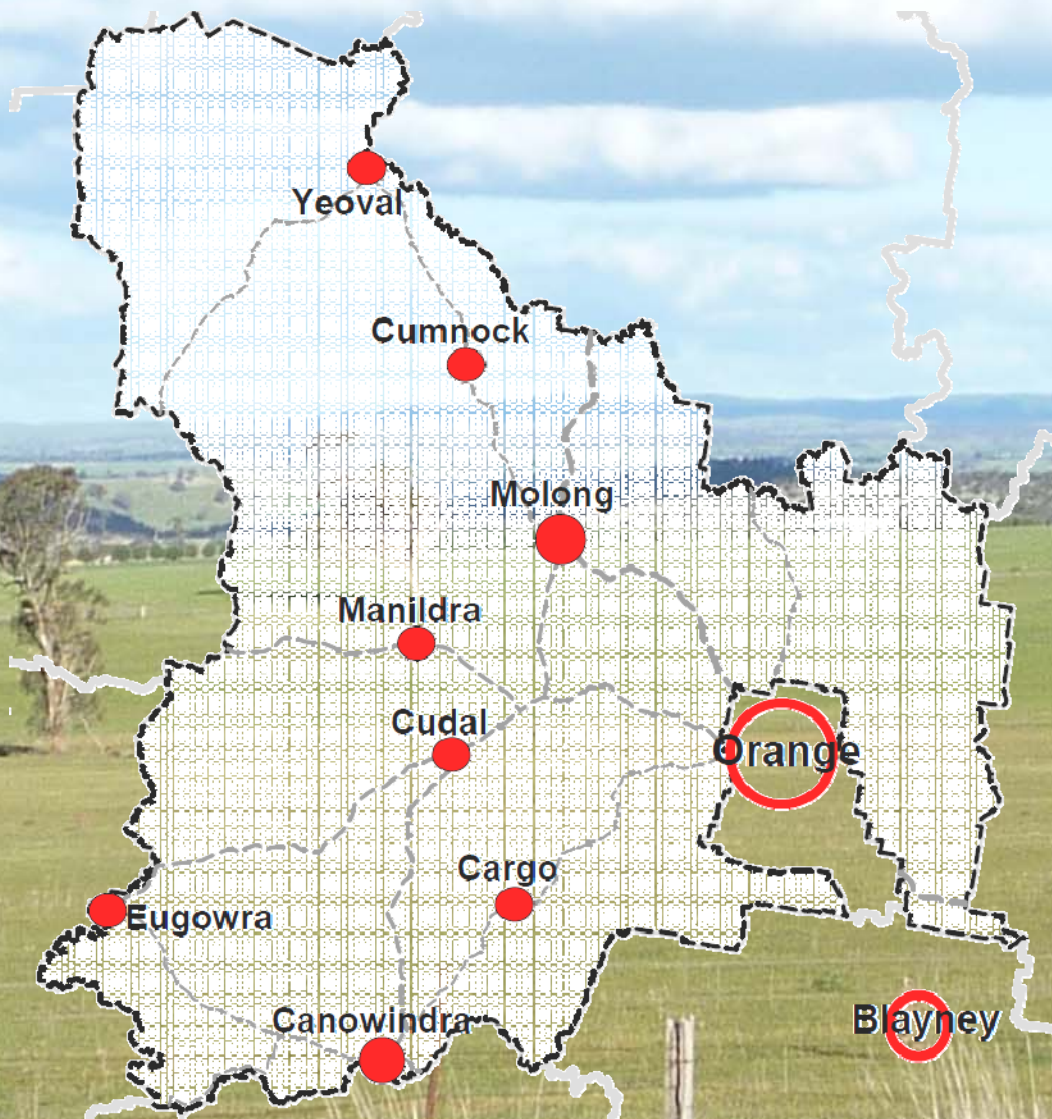


Cabonne Settlement Strategy

Final - Adopted



Land Use Strategies for:
Molong, Canowindra, Eugowra, Manildra,
Yeoval, Cudal, Cumnock & Cargo

Volume A
Cabonne Settlement Strategy
Cabonne Council

(Adopted 16 July 2012 with Amendments August 2012)

Volume A: Cabonne Settlement Strategy

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Document Control

Version	Date	Author	Summary	Reviewed
A	December 2009	A.Napier	Draft Table of Contents	DES / EDO
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- The Cabonne Councillors;
- Each of the participating Government Departments / Agencies with particular mention of the Department of Planning & Infrastructure, Office of Environment & Heritage, the New South Wales Office of Water, and former Dept of Primary Industries; and
- Community and Residents in each key Settlement and across the Cabonne who have provided their assistance and input into this Strategy.

Acronyms / Terminology Used in this Strategy

The following acronyms are used in this Strategy. Please note that some NSW Government Department names will change over time so references in this document to one name refