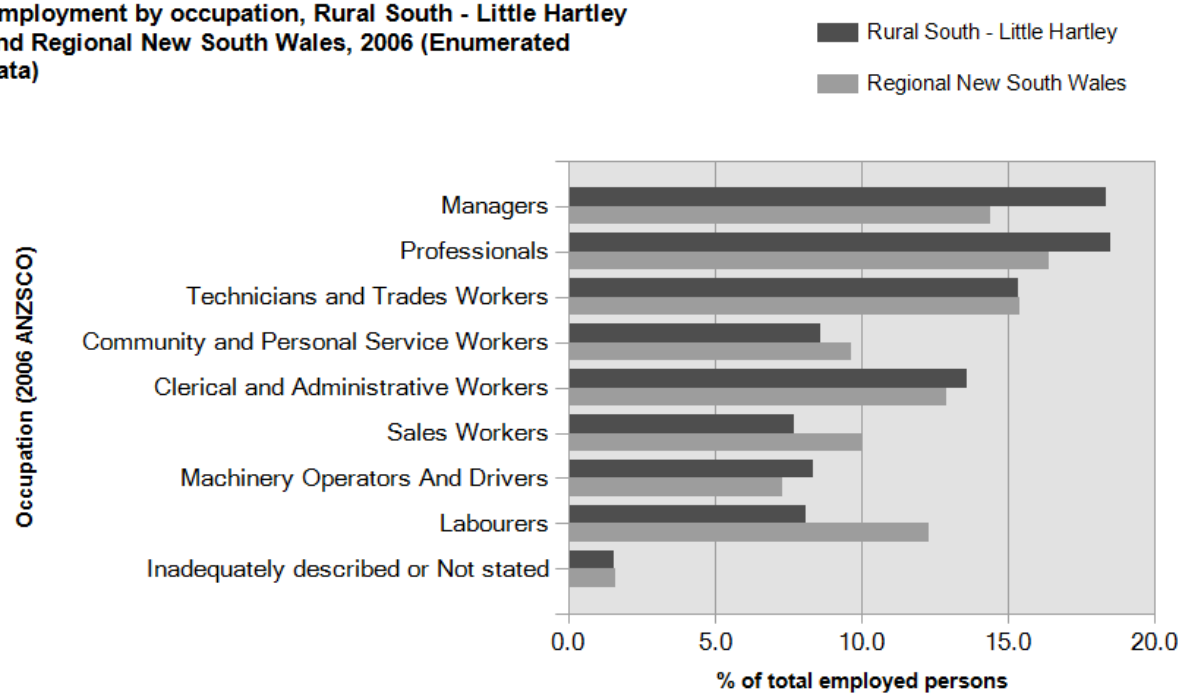
In comparison, Regional New South Wales employed 16.4% as Professionals; 14.4% as Managers; and

15.4% as Technicians and Trades Workers.

The major differences between the occupations of the population of Rural South - Little Hartley and Regional New South Wales were

- A *larger* percentage persons employed as Managers (18.3% compared to 14.4%);
- A *larger* percentage persons employed as Professionals (18.5% compared to 16.4%);
- A *smaller* percentage persons employed as Labourers (8.1% compared to 12.3%), and;
- A *smaller* percentage persons employed as Sales Workers (7.7% compared to 10.1%).

Employment by occupation, Rural South - Little Hartley and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Rural South - Little Hartley

How do we get to work? (Method of travel to work)

Derived from the Census question, *'How did the person get to work on Tuesday, 8 August 2006?'* and relates only to persons aged 15 years or more.

This data reveals the main Modes of Transport used by residents to get to work. This data is very useful in transport planning as it informs decision-makers on the effectiveness and availability of local public transport. There are a number of reasons why people use different Modes of Transport to get to work including:

- the availability of affordable and effective public transport options;
- the number of motor vehicles available within a household; and
- the travel distance to work, which for example, can allow people to walk or bicycle to their place of employment.

Note that respondents to the Census can nominate up to three methods of travel. The data presented here include people using multiple methods, but shows only one method. A hierarchy is used in which public transport is assumed to be the dominant mode if it is used. Hence people driving their car to a station or taking a taxi to the ferry are included under "Train" and "Tram or Ferry" respectively, rather than "Car" or "Taxi".

Travel to work(includes multi-mode journeys)	Rural South - Little Hartley						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Train	1	0.1	0.8	22	2.4	0.9	-21
Bus	8	0.8	0.8	3	0.3	1.0	5
Tram or Ferry	0	0	0	0	0	0	0
Taxi	0	0	0.2	1	0.1	0.2	-1
Car - as driver	600	60.2	61.6	486	54.7	58.2	114
Car - as passenger	47	4.8	6.6	47	5.2	7.2	1
Truck	23	2.3	2.0	37	4.2	2.6	-14
Motorbike	0	0	0.7	0	0	0.8	0
Bicycle	3	0.3	0.8	2	0.2	0.9	1
Walked only	34	3.4	4.7	20	2.3	4.9	14
Other	8	0.8	1.2	17	1.9	1.7	-9
Worked at home	125	12.6	6.4	126	14.2	7.2	-1
Did not go to work	129	12.9	12.2	111	12.5	12.4	17
Not stated	17	1.7	1.9	17	1.9	1.9	0
Total	996	100.0	100.0	887	100.0	100.0	108

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

In 2006, there were 9 people who caught public transport to work (train, bus, tram or ferry) in Rural South - Little Hartley, compared with 670 who drove in private vehicles (car –as driver, car – as passenger, motorbike, or truck).

Analysis of the method of travel to work of the residents in Rural South - Little Hartley in 2006 compared to Regional New South Wales shows that 0.9% used public transport, while 67.3% used a private vehicle, compared with 1.6% and 70.9% respectively in Regional New South Wales.

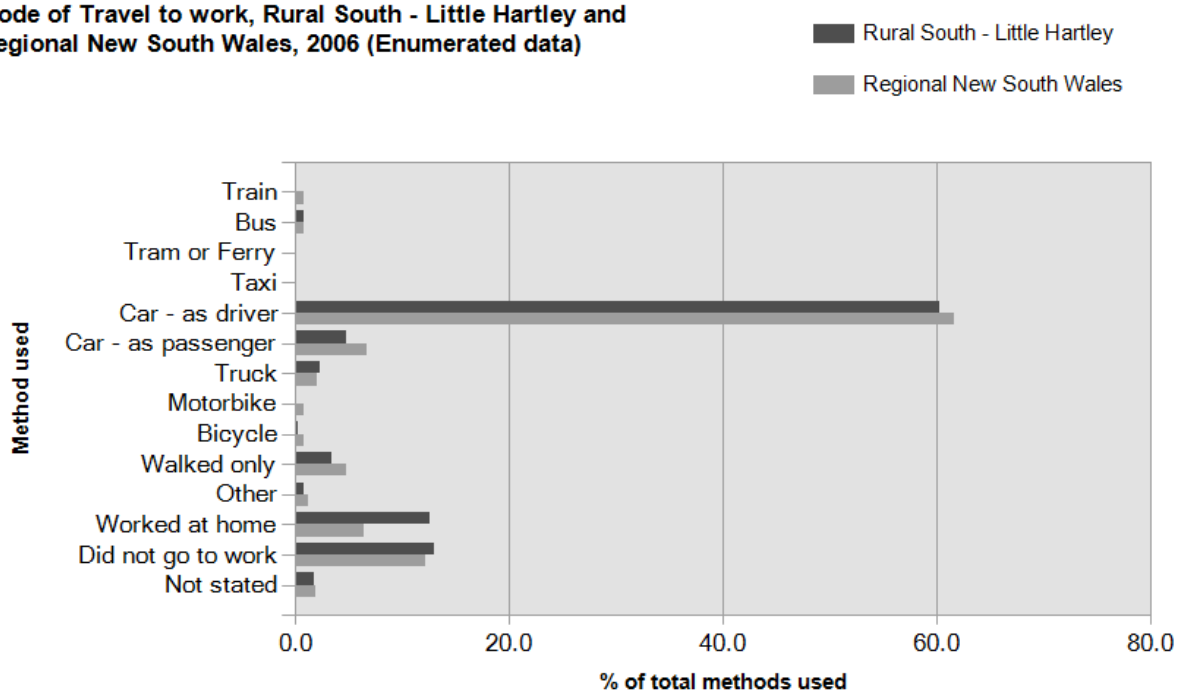
The major difference between the method of travel to work of Rural South - Little Hartley and Regional New South Wales was:

- A *larger* percentage of people who worked at home (12.6% compared to 6.4%).

The largest change in the method of travel to work by resident population in Rural South - Little Hartley between 2001 and 2006 were for those nominated:

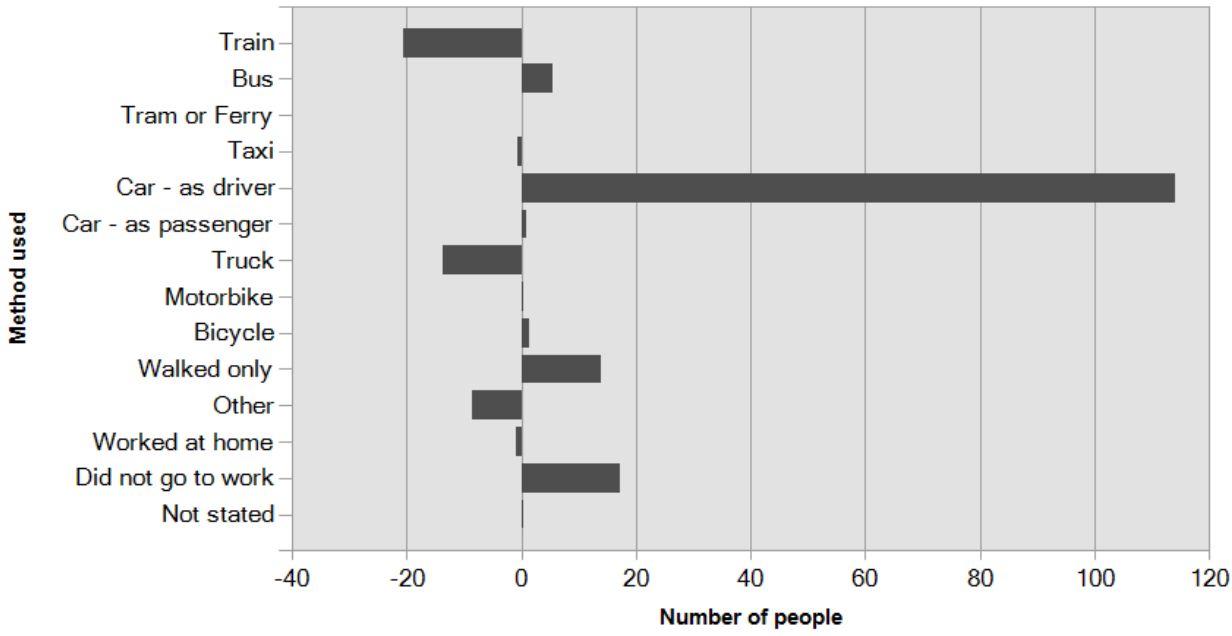
- Car - as driver (+114 persons).

Mode of Travel to work, Rural South - Little Hartley and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in mode of travel to work, Rural South - Little Hartley, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Rural South - Little Hartley

What type of households do we live in? (Household and family types)

Derived from the Census question, *'What is the person's relationship [to each other person in the household]?'*

The Household and Family structure of the population is an indicator of an area's residential role and function (relating to the types of housing markets attracted to the area). It is usually indicative of the area's era of settlement and provides key insights into the level of demand for services and facilities (as most services and facilities are age- and household type-specific).

To get a more complete picture of the demographic characteristics of an area, the Household and Family Type data should be viewed in conjunction with Age Structure data.

Household types(households)	Rural South - Little Hartley						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Couples with child(ren) under 15 years	181	32.8	29.0	188	36.4	31.5	-7
Couples with child(ren) 15 years and over	81	14.7	12.2	69	13.4	12.1	12
Total couples with child(ren)	262	47.5	41.2	258	49.8	43.6	5
One parent families with child(ren) under 15 years	19	3.4	10.1	34	6.6	10.1	-15
One parent families with child(ren) 15 years and over	25	4.5	6.7	22	4.2	6.0	3
Total one parent families	44	7.9	16.8	56	10.8	16.1	-12
Couples without child(ren)	246	44.5	40.7	198	38.2	38.9	48
Other families	0	0	1.3	6	1.2	1.4	-6
Total families	552	100.0	100.0	517	100.0	100.0	35
One family households	552	75.6	68.0	481	71.8	68.2	71
Two or more family households	7	1.0	1.0	14	2.1	0.7	-7
Total family households	560	76.6	69.0	495	73.9	68.9	64
Lone person households	138	18.9	25.1	111	16.5	23.9	28
Group households	14	1.9	2.9	13	1.9	2.9	1
Other not classifiable households	19	2.6	2.9	52	7.7	4.3	-33
Total households	730	100.0	100.0	670	100.0	100.0	60

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of the **family types** in Rural South - Little Hartley in 2006 compared to Regional New South Wales shows that there was a larger proportion of couple families with child(ren) but a smaller proportion of one-parent families.

Overall, 47.5% of total families were couple families with child(ren), and 7.9% were one-parent families, compared with 41.2% and 16.8% respectively for Regional New South Wales.

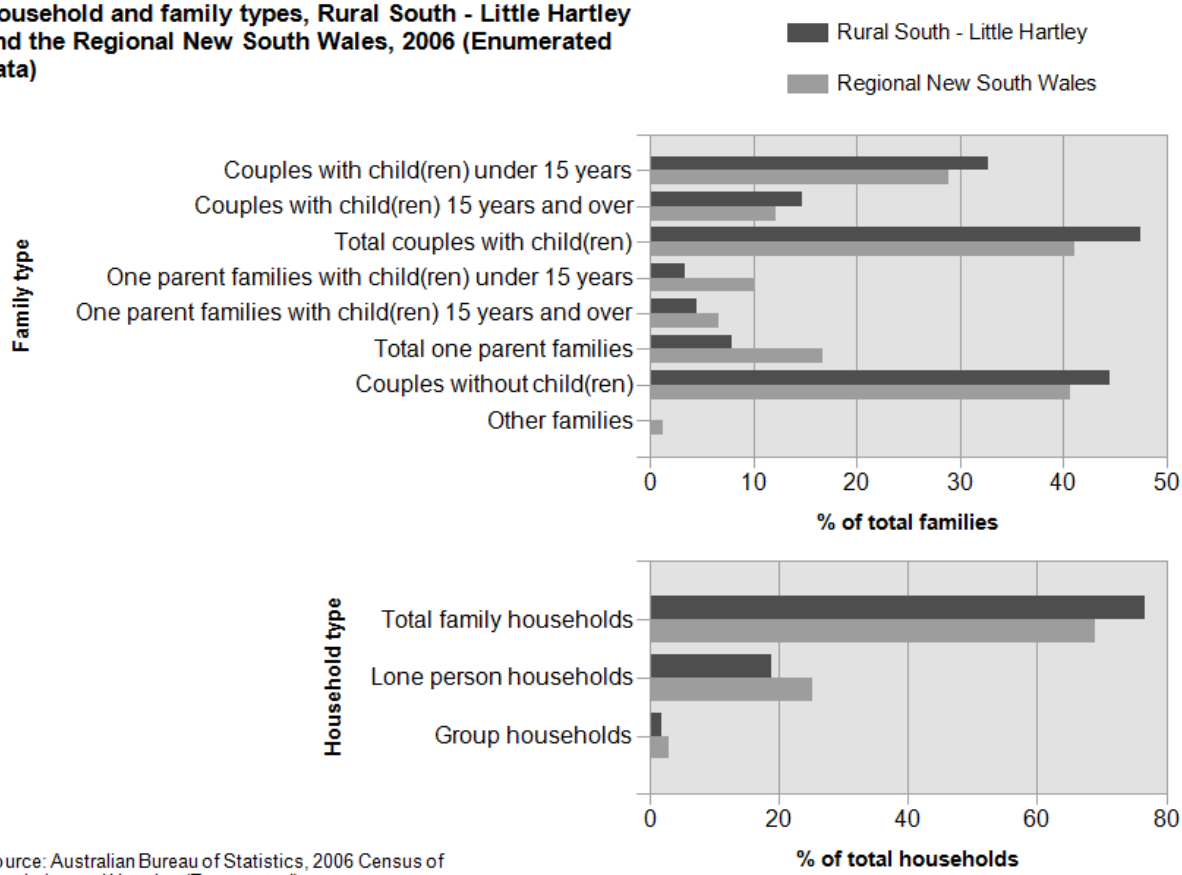
Between 2001 and 2006 there were no numerically significant changes in Rural South - Little Hartley's household types data.

Comparing **Household types** between Rural South - Little Hartley and Regional New South Wales in 2006

reveals a larger proportion of Family households, but a smaller proportion of lone person households. Family households accounted for 76.6% of total households in Rural South - Little Hartley while lone person households comprised 18.9%, (69.0% and 25.1% respectively for Regional New South Wales).

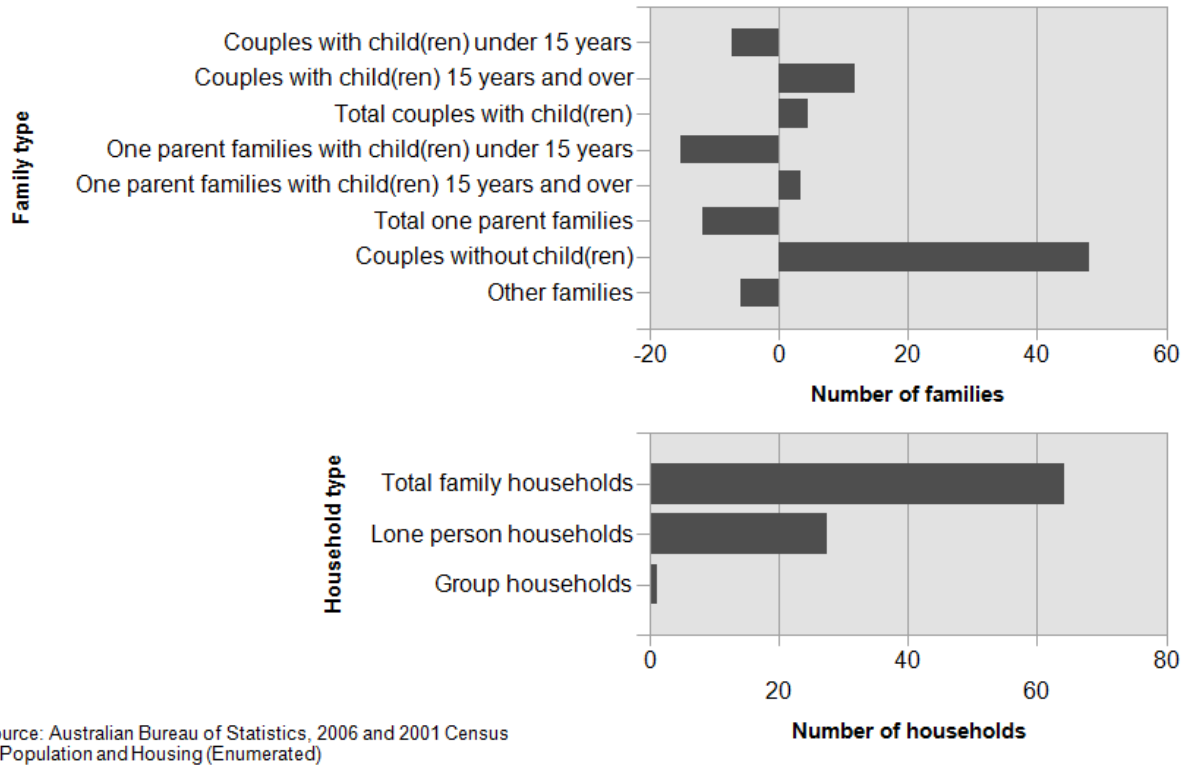
Between 2001 and 2006 in Rural South - Little Hartley, there was an increase in the number of Family households (64), an increase in lone person households (28) and an increase in group households (1).

Household and family types, Rural South - Little Hartley and the Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in household and family types, Rural South - Little Hartley, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Rural South - Little Hartley

How many people live in each household? (Number of persons usually resident)

Derived from the three Census questions, *'Name of each person including visitors who spent the night of Tuesday, 8 August 2006 in this dwelling*', and *'Where does the person usually live?*', and *'Are there any persons who usually live in this dwelling who were absent on Census Night (Tuesday, 8 August 2006)?*'

The size of households in general follows the life-cycle of families. Households are usually small at the stage of relationship formation (early marriage), and then increase in size with the advent of children. They later reduce in size again as these children reach adulthood and leave home. However, household size can also be influenced by a lack, (or abundance) of affordable housing. Further, overseas migrants and indigenous persons often have a tradition of living with extended family members and/or other families.

Household size(number of persons usually resident)	Rural South - Little Hartley						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
1 Person	138	19.3	25.9	111	18.0	25.0	28
2 Persons	270	37.5	36.3	217	35.3	35.3	52
3 Persons	107	14.9	14.5	100	16.2	15.0	7
4 Persons	111	15.4	14.0	91	14.8	14.5	19
5 Persons	64	8.9	6.5	63	10.3	7.1	1
6 or more Persons	30	4.1	2.8	33	5.4	3.1	-4
Total	719	100.0	100.0	615	100.0	100.0	104

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Analysis of the number of persons usually resident in a household in the Rural South - Little Hartley compared with Regional New South Wales shows that there were a smaller proportion of lone person households, and a larger proportion of larger households (those with 4 persons or more). Overall there were 19.3% of lone person households, and 28.4% of larger households, compared with 25.9% and 23.3% respectively for Regional New South Wales.

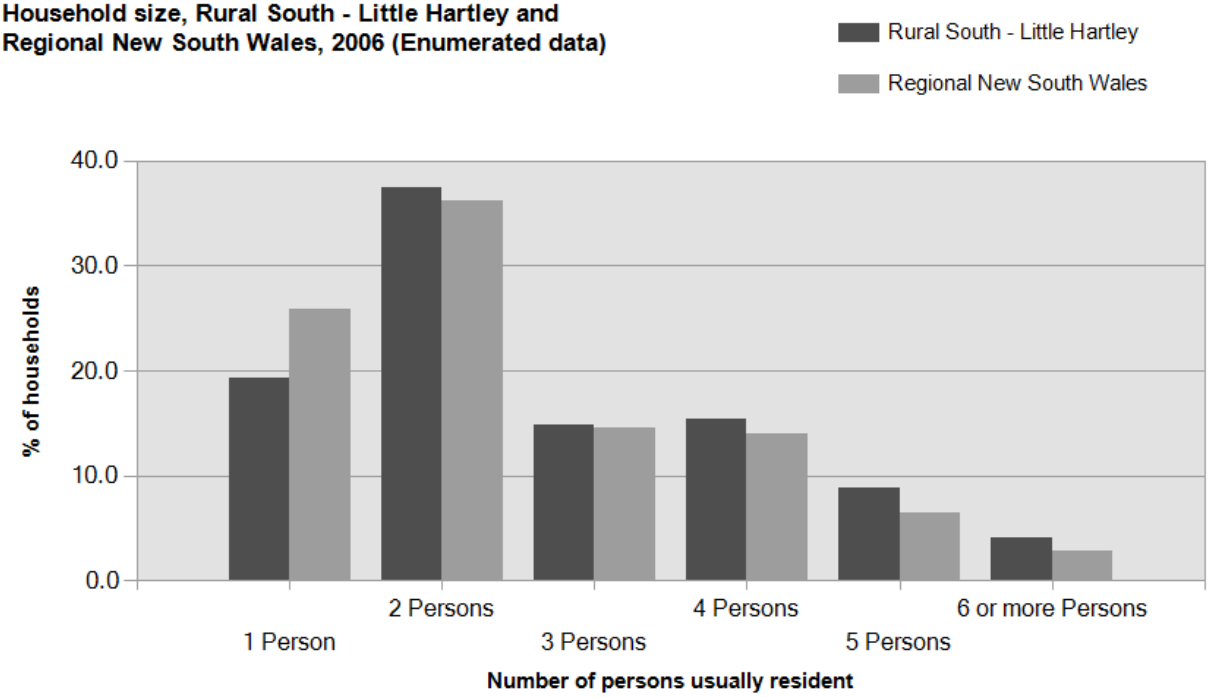
The major differences in the household size for Rural South - Little Hartley and Regional New South Wales were:

- A *larger* percentage of 5 person households (8.9% compared to 6.5%), and;
- A *smaller* percentage of 1 Person households (19.3% compared to 25.9%).

The largest change in the number of persons usually resident in a household in Rural South - Little Hartley between 2001 and 2006 was:

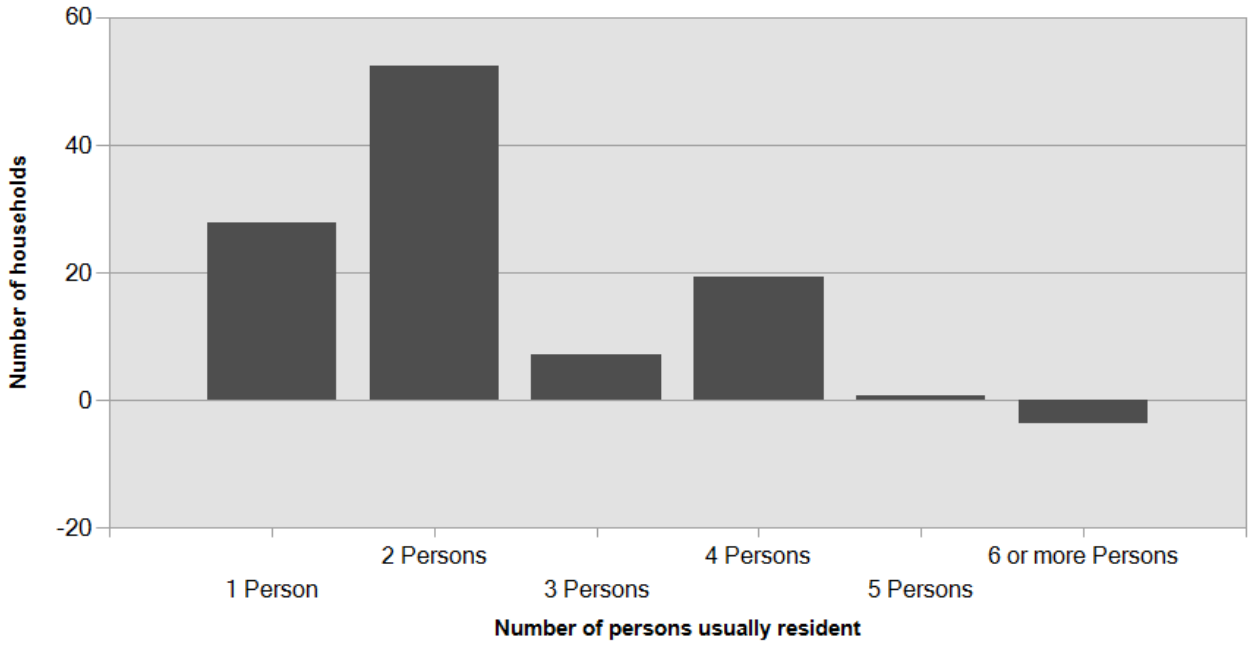
- 2 person households (+52).

Household size, Rural South - Little Hartley and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in household size, Rural South - Little Hartley, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Rural South - Little Hartley

Are we owners, renters or buyers? (Housing tenure)

Derived from the Census questions, *'Is this dwelling [owned outright, owned with a mortgage etc]'*, and *'If this dwelling is being rented, who is it rented from?'*

Tenure data, to some extent, provide insights into the socio-economic status of an area as well as the role that the area plays in the housing market. For example, a high concentration of private renters may indicate an area attractive to specific housing markets such as young singles and couples, while a concentration of home owners indicates a more settled area (i.e. less transitory), with mature families and empty-nester household types. Tenure can also reflect built form, with a significantly higher share of renters in high density housing and a substantially larger proportion of home-owners in separate houses, although this is not a mutually exclusive pattern.

In conjunction with other socio-economic status information tenure data is useful for analysing a wide range of issues, including housing market analysis (in conjunction with Household and Family Type data) and for identifying public housing areas.

Housing tenure(households)	Rural South - Little Hartley						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Owned	324	44.1	38.3	335	49.9	44.4	-11
Being purchased	291	39.6	28.7	199	29.7	22.7	92
Renting - Govt	0	0	4.3	0	0	4.6	0
Renting - Other	78	10.7	20.8	56	8.3	20.4	23
Renting - Not stated	11	1.5	1.1	3	0.4	0.3	8
Renting - Total	**89**	**12.1**	**26.2**	**59**	**8.7**	**25.3**	**31**
Other tenure type	3	0.4	1.0	28	4.2	3.4	-25
Not stated	27	3.7	5.9	50	7.5	4.2	-23
Total	**734**	**100.0**	**100.0**	**671**	**100.0**	**100.0**	**63**

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

Care should be taken when analysing change over time for 'Owned' and 'Being purchased' categories as changes to the wording of the responses in the Census questionaire between 2001 and 2006 may have resulted in skewed data. Please see the specific data notes for more detail.

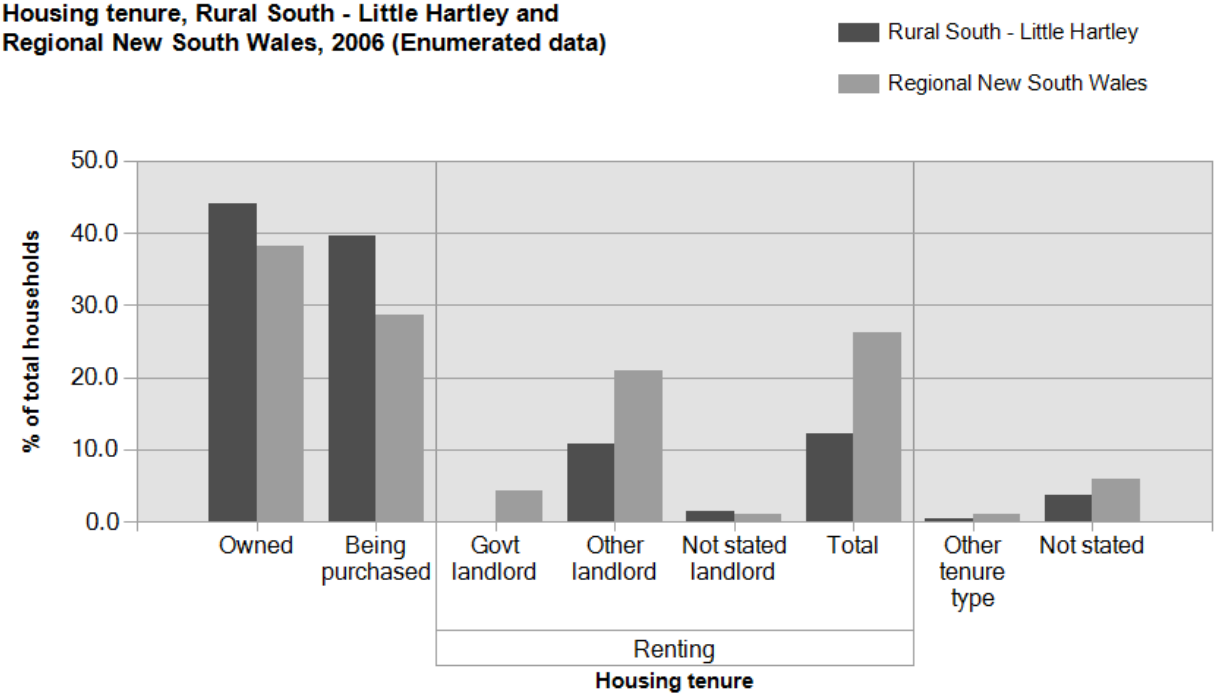
Analysis of the housing tenure of the population of Rural South - Little Hartley in 2006 compared to Regional New South Wales shows that there was a larger proportion of households who owned their dwelling; a larger proportion purchasing their dwelling; and a smaller proportion who were renters.

Overall, 44.1% of the population owned their dwelling; 39.6% were purchasing, and 12.1% were renting, compared with 38.3%, 28.7% and 26.2% respectively for Regional New South Wales.

The largest change in housing tenure categories for the households in Rural South - Little Hartley between 2001 and 2006 were:

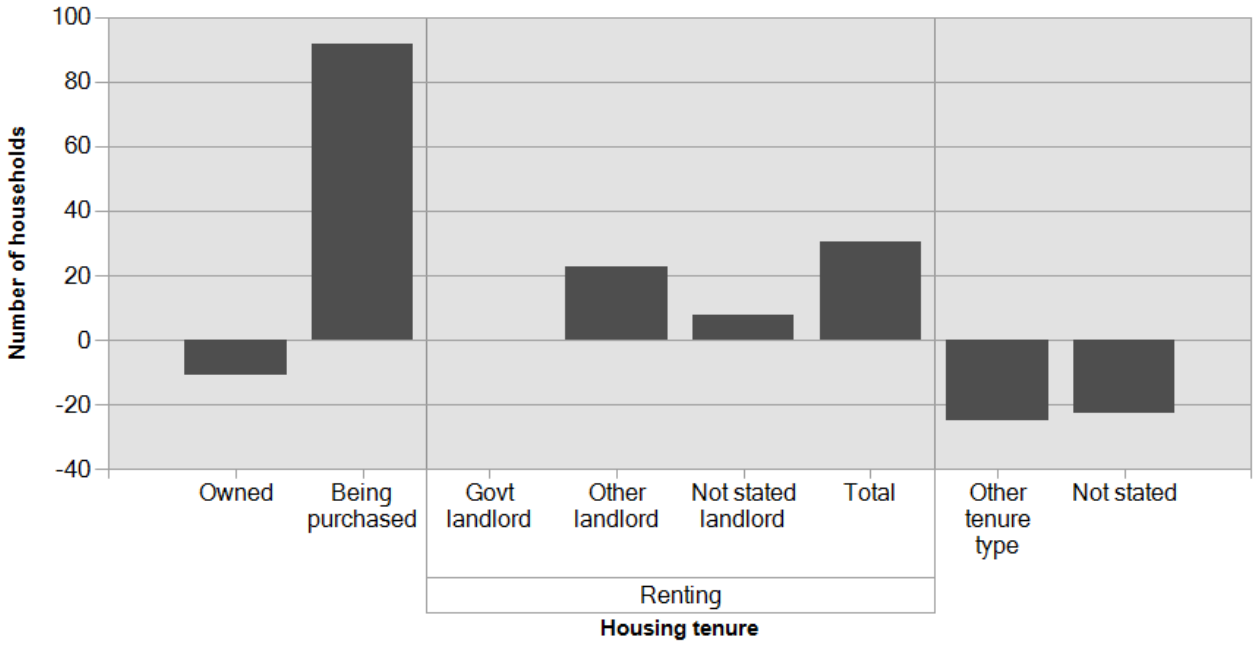
- Being purchased (+92 households).

Housing tenure, Rural South - Little Hartley and Regional New South Wales, 2006 (Enumerated data)



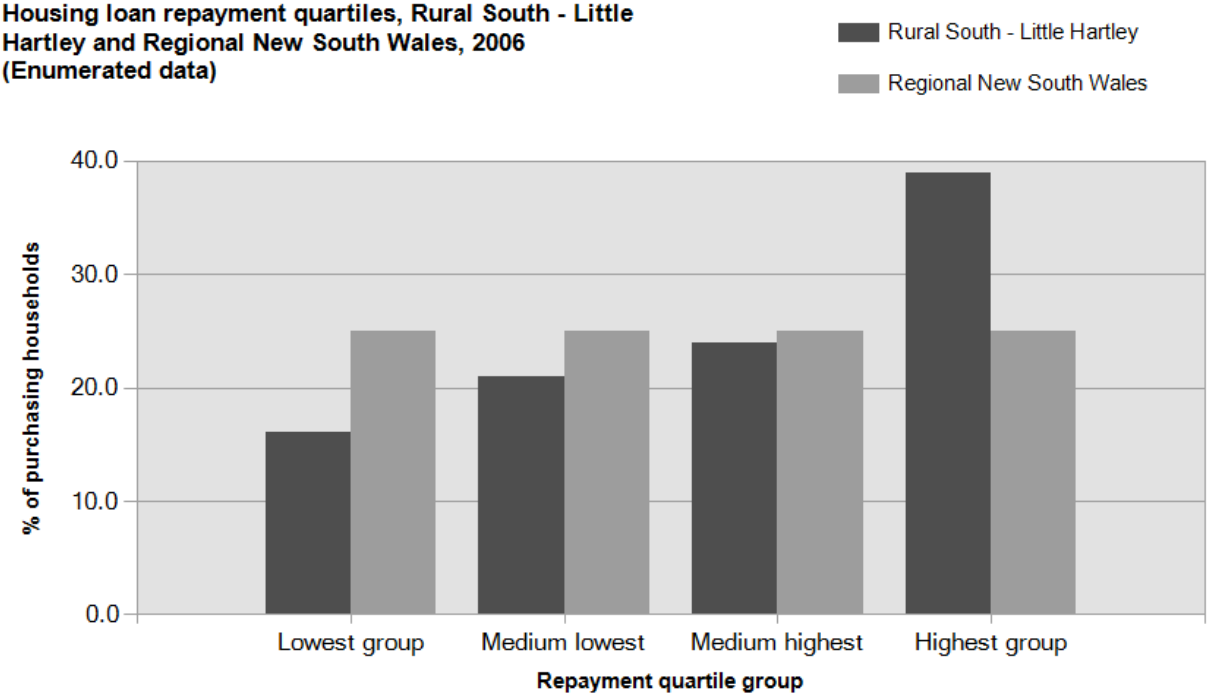
Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in housing tenure, Rural South - Little Hartley, 2001 to 2006 (Enumerated data)



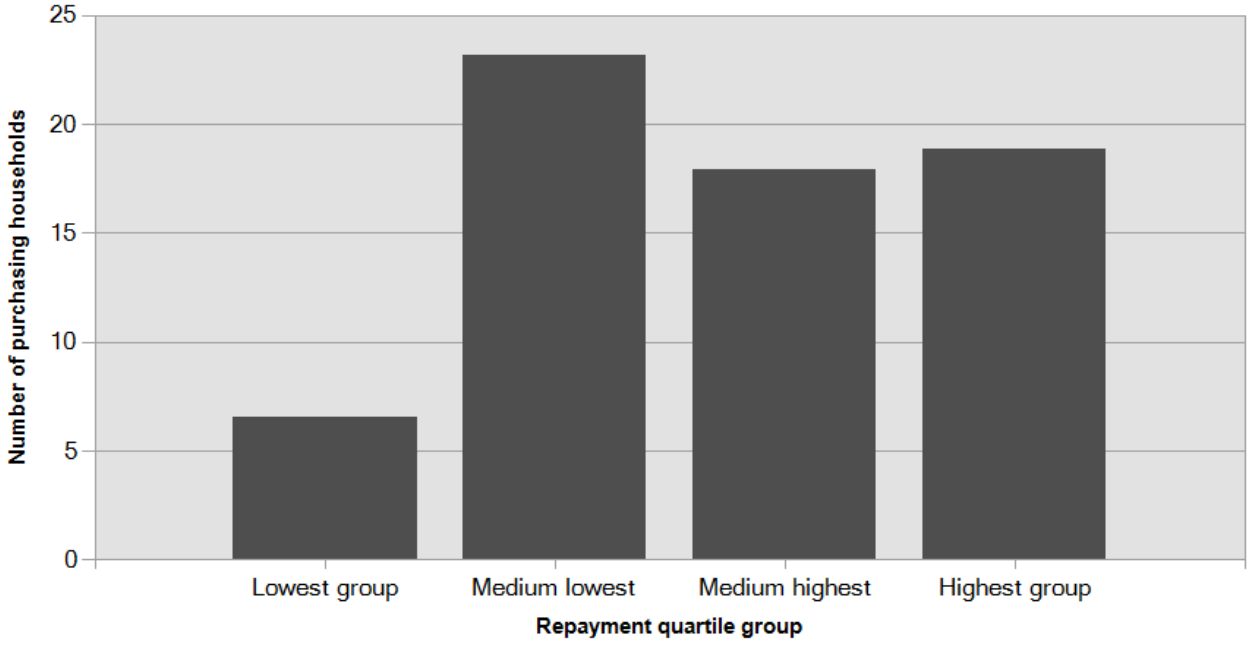
Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Housing loan repayment quartiles, Rural South - Little Hartley and Regional New South Wales, 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in housing loan repayment quartiles, Rural South - Little Hartley, 2001 to 2006 (Enumerated data)



Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Rural South - Little Hartley

What type of dwellings do we live in? (Dwelling types)

Dwelling Type is derived from an assessment by the Census Collector who observes and records the type of dwelling structure.

The types of dwellings that are common to areas are important determinants in the role and function that the area plays in the housing market. A greater concentration of higher density dwellings is likely to attract more young adults and smaller households; while larger, detached or separate dwellings are more likely to have families and prospective families living in them, although this is not a mutually exclusive pattern.

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

Dwelling structure(private dwellings)	Rural South - Little Hartley						
	2006			2001			
Enumerated data	number	%	Regional New South Wales %	number	%	Regional New South Wales %	Change 2001 to 2006
Separate house	734	68.4	72.1	646	73.6	72.3	89
Medium density	0	0	11.4	0	0	11.3	0
High density	0	0	1.6	0	0	1.5	0
Caravans, cabin, houseboat	6	0.5	1.8	9	1.0	2.1	-3
Other	0	0	0.5	0	0	0.6	0
Not stated	0	0	0.1	7	0.8	0.6	-7
TOTAL occupied private dwellings	741	69.0	87.5	661	75.4	88.3	79
TOTAL unoccupied Dwellings	333	31.0	12.5	216	24.6	11.7	117
TOTAL Dwellings	1,073	100.0	100.0	878	100.0	100.0	196

Source: Australian Bureau of Statistics, Census of Population and Housing, 2006, 2001, 1996, and 1991.

(a) 'Medium density' includes all semi-detached, row, terrace, townhouses and villa units, plus flats and apartments in blocks of 1 or 2 storeys, and flats attached to houses.

(b) 'High density' includes flats and apartments in 3 storey and larger blocks.

NOTE: Table totals may not equate with other similar tables due to **randomisation** of small numbers. Please refer to the **specific data notes** for more information.

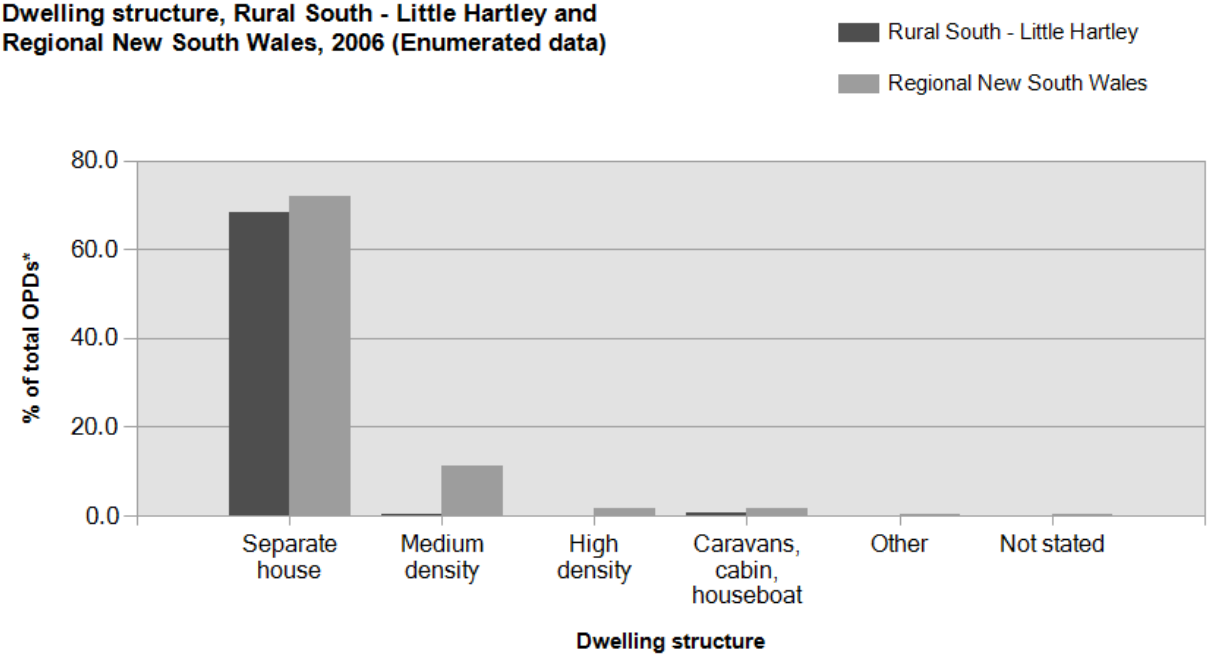
In 2006, there were 734 households who occupied a separate house in the area, while 0 occupied a medium density dwelling, and 0 occupied high density flats and apartments.

Analysis of the types of dwellings of the households in Rural South - Little Hartley in 2006 compared to Regional New South Wales shows that 68.4% occupied a separate house; 0.0% occupied a medium density dwelling; while 0.0% occupied high density dwellings, compared with 72.1%, 11.4%, and 1.6% respectively in Regional New South Wales.

The largest change in the type of dwellings occupied by households in Rural South - Little Hartley between 2001 and 2006 were for those occupying a:

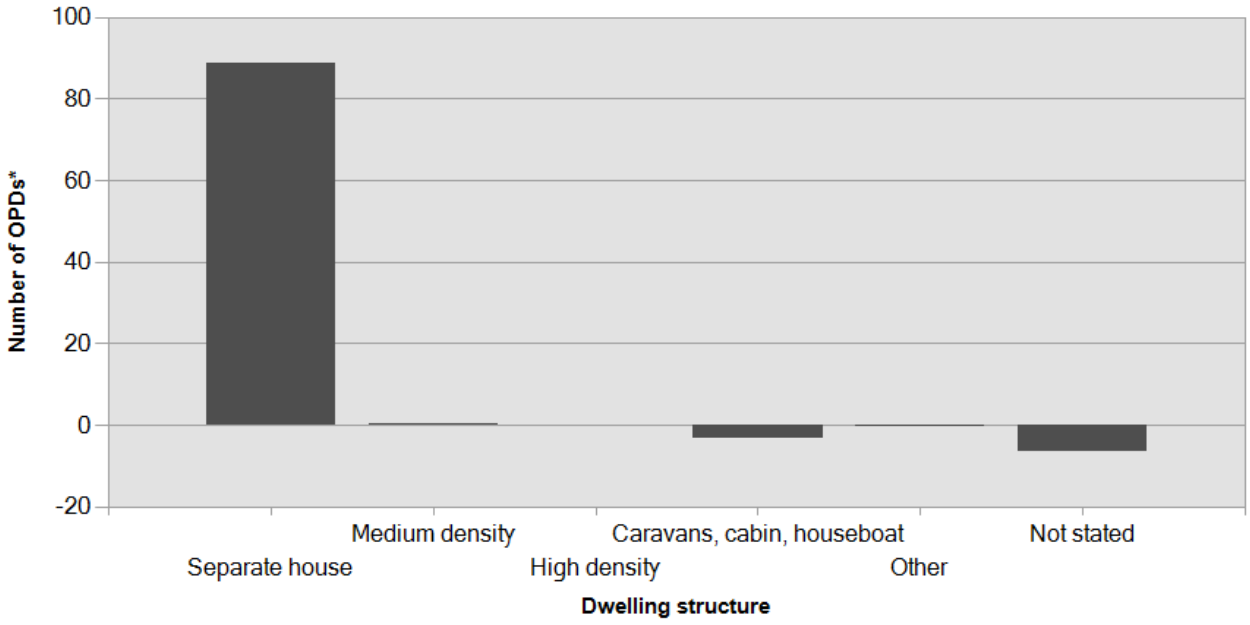
- Separate house (+89 dwellings).

Dwelling structure, Rural South - Little Hartley and Regional New South Wales, 2006 (Enumerated data)



*OPDs refers to Occupied Private Dwellings.
Source: Australian Bureau of Statistics, 2006 Census of Population and Housing (Enumerated)

Change in dwelling structure, Rural South - Little Hartley, 2001 to 2006 (Enumerated data)



*OPDs refers to Occupied Private Dwellings.
Source: Australian Bureau of Statistics, 2006 and 2001 Census of Population and Housing (Enumerated)

Geography notes

Census data is available at a variety of different geographic levels, for example, State; Local Government; and Census Collector District (a unit of around 200 households). Rarely do these boundaries match actual 'communities', 'suburbs' or 'service catchments' needed for effective decision making.

The Community Profile combines data for Lithgow City along with customised suburbs/localities, aggregated from Census Collector Districts for the Census years: 2006, 2001, 1996, and 1991.

Lithgow City has 9 small areas:

- Bowenfels
- Lithgow - Hermitage Flat and District
- Morts Estate - Oaky Park - Vale Of Clwydd
- Portland
- Rural North - Marrangaroo
- Rural South - Little Hartley
- South Bowenfels - Littleton - South Littleton
- Wallerawang - Lidsdale
- Lithgow Urban Area

Suburb/locality geography

The suburbs and localities in the Community Profile tables are aggregations of 2006 Census Collection Districts (CDs). Where CDs did not fit exactly into the suburb or locality boundaries, estimates were made of the number of dwellings to be included. These estimates use aerial photography, dwelling counts, planning schemes, and street directories to determine what percentage of a CD goes into each suburb. The resulting data provides the most accurate population information for suburbs and localities.

NOTE: The geography in the Community Profile tables may not match the Australian Bureau of Statistics (ABS) suburb boundaries for 2006, which are based on aggregation of whole CDs.

Data notes

All data in this Profile is sourced from the Australian Bureau of Statistics, copyright in ABS data vests in the Commonwealth of Australia.

Population figures

The most comprehensive population count available in Australia is derived from the Census of Population and Housing, conducted by the Australian Bureau of Statistics every 5 years. It is an official count of all people and dwellings in Australia on Census night, and collects details of age, sex and other characteristics of the population. The last Census was conducted on 8 August 2006 and was the 15th national Census for Australia. The next Census will be conducted on 7 August 2011.

Census statistics are used as the basis for estimating the population at national, state and local government levels, for electoral purposes and the distribution of government funds. They are used by individuals and organisations in the public and private sectors for planning, administration, research and decision making.

Populations are estimated in various ways. It is important to understand how a population has been derived when you are using the data.

Census data in the Community Profile section of profile.id® includes **enumerated** and **usual residence** data. The **estimated resident population** can be found in the Additional Information section of this website.

Enumerated Population

The 'Enumerated Population' represents where people were counted on Census Night (8 August 2006), which may not be where they usually live. This population figure generally includes overseas visitors and visitors to the area from within Australia, but excludes Australians overseas.

This type of count provides a snapshot at a given point in time. The Census is timed to attempt to capture the typical situation, however, holiday resort areas, such as the Gold Coast and snow fields, may show a large enumeration count compared with the usual residence count.

Where enumerated population data is used in the profile, overseas visitors have been specifically excluded from the tables, but visitors from within Australia are included.

For detailed information about Enumerated population please refer to the ABS Fact Sheet – Population Measures.

Usual Residence Population

This population is derived from the Census. It is the place where a person usually lives, rather than the place where they were counted on Census night. Each person completing the Census is required to state their address of usual residence and this information is used to derive the Usual Residence population.

Census counts compiled on this basis are less likely to be influenced by seasonal factors, such as holiday seasons and snow seasons, and provide information about the usual residents of an area.

In 2006 all Census data are provided for usual residence as well as enumerated population. Previously household information was released as enumerated only (please see the detailed note for household and family type). Additionally, data about usual residence were not published for any data sets prior to 2001. Consequently, a time series has been provided for non-household data comparing 2006 and 2001 data only.

For detailed information about usual residence and enumerated population please refer to the ABS Fact Sheet – Population Measures.

Estimated Resident Population

The Estimated Resident Population (ERP) is the official ABS estimate of the Australian population. The ERP is based on results of the Census and is compiled as at 30 June of each Census year. It is updated between Censuses - quarterly for state and national figures, and annually for local government areas. ERP provides a population figure between Censuses.

The ERP is based on the usual residence population and includes adjustments for Census undercount,

Australian residents who were temporarily overseas on Census night, and backdates the population to 30 June. Each year's updates take into account births, deaths and both internal and overseas migration.

ERPs can be found under the 'Additional Information' section of the menu in the Community Profile.

For detailed information about ERPs please refer to the ABS publication Demographic Estimates and Projections: Concepts, Sources and Methods, 1999.

Randomisation

The information presented in the tables in the Community Profile is based on detailed tables produced by the Australian Bureau of Statistics at the Local Government Area level, and at the Census Collection District (CD) level for suburbs and small areas.

Note: The raw CD level data are then recalculated to exactly reflect the selected boundaries as shown on the maps within the Community Profile.

The Australian Bureau of Statistics (ABS) will randomise information it provides to preserve confidentiality. All cells are slightly adjusted to prevent any identification of personal details. Methodologies for doing this have changed between 2001 and 2006.

- Data tables released prior to the 2006 Census had small numbers (values of 1 or 2) randomly adjusted to either 0 or 3 by the ABS. As tables are randomly adjusted independently of each other, totals differ slightly across tables with the same population. The affect of randomisation is increased with the aggregation of Census Collector Districts into suburbs.
- In relation to the 2006 data, a new method called "perturbation" has been introduced. All figures included within any table may be randomly adjusted by a small amount. These adjustments result in small introduced random errors. Although the information value of the table as a whole is not impaired, care should be taken when interpreting very small numbers, since randomisation will affect the relative size of small numbers far more than larger numbers. The effect of the randomisation methodology also ensures that values of 1 and 2 do not appear in tables.

No reliance should be placed on small cells as they are impacted by random adjustment, respondent and processing errors.

Table totals and subtotals will be internally consistent but discrepancies may be observed between tables cross-tabulating the same population by different variables. While randomisation compromises the table totals by making them appear inconsistent, this is the best available socio-demographic data at the suburb level. This level of compromise is not statistically significant and should not impact on decision makers making effective resource allocation and planning decisions.

Overseas visitors

Enumerated data from the 2001 and 2006 Censuses are published by the ABS with "Overseas visitors" appearing as a separate category in many tables. To improve usability of the information the category "Overseas visitors" has been removed from all tables and calculations.

Table totals and rounding

Table totals may not equate with other similar tables due to randomisation of small numbers and percentages may not total to 100 due to rounding of decimal places. All discrepancies are minimal and are statistically insignificant.

Household and Family Composition

This variable describes the type of household within a dwelling. Household composition indicates whether a family is present and whether other unrelated household members are present. Any household, including lone person households, can contain visitors. 'Visitor only' households can contain overseas visitors (ABS Census Dictionary 2006).

The 'Other not classifiable' category includes those households which were occupied on Census night but where the Census collector could not make contact; households that contained only persons aged under 15 years; and households which could not be classified elsewhere in this classification because there was

insufficient information on the Census form. (ABS Census Dictionary 2006).

The household and family data are essentially the same for both Usual Residence and Enumerated population counts. The person who fills in the form identifies all persons who are present on Census night and their relationship within the household. Anyone who is temporarily absent is separately identified on the form, so that the type of household and number of usual residents can be identified. However, any table examining the characteristics of people by the type of household they live in will exclude these people as few demographic variables are collected for persons temporarily absent.

Persons who are away from home, will be counted in the household they are present in on Census night (generally in a non-private dwelling or as a visitor in a private dwelling). Although the ABS will know their usual address, and they will be coded back to their area of usual residence, the ABS is not able to impute that person's relationship to other people also resident at that address. Unlike the Enumerated count, Usual Residence household data does not include 'visitor only' households.

Specific notes

All data in the Community Profile is sourced from the Australian Bureau of Statistics, copyright in ABS data vests in the Commonwealth of Australia.

How many people live here?

Key Statistics

The summary statistics table contains 'Total population', ‘Overseas population’ 'Gender', 'Indigenous population', ‘Institutional population’ and 'Average household size'; along with a summary of data contained elsewhere in the Profile.

'Total population' and 'Gender' data are shown both including and excluding 'Overseas Visitors'.

'Indigenous population' refers to persons of Aboriginal and/or Torres Strait Islander origin.

‘Institutional population’ refers to people living in non-private dwellings. These types of dwellings are establishments which provide a communal type of accommodation. Examples of categories are hotel, motel, boarding house, private hotel, public hospital (not psychiatric), and childcare institution.

'Average household size' is calculated on the basis of the number people counted in occupied private dwellings (excluding overseas visitors), divided by the number of occupied private dwellings (excluding non-private dwellings, such as institutions and hotels etc).

For notes on other variables in the 'Key statistics' table please see the specific data notes for each of the relevant sections.

How old are we?

Includes all persons except 'Overseas Visitors'.

Between the 2001 and the 2006 Censuses, there was a small change in the way that the question regarding your age was phrased. The 2001 Census asked your age last birthday. In 2006, the question asked either your age last birthday or your date of birth. This change in the way age structure has been collected has not had an impact on the data produced; if date of birth was completed, then the ABS calculated age as at your last birthday. 2006 age data are comparable to prior Censuses.

Who are we?

Where were we born?

Includes all persons except 'Overseas Visitors'.

The 'United Kingdom' includes England, Scotland, Wales, Northern Ireland, Channel Islands, Isle of Man, and 'United Kingdom not further defined'.

'Former Federal Republic of Yugoslavia' includes Serbia and Montenegro, as well as 'South Eastern Europe nfd' in 2006. Those people categorised to South Eastern Europe in 2006 were primarily those who stated their birthplace as Yugoslavia, which did not exist as a nation in 2006. In 2001 it includes all people who listed their birthplace as Yugoslavia, while it is not available for 1996 and 1991 due to considerable changes to national boundaries in this region.

'Total Overseas born' includes 'inadequately described', 'at sea', and 'not elsewhere classified'.

'Main English speaking countries' includes Canada, Ireland, New Zealand, South Africa, the United Kingdom, and the United States of America.

'Non-English speaking backgrounds' refers to persons born in countries not included in 'Main English speaking countries'.

'China (excl. Taiwan Province) ' also excludes the Special Administrative Regions of Hong Kong and Macau.

Birthplace is coded using the Standard Australian Classification of Countries (SACC) 1998.

How many recently arrived?

Excludes persons who did not state their birthplace, and persons born in Australia or in other Australian territories.

Includes Australian residents born overseas who will be in Australia for more than one year.

How well do we speak English?

This is derived from the Census question, 'How well does the person speak English?' and applies to all persons who speak a language other than English at home. The table in the profile has been further restricted to refer only to persons born overseas and aged over 5 years (excluding overseas visitors).

English proficiency aims to measure the ability of persons who speak 'English as a Second Language' to also speak English. The data, when viewed with other ethnic and cultural indicators, tends to reflect the ethnic composition of the population and the number of years of residence in Australia. In general, an area with a higher proportion of persons born in English-speaking countries or who emigrated from non-English speaking countries several decades ago is likely to have greater English-speaking proficiency.

Note: A person's English proficiency is based on a subjective assessment and should therefore be treated with caution.

Responses to the question on Proficiency in English in the Census are subjective. For example, one respondent may consider that a response of 'Well' is appropriate if they can communicate well enough to do the shopping, while another respondent may consider such a response appropriate only for people who can hold a social conversation. Proficiency in English should be considered as an indicator of a person's ability to speak English and not a definitive measure of this ability.

For more information on proficiency in English, please refer to the ABS Census Dictionary (2901.0).

What language do we speak at home?

Includes all persons except 'Overseas Visitors'.

Language spoken at home is coded using the Australian Standard Classification of Languages (ASCL), 2005-06.

'Filipino' was recorded as a separate language from 'Tagalog' in the 2006 Census, but no such distinction was made in earlier Censuses. profile.id® combines the two languages together as 'Tagalog'. Filipino is a standardised version of Tagalog, incorporating words from other indigenous languages within the Philippines.

'Dari' was recorded as a separate language from 'Persian' in the 2006 Census, but no distinction was made in earlier Censuses. profile.id® combines the two languages together as 'Persian'. Dari is a localised name for Persian in Afghanistan.

What is our religion?

Includes all persons except 'Overseas Visitors'.

Religion is coded using the Australian Standard Classification of Religious Groups (ASCRG), 2005.

The religion question in the Census is an optional question and so has quite a high rate of 'Not Stated' responses.

The 2006 Census recorded 'Eastern Orthodox', which is a new designation for those churches previously described as 'Orthodox'.

The 2006 Census recorded 'Assyrian Apostolic' as a separate religious category. Previously, all religions falling under this category were recorded as 'Oriental Christian'.

The 2006 Census introduces a new designation called 'Oriental Orthodox'. The majority of the churches in this group were formerly known as 'Oriental Christian'. This includes:

- Oriental Orthodox, nfd
- Armenian Apostolic
- Coptic Orthodox Church
- Syrian Orthodox Church
- Ethiopian Orthodox Church
- Oriental Orthodox, nec

'Christian nfd' refers to a Christian religion 'not further defined', and includes:

- Apostolic Church, so described
- Church of God, so described
- Australian Christian Churches, so described
- New Church Alliance, so described

What is our individual income?

This data includes total gross income (including pensions and allowances) that a person usually receives each week.

This data applies only to people aged 15 years and over and excludes overseas visitors.

Individual incomes are collected as ranges in the Census.

Individual income quartiles

Individual income groups are not comparable over time because of the influences of economic change such as wage level fluctuations and inflation. The income quartile method has been adopted as the most objective method of comparing change in the income profile of a community over time.

Individual income quartiles look at the distribution of incomes in Lithgow City relative to Regional New South Wales. Quartiles split the total population into four equal parts for the Regional New South Wales. The table shows the number and proportion of individuals in Lithgow City falling into each segment for the benchmark area.

The table gives a clear picture of where individual incomes in Lithgow City sit relative to Regional New South Wales. For the Regional New South Wales, 25% of persons fall into each category. If, for example, Lithgow City has 30% in the top category and only 20% in the lowest, this indicates that Lithgow City has proportionally more higher-income individuals and less lower-income individuals.

Individual income quartile definitions(Annual income ranges)

	2006	2001	1996	1991
Lowest group	Nil to $10,593	Nil to $9,213	Nil to $7,449	Nil to $6,248
Medium lowest	$10,594 to$20,166	$9,214 to$16,237	$7,450 to$12,898	$6,249 to$11,681
Medium highest	$20,167 to$38,532	$16,238 to$30,456	$12,899 to$24,972	$11,682 to$22,218
Highest group	$38,533 and over	$30,457 and over	$24,973 and over	$22,219 and over

What is our household income?

Household income comprises the total of incomes of all persons in the household who stated an income.

Excludes ‘Visitor only households’ and ‘Other non classifiable households’.

'Not stated' includes 'Partial income not stated' and 'All incomes not stated'.

'Partial income not stated' includes households where at least one, but not all, member(s) aged 15 years and over did not state an income and / or at least one household member aged 15 years and over was temporarily absent. In these cases, the aggregate of all stated individual incomes would be less than the true household income so these households are excluded from the classification.

'All incomes not stated' includes households where no members present stated an income.

Household income quartiles

Household income groups are not comparable over time because of the influences of economic change such as wage level fluctuations and inflation. The income quartile method has been adopted as the most objective method of comparing change in the income profile of a community over time.

Household income quartiles look at the distribution of incomes in Lithgow City relative to Regional New South Wales. Quartiles split the total number of households into four equal parts for the Regional New South Wales. The table shows the number and proportion of households in Lithgow City falling into each segment.

The table gives a clear picture of where household incomes in Lithgow City sit relative to Regional New South Wales. For the Regional New South Wales, 25% of households fall into each category. If, for example, Lithgow City has 30% in the top category and only 20% in the lowest, this indicates that Lithgow City has proportionally more higher-income households and less lower-income households.

Household income quartile definitions(Annual income ranges)

	2006	2001	1996	1991
Lowest group	Nil to $22,618	Nil to $18,647	Nil to $14,904	Nil to $14,014
Medium lowest	$22,619 to$41,382	$18,648 to$32,914	$14,905 to$26,949	$14,015 to$24,525
Medium highest	$41,383 to$71,642	$32,915 to$57,579	$26,950 to$46,984	$24,526 to$42,010
Highest group	$71,643 and over	$57,580 and over	$46,985 and over	$42,011 and over

What are our qualifications?

Includes persons aged 15 years and over.

Excludes 'Overseas Visitors'.

Excludes schooling up to Year 12.

'No qualifications' refers to persons still studying for their first qualification, persons who do not have a qualification, and persons who have a qualification out of the scope of the Census version of the Australian Standard Classification of Education (ASCED), 2001.

What is the highest secondary school year we have completed?

Includes persons aged 15 years and over.

'Schooling' refers to Primary and Secondary schooling.

Excludes 'Overseas Visitors'.

There is no time series for this particular data set owing to differences in the way that the data was recorded. The 2001 Census did not record people who were over 15 years and still at school as having completed a particular year of schooling. Instead they were counted as “Still at school”. However, in 2006 they were coded to the highest year already completed, making the data non-comparable. This means that if an individual is still in the process of completing year 11 during a Census year, they are recorded as having completed year 10. This also means that the number of people who have completed year 10 cannot be treated as being indicative of the number of people who left school after completing year 10 as it will include people who were in the process of completing year 11.

Where are we learning?

Excludes 'Overseas Visitors'.

'Independent' refers to private and other non-Government schools.

‘Catholic’ refers to infant, primary and secondary schools run independently by the Catholic Church.

'TAFE' refers to 'Technical and Further Education' institutions.

Do we need assistance?

This data identifies people who report a need for assistance due to a 'profound or severe core activity limitation'. This population is defined as people who need assistance in their day to day lives with any or all of the following activities – self-care, body movements or communication – because of a disability, long-term health condition, or old age.

This question relies on people evaluating themselves, (or their carers), as being in need of assistance. Consequently this question provides an indication of the characteristics of people who report, or are reported as requiring, a need for assistance; but cannot be relied upon to provide details as to the total number of people with a 'profound or severe core activity limitation'.

Persons under the age of 40 whose only stated reason for need for assistance was ‘old or young age’ are included under ‘no need for assistance’.

Excludes 'Overseas Visitors'.

What do we do?

Do we do unpaid work?

This data includes help willingly given in the form of time, service or skills, to a club, organisation or association including:

- assisting at events and with sports organisations
- helping with school events and activities
- assisting in churches, hospitals, nursing homes and charities
- other kinds of volunteer work (e.g. emergency services, etc.).

Voluntary work excludes unpaid work done through a club, organisation or association mainly in order to qualify for government benefits such as Newstart Allowance. It also excludes any activity which is part of a person's paid employment or family business. ABS Census Dictionary 2006.

This data applies to persons aged 15 years and over and to **voluntary work undertaken in the 12 months prior to the Census**.

This data excludes 'Overseas Visitors'.

Unpaid domestic work

This data includes all the domestic work a person does without pay in their own home and in other places, for themselves, their family and other people in their household.

This data only applies to persons aged 15 years and over and to **domestic work performed in the week prior to Census**.

Unpaid domestic work can include meal preparation, service and clean-up; washing, ironing and managing clothes; other housework; gardening, mowing and yard work; home maintenance; car and bike maintenance; household shopping and managing household financial affairs.

This data excludes 'Overseas Visitors'.

Unpaid care

Unpaid care (unpaid assistance to a person with a disability, a long term illness or problems related to old age), includes the unpaid help a person gives to another person to assist them with their daily activities. It can include assistance with:

- bathing, dressing, toileting and feeding;
- mobility;
- understanding or being understood by others;
- emotional support;
- medication;
- dressing wounds
- food
- housework
- driving

This data applies to persons aged 15 years and over and to **care given in the two weeks prior to Census**.

This data excludes 'Overseas Visitors'.

Unpaid childcare

This data includes the time a person spends caring for a child or children without being paid. This can include people caring for their own children, whether they usually live with them or not. It can also include people looking after their own grandchildren or the children of other relatives or the children of friends or neighbours.

This data only applies to persons aged 15 years and over and to **child care given in the two weeks prior to Census**.

This data excludes 'Overseas Visitors'.

What is our employment status?

Excludes 'Overseas Visitors'

Includes persons aged 15 years and over.

'Employed full time' is defined as having worked 35 hours or more in all jobs during the week prior to Census night.

'Employed part time' is defined as having worked less than 35 hours in all jobs during the week prior to Census night.

The 'Labour force' is defined as all persons aged 15 years and over who are looking for work, or are employed, either full time, part time or casually.

What industries do we work in?

This data describes the industries in which employed people work. It applies only to people aged 15 and over who were employed in the week prior to Census.

Data for industry are coded using the Australia and New Zealand Standard Industrial Classification (ANZSIC). The industry classification is updated periodically to take account of emerging industries and changes in the structure of the economy.

For the 2006 Census, the updated ANZSIC06 classification was used, which includes more industry divisions which better reflect the structure of the Australian economy. Data are presented using this classification as an option. However for time series, data are also presented on the older ANZSIC93 classification, as this classification was used in earlier censuses.

For more information please refer to the 2006 Census Dictionary, and ANZSIC classification.

Time series industry categories

This data describes the industries in which employed people work. It applies only to people aged 15 and over who were employed in the week prior to Census.

Data for industry are coded using the Australia and New Zealand Standard Industrial Classification (ANZSIC). The industry classification is updated periodically to take account of emerging industries and changes in the structure of the economy.

For the 2006 Census, the updated ANZSIC06 classification was used, but people were also coded to the older ANZSIC93 classification. Data in the profiles is presented using both classifications; data for 2006 alone uses ANZSIC06, while time series data uses ANZSIC93 for comparability.

For more information please refer to the 2006 Census Dictionary, and ANZSIC classification.

What are our occupations?

This data describes the occupations of employed people. It applies only to people aged 15 and over who were employed in the week prior to Census.

Data for occupation are coded using the Australian and New Zealand Standard Classification of Occupations (ANZSCO). The occupation classification is updated periodically to take account of emerging occupation groups and changes to the structure of the labour force.

Data are presented for the broad occupation groupings. For 2006 these were coded using ANZSCO, the most recent classification. These are presented in profile.id® where no time series is required. For time series, the data are presented using the older ASCO 2nd edition classification, to ensure data comparability.

For more information please refer to the 2006 Census Dictionary, and the 2006 Australian and New Zealand Standard Classification of Occupations (ANZSCO).

Time series occupation categories

This data describes the occupations of employed people. It applies only to people aged 15 and over who were employed in the week prior to Census.

Data for occupation are coded using the Australian and New Zealand Standard Classification of Occupations (ANZSCO). The occupation classification is updated periodically to take account of emerging occupation groups and changes to the structure of the labour force.

Data are presented for the broad occupation groupings. For 2006 these were coded using ANZSCO, the most recent classification. These are presented in profile.id® where no time series is required. For time series, the data are presented using the older ASCO 2nd edition classification, to ensure data comparability.

How do we get to work?

This data looks at the method of travel to work of employed people. It applies only to people aged 15 and over who were employed in the week prior to Census.

Method of travel relates specifically to the journey to work on the morning of Census day. This differs to the industry and occupation data which relates to the main job held in the week prior to Census.

Respondents can nominate up to three modes of travel. For data presented in the profile, the following aggregations have been used:

- 'Train' includes any journey involving a train, whether or not other methods were used.
- 'Bus' includes any journey involving a bus, except for those also involving a train.
- The remaining categories, except for 'Other', only refer to a single method of travel (e.g. 'Car as driver'

when no other method was used).

- 'Other' refers to any method not listed in the standard categories, plus any combination of two or three methods NOT involving a bus or train.

Note that the categories "Walked only", "Worked at home" and "Did not go to work" are exclusive and are never combined with other methods.

'Tram or Ferry' includes light rail.

This data excludes 'Overseas Visitors'.

For more information please refer to the Census Dictionary 2006.

How do we live?

What type of households do we live in?

This data describes the type of family and non-family households within a dwelling.

The first section of the table counts family units in family households, and breaks them down by the presence of couples, single parents, and children. This classification of a family includes persons who are temporarily absent from the family on Census night.

The second section counts households. Households can contain up to three families, or a lone person, group of unrelated individuals (flatmates etc.) or other household.

The 'Other not classifiable' category includes those households which were occupied on Census Night but where the Census collector could not make contact; households that contained only persons aged under 15 years; and households which could not be classified elsewhere in this classification because there was insufficient information on the Census form. (ABS Census Dictionary 2006).

'Couple with child(ren) 15 years and under' and 'One parent family with child(ren) 15 years and under' refers to families with at least one child aged 15 years or younger. These families may also have older children living at home.

'One parent family with child(ren) over 15 years' and 'Couple with child(ren) over 15 years' refers to families with no children under the age of 15 years.

Data includes same sex couple families.

This data excludes 'Overseas Visitors'.

As the data are counting households, only enumerated counts are applicable.

How many people live in each household?

This data includes enumerated households by the number of persons usually resident, (includes up to three residents who were temporarily absent on Census night).

A household is defined as one or more persons, at least one of whom is at least 15 years of age, usually resident in the same private dwelling.

This data excludes ‘Visitor only’ and 'Other not classifiable' households.

Are we owners, renters or buyers?

This data presents the tenure type of occupied private dwellings, and for those dwellings being rented, provides a breakdown of the type of landlord the dwelling is being rented from.

‘Being purchased’ includes dwellings being purchased under a rent/buy scheme.

'Renting – Govt' refers to households renting from a State/Territory Government housing authority.

'Renting – Other' refers to households renting from private landlords, real estate agents and employers.

'Rented – Not stated' refers to rented dwellings where the landlord type was not stated.

‘Life tenure’ in 2006 has been included under ‘Other tenure type’

Tenure type changes between 2001 and 2006: Though the classification for Census data has remained the same, between 2001 and 2006 there was a change to the wording of dwelling ownership responses to the Tenure Type question on the Census questionnaire. "Fully Owned" in 2001 became "Owned Outright" in 2006, while "Being Purchased" became "Owned with a mortgage". This change in wording may have resulted in more accurate responses to this question, however it has made comparison over time difficult and such analysis should be done with caution. Looking at Australia as a whole, comparing 2006 to 2001 data, the "Being Purchased" category has increased by 5.7%, to 32.2% of private dwellings, while the "Fully Owned" category has decreased by 7.1%, to 32.6% of private dwellings. It is expected that a large part of this change is due to the change in wording, rather than representing change in the real world.

It is recommended that any analysis of change over time in these categories look only at the relative differences between change in local populations and the Australia-wide or state-based benchmarks, rather making inferences about local populations based on their numbers alone. Other categories in the Tenure Type classification are unaffected.

How much do we pay on our housing loan?

This data shows housing loan repayments being paid on a monthly basis by a household to purchase the dwelling in which it was enumerated (also applicable to caravans).

This data only applies to households (occupied private dwellings) who are purchasing their dwelling. It also includes households who are purchasing their dwelling under a 'rent/buy' scheme.

'Other not classifiable' households are excluded from this data.

Housing loan quartiles

Housing loan payments are not comparable over time because of the influences of economic change such as inflation. The loan payment quartile method has been adopted as the most objective method of comparing change in the cost of housing of a community over time.

Housing loan repayment quartiles look at the distribution of housing loan repayments in Lithgow City relative to Regional New South Wales. Quartiles split the total number of households into four equal parts for the Regional New South Wales. The table shows the number and proportion of households in Lithgow City falling into each segment.

The table gives a clear picture of the level of housing loan repayments in Lithgow City relative to Regional New South Wales. For the Regional New South Wales, the categories are split so that 25% of households fall into each category, so by comparison, the table will show if there are more or less households in Lithgow City with high repayments than in Regional New South Wales. If, for example, Lithgow City has 30% in the top category and only 20% in the lowest, this indicates that Lithgow City has proportionally more households with ‘top quarter’ repayments on their home loans, and less paying relatively low amounts.

Housing loan quartile definitions(Annual payment ranges)

	2006	2001	1996
Lowest group	Nil to $9,419	Nil to $7,093	Nil to $6,152
Medium lowest	$9,420 to$14,414	$7,094 to$10,081	$6,153 to$9,055
Medium highest	$14,415 to$21,029	$10,082 to$13,822	$9,056 to$12,273
Highest group	$21,030 and over	$13,823 and over	$12,274 and over

How much do we pay on our housing rental?

This data shows the amount of rent paid by households on a weekly basis for the dwelling in which they were enumerated on Census night (also applicable to caravans).

This data only applies to households (occupied private dwellings) renting their dwelling.

'Other not classifiable' households are excluded from this data.

Note that rent is shown on a **weekly** basis while housing loan repayments are on a **monthly** basis.

Housing rental quartiles

Rental payments are not comparable over time because of the influences of economic change such as inflation. The rental payment quartile method has been adopted as the most objective method of comparing change in the cost of rental housing of a community over time.

Rent quartiles look at the distribution of rental payments in Lithgow City relative to Regional New South Wales. Quartiles split the total number of households into four equal parts for the Regional New South Wales. The table shows the number and proportion of households in Lithgow City falling into each segment relative to the Regional New South Wales.

The table gives a clear picture of the level of rental payments in Lithgow City relative to Regional New South Wales. For the Regional New South Wales, 25% of households fall into each category, so by comparison, the table will show if there are more or less households in Lithgow City with high (or low) rent than in Regional New South Wales. If, for example, Lithgow City has 30% in the top category and only 20% in the lowest, this indicates that Lithgow City has proportionally more households paying ‘top-quarter’ rents, and less paying ‘bottom-quarter’ rents.

Housing rental quartile definitions(Annual payment ranges)

	2006	2001
Lowest group	Nil to $5,647	Nil to $4,682
Medium lowest	$5,648 to$8,528	$4,683 to$6,843
Medium highest	$8,529 to$11,416	$6,844 to$9,083
Highest group	$11,417 and over	$9,084 and over

What type of internet connection do we have?

This data relates to the question 'Can the Internet be accessed at this dwelling?' The question also asked for the type of connection:

- 'Broadband connection' - includes ADSL, Cable, Wireless and Satellite connection,
- 'Dial-up connection' - includes analog modem and ISDN connections
- 'Other' - includes Internet access through mobile phones, set-top boxes, games machines or connections other than dial-up or broadband.

This question was asked for the first time in the 2006 Census, replacing the questions in the 2001 Census relating to internet use and computer use. Owing to this there is no time series data available. Unlike the 2001 questions, the data relate to dwellings and not individuals.

How many cars do we own?

This data applies only to households in occupied private dwellings.

This data identifies the number of registered motor vehicles owned or used by household members, garaged, parked at or near private dwellings on Census night. It includes company owned vehicles.

The data excludes motorbikes, scooters and tractors.

What type of dwellings do we live in?

Dwelling structure looks at the type of dwelling for all occupied private dwellings. This data is classified by the Census collector on visiting the household, and the categories are broadly based on the density of the

housing types.

‘Separate house’ includes all free-standing dwellings separated from neighboring dwellings by a gap of at least half a metre.

‘Medium density’ includes all semi-detached, row, terrace, townhouses and villa units, plus flats and apartments in blocks of 1 or 2 storeys, and flats attached to houses.

‘High density’ includes flats and apartments in 3 storey and larger blocks.

‘Caravans, cabins, houseboats’ includes all such mobile accommodation, both inside and outside caravan parks.

‘Other’ includes houses and flats attached to shops or offices, and improvised homes, tents and sleepers out on Census night.

Unoccupied dwellings are shown separately in the table.

The Census classification for dwelling structure is based on the ABS Standard Dwelling Classification.

APPENDIX 3 – CONSOLIDATED LIST OF PROPOSED HERITAGE ITEMS AND CONSERVATION AREAS

Standard Instrument LEP – Proposed Schedule 5 Heritage Items

Locality	Property Name/Item	Address	Property Description	Significance	Inventory Sheet Number	Status	State Heritage List
Airly	Airly, Torbane and Genowlan oil shale sites	off Glen Davis Road	map reference	State	A144	New	
Airly	Airly Township & Mines Group	off Glen Davis Road	map reference	State	A145	New	
Airly	Airly Village Church site	off Glen Davis Road	map reference	State	A146	New	
Airly	Spring Shaft and Stone House	off Glen Davis Road	map reference	State	A147	New	
Airly	Airly Big Rock Cave Dwellings	off Glen Davis Road	map reference	State	A148	New	
Airly	Airly Bakery	off Glen Davis Road	map reference	State	A149	New	
Airly	Potts Point Dwelling Complex	off Glen Davis Road	map reference	State	A150	New	
Airly	Managers Residence	off Glen Davis Road	map reference	State	A151	New	
Airly	Magazine, spring, stone cave dwelling	off Glen Davis Road	map reference	State	A152	New	
Airly	Stone Dwelling Comples	off Glen Davis Road	map reference	State	A153	New	
Airly	Skipway, stone retaining wall	off Glen Davis Road	map reference	State	A154	New	
Airly	Grooms House	off Glen Davis Road	map reference	State	A155	New	
Airly	Matrins Tunnel, ventilation tunnel and chimney	off Glen Davis Road	map reference	State	A156	New	
Airly	Ventilation Chimney	off Glen Davis Road	map reference	State	A157	New	
Airly	Boiler and winding house	off Glen Davis Road	map reference	State	A158	New	
Airly	Flying Fox rope way	off Glen Davis Road	map reference	State	A159	New	
Airly	Ventilation shaft, dwelling, skipway	off Glen Davis Road	map reference	State	A160	New	
Airly	Tornane Railway Cutting	off Glen Davis Road	map reference	State	A161	New	
Airly	Torbane Retort Complex	off Glen Davis Road	map reference	State	A162	New	
Ben Bullen	Ben Bullen Railway Station and Platform	Castlereagh Highway	map reference	Local	B174	New	
Blackmans Flat	Blackmans Flat Roman Catholic Cemetery	Castlereagh Highway	Lot 68 & 69 DP 751639	Local	A111	New	
Blackmans Flat	Berwindi	1470 Castlereagh Highway	Lot 1 DP 666540	Local	B206	New	
Capertee	former Kangaroo Flat Methodist Church	4959 Castlereagh Highway	Lots 91 & 92 DP 755778	Local	A059	New	
Capertee	Galagher family cemetery	4428 Castereagh Highway		Local	A104	New	

Locality	Property Name/Item	Address	Property Description	Significance	Inventory Sheet Number	Status	State Heritage List
Capertee	Capertee Railway Station	Railway Street	Main Western Railway	Local	B120	New	
Capertee	Cottage 1, Capertee	Railway Street	Lot 9 DP 758222 Section 5	Local	B121	New	
Capertee	Capertee Lock-Up	Castlereagh Highway	Lot 2 Section 3 DP 758222	Local	B123	New	
Capertee	School Masters Residence	35 Castlereagh Highway	Lot 82 DP 755769	Local	B124	New	
Capertee	Cottage and Store	Castlereagh Highway	Lots 1 & 2 Section 1 DP 758222	Local	B125	New	
Capertee	Store and Cottage	65 Castlereagh Highway	Lot 14 DP 755758	Local	B126	New	
Capertee	Royal Hotel	67 Castlereagh Highway	Lot 1 DP 578843	Local	B127	New	
Capertee	Cottage 3	Castlereagh Highway	Part Lot 1 DP 1115443	Local	B128	New	
Capertee	Cottage 4	Short Street	Lot 3 Section 11 DP 758222	Local	B129	New	
Capertee	Glengar	5016 Castlereagh Highway	Lot 44 DP 755778	State	B130	New	
Capertee	Cottage McDonalds Hole	McDonalds Hole Road	Lot 6 DP 668679	Local	B131	New	
Capertee	Green Gully	Torbane Road	Lot 3 DP 709009	State	B132	New	
Capertee	Pise House	Torbane Road	Lot 3 DP 709009	Local	B133	New	
Capertee	Bandanora	4601 Castlereagh Highway	Lot 37 DP 755758	Local	B170	New	
Capertee	Bernina	4428 Castlereagh Highway	Lot 15 DP 755758 Lot 42 DP 755758	Local	B171	New	Yes
Capertee	Airly	4428 Castlereagh Highway	Lot 8 DP 755758	Local	B172	New	
Capertee	Carinya	Glen Davis Road	Lot 87 DP 755757	Local	B173	New	
Capertee	Goolooinboin Station	2280 Glen Davis Road	Lot 109 DP 751640	Local	B327	New	
Clarence	Gun Emplacements	Chifley Road	Lot 1 DP 413551 & Lots 1 & 2 DP 456153	Local	A176	New	
Clarence	Clarence House	off Chifley Road	Lot 16 DP 751650	Local	B221	New	
Clarence	The Oaks	off Chifley Road	Lot 16 DP 751650	State	B222	New	
Clarence	Clarence Homestead	855 Chifley Road	Lot 191 DP 875912	Local	B223	New	
Clarence	Zig Zag	14. Great Zig Zag		State	B245	Existing	
Cullen Bullen	Back Cullen Cemetery	Back Cullen Road	Lot 7302 DP 1142032	Local	A053	New	
Cullen Bullen	Beaumaris	Back Cullen Road	Lot 11 DP 1008594	Local	A054	New	
Cullen Bullen	Cullen Bullen General Cemetery	Castlereagh Highway	Lot 7005 DP 1026565	Local	A088	New	Yes
Cullen Bullen	Carleon	2547 Castlereagh Highway	Lot 57 DP 755769	Local	B114	New	
Cullen Bullen	Miners Cottages	1 Old Company Cottages Road	Lot 1 DP 242575	Local	B115	New	
Cullen Bullen	Miners Cottages	2 Old Company Cottages Road	Lot 2 DP 242575	Local	B115	New	

Locality	Property Name/Item	Address	Property Description	Significance	Inventory Sheet Number	Status	State Heritage List
Cullen Bullen	Miners Cottages	3 Old Company Cottages Road	Lot 3 DP 242575	Local	B115	New	
Cullen Bullen	Miners Cottages	4 Old Company Cottages Road	Lot 4 DP 242575	Local	B115	New	
Cullen Bullen	Miners Cottages	5 Old Company Cottages Road	Lot 5 DP 242575	Local	B115	New	
Cullen Bullen	Miners Cottages	6 Old Company Cottages Road	Lot 6 DP 242575	Local	B115	New	
Cullen Bullen	Royal Hotel	20-22 Castlereagh Highway	Lot 1 DP 925015	Local	B116	New	
Cullen Bullen	Cullen Bullen School	15-23 Castlereagh Highway	Lot 82 DP 755769	Local	B117	New	
Cullen Bullen	Cottage, Cullen Bullen	45 Castlereagh Highway	Lot 1 DP 302239	Local	B118	New	
Dargan	Dargan Railway Dams	off Chifley Road	Lot 7301 DP 1123766	Local	A119	New	
Dark Corner	Dark Corner General Cemetery	Dark Corner Road	Lots 23, 24, 25, 26 & 6A DP 755767 & Lot 1 DP 668503	Local	A105	Existing	
Glen Alice	Church (mulitdemonational)	Glen Alice Village	Lot 41 Parish Umbiella	Local	B413	New	
Glen Alice	Glen Alice School	Upper Nile Road	Lots 17, 18, 19 Sec 4 Upper Nile Road	Local	B414	New	
Glen Alice	Post Office	Upper Nile Road	Por 7 Umbiella, Upper Nile Road	Local	B415	New	
Glen Alice	Glen Alice Sunday School	Upper Nile Road	included in school site? Check B414	Local	B417	New	
Glen Alice	Residence	653 Glen Alice Road		Local	B421	New	
Glen Alice	Residence	650/11 Dunville Loop Road		Local	B422	New	
Glen Alice	Dunville	654 Dunville Loop Road		Local	B423	New	
Glen Alice	Noola	125/09 Noola Road		Local	B424	New	
Glen Alice	Brymair	650/1 Brymair Road		Local	B425	New	
Glen Alice	Residence	2599 Dunville Loop Road		Local	B426	New	
Glen Alice	Residence	427 Upper Nile Road		Local	B427	New	
Glen Alice	Cottage	2653 Glen Alice Road		Local	B428	New	
Glen Alice	Reidence	2649 Upper Nile Road		Local	B429	New	
Glen Alice	Residence	2659 Jamisons Road		Local	B430	New	
Glen Alice	Oakwood	2653 Jamisons Road		Local	B431	New	
Glen Alice	Tayar	2607 Upper Nile Road		Local	B432	New	
Glen Davis	Glen Davis town and oil-works		Various	State	A087	Existing	
Hampton	St Thomas Anglican Church	32 Wicketty War Road	Lot 20 DP 1117347	Local	B097	Existing	
Hampton	Lowther Park cemetery	96 Larnach Baker Road	Lot 223 DP 757063	Local	A043	New	

Locality	Property Name/Item	Address	Property Description	Significance	Inventory Sheet Number	Status	State Heritage List
Hampton	Slab Cottage	1716 Jenolan Caves Road	Lot 2 DP 851993	Local	B089	New	
Hampton	Montana	1716 Jenolan Caves Road	Lot 2 DP 851993	Local	B090	New	
Hampton	Jenolan Half Way House Motor Inn	1856 Jenolan Caves Road	Lot 1 DP 716400	Local	B091	New	
Hampton	The Stone Cottage	1991 Jenolan Caves Road	Lot 1 DP 120952	Local	B092	New	
Hampton	Hampton Road House	1994 Jenolan Caves Road	Lot 37 DP 665099	Local	B093	New	
Hampton	Cottage	1994 Jenolan Caves Road	Lot 9 DP 114863	Local	B094	New	
Hampton	Hillroy	2058 Jenolan Caves Road	Lot 50 DP 757041	Local	B095	New	
Hampton	Rosehaven	30 Dowdells Road	Lot B DP 389469	Local	B096	New	
Hampton	Cottage 2	139 Wicketty War Road	Lot 2 DP 1031694	Local	B098	New	
Hampton	Hickory Hill	139 Wicketty War Road	Lot 2 DP 1031694	Local	B100	New	
Harltey	Cottage below Corney's Garage	54 Old Great Western Highway	Lot 13&14 Section 3 DP 758503	Local	B041	New	
Harthey	Shamrock Inn	55 Old Great Western Highway	Lot 6 Section 9 DP 758503	Local	B038	New	
Hartley	Royal Hotel	10 Old Great Western Highway	Part Lots 3, 4 & 5 Section 14 DP 758503	Local	B030	Existing	
Hartley	Saint Bernard Catholic Presbytery	45 Old Great Western Highway	Lot 8 Section 9 DP 75803	State	B034	Existing	Yes
Hartley	Saint Bernard Roman Catholic Church	47 Old Great Western Highway	Lot 8 Section 9 DP 75803	State	B035	Existing	Yes
Hartley	Court House	44 Old Great Western Highway	Lot 16 Section 10 DP 758503	State	B039	Existing	Yes
Hartley	Eliza Rodd Grave	200 Jenolan Caves Road	Lot 10 DP 830372	State	A019	Existing	
Hartley	Old Roman Catholic Cemetery	Great Western Highway	Lots 7016, 7017 & 7018 DP 1057029	State	A015	Existing	
Hartley	Victoria Stockade Site	2200 Great Western Highway	Lot 279 DP 751644	State	A013	New	
Hartley	Rev John Troughton gravemarker	1 Old Great Western Highway	Lot 9 Section 14 DP 758503	Local	A078	New	
Hartley	Bungarribee	17 Old Great Western Highway	Lot 14 Section 14 DP 758503	Local	B031	New	
Hartley	Ivy Cottage	Old Bathurst Road	Lot 2 DP 513933	Local	B037	New	
Hartley	Corney's Garage	54 Old Great Western Highway	Lot 13 Section 3 DP 758503	Local	B040	New	
Hartley	Old Trahlee	33 Old Great Western Highway	Lot 11 Section 9 DP 758503	State	B032	New	
Hartley	Post Office	37 Old Great Western Highway	Lots 9 & 10 SP 758503	State	B033	New	
Hartley	Farmers Inn	51 Old Bathurst Road	Lot 1 DP 513933	Local	B036	New	

Locality	Property Name/Item	Address	Property Description	Significance	Inventory Sheet Number	Status	State Heritage List
Hartley	Glenroy	200 Jenolan Caves Road	Lot 10 DP 830372	State	A020	New	
Hartley	St John the Evergelist's Anglican Church	1 Old Great Western Highway	Lot 9 Section 14 DP 758503	State	B029	Existing	
Hartley Vale	Site of oil-shale works, Hartley Vale	400 Hartley Vale Road	Lots 1, 2 & 3 DP 818567	State	A001	Existing	
Hartley Vale	Collits Inn	Hartley Vale Road	Lot 50 DP 1026523	State	B012	Existing	Yes
Hartley Vale	Timber slab cottage "Crazy Cottage"	Mid Hartley Road	Lot 1 DP 304523	State	B017	Existing	
Hartley Vale	Lockyers Pass	Hartley Vale Road	Lot 3 DP 820928	Local	A125?	Existing	
Hartley Vale	Collitts/Mt York Burial ground	74 Coxs River Road	Lot 379 DP 729619	State	A007	Existing	Yes
Hartley Vale	Blackman-Merrick family cemetery	498 Browns Gap Road	Lot 2 DP 749916	Local	A049	Existing	
Hartley Vale	Hartley Historic incline	Darling Causeway	Lot 372 DP 41332	State	A175	New	
Hartley Vale	Mummulgun	Hartley Vale Road	Lot 41 DP 1128436	State	B001	New	
Hartley Vale	Cottage	400 Hartley Vale Road	Lot 1 DP 818567	Local	B002	New	
Hartley Vale	Comet Inn	Hartley Vale Road	Lot 4 DP 836542 Lot 6 & 7 DP 986316	Local	B003	New	
Hartley Vale	Hartley Vale School-House	Hartley Vale Road	Lot 1 DP 543475	Local	B004	New	
Hartley Vale	Schoolmasters Residence	JR Street	Lot 101 DP 1084186	Local	B005	New	
Hartley Vale	Cottage	Wood Road	Lot 102 DP 1084186	Local	B006	New	
Hartley Vale	Vizzard Cottage complex	358 JR Street	Lot 4-8 Sec B DP 193313	State	B007	New	
Hartley Vale	The Glen	347 JR Street	Lot 1 DP 196405	Local	B008	New	
Hartley Vale	Homedale	355 JR Street	Lot 6 Section A DP 758503	Local	B009	New	
Hartley Vale	Valley Farm	2 Allen Street	Lot 51 DP 876197	State	B010	New	
Hartley Vale	Wondalga	254 Hartley Vale Road	Lot 92 DP 664550	Local	B011	New	
Hartley Vale	Hillview	104 Hartley Vale Road	Lot 2 DP 773638	Local	B013	New	
Hartley Vale	Vellacott Park	687 Browns Gap Road	Lot 52 DP 751650	Local	B014	New	
Hartley Vale	Southleigh	573 Browns Gap Road	Lot 119 DP 751650	Local	B015	New	
Hartley Vale	Rosedale	498 Blackman Creek Road	Lot 2 DP 749916, Lot 177 DP 751650 & Lot 258 DP 75160	Local	A048	New	Yes
Kanimbla	Moyne Farm	302 Coxs River Road	Lot 176 DP 751644	State	B027	Existing	
Megalong Valley	John Norton Grave	89B Wards Road	Lot 2 DP 219769	Local	A034	New	
Kanimbla	Old Kanimlba Homestead	89B Wards Road	Lot 2 DP 219769	State	A035	New	
Kanimbla	Edmund Harvey Grave	675 Coxs River Road	Lot 44 DP 834766	Local	A042	New	
Kanimbla	Bimbadgen Woolshed	641 Coxs River Road	Lot 40 DP 834766	State	B316	New	
Kanimbla	Moyne Farm Cemetery	302 Coxs River Road	Lot 176 DP 751644	State	A016	Existing	

Locality	Property Name/Item	Address	Property Description	Significance	Inventory Sheet Number	Status	State Heritage List
Kanimbla Valley	Glen Shee	1033 Cullenbenbong Creek Road	Lot 102 DP 1093836	State	B075	New	
Kanimbla Valley	Mt Sandy Cottage	916 Peach Tree Road	Lot 16 DP 1010564	State	B076	New	
Kanimbla Valley	Kanimbla Valley Congreational Church Hall	Cullenbenbond Road	Lot 1 DP 790431 Lot 201 DP 821843	Local	B077	New	
Kanimbla Valley	Wingebelaley	324 Cullenbenbond Road	Lot 181 DP 757051	State	B079	New	
Kanimbla Valley	Belmont	1691 Gangbenang Road	Lot 279 DP 1013624	State	B080	New	
Kanimbla Valley	Yarandoo	1688 Gangbenang Road	Lot 106 DP 1060618	State	B081	New	
Kanimbla Valley	Duddawarra	40 Clarke Simpron Road	Lot 330 DP 1108595	State	B084	New	
Lidsdale	Lidsdale House and Gardens	1384 Castlereagh Highway	Lot 5 & 7 DP 1084545	Local	B203	Existing	
Lidsdale	The Cottage	Castlereagh Highway	Lot 101 DP 829410	Local	B191	New	
Lidsdale	Meadowside	200 Castlereagh Highway	Lot 88 DP 1079253	Local	B192	New	
Lidsdale	Braemai	Castlereagh Highway	Lot 3 DP 650334	Local	B193	New	
Lidsdale	Uniting Church	23 Wolgan Road	Lot 201 DP 1047676	Local	B194	New	
Lidsdale	Cottage	25 Wolgan Road	Lot 202 DP 751651	Local	B195	New	
Lidsdale	Cottage and Stone Barn	10 Skelly Road	Lot C DP 417872	Local	B196	New	
Lidsdale	Windmill Lad Stud	35 Ian Holt Drive	Lot 1 DP 531335	State	B197	New	
Lidsdale	Square and Compass Inn (former)	70 Ian Holt Drive	Lot 9 DP 1088207	State	B198	New	
Lidsdale	Woodlands	111 Ian Holt Drive	Lot 2 DP 574754	State	B199	New	
Lidsdale	Riverdale	1333 Castlereagh Highway	Lot 222 DP 751651	Local	B200	New	
Lidsdale	The Meadows	41 Maddox Lane	Lot 173 DP 666814	Local	B201	New	
Lidsdale	Maddox Lane Group	16 Maddox Lane	Lot 2 DP 237078	State	B202	New	
Lidsdale	Maddox Lane Group	18 Maddox Lane	Lot 3 DP 237078	State	B202	New	
Lidsdale	Maddox Lane Group	20 Maddox Lane	Lot 4 DP 237078	State	B202	New	
Lidsdale	Maddox Lane Group	22 Maddox Lane	Lot 5 DP 237078	State	B202	New	
Lidsdale	Maddox Lane Group	24 Maddox Lane	Lot 6 DP 237078	State	B202	New	
Lidsdale	Maddox Lane Group	10 Maddox Lane	Lot 1 DP 237078	State	B202	New	
Lidsdale	Maddox Lane Group	14 Maddox Lane	Lot 312 DP 883659	State	B202	New	
Lidsdale	House opposite Lidsdale House	1385 Castlereagh Highway	Lot 31 DP 18837	Local	B204	New	
Lidsdale	House opposite Lidsdale House	1387 Castlereagh Highway	Lot 30 DP 18837	Local	B204	New	

Locality	Property Name/Item	Address	Property Description	Significance	Inventory Sheet Number	Status	State Heritage List
Lidsdale	Farmhouse	1449 Castlereagh Highway	Lot 101 DP 1145705	Local	B205	New	
Lithgow	De La Salle Academy (former Cooerwull Academy)	96 Rabaul Street	Lot 321 DP 1142036	State	B069	Existing	Yes
Lithgow	Braemar House	50 Tweed Road	Lot 10 DP 815871	Local	B071	Existing	
Lithgow	Cooerwull House	off Andrew Street	Lot 13 DP 253969	State	B072	Existing	Yes
Lithgow	Bowenfels Railway Station	1 Cooerwull Road	Main Western Railawy	Local	B101	Existing	Yes
Lithgow	Bowenfels Station Masters Residence	3 Cooerwull Road	Lot 1 DP 1088726	State	B102	Existing	Yes
Lithgow	Cooerwull Presbyterian Church	1129 Great Western Highwy	Lot 2 DP 514466	State	B103	Existing	Yes
Lithgow	Methven	Evans Place	Lot 54 DP 605861	State	B104	Existing	Yes
Lithgow	Lithgow General Cemetery	Great Western Highwy	Lot 7306 DP 1142901 Lot 1 DP 1133793	Local	A032	Existing	Yes
Lithgow	Andrew Brown Private Cemetery	Cooerwull Road	Lot 13 DP 253969	Local	A050	Existing	
Lithgow	Cottage (former Cooerwull Academy)	993 Great Western Highway	Lot A DP 345053	Local	B067	New	
Lithgow	Kanangra	989 Great Western Highway	Lot 6 DP 776529	Local	B068	New	
Lithgow	beyond 1 Fullagar Avenue	Crossing Keepers House	Main Western Railway	Local	B105	New	
Lithgow	Directors House, Lithgow Valley Colliery	3 Coalbrook Street	Lot 1 DP 569626	Local	B247	Existing	Yes
Lithgow	Commonwealth Avenue Houses	1 Commonwealth Avenue	Lot 1 DP 833809	State	B267	Existing	
Lithgow	Commonwealth Avenue Houses	2 Commonwealth Avenue	Lot 2 DP 833809	State	B267	Existing	
Lithgow	Commonwealth Avenue Houses	3 Commonwealth Avenue	Lot 3 DP 833809	State	B267	Existing	
Lithgow	House	22-24 Lithgow Street	Lot 1 DP 786694	State	B268	Existing	
Lithgow	House	20 Lithgow Street	Lot 4 DP 432373	Local	B269	Existing	
Lithgow	Cottage - Duplex	16 Lithgow Street	Lot 5 DP 432373	Local	B270	Existing	
Lithgow	Cottage - Duplex	18 Lithgow Street	Lot 5 DP 432373	Local	B270	Existing	
Lithgow	Terrace	8-14 Lithgow Street	Lot 3 DP 233691	Local	B271	Existing	
Lithgow	Lithgow Public School Group	163 Mort Street	Lot 1 DP 793654	State	B278	Existing	
Lithgow	Memorial Gates at Lithgow Primary School	163 Cnr Mort and Eskbank Streets	Lot 1 DP 793654	Local	B346	Existing	
Lithgow	Co-operative Store former (West Fund)	3 Railway Parade	Lot 22 Section 41 DP 3466	Local	B289	Existing	
Lithgow	Co-operative Store former (Kings Chinese)	5 Railway Parade	Lot 23 Section 41 DP 3466	Local	B289	Existing	
Lithgow	Lithgow Court House	156 Mort Street	Lot 29 Section 1 DP 2308	Local	B307	Existing	Yes
Lithgow	Eskbank House	70 Inch Street	Lot 1 DP 365772	State	B312	Existing	Yes
Lithgow	Hoskins Memorial Presbyterian Church	Bridge & Mort Streets	Lot 1 DP 165879	Local	B314	Existing	
Lithgow	Union Theatre	Bridge Street	Lot 2 DP 1077295	State	B321	Existing	Yes

Locality	Property Name/Item	Address	Property Description	Significance	Inventory Sheet Number	Status	State Heritage List
Lithgow	Currently ANZ	71 Main Street	Lot 1 DP 911132	Local	B337	Existing	
Lithgow	National Australia Bank	156 Main Street	Lot 3 DP 360	Local	B376	Existing	
Lithgow	Office	31 Main Street	Lot 7 Section 1 DP 2308	Local	B338	Existing	
Lithgow	Oakey Park Colliery Site	Bells Road	Lot 17 DP 1099804	Local	A095	Existing	
Lithgow	Lithgow No. 2 Dam	Farmers Creek	Lot 423 DP 1152284	Local		Existing	
Lithgow	Lithgow Valley Pottery and Brickworks	Bent/Silcock Streets	Lot 1 DP 1005128	State	A124	Existing	Yes
Lithgow	Lithgow Valley Pottery and Brickworks	Bent/Silcock Streets	Lot 2 DP 1005128	State	A124	Existing	Yes
Lithgow	Lithgow Valley Pottery and Brickworks	Bent/Silcock Streets	Lot 3 DP 1005128	State	A124	Existing	Yes
Lithgow	Lithgow Valley Pottery and Brickworks	Bent/Silcock Streets	Lot 4 DP 1005128	State	A124	Existing	Yes
Lithgow	Lithgow Valley Pottery and Brickworks	Bent/Silcock Streets	Lot 5 DP 1005128	State	A124	Existing	Yes
Lithgow	Lithgow Valley Pottery and Brickworks	Bent/Silcock Streets	Lot 6 DP 1005128	State	A124	Existing	Yes
Lithgow	Lithgow Valley Pottery and Brickworks	Bent/Silcock Streets	Pt Lot 9 DP 1005128	State	A124	Existing	Yes
Lithgow	Lithgow Valley Pottery and Brickworks	Bent/Silcock Streets	Pt Lot 127 DP 1111768	State	A124	Existing	Yes
Lithgow	Blast Furnace Site & Coke Ovens	Inch Strret	Lot 2 DP 776568	State	A125	Existing	Yes
Lithgow	State Mine Heritage Park	State Mine Gully Rd	Lot 1 DP 242977 & Lot 2 DP 787403	State	A127	Existing	
Lithgow		7. Stone Viaduct James Street	Main Western Railway	Local	B245	Existing	
Lithgow		8. Inverted A Frame Footbridge	Main Western Railway	Local	B245	Existing	
Lithgow		9. Stone Viaduct Farmers Creek Bowenfels	Main Western Railway	Local	B245	Existing	
Lithgow	Lithgow War Memorial	Queen Elizabeth Park Main Street	Lot 45 DP 1096536	Local	A122	New	
Lithgow	Sorensen Memorial	Mort/Bridge Streets	Lot 1 DP 165879	Local	A123	New	
Lithgow	Lithgow Gasholder	Mort Street	Lot 22 DP 773810	Local	A136	New	
Lithgow	Cooerwull Public School Bell	319 Main Street	Lot 1 DP 123135	Local	A170	New	
Lithgow	Mossend	41 Laidley Street	Lot 1 DP 715230	Local	B242	New	
Lithgow	Inch Street Group	11 Inch Street	Lot 14 Section 22 DP 1936	Local	B243	New	
Lithgow	Inch Street Group	15 -17 Inch Street	Lot C & D DP 367579	Local	B243	New	
Lithgow	Inch Street Group	19 Inch Street	Lot B DP 367597	Local	B243	New	
Lithgow	Inch Street Group	21 Inch Street	Lot A DP 367597	Local	B243	New	
Lithgow	Inch Street Group	104 - 106 Inch Street	Lot A DP 107691	Local	B243	New	
Lithgow	Cottage	108 Inch Street	Lot D DP 107691	State	B244	New	

Locality	Property Name/Item	Address	Property Description	Significance	Inventory Sheet Number	Status	State Heritage List
Lithgow	Cottage	110 Inch Street	Lot E DP 107691	State	B244	New	
Lithgow	Eskbank Railway Station	Inch Street	Main Western Railway	Local	B245	Existing	
Lithgow	Rosebank	21 Coalbrook Street	Lot 4 DP 3227	Local	B248	New	
Lithgow	Cottage Group	86 Mort Street	Lot 1 DP 302077	Local	B252	New	
Lithgow	Cottage Group	88 Mort Street	Lot 5 DP 661003	Local	B252	New	
Lithgow	Laurence Street Group	42 Laurence Street	Lot 481 DP 5255	Local	B254	New	
Lithgow	Laurence Street Group	44 Laurence Street	Lot 480 DP 5255	Local	B254	New	
Lithgow	Laurence Street Group	46 Laurence Street	Lot 479 DP 5255	Local	B254	New	
Lithgow	Laurence Street Group	48 Laurence Street	Lot 478 DP 5255	Local	B254	New	
Lithgow	House	19 Cupro Street	Lots 307 & 308 DP 5255	Local	B255	New	
Lithgow	House	65 Ferro Street	Lot 1 DP 626657	Local	B256	New	
Lithgow	House	144 Hassans Walls Road	Lot 16 DP 5255	Local	B259	New	
Lithgow	Edwardian House Group	173 Hassans Walls Road	Lot 1 DP 655435	Local	B261	New	
Lithgow	Wenvoe	26 Ordnance Avenue	Lots 2 DP 221773	State	B263	New	
Lithgow	Terrelaroy	24 Ordnance Avenue	Lot 1 DP 511164	Local	B264	New	
Lithgow	Avenue of Plane Trees	Methven Street (Adj Park Parade)	Lot 200 DP 1137354	Local	B266	New	
Lithgow	Doctors Surgery (former LVC Managers Office)	69 Bent Street	Lot 1 DP 1005128	Local	B272	New	
Lithgow	Former LVC Managers Residence	67 Bent Street	Lot 31 DP 600256	Local	B273	New	
Lithgow	Hillcrest	off Eskbank Street	Lot 1 DP 875910	Local	B275	New	
Lithgow	Waratah	39 Railway Parade	Lot 1 DP 817560	Local	B279	New	
Lithgow	St Paul's Anglican Church, Rectory and Hall	Railway Parade/Roy Street	Lots 26, 27, 28 Section 48 DP 3955	Local	B280	New	
Lithgow	Cottage	27 Albert Street	Part lot 1 DP 1102434	Local	B282	New	
Lithgow	Cottage	29 Albert Street	Part lot 1 DP 1102434	Local	B282	New	
Lithgow	House	22 Sandford Avenue	Lots 9 & 10 Section 6 DP 4911	Local	B283	New	
Lithgow	House	21 Hayley Street	Lot 10 Section 47 DP 3955	Local	B285	New	
Lithgow	Florence	4 Spooner Street	Lot 1 DP 419406	Local	B286	New	
Lithgow	House	8 Spooner Street	Lot 31 Section 47 DP 3955	Local	B287	New	
Lithgow	Former Post Office	31 Railway Parade/Roy Street	Lot 2 DP 777804	Local	B288	New	
Lithgow	Co-op bakery & pharmacy former	Railway Parade	Lots 22 & 23 Section 40 DP 3466 Lot 1 DP 947429 Lot 1 DP 947429	Local	B290	New	
Lithgow	former trades hall	25 Railway Parade	Lot 32 Section 39 DP 3466	Local	B291	New	

Locality	Property Name/Item	Address	Property Description	Significance	Inventory Sheet Number	Status	State Heritage List
Lithgow	former Union offices (old Repco building)	Railway Parade	Lot 31 Section 39 DP 3466	Local	B292	New	
Lithgow	former shop and residence	44-46 Tank Street	Lot 7 & 8 Section 33 DP 3364	Local	B293	New	
Lithgow	Lithgow Catholic Presbytery	227 Mort Street	Lot 5 DP 930738	Local	B308	New	
Lithgow	Former St Mary's Presbyterian Church	1 Church Street	Lot A DP 39706	Local	B309	New	
Lithgow	Small Arms Factory	Methven Street	Lot 200 DP 1137354	State	B313	New	Yes
Lithgow	The Tin Shed	69 Bridge Street	Lot 1 DP 1077295	Local	B319	New	
Lithgow	Terrace	4 Bridge Street	Part Lots 4, 5 & 6 Section 28 DP 2858	Local	B323	New	
Lithgow	Former Methodist Church	169 Mort Street	Lot 3 Sec 5 DP 2308	Local	B325	New	
Lithgow	Former Tafe College	Mort Street	Lots 9,10 & 11 Section 2 DP 2308	Local	B326	New	
Lithgow	Showground Grandstand and Buildings	Barton Street		Local	B340	New	
Lithgow	Charles Hoskins Memorial Inst. Library	Cnr Mort and Bridge Streets	Lot 3 DP 1077295	Local	B341	New	
Lithgow	Fire Station	58 Cook Street	Lot 1 DP 940807	Local	B343	New	
Lithgow	Doctors Surgery Offices (check location)	52 Eskbank Street	Lot 12 DP 1053142	Local	B348	New	
Lithgow	Theatre Royal	210-212 Main Street	Lot 10 DP 131092	Local	B351	New	
Lithgow	St Patricks Catholic School	Mort Street	Lot 2 DP 64727	Local	B359	New	
Lithgow	War Memorial Statue	QE Park	Lot 45 DP 1096536	Local	B364	New	
Lithgow	Lithgow Hotel	130 Main Street	Lot 2 DP 656449	Local	B374	New	
Lithgow	Commercial Hotel	198 Main Street	Lot A DP 944949	Local	B382	New	
Lithgow	Court House Hotel	1 Main Street	Lot 1 Sec 1 DP 2308	Local	B383	New	
Lithgow	The Grand Central Hotel	69 Main Street	Lot 1 DP 900325	Local	B393	New	
Lithgow	Landsdowne Hotel	137 Main Street	Lot 1 DP 1102011	Local	B402	New	
Lithgow	Tattersals Hotel	151 Main Street	Lot 2 DP 828975	Local	B335	New	
Lithgow	Former Cosmopolitan Hotel	83 Main Street	Lot 10 DP 771040	Local	B395	New	
Lithgow	Charles Lewins Memorial Rotunda	Queen Elizabeth Park, Main Street	Lot 45 DP 1096536	Local	B332	New	
Lithgow	Outbuildings Union Theatre	65 Bridge Street	Lot 2 DP 1077295	Local	B320	New	
Lithgow	Lithgow Valley Colliery Quoits Field	Valley Drive	Lot 603 DP 1051775	Local		New	
Lithgow	Mon Reve	27 Padley Street	Lots 5 & 6 Section 53 DP 9485	Local	B284	New	
Lithgow	The Hermitage	7 Coalbrook Street	Lot 102 DP 1075376	Local	B246	New	Yes
Lithgow		6. Lithgow Railway Station Goods Lift	Main Western Railway	Local	B245	Existing	

Locality	Property Name/Item	Address	Property Description	Significance	Inventory Sheet Number	Status	State Heritage List
Lithgow -	Greys Terrace	10-12 Brisbane	Lot 6 DP 834082	Local	B237	Existing	
Lithgow - Oakey Park	Colliery Managers Cottage	Bells Road	Lot 17 DP 1099804	Local	B236	Existing	
Lithgow - Oakey Park	Lithgow Valley Springs (former Zig Zag Brewery)	Victoria Ave	Lot 1 & 2 DP 1098480	State	B238	Existing	
Lithgow - Oakey Park	Greys Terrace	13 Bragg Street	Lot 7 DP 7199	Local	B237	Existing	
Lithgow - Oakey Park	Greys Terrace	11 Bragg Street	Lot 6 DP 7199	Local	B237	Existing	
Lithgow - Oakey Park	Greys Terrace	9 Bragg Street	Lot 5 DP 7199	Local	B237	Existing	
Lithgow - Oakey Park	Greys Terrace	7 Bragg Street	Lot 4 DP 7199	Local	B237	Existing	
Lithgow - Oakey Park	Greys Terrace	5 Bragg Street	Lot 3 DP 7199	Local	B237	Existing	
Lithgow - Oakey Park	Greys Terrace	3 Bragg Street	Lot 2 DP 7199 & Lot 1 DP 1080735	Local	B237	Existing	
Lithgow - Oakey Park	Greys Terrace	2 Bragg Street	Lot 14 DP 7199	Local	B237	Existing	
Lithgow - Oakey Park	Greys Terrace	4 Bragg Street	Lot 13 DP 7199	Local	B237	Existing	
Lithgow - Oakey Park	Greys Terrace	6 Bragg Street	Lot 12 DP 7199	Local	B237	Existing	
Lithgow - Oakey Park	Greys Terrace	8 Bragg Street	Lot 11 DP 7199	Local	B237	Existing	
Lithgow - Oakey Park	Greys Terrace	10 Bragg Street	Lot 10 DP 7199	Local	B237	Existing	
Lithgow - Oakey Park	Greys Terrace	12 Bragg Street	Lot 8 & 9 DP 7199	Local	B237	Existing	
Lithgow - Oakey Park	Greys Terrace	9 Brisbane	Lot 17 DP 7199	Local	B237	Existing	
Lithgow - Oakey Park	Greys Terrace	7 Brisbane	Lot A DP 377435	Local	B237	Existing	
Lithgow - Oakey Park	Greys Terrace	5 Brisbane Street	Lot B DP 377435	Local	B237	Existing	
Lithgow - Oakey Park	Greys Terrace	3 Brisbane	Lot B DP 410209	Local	B237	Existing	
Lithgow - Oakey Park	Greys Terrace	1 Brisbane	Lot A DP 401209	Local	B237	Existing	
Lithgow - Oakey Park	Greys Terrace	2 Brisbane	Lot 2 DP 514250	Local	B237	Existing	

Locality	Property Name/Item	Address	Property Description	Significance	Inventory Sheet Number	Status	State Heritage List
Lithgow - Oakey Park	Greys Terrace	4 Brisbane	Lot 1 DP 514250	Local	B237	Existing	
Lithgow - Oakey Park	Greys Terrace	6 Brisbane	Lot B DP 400049	Local	B237	Existing	
Lithgow - Oakey Park	Greys Terrace	8 Brisbane Street	Lot A DP 400049	Local	B237	Existing	
Lithgow - Oakey Park	Langs dairy	Brewery Lane	Lot 4 DP 102985	Local	B239	New	
Lithgow - Oakey Park	Brighton Cottage	166 Bells Road	Lot 25 & 26 DP 17462	Local	B240	New	
Lithgow - Oakey Park	Railway culvert of Ida Falls Creek	off Bell Street		Local	A133	New	
Lithgow - Oakey Park	Newvale Colliery and Coke-Ovans	Ida Falls Gully		Local	A140	New	
Lithgow - Old Bowenfels	Hassans Walls Stockaed and Barracks	3124 Great Western Highway	Lot 301 DP 999720	State	A021	New	
Lithgow - South Bowenfels	Fernhill	3109 Great Western Highway	Lot 36 DP 619816	State	B043	Existing	
Lithgow - South Bowenfels	Forty Bends Cottage	35 Great Western Highway	Lot 1 DP 195020	State	B046	Existing	
Lithgow - South Bowenfels	Forty Bends Monte Vista	35 Great Western Highway	Lots 1 & 2 DP 195020	State	B047	Existing	Yes
Lithgow - South Bowenfels	Emoh (Emu Store/Corderoy's Store)	3431 Great Western Highway	Lot 1 DP 798073	State	B051	Existing	
Lithgow - South Bowenfels	Umera (Bowenfels Inn, Tricks House)	3449 Great Western Highway	Lot 1 DP 68390	State	B052	Existing	
Lithgow - South Bowenfels	Ben Avon (former Royal Hotel)	76 Mudgee Street	Lot 1 DP 933110 & Lot 2 DP 758809	State	B053	Existing	Yes
Lithgow - South Bowenfels	National School Group	70 Mudgee Street	Lot 372 DP 823384	State	B054	Existing	
Lithgow - South Bowenfels	Somerset House	34 Mudgee Street	Lots 10 & 11 Sec 2 DP 758809 Lot 1 & 2 DP 984111 Lot 1 & 2 DP 580773	State	B057	Existing	Yes
Lithgow - South Bowenfels	Presbyterian Church Bowenfels	12 Mudgee Street	Lot 15 & 16 Section 1 DP 758809	State	B059	Existing	
Lithgow - South Bowenfels	Royal Hotel	3584 Great Western Highway	Lot 20 DP 1117668	State	B062	Existing	Yes
Lithgow - South Bowenfels	Airdrie	Kirkley Street	Lot 3 DP 881717	Local	B064	Existing	
Lithgow - South Bowenfels	Sweet Briars	Great Western Highway	Lot 252 DP 1045308	State	B066	Existing	
Lithgow - South Bowenfels	former Eagle & Child Inn	Great Western Hgihway	Lot 1 DP 195020	Local	A022	Existing	

Locality	Property Name/Item	Address	Property Description	Significance	Inventory Sheet Number	Status	State Heritage List
Lithgow - South Bowenfels	Forty Bends Cemetery	35 Great Western Highway	Lot 1 DP 195020	State	A023	Existing	
Lithgow - South Bowenfels	Road culvert and sustaining wall at Emoah	3431 Great Western Highway	Lot 1 DP 798073	Local	A027	Existing	
Lithgow - South Bowenfels	Bowenfels Presbyterian Cemetery	Great Western Highwy	Lot 62 DP 751650	State	A030	Existing	
Lithgow - South Bowenfels	Gun Emplacements	Off Kirkley Street	Lot 3 DP 1017922	Local	A031	Existing	
Lithgow - South Bowenfels	Old Catholic Cemetery	Great Western Highway	Lot 336 DP 751650	Local	A029	New	
Lithgow - South Bowenfels	McKanes Bridge (RTA)	McKanes Falls Road		State	A077	New	
Lithgow - South Bowenfels	Sunnyside	3110 Great Western Highway	Lot 1 DP 999039	Local	B044	New	
Lithgow - South Bowenfels	Stone and Timber Cottage	24 Old Bathurst Road	Lot 1 DP 514845	Local	B045	New	
Lithgow - South Bowenfels	Daintree	Old Forty Bends Road	Lot 12 DP 844595	Local	B048	New	
Lithgow - South Bowenfels	Cottage	3357 Forty Bends, Great Western Highway	Lot 2 DP 1009243	Local	B049	New	
Lithgow - South Bowenfels	Gonna-Do	29 McKanes Falls Road/Lithgow Road	Lot 1 DP 87543	Local	B050	New	
Lithgow - South Bowenfels	Co-operative Slaughter yards	51 Old Bathurst Road	Lot 1 DP 1085235	Local	B056	New	
Lithgow - South Bowenfels	Parsonage Farm	14 Mudgee Street	Lot 14 DP 67883	Local	B058	New	
Lithgow - South Bowenfels	Cottage and outbuildings	3532 Great Western Highway	Lot 120 DP 751650	Local	B060	New	
Lithgow - South Bowenfels	Caldwells house	3534 Great Western Highway	Lot 1 DP 923403	Local	B061	New	
Lithgow - South Bowenfels	Fairview	985 Great Western Highway	Lot 201 DP 1077344	Local	B065	New	
Lithgow - South Bowenfels	Rankin	1002 Great Western Highway	Lot 2 DP 173015 & Lot A DP 305256	Local	B070	New	
Lithgow - South Bowenfels	Bowens Hollow	Old Bathurst Road	Bowens Creek Bridge Abutments	State	A026	New	
Lithgow - Vale of Clwydd	Duplex	82 Hartley Valley Road	Lot 16 Section 3 DP 416	Local	B249	New	
Lithgow - Vale of Clwydd	Duplex	84 Hartley Valley Road	Lot 15 Section 3 DP 416	Local	B249	New	
Little Hartley	Meads Farm	2366 Great Western Highway	Lot 1021 DP 1056042	State	B020	Existing	Yes
Little Hartley	Rosedale	Great Western Highway	Lot 2 DP 594106	State	B024	Existing	

Locality	Property Name/Item	Address	Property Description	Significance	Inventory Sheet Number	Status	State Heritage List
Little Hartley	Harp of Erin	Great Western Highway	Lot 1 DP 589557	State	B028	Existing	Yes
Little Hartley	Ambermere	5 Ambermere Drive	Lot 12 DP 851241	Local	B022	Existing	
Little Hartley	Hartley Public School	Mid Hartley Road	Lot 186 DP 751644	Local	B018	New	
Little Hartley	Lyndoch Orchard	2464-2468 Great Western Highway	Lot 1 DP 629411	State	B019	New	
Little Hartley	House	2360 Great Western Highway	Lot 102 DP 1078863	State	B021	New	
Little Hartley	Billesdene Grange	2272 Great Western Highway	Lots 1 & 2 DP540599	State	B023	New	
Little Hartley	Nioka	2209 Great Western Highway	Lot 344 DP 655748	State	B025	New	
Little Hartley	Bonnie Blink	Baaners Lane	Lot 12 DP 1036076	State	B042	New	
Little Hartley	Apple Shed	57 Cranbrook Park Road	Lot 14 DP 776589	Local	B082	New	
Lowther	Lowther Park	1296 Jenolan Caves Road	Lot 1 DP 1107415	State	B085	Existing	
Lowther	Lowther general cemetery	Jenolan Caves Road	Lot 7301 DP 1148839	Local	A044	Existing	
Lowther	Lowther/Hampton district War Memorial			Local		New	
Lowther	Timber Cottage (Rushvale)	96 Larnach Baker Road	Lot 127 DP 757063	Local	B086	New	
Lowther	The Old Chook Farm	89 Old Jenolan Caves Road	Lot 84 DP 757063	Local	B087	New	
Lowther	Lowther Presbyterian Church	1326 Jenolan Caves Road	Lot 148 DP 757063	Local	B318	New	
Marrangaroo	Marrangaroo Prayer Chapel	3 Reserve Road	Lot 40 DP 600845	Local	B108	Existing	
Marrangaroo		1. Railway Line Newnes - Zig Zag etc	Main Western Railway	Local	B245	Existing	
Marrangaroo		10. Tunnel Hill	Main Western Railway	Local	B245	Existing	
Marrangaroo	Stone Viaduct Marrangaroo Creek	13. Stone Viaduct Marrangaroo Creek	Main Western Railway	Local	B245	Existing	
Marrangaroo	Lithgow Golf Club	Great Western Highway	Lot 1 DP 840412	Local	B106	New	
Marrangaroo	Farmhouse	Oakey Forest Road	Lot 1 DP 876453	Local	B107	New	
Marrangaroo	Fernbrook	Reserve Road	Lot 1 DP 998434	Local	B109	New	
Marrangaroo	River Cottage	587 Great Western Highway	Lot 3 DP 242965	Local	B110	New	
Marrangaroo	Cottage (railway crossing keepers cottage)	Hughes Lane	Lot 20 DP 751651	Local	B111	New	
Marrangaroo	Stone Cottage	16 Gemalong Close	Lot 3 DP 242966	Local	B190	New	
Meadow Flat	Meadow Flat General Cemetery	Meadow Flat Cemetery Road	Lot 7002 & 7004 DP 1052053	Local	A093	Existing	Yes
Meadow Flat	Meadow Flat War Memorial	Great Western Highway	7001 DP 1021302	Local	A091	New	
Meadow Flat	Meadow Flat School Bell	Great Western Highway	Lot 1 DP 782196	Local	A092	New	
Meadow Flat	Mount Lambie Presbyterian Cemetery	75 Thorpes Pinch Road	Lot 2 DP 1043887	Local	A094	New	

Locality	Property Name/Item	Address	Property Description	Significance	Inventory Sheet Number	Status	State Heritage List
Meadow Flat	Meadow Flat Public School	Great Western Highway	Lot 156 DP 820904	Local	B231	New	
Meadow Flat	St Luke's Anglican Church	off Sunny Corner Road	Lot 9 Section 2 DP 758663	Local	B232	New	
Meadow Flat	Mt Lambie Presbyterian Church	75 Thorpes Pinch Road	Lot 2 DP 1043887	Local	B234	New	
Meadow Flat	Currency Lass	60-62 Thorpes Pinch Road	Lot 52 DP 588862	Local	B235	New	
Megalong Valley	Six Foot Track			State	A182	Existing	
Megalong Valley	Grandview	601 Peach Tree Road	Lot 11 DP 240967	State	B073	New	
Mt Victoria	Victoria Pass	Great Western Highway		State	A183	Existing	
Mt Victoria	Hill Top Tramway above Hartley Vale	Darling Causeway	Lot 372 DP 41332 Lot 7010 DP 92868	State	A174	New	
Mutton Falls	St Peters Anglican Church Cemetery			Local		New	
Newnes		2. Coal Stage Remains		Local	B245	Existing	
Newnes	Newnes Coke Ovens			Local	A163	Existing	Yes
Newnes	Newnes Township			Local	A163	Existing	
Newnes	Newnes Associated Works			Local	A163	Existing	Yes
Newnes Juntion	Blue Hills	602 Sandham Road	Lot 361 & 362 DP 209982	Local	B224	New	
Palmers Oakey	Palmers Oakey General Cemetery	off Sunny Corner Road	Lot 111 DP 755795	Local	A106	New	
Pipers Flat	Former Railway Cottage	15. Portland Road	Main Western Railway	Local	B216	Existing	
Portland	Portland Cement Works Group	Williwa Street	##################################	State	B296	Existing	
Portland	Portland General Cemetery	Sunny Corner Road	Lot 7300 DP 1144082	Local	A107	New	
Portland	Sydney House	31 Wallerawang Road	Lot 2 DP 856917	Local	B175	New	
Portland	Portland House	51 Wallerawang Road	Lot 4 DP 856917	Local	B176	New	
Portland	Residence	1 Bellvue Place	Lot 1 DP 842893	Local	B177	New	
Portland	Residence	3 Bellvue Place	Lot 2 DP 842893	Local	B178	New	
Portland	Residence	5 Bellvue Place	Lot 3 DP 842893	Local	B179	New	
Portland	Residence	2 Bellvue Place	Lot 4 DP 842893	Local	B180	New	
Portland	Residence	4 Bellvue Place	Lot 5 DP 842893	Local	B181	New	
Portland	Residence	6 Bellvue Place	Lot 6 DP 842893	Local	B182	New	
Portland	Residence	7 Bellvue Place	Lot 9 DP 842893	Local	B183	New	
Portland	Residence	8 Bellvue Place	Lot 7 DP 842893	Local	B184	New	
Portland	Residence	10 Bellvue Place	Lot 8 DP 842893	Local	B185	New	

Locality	Property Name/Item	Address	Property Description	Significance	Inventory Sheet Number	Status	State Heritage List
Portland	Company Foremans Cottages (group)	20 Saville Street	Lot 10 DP 842893	Local	B186	New	
Portland	Company Foremans Cottages (group)	18 Saville Street	Lot 11 DP 842893	Local	B186	New	
Portland	Company Foremans Cottages (group)	16 Saville Street	Lot 12 DP 842893	Local	B186	New	
Portland	Company Foremans Cottages (group)	14 Saville Street	Lot 13 DP 842893	Local	B186	New	
Portland	Company Foremans Cottages (group)	12 Saville Street	Lot 14 DP 842893	Local	B186	New	
Portland	Company Foremans Cottages (group)	10 Saville Street	Lot 15 DP 842893	Local	B186	New	
Portland	Company Foremans Cottages (group)	8 Saville Street	Lot 16 DP 842893	Local	B186	New	
Portland	St Josephs Convent and Presbytery	95 Williwa Street	Lot 92 DP 755769	Local	B187	New	
Portland	St Josephs Catholic Church - school	95 Williwa Street	Lot 1 12 10 Section 25 DP 755769 & Lot 92 DP 755769	Local	B188	New	
Portland	Cottage	101 Williwa Street	Lot 13 Section 25 DP 758855	Local	B189	New	
Portland	Cottage	10 Piper Street cnr Payne Street	Lot B DP 344369	Local	B294	New	
Portland	St Stephens Anglican Church and Hall	2 Williwa Street	Lot 1 DP 922029	Local	B297	New	
Portland	Portland Post Office	17 Williwa Street	Lot 1 DP 813095	Local	B298	New	
Portland	Masonic Hall	20 Wolgan Street	Lots 21 & 22 Section 1 DP 4856	Local	B299	New	
Portland	Uniting Church	41 Wolgan Street	Lot 5 Section 2 DP 3778	Local	B300	New	
Portland	Solicitors Offices	2 Wallerawang Road/Wolgan Street	Lot 1 DP 947056	Local	B301	New	
Portland	Co-operative Store	15 Vale Street	Lot 12 Section 1 DP 758855	Local	B302	New	
Portland	Police Station Complex	Lett & Vale Streets	Lot 6 Section 2 DP 758855	Local	B303	New	
Portland	Vale Street	1-2 St Andrews Presbyterian Church and Hall	Lot 1 DP 667861	Local	B304	New	
Portland	Portland District Hospital	Kiln Street	Lot 21 DP 1134404	Local	B305	New	
Portland	Kremer Park Portland	Cnr Kiln and Laurie Streets	Lot 531 DP 902158	Local	B306	New	
Running Stream	Round Swamp Cemetery	5249 Castlereagh Highway	Lot 1 DP 1015522 Lot 3 DP 565109	Local	A061	New	Yes
Rydal	Union Church (former Anglican Church)	Bathurst Street	Lot 1 DP 918723	Local	B142	Existing	
Rydal	former Railway Station	Bathurst Street	SRA 277173	Local	B140	Existing	Yes
Rydal	Rydal General Cemetery	Cartwright Street	Lot 7311 DP 1140577 & Lot 7001 DP 1020468	Local	A069	Existing	
Rydal	Former General Store (former Post Office)	Bathurst Street	Lot 1 DP 559056	Local	B144	Existing	
Rydal		5. Former Lithgow Railway Platform	Main Western Railway	Local	B245	Existing	

Locality	Property Name/Item	Address	Property Description	Significance	Inventory Sheet Number	Status	State Heritage List
Rydal	Stone Viaduct 1-6	12. Stone Viaduct 1-6	Main Western Railway	Local	B245	Existing	
Rydal	Outbuildings	11 Cheethams Flat Road	Lot 235 DP 757036	Local	B150	New	
Rydal	Old Roman Catholic Cemetery	Cartwright Street	Lot 9 Sec 19 DP 758890	Local	A068	New	
Rydal	Thomas Veays Isolated Grave	140 Cut Hill Road	Lot 1 DP 1107268	Local	A070	New	
Rydal	Martha Power grave	Rydal Hampton Road	Lot 100 DP 829748	Local	A071	New	
Rydal	Hillcrest Cottage 1	Quarry Street	Lot 1 DP 912182	Local	B134	New	
Rydal	Cottage 2, Rydal	Market Street	Lot 9 Section 15 DP 758890	Local	B135	New	
Rydal	Cottage 3, Rydal	Market Street	Lot 5 Section 38 DP 758890	Local	B136	New	
Rydal	Cottage 4, Rydal	49B Railway Street	Lot 1 DP 710327	Local	B137	New	
Rydal	Chapel House Farm	22 Market Street	Lot 1 DP 1001275	State	B138	New	
Rydal	Alexander Hotel	Bathurst Street	Lot 3 Section 18 DP 758890	Local	B139	New	
Rydal	Former Police Station	Bathurst Street	Lot 8 Section 18 DP 758890	Local	B145	New	
Rydal	Rydal Mount	Cartwright Street	Lot 70 DP 1134582	State	B146	New	
Rydal	St Mathews Roman Catholic Church	Cartwright Street	Lot 8 & 9 Section 19 DP 758890	Local	B147	New	
Rydal	Agricultural Showground	Market Street	Lot 71 DP 751651 & Lot 124 DP 751651 Lot 1 DP 1138698	Local	B148	New	
Rydal	Highland House	209 Martins Road	Lot 122 DP 757036	State	B169	New	
Sodwalls	Sodwalls Inn (former Sodwalls House)	329 Rydal/Sodwalls/Tarana Road	Lot 1 DP 737321	State	B152	Existing	
Sodwalls		3. Eskbank Signal Box	Main Western Railway	Local	B245	Existing	
Sodwalls	Sodwalls Cemetery	329 Sodwalls Road	Lot 2 DP 844355 Lot 1 DP 737321	Local	A141	New	
Sodwalls	Gravestone of Ellen Griffiths and Julia Beale	281 Anarel Road	Lot 243 DP 757076	Local	A143	New	
Sodwalls	Kilcooly	21 Jerrys Meadows Road	Lot 201 DP 1078651	State	B151	New	
Sodwalls	Invergowrie	396 Rydal/Sodwalls/Tarana Road	Lot 68 DP 755794	Local	B153	New	
Sodwalls	Old Sodwalls Public School	428 Rydal/Sodwalls/Tarana Road	Lot 7004 DP 1025924	Local	B154	New	
Sodwalls	Railway Cottage	37 Sodwalls Station Road	Lots 1 DP 783723	Local	B155	New	
Sodwalls	Jerrys Mount	308 Anarel Road	Lot 236 DP 757076	State	B157	New	
Sodwalls	Pendari	302 Anarel Road	Lot 78 DP 757076	Local	B158	New	
Sodwalls	Timber Cottage	281 Anarel Road	Lot 243 DP 757076	Local	B159	New	
Sodwalls	Wattle Grove	233 Anarel Road	Lot 107 DP 757076	State	B160	New	

Locality	Property Name/Item	Address	Property Description	Significance	Inventory Sheet Number	Status	State Heritage List
Sunny Corner	Sunny Corner Smelter Ruins	153 Back Creek Road	Lot 70 DP 755767	Local	A187	Existing	
Tarana	Residence (former school masters residence)	1385 Rydal/Sodwalls/Tarana Road	Lot 1 DP 745731	Local	B164	Existing	Yes
Tarana	Tarana Railway Station water-tank	Railway Land	Adjacent Tarana Railway Station	Local	A082	New	
Tarana	Grave of Jeremiah Beale	Mt Home Honeysuckle Falls Road	Lot 1 DP 876777	Local	A142	New	
Tarana	Westholme	1198 Rydal/Sodwalls/Tarana Road	Lot 23 DP 1016189	Local	B162	New	
Tarana	1197 Rydal/Sodwalls/Tarana Road		The Crown	Local	B161	New	
Tarana	St Stephens Anglican Church	O'Connell Road	Lot 621 DP 1142480	Local	B163	New	
Tarana	Bangaroo	2273 Rydal/Sodwalls/Tarana Road	Lot 6 DP 1016189	Local	B165	New	
Tarana	Tarana Railway Station			State	B166	New	
Tarana	Tarana Hotel	O'Connell Road	Lot 1 DP 832370	Local	B167	New	
Tarana	Residence	7-9 Mutton Falls Road	Lot A DP 376191	Local	B168	New	
Tarana	General Store	Rydal/Sodwalls Rd	Lot C DP 376191	Local	B168	New	
Tarana	Crown View	Honeysuckle Falls Road	Lot 22 DP 757076	State	B315	New	
Tarana	Crownlea	Tarana/O'Connell Road		Local	B410	New	
Tarana	Church (former Methodist)	Tarana/O'Connell Road		Local	B411	New	
Tarana	House	Cnr Brewongle/O'Connell Roads		Local	B412	New	
Wallerawang	Church of St John the Evangelist	Main Street	Lot 1 DP 372255	Local	B112	Existing	Yes
Wallerawang	Willow Vale	401 Pipers Flat Road	Lot 3 DP 1041104	Local	B219	Existing	Yes
Wallerawang	Old Wallerawang School (forner National School)	Main Street	Lot 4 DP 1087684	State	B113	Existing	
Wallerawang	Walker-Barton Private Cemetery	Foreshores Lake Wallace	Lot 1 DP 371608	State	A109	Existing	
Wallerawang		4. Eskbank Railway Station	Main Western Railway	Local	B245	Existing	
Wallerawang		11. Stone Viaduct Cox's River	Main Western Railway	Local	B245	Existing	
Wallerawang	House & Shop	14 Commens St	Lot 13 DP 15683	Local		New	
Wallerawang	Wallerawang General Cemetery	Portland Road	Lot 408-414 DP 751651	Local	A108	New	
Wallerawang	War Memorial	Main Street		Local		New	
Wallerawang	former Wallerawang Public School	121-123 Main Street	Lot 1 DP 795132 & Lot 1 DP 795133	Local	B225	New	
Wallerawang	Bottom Pub	Main Street	Lot A DP 374050	Local	B207	New	
Wallerawang	Wallerawang Junction Railway Station	Main Street	Main Western Railway	State	B208	New	

Locality	Property Name/Item	Address	Property Description	Significance	Inventory Sheet Number	Status	State Heritage List
Wallerawang	Surgery	50 Main Street	Lot 1 DP 609279	Local	B209	New	
Wallerawang	Wang Antiques and Emporium	48 Main Street	Lot 9 DP 17727	Local	B210	New	
Wallerawang	Post Office	32 Main Street	Lot 102 DP 1142511	Local	B211	New	
Wallerawang	Former Commercial Banking Co.	30 Main Street	Lot 15 DP 17727	Local	B212	New	
Wallerawang	Railway Crossing Keepers House	45 Pipers Flat Road	Lot 2 DP 815106	Local	B216	New	
Wallerawang	Cottage	61 Pipers Flat Road	Lot 2 DP 616176	Local	B217	New	
Wallerawang	Cottage	63 Pipers Flat Road	Lot 103 DP 877661	Local	B217	New	
Wallerawang	Cottages	57 Pipers Flat Road	Lot 12 DP 2527	Local	B218	New	
Wallerawang	Northbrook	581 Pipers Flat Road	Lot 1 DP 1124158	Local	B220	New	
Wolgan	Newnes Historic Site Group	Newnes Junction - Newnes		Local	A163	Existing	Yes
Wolgan	Newnes Hotel	Wolgan Valley	Lot 9 DP 751639	Local	A163	Existing	
	Newnes Coke Ovens			Local	A163		
	Newnes Township			Local	A163		
	Newnes Associated Works			Local	A163		
Wolgan	Christiana Williams grave	Wolgan Valley Road		Local	A110	New	
Wolgan	Wolgan Homestead(Wolgan Valley Station)	off Wolgan Valley Road	Lot 26 DP 751666	Local	B317	New	

PROPOSED CONSERVATION AREAS

HERITAGE ITEMS INCLUDED IN CONSERVATION AREAS

LOCALITY	PROPERTY ADDRESS
HASSANS WALLS RD	
LITHGOW NSW	173 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	171 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	169 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	167 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	165 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	163 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	161 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	159 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	157 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	155 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	153 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	151 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	149 HASSANS WALLS ROAD LITHGOW NSW 2790

LOCALITY	PROPERTY ADDRESS
LITHGOW NSW	147 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	145 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	143 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	141 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	139 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	108 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	110 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	112 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	114 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	116 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	118 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	120 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	122 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	124 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	126 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	128 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	130 HASSANS WALLS ROAD LITHGOW NSW 2790

LOCALITY	PROPERTY ADDRESS
LITHGOW NSW	132 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	134 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	136 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	138 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	140 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	142 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	144 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	146 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	148 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	150 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	152 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	154 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	156 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	158 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	160 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	135 HASSANS WALLS ROAD LITHGOW NSW 2790
LITHGOW NSW	137 HASSANS WALLS ROAD LITHGOW NSW 2790

LOCALITY	PROPERTY ADDRESS
POTTERY ESTATE	
LITHGOW NSW	OFF BENT STREET LITHGOW NSW 2790
LITHGOW NSW	25 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	23 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	21 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	19 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	11 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	9 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	7 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	5 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	3 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	1 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	14 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	20 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	28 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	30 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	32 SILCOCK STREET LITHGOW NSW 2790

LOCALITY	PROPERTY ADDRESS
LITHGOW NSW	34 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	1 SILCOCK LANE LITHGOW NSW 2790
LITHGOW NSW	SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	27 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	17 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	15 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	13 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	16 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	18 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	22 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	24 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	26 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	36 SILCOCK STREET LITHGOW NSW 2790
LITHGOW NSW	1A SILCOCK LANE LITHGOW NSW 2790
LITHGOW NSW	SILCOCK STREET LITHGOW NSW 2790

LOCALITY	PROPERTY ADDRESS
ESKBANK ST	
LITHGOW NSW	23 ESKBANK STREET LITHGOW NSW 2790
LITHGOW NSW	21 ESKBANK STREET LITHGOW NSW 2790
LITHGOW NSW	19 ESKBANK STREET LITHGOW NSW 2790
LITHGOW NSW	17 ESKBANK STREET LITHGOW NSW 2790
LITHGOW NSW	15 ESKBANK STREET LITHGOW NSW 2790
LITHGOW NSW	13 ESKBANK STREET LITHGOW NSW 2790
LITHGOW NSW	11 ESKBANK STREET LITHGOW NSW 2790
LITHGOW NSW	9 ESKBANK STREET LITHGOW NSW 2790
LITHGOW NSW	7 ESKBANK STREET LITHGOW NSW 2790
LITHGOW NSW	20 ESKBANK STREET LITHGOW NSW 2790
LITHGOW NSW	22 ESKBANK STREET LITHGOW NSW 2790
LITHGOW NSW	24 ESKBANK STREET LITHGOW NSW 2790
LITHGOW NSW	26 ESKBANK STREET LITHGOW NSW 2790
LITHGOW NSW	28 ESKBANK STREET LITHGOW NSW 2790
COOK STREET	

LOCALITY	PROPERTY ADDRESS
LITHGOW NSW	20 COOK STREET LITHGOW NSW 2790
LITHGOW NSW	22 COOK STREET LITHGOW NSW 2790
LITHGOW NSW	24 COOK STREET LITHGOW NSW 2790
LITHGOW NSW	26 COOK STREET LITHGOW NSW 2790
LITHGOW NSW	28 COOK STREET LITHGOW NSW 2790
LITHGOW NSW	COOK STREET LITHGOW NSW 2790
LITHGOW NSW	44 COOK STREET LITHGOW NSW 2790
LITHGOW NSW	46 COOK STREET LITHGOW NSW 2790
LITHGOW NSW	48 COOK STREET LITHGOW NSW 2790
LITHGOW NSW	50 COOK STREET LITHGOW NSW 2790
LITHGOW NSW	52 COOK STREET LITHGOW NSW 2790
LITHGOW NSW	54 COOK STREET LITHGOW NSW 2790
LITHGOW NSW	30-32 COOK STREET LITHGOW NSW 2790
LITHGOW NSW	34-36 COOK STREET LITHGOW NSW 2790
LITHGOW NSW	38-40 COOK STREET LITHGOW NSW 2790
MORT ST	
LITHGOW NSW	59 MORT STREET LITHGOW NSW 2790

LOCALITY	PROPERTY ADDRESS
LITHGOW NSW	61 MORT STREET LITHGOW NSW 2790
LITHGOW NSW	63 MORT STREET LITHGOW NSW 2790
LITHGOW NSW	65 MORT STREET LITHGOW NSW 2790
LITHGOW NSW	67 MORT STREET LITHGOW NSW 2790
LITHGOW NSW	69 MORT STREET LITHGOW NSW 2790
LITHGOW NSW	71 MORT STREET LITHGOW NSW 2790
LITHGOW NSW	73 MORT STREET LITHGOW NSW 2790
LITHGOW NSW	75 MORT STREET LITHGOW NSW 2790
LITHGOW NSW	77 MORT STREET LITHGOW NSW 2790
LITHGOW NSW	2 WHITTON STREET LITHGOW NSW 2790
LITHGOW NSW	4 WHITTON STREET LITHGOW NSW 2790
LITHGOW NSW	6 WHITTON STREET LITHGOW NSW 2790
LITHGOW NSW	8 WHITTON STREET LITHGOW NSW 2790
LITHGOW NSW	10 WHITTON STREET LITHGOW NSW 2790
LITHGOW NSW	12 WHITTON STREET LITHGOW NSW 2790
LITHGOW NSW	14 WHITTON STREET LITHGOW NSW 2790
LITHGOW NSW	16 WHITTON STREET LITHGOW NSW 2790

LOCALITY	PROPERTY ADDRESS
INCH ST	
LITHGOW NSW	43 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	41 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	35 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	31 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	29 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	21 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	19 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	15-17 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	13 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	11 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	7 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	5 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	3 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	78 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	80 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	82 INCH STREET LITHGOW NSW 2790

LOCALITY	PROPERTY ADDRESS
LITHGOW NSW	84 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	96 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	102 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	104 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	108 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	110 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	120 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	124 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	126 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	128 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	130 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	132 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	134 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	136 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	138 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	140 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	142 INCH STREET LITHGOW NSW 2790

LOCALITY	PROPERTY ADDRESS
LITHGOW NSW	112-114 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	27 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	25 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	23 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	1 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	1A INCH STREET LITHGOW NSW 2790
LITHGOW NSW	BLAST FURNACE INCH STREET LITHGOW NSW 2790
LITHGOW NSW	31 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	37 INCH STREET LITHGOW NSW 2790
LITHGOW NSW	116 INCH STREET LITHGOW NSW 2790
HARTLEY VALE	
HARTLEY VALE NSW	400 HARTLEY VALE ROAD HARTLEY VALE NSW 2790
HARTLEY VALE NSW	THE GLEN ALLEN STREET HARTLEY VALE NSW 2790
HARTLEY VALE NSW	355 J.R. STREET HARTLEY VALE NSW 2790
HARTLEY VALE NSW	375 FRYER STREET HARTLEY VALE NSW 2790
HARTLEY VALE NSW	8 ALLEN STREET HARTLEY VALE NSW 2790
HARTLEY VALE NSW	358 J.R. STREET HARTLEY VALE NSW 2790

LOCALITY	PROPERTY ADDRESS
HARTLEY VALE NSW	J.R. STREET HARTLEY VALE NSW 2790
HARTLEY VALE NSW	2 ALLEN STREET HARTLEY VALE NSW 2790
HARTLEY VALE NSW	HARTLEY VALE ROAD HARTLEY VALE NSW 2790
HARTLEY VALE NSW	HARTLEY VALE ROAD HARTLEY VALE NSW 2790
HARTLEY VALE NSW	OLD PUBLIC SCHOOL J.R. STREET HARTLEY VALE NSW 2790
HARTLEY VALE NSW	348 J.R. STREET HARTLEY VALE NSW 2790
HARTLEY VALE NSW	PETROLEA J.R. STREET HARTLEY VALE NSW 2790
LITTLE HARTLEY	
LITTLE HARTLEY NSW	2272 GREAT WESTERN HIGHWAY LITTLE HARTLEY NSW 2790
LITTLE HARTLEY NSW	2329 GREAT WESTERN HIGHWAY LITTLE HARTLEY NSW 2790
LITTLE HARTLEY NSW	15 COXS RIVER ROAD LITTLE HARTLEY NSW 2790
LITTLE HARTLEY NSW	2355 GREAT WESTERN HIGHWAY LITTLE HARTLEY NSW 2790
LITTLE HARTLEY NSW	18 COXS RIVER ROAD LITTLE HARTLEY NSW 2790
LITTLE HARTLEY NSW	5 BAANERS LANE LITTLE HARTLEY NSW 2790
LITTLE HARTLEY NSW	MISTY VINES 2300 GREAT WESTERN HIGHWAY LITTLE HARTLEY NSW 2
LITTLE HARTLEY NSW	19 COLLITS PLACE LITTLE HARTLEY NSW 2790
LITTLE HARTLEY NSW	5 AMBERMERE DRIVE LITTLE HARTLEY NSW 2790

LOCALITY	PROPERTY ADDRESS
LITTLE HARTLEY NSW	GREAT WESTERN HIGHWAY LITTLE HARTLEY NSW 2790
LITTLE HARTLEY NSW	GREAT WESTERN HIGHWAY LITTLE HARTLEY NSW 2790
LITTLE HARTLEY NSW	22 COLLITS PLACE LITTLE HARTLEY NSW 2790
HARTLEY NSW	2360 GREAT WESTERN HIGHWAY HARTLEY NSW 2790
LITTLE HARTLEY NSW	2297 GREAT WESTERN HIGHWAY LITTLE HARTLEY NSW 2790
RYDAL	
RYDAL NSW	BATHURST STREET RYDAL NSW 2790
RYDAL NSW	BATHURST STREET RYDAL NSW 2790
RYDAL NSW	BATHURST STREET RYDAL NSW 2790
RYDAL NSW	ALEXANDER HOTEL BATHURST STREET RYDAL NSW 2790
RYDAL NSW	CARTWRIGHT STREET RYDAL NSW 2790
RYDAL NSW	BATHURST STREET RYDAL NSW 2790
RYDAL NSW	BATHURST STREET RYDAL NSW 2790
RYDAL NSW	BATHURST STREET RYDAL NSW 2790
RYDAL NSW	BATHURST STREET RYDAL NSW 2790
RYDAL NSW	14 BATHURST STREET RYDAL NSW 2790
RYDAL NSW	CARTWRIGHT STREET RYDAL NSW 2790

LOCALITY	PROPERTY ADDRESS
RYDAL NSW	CARTWRIGHT STREET RYDAL NSW 2790
RYDAL NSW	5 CARTWRIGHT STREET RYDAL NSW 2790
RYDAL NSW	NEW STREET RYDAL NSW 2790
RYDAL NSW	BATHURST STREET RYDAL NSW 2790
RYDAL NSW	SHOWGROUND MARKET STREET RYDAL NSW 2790
RYDAL NSW	BATHURST STREET RYDAL NSW 2790
RYDAL NSW	CARTWRIGHT STREET RYDAL NSW 2790
RYDAL NSW	CARTWRIGHT STREET RYDAL NSW 2790
RYDAL NSW	BATHURST STREET RYDAL NSW 2790
RYDAL NSW	BATHURST STREET RYDAL NSW 2790
RYDAL NSW	CARTWRIGHT STREET RYDAL NSW 2790
RYDAL NSW	RYDAL MOUNT 16 BATHURST STREET RYDAL NSW 2790
RYDAL NSW	6 CARTWRIGHT STREET RYDAL NSW 2790
RYDAL NSW	GREG FEATHERSTONE PARK BATHURST STREET RYDAL NSW 2790
WALLERAWANG	
WALLERAWANG NSW	COMMERCIAL HOTEL MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	64 MAIN STREET WALLERAWANG NSW 2845

LOCALITY	PROPERTY ADDRESS
WALLERAWANG NSW	60 MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	56 MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	50 MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	46 MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	48 MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	42 MAIN STREET WALLERAWANG NSW 2845

LOCALITY	PROPERTY ADDRESS
WALLERAWANG NSW	36-40 MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	34 MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	30 MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	26 MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	68-70 MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	54-54A MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	WALLERAWANG SPORTS OVAL BRAYS LANE WALLERAWANG NSW 2845
WALLERAWANG NSW	MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	ROYAL HOTEL MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	PINTA STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	44 MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	24 MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	22 MAIN STREET WALLERAWANG NSW 2845
WALLERAWANG NSW	BLACKBERRY LANE WALLERAWANG NSW 2845

LOCALITY	PROPERTY ADDRESS
WALLERAWANG NSW	32 MAIN STREET WALLERAWANG NSW 2845
PORTLAND	
PORTLAND NSW	2 COX STREET PORTLAND NSW 2847
PORTLAND NSW	IMPERIAL HOTEL 24 CULLEN STREET PORTLAND NSW 2847
PORTLAND NSW	16 CULLEN STREET PORTLAND NSW 2847
PORTLAND NSW	4 CULLEN STREET PORTLAND NSW 2847
PORTLAND NSW	CULLEN STREET PORTLAND NSW 2847
PORTLAND NSW	3 LETT STREET PORTLAND NSW 2847
PORTLAND NSW	2 LETT STREET PORTLAND NSW 2847
PORTLAND NSW	LETT STREET PORTLAND NSW 2847
PORTLAND NSW	19 VALE STREET PORTLAND NSW 2847
PORTLAND NSW	15 VALE STREET PORTLAND NSW 2847
PORTLAND NSW	13 VALE STREET PORTLAND NSW 2847
PORTLAND NSW	11 VALE STREET PORTLAND NSW 2847
PORTLAND NSW	9 VALE STREET PORTLAND NSW 2847
PORTLAND NSW	7 VALE STREET PORTLAND NSW 2847
PORTLAND NSW	5 VALE STREET PORTLAND NSW 2847

LOCALITY	PROPERTY ADDRESS
PORTLAND NSW	1 VALE STREET PORTLAND NSW 2847
PORTLAND NSW	VALE STREET PORTLAND NSW 2847
PORTLAND NSW	4 VALE STREET PORTLAND NSW 2847
PORTLAND NSW	6 VALE STREET PORTLAND NSW 2847
PORTLAND NSW	8 VALE STREET PORTLAND NSW 2847
PORTLAND NSW	10 VALE STREET PORTLAND NSW 2847
PORTLAND NSW	12 VALE STREET PORTLAND NSW 2847
PORTLAND NSW	2 WALLERAWANG ROAD PORTLAND NSW 2847
PORTLAND NSW	1 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	3 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	7 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	9 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	11 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	13 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	15 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	WILLIWA STREET PORTLAND NSW 2847

LOCALITY	PROPERTY ADDRESS
PORTLAND NSW	21 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	23 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	25 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	27 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	29 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	31 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	33 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	CORONATION HOTEL 41 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	51 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	53 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	59 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	61 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	63 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	2D WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	WILLIWA STREET PORTLAND NSW 2847

LOCALITY	PROPERTY ADDRESS
PORTLAND NSW	WOLGAN STREET PORTLAND NSW 2847
PORTLAND NSW	1B WOLGAN STREET PORTLAND NSW 2847
PORTLAND NSW	WOLGAN STREET PORTLAND NSW 2847
PORTLAND NSW	WOLGAN STREET PORTLAND NSW 2847
PORTLAND NSW	3 WOLGAN STREET PORTLAND NSW 2847
PORTLAND NSW	WOLGAN STREET PORTLAND NSW 2847
PORTLAND NSW	7 WOLGAN STREET PORTLAND NSW 2847
PORTLAND NSW	9 WOLGAN STREET PORTLAND NSW 2847
PORTLAND NSW	15 WOLGAN STREET PORTLAND NSW 2847
PORTLAND NSW	19 WOLGAN STREET PORTLAND NSW 2847
PORTLAND NSW	21 WOLGAN STREET PORTLAND NSW 2847
PORTLAND NSW	23 WOLGAN STREET PORTLAND NSW 2847
PORTLAND NSW	25 WOLGAN STREET PORTLAND NSW 2847
PORTLAND NSW	29 WOLGAN STREET PORTLAND NSW 2847
PORTLAND NSW	35 WOLGAN STREET PORTLAND NSW 2847
PORTLAND NSW	WOLGAN STREET PORTLAND NSW 2847
PORTLAND NSW	WOLGAN STREET PORTLAND NSW 2847

LOCALITY	PROPERTY ADDRESS
PORTLAND NSW	SAVILLE PARK WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	WOLGAN STREET PORTLAND NSW 2847
PORTLAND NSW	67-71 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	6-8 WOLGAN STREET PORTLAND NSW 2847
PORTLAND NSW	WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	14 VALE STREET PORTLAND NSW 2847
PORTLAND NSW	35-37 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	39 WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	5-5A WILLIWA STREET PORTLAND NSW 2847
PORTLAND NSW	10 WOLGAN STREET PORTLAND NSW 2847
PORTLAND NSW	CWA HALL WOLGAN STREET PORTLAND NSW 2847
PORTLAND NSW	18 CULLEN STREET PORTLAND NSW 2847
PORTLAND NSW	22 CULLEN STREET PORTLAND NSW 2847
CAPERTEE	
CAPERTEE NSW	CASTLEREAGH HIGHWAY CAPERTEE NSW 2846
CAPERTEE NSW	CASTLEREAGH HIGHWAY CAPERTEE NSW 2846

LOCALITY	PROPERTY ADDRESS
CAPERTEE NSW	67 CASTLEREAGH HIGHWAY CAPERTEE NSW 2846
CAPERTEE NSW	71 CASTLEREAGH HIGHWAY CAPERTEE NSW 2846
CAPERTEE NSW	65 CASTLEREAGH HIGHWAY CAPERTEE NSW 2846
CAPERTEE NSW	CASTLEREAGH HIGHWAY CAPERTEE NSW 2846
CAPERTEE NSW	CASTLEREAGH HIGHWAY CAPERTEE NSW 2846
CAPERTEE NSW	CASTLEREAGH HIGHWAY CAPERTEE NSW 2846
CAPERTEE NSW	CASTLEREAGH HIGHWAY CAPERTEE NSW 2846
CAPERTEE NSW	CASTLEREAGH HIGHWAY CAPERTEE NSW 2846
CAPERTEE NSW	CASTLEREAGH HIGHWAY CAPERTEE NSW 2846
CAPERTEE NSW	CASTLEREAGH HIGHWAY CAPERTEE NSW 2846
CAPERTEE NSW	73 CASTLEREAGH HIGHWAY CAPERTEE NSW 2846
CAPERTEE NSW	38 CASTLEREAGH HIGHWAY CAPERTEE NSW 2846
CAPERTEE NSW	CASTLEREAGH HIGHWAY CAPERTEE NSW 2846
CAPERTEE NSW	PUBLIC HALL 34 CASTLEREAGH HIGHWAY CAPERTEE NSW 2846
CAPERTEE NSW	30 CASTLEREAGH HIGHWAY CAPERTEE NSW 2846
CAPERTEE NSW	26 CASTLEREAGH HIGHWAY CAPERTEE NSW 2846
CAPERTEE NSW	29 CASTLEREAGH HIGHWAY CAPERTEE NSW 2846
CAPERTEE NSW	RAILWAY STREET CAPERTEE NSW 2846

LOCALITY	PROPERTY ADDRESS
CAPERTEE NSW	35 CASTLEREAGH HIGHWAY CAPERTEE NSW 2846
CAPERTEE NSW	RAILWAY STREET CAPERTEE NSW 2846
CAPERTEE NSW	CAPERTEE RAILWAY STATION RAILWAY STREET CAPERTEE NSW 2846
CAPERTEE NSW	RAILWAY STREET CAPERTEE NSW 2846
LITHGOW MAIN STREET	
LITHGOW NSW	77 BRIDGE STREET
LITHGOW NSW	HOSKINS CHURCH 43 BRIDGE ST
LITHGOW NSW	OLD TAFE COOK ST
LITHGOW NSW	56 COOK STREET
LITHGOW NSW	58 COOK STREET
LITHGOW NSW	60 COOK STREET
LITHGOW NSW	UNITED MINE WORKERS 52 ESKBANK ST
LITHGOW NSW	CNR GRAY AND SANDFORD AVE
LITHGOW NSW	1 GRAY STREET
LITHGOW NSW	7 GRAY STREET
LITHGOW NSW	9 GRAY STREET
LITHGOW NSW	11 GRAY STREET

LOCALITY	PROPERTY ADDRESS
LITHGOW NSW	9 JAMES STREET
LITHGOW NSW	8 JAMES STREET
LITHGOW NSW	7 JAMES STREET
LITHGOW NSW	RAILWAY VIADUCT JAMES ST
LITHGOW NSW	41 LITHGOW STREET
LITHGOW NSW	224 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	222 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	220 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	218 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	216 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	214 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	210-212 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	208 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	206 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	202 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	COMMERCIAL HOTEL 198 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	188 MAIN STREET LITHGOW NSW 2790

LOCALITY	PROPERTY ADDRESS
LITHGOW NSW	170 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	168 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	166 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	164 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	160 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	158 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	156 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	152 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	146 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	144 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	136 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	132-134 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	130 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	126-128 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	124 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	122 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	120 MAIN STREET LITHGOW NSW 2790

LOCALITY	PROPERTY ADDRESS
LITHGOW NSW	112-118 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	100 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	94 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	84 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	80 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	72-74 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	70 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	66 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	64 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	58 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	54 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	50 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	48 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	36 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	32 MAIN STREET LITHGOW NSW 2790

LOCALITY	PROPERTY ADDRESS
LITHGOW NSW	34 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	30 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	28 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	COURT HOUSE HOTEL MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	3-5 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	7-9 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	11 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	13 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	15 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	17 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	19 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	21 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	23 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	27-29 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	31 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	33 MAIN STREET LITHGOW NSW 2790

LOCALITY	PROPERTY ADDRESS
LITHGOW NSW	35-37 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	39 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	41 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	43 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	45 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	49 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	53 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	55 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	59 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	61 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	63 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	65 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	67 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	69 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	71 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	73-75 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	77 MAIN STREET LITHGOW NSW 2790

LOCALITY	PROPERTY ADDRESS
LITHGOW NSW	79 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	81 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	85 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	87 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	93 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	95 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	101 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	97-99 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	103 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	105 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	107 - 109 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	111 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	117 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	119 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	121 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	123 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	125 MAIN STREET LITHGOW NSW 2790

LOCALITY	PROPERTY ADDRESS
LITHGOW NSW	127 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	129 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	131 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	133 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	135 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	LANSDOWNE HOTEL 137 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	139 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	141 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	143 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	145-147 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	149 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	153 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	157 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	159 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	165 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	167 MAIN STREET LITHGOW NSW 2790

LOCALITY	PROPERTY ADDRESS
LITHGOW NSW	181 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	183 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	185 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	187 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	199 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	201 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	203 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	221 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	223 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	153 MORT STREET LITHGOW NSW 2790
LITHGOW NSW	155 MORT STREET LITHGOW NSW 2790
LITHGOW NSW	157 MORT STREET LITHGOW NSW 2790
LITHGOW NSW	159 MORT STREET LITHGOW NSW 2790
LITHGOW NSW	160-178 MORT STREET LITHGOW NSW 2790
LITHGOW NSW	158 MORT STREET LITHGOW NSW 2790
LITHGOW NSW	31 RAILWAY PARADE LITHGOW NSW 2790
LITHGOW NSW	27 RAILWAY PARADE LITHGOW NSW 2790

LOCALITY	PROPERTY ADDRESS
LITHGOW NSW	25 RAILWAY PARADE LITHGOW NSW 2790
LITHGOW NSW	19 RAILWAY PARADE LITHGOW NSW 2790
LITHGOW NSW	7-13 RAILWAY PARADE LITHGOW NSW 2790
LITHGOW NSW	5 RAILWAY PARADE LITHGOW NSW 2790
LITHGOW NSW	3 RAILWAY PARADE LITHGOW NSW 2790
LITHGOW NSW	1 RAILWAY PARADE LITHGOW NSW 2790
LITHGOW NSW	ST PAULS ANGLICAN CHURCH ROY STREET LITHGOW NSW 2790
LITHGOW NSW	LITHGOW PRIMARY SCHOOL & MEMORIAL GATES 163 MORT STREET LITHGOW NSW 2790
LITHGOW NSW	MANSE 6 CHURCH STREET LITHGOW NSW 2790
LITHGOW NSW	83 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	TATTERSALS HOTEL 151 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	194 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	192 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	31 ESKBANK STREET LITHGOW NSW 2790
LITHGOW NSW	FORMER RAILWAY STATION ENTRY AND PLATFORMS ESKBANK ST
LITHGOW NSW	180-184 MORT STREET LITHGOW NSW 2790
LITHGOW NSW	52 MAIN STREET LITHGOW NSW 2790

LOCALITY	PROPERTY ADDRESS
LITHGOW NSW	89 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	91 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	3-5 GRAY STREET LITHGOW NSW 2790
LITHGOW NSW	113-115 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	169 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	171 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	COURT HOUSE 156 MORT STREET LITHGOW NSW 2790
LITHGOW NSW	205 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	102 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	TIN SHED 69 BRIDGE STREET LITHGOW NSW 2790
LITHGOW NSW	UNION THEATRE 67 BRIDGE STREET LITHGOW NSW 2790
LITHGOW NSW	HOSKINS BUILDING 65 BRIDGE STREET LITHGOW NSW 2790
LITHGOW NSW	174 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	176 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	193-197 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	38-46 MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	STATION MASTERS RESIDENCE 6 RAILWAY PARADE LITHGOW NSW 2790

LOCALITY	PROPERTY ADDRESS
LITHGOW NSW	QUEEN ELIZABETH PARK MAIN STREET LITHGOW NSW 2790
LITHGOW NSW	175-177 MAIN STREET LITHGOW NSW 2790

DRAFT

Figure 1. Capertee Heritage Conservation Area

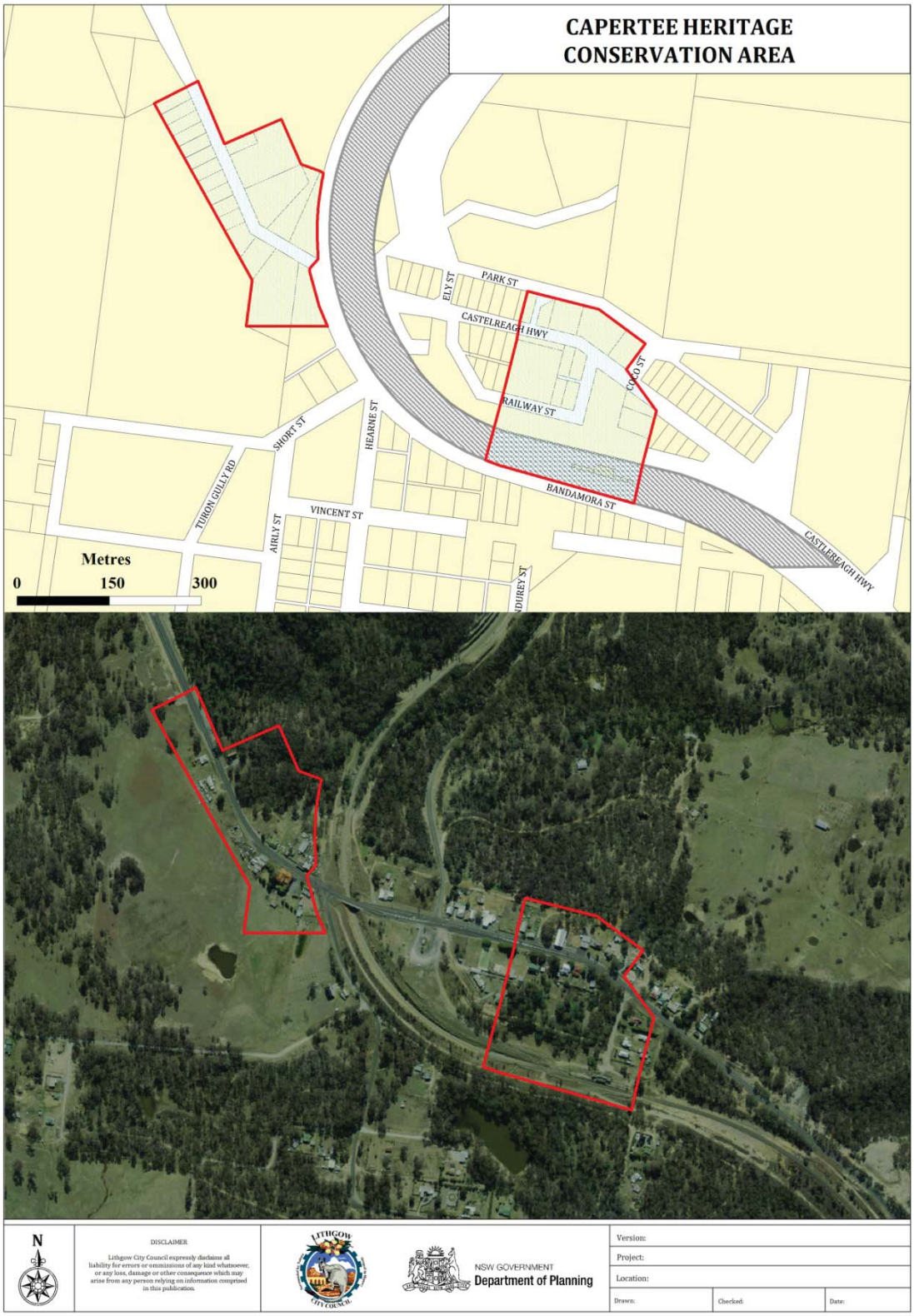


Figure 2. Cook St Heritage Conservation Area



Figure 3. Eskbank St Heritage Conservation Area



Figure 4. Hartley Vale Heritage Conservation Area

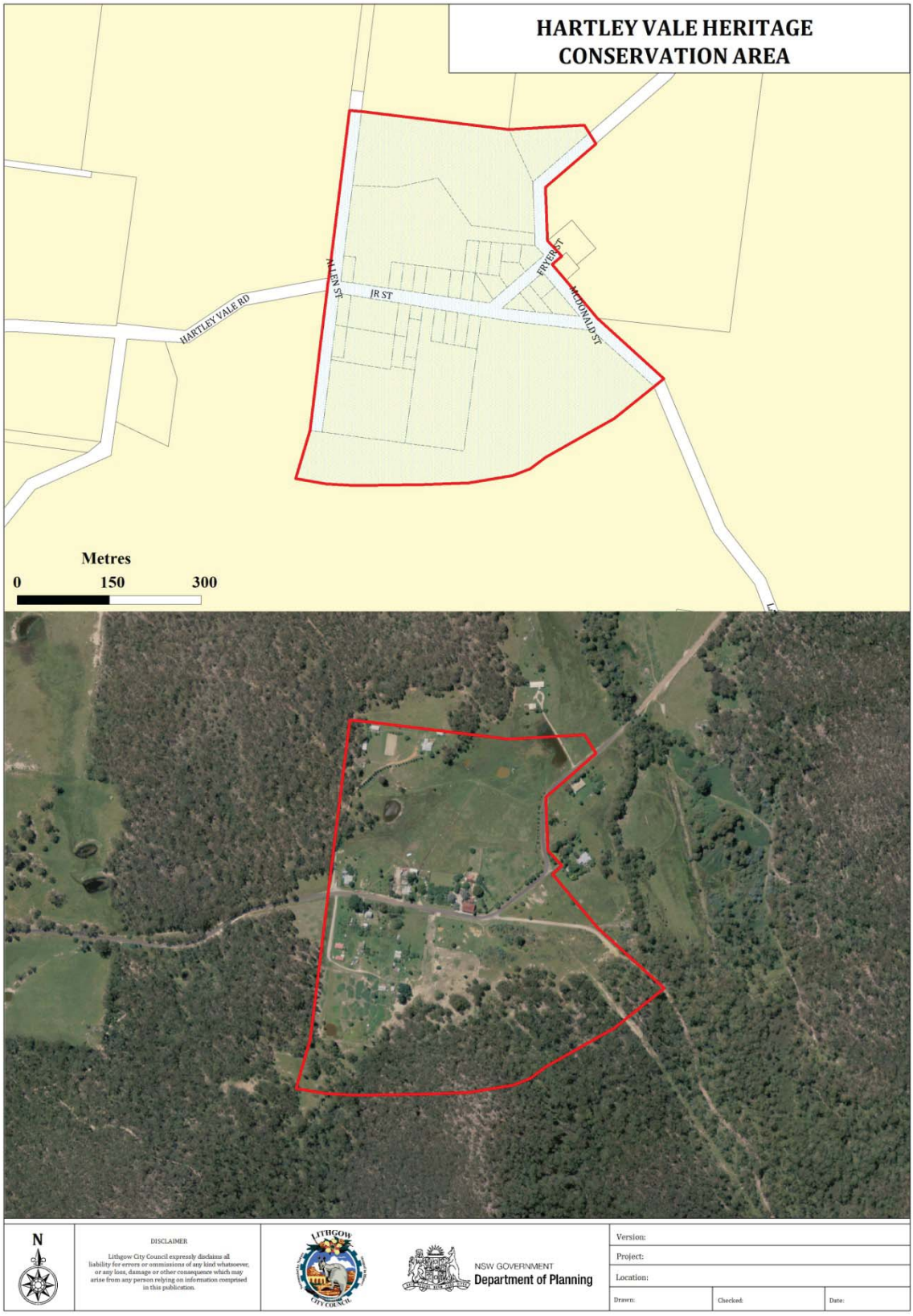


Figure 5. Hassans Walls Rd Heritage Conservation Area



Figure 6. Inch St Heritage Conservation Area



Figure 7. Lithgow Main St Heritage Conservation Area

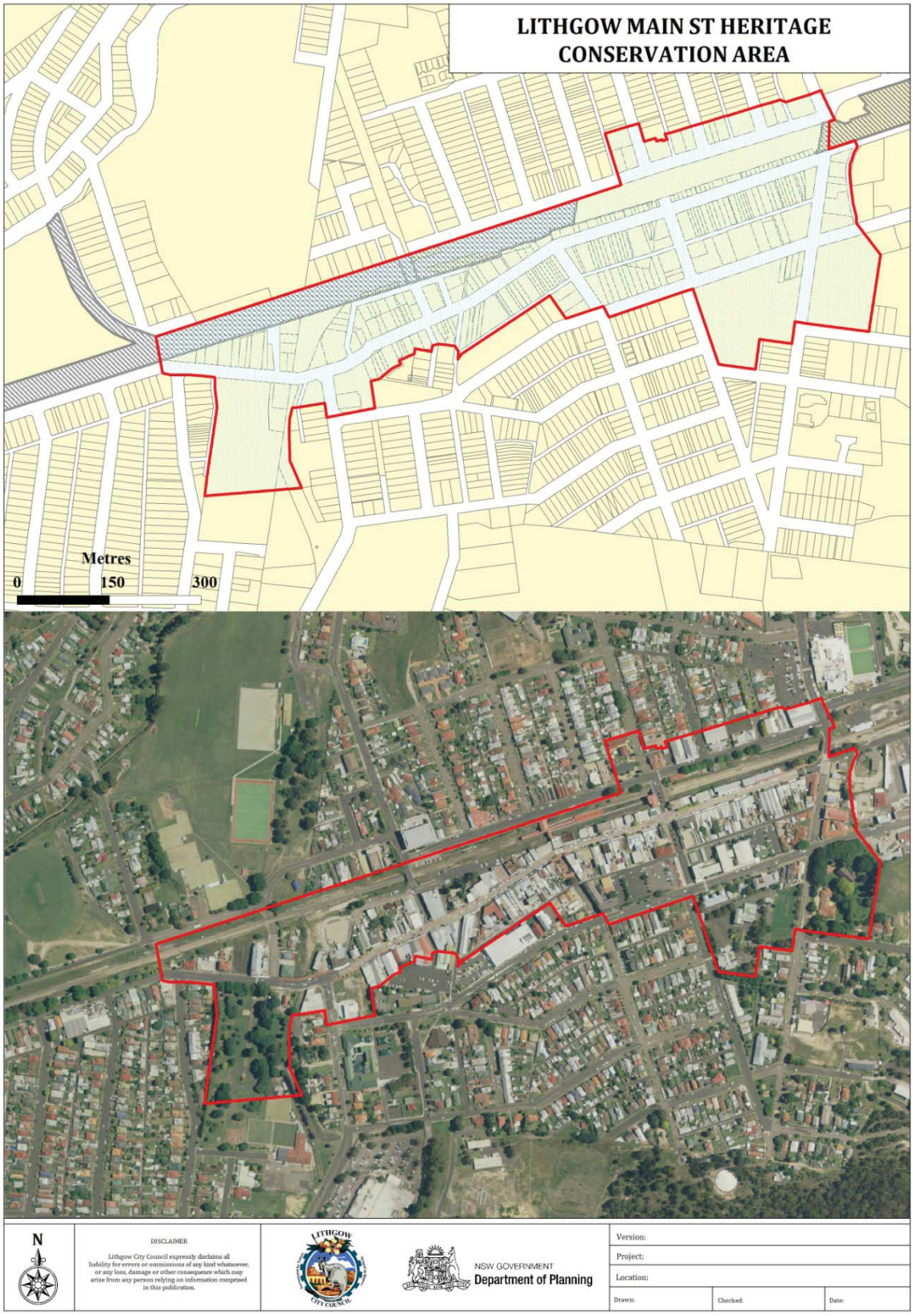


Figure 8. Little Hartley Heritage Conservation Area

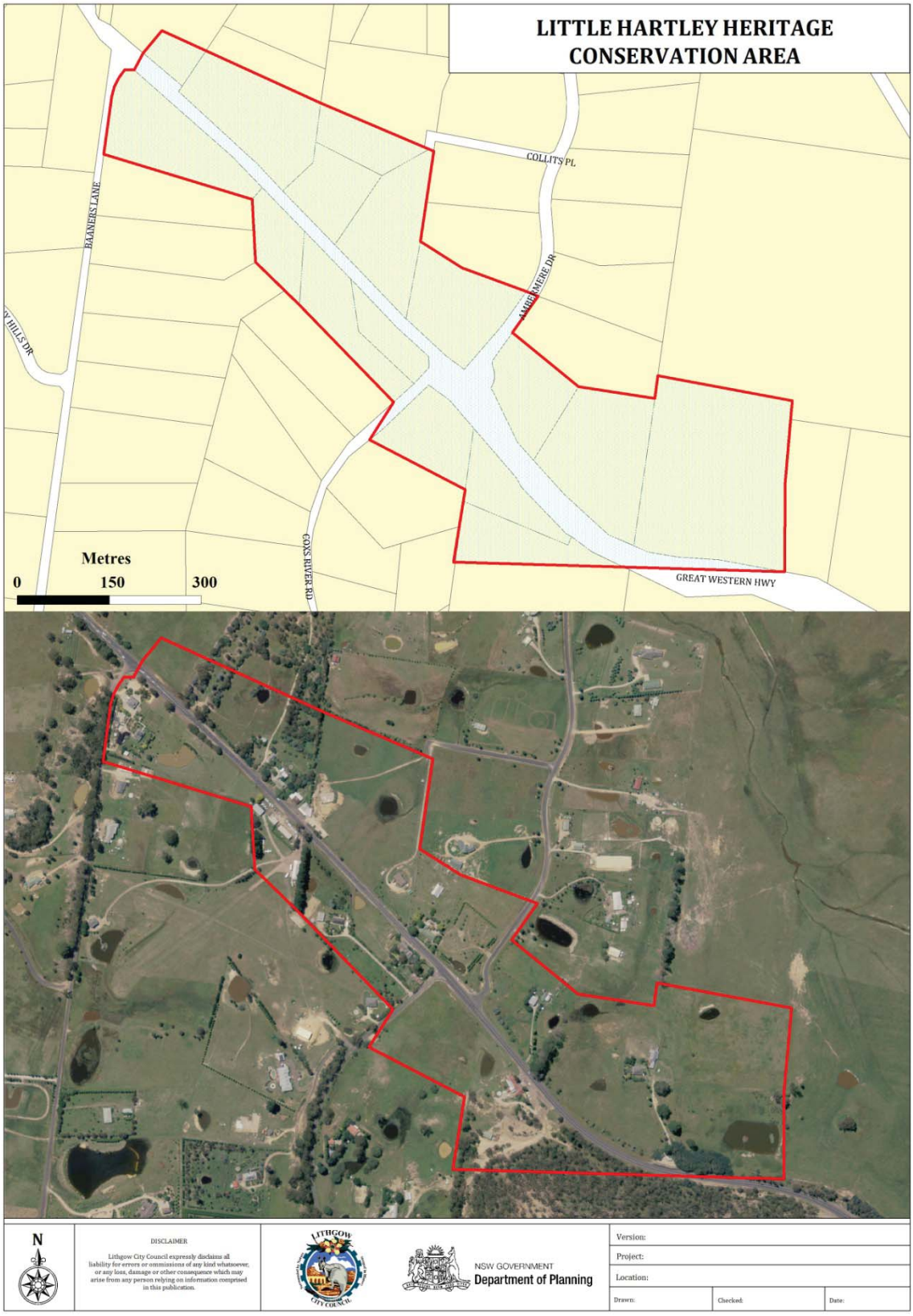


Figure 9. Mort St Heritage Conservation Area



Figure 10. Portland Heritage Conservation Area

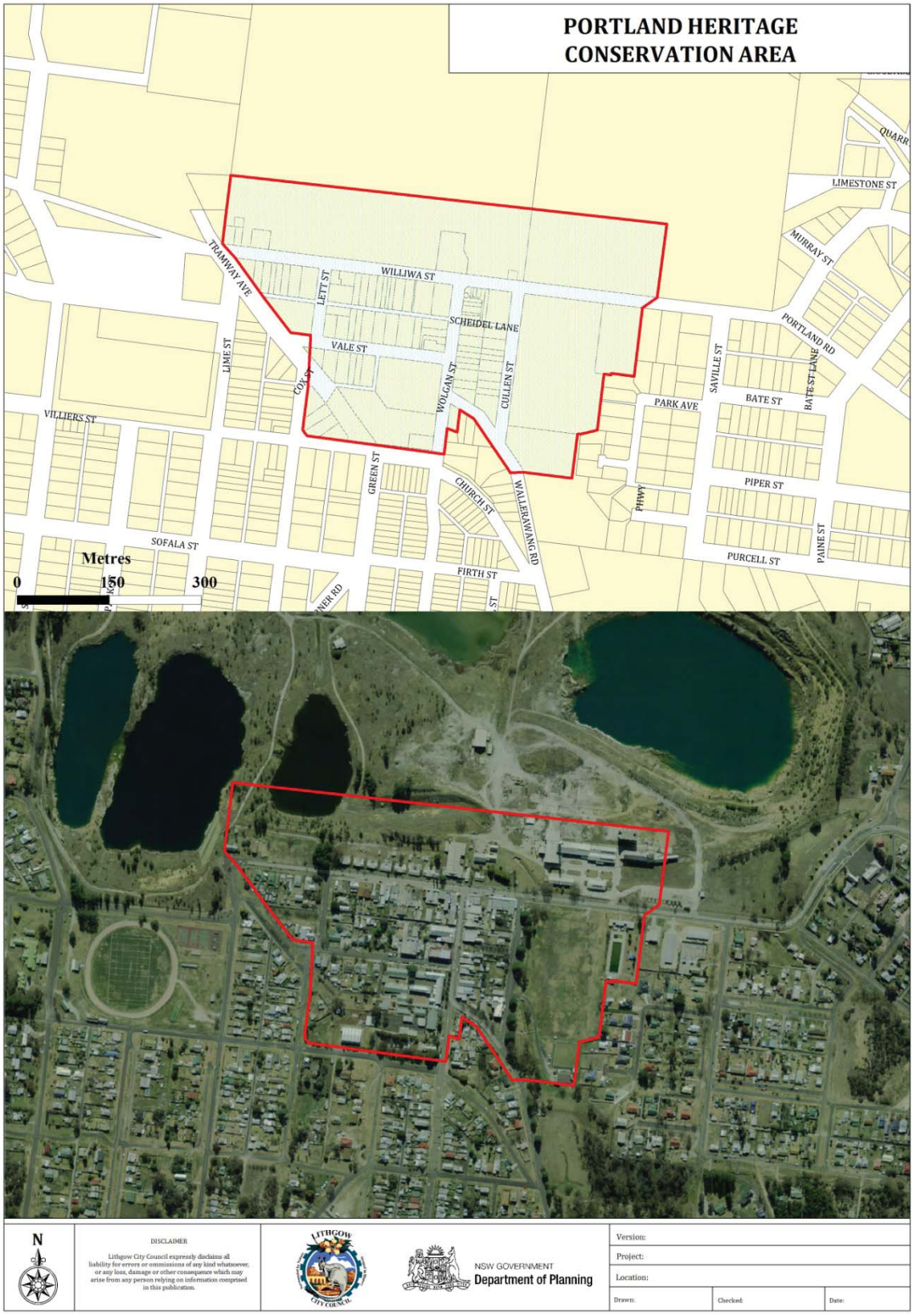


Figure 11. Pottery Estate Heritage Conservation Area



Figure 12. Rydal Heritage Conservation Area

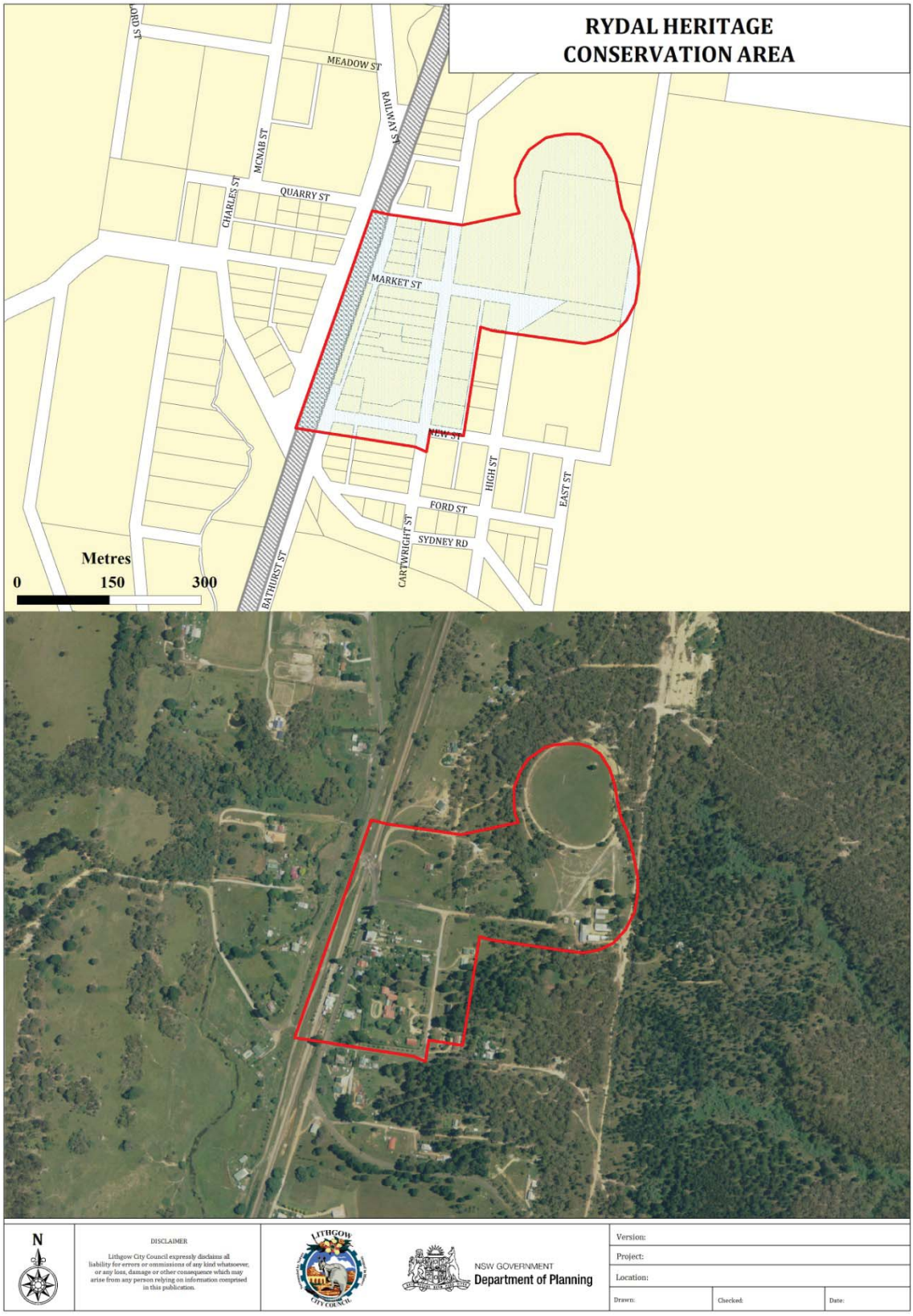


Figure 13. Wallerawang Heritage Conservation Area

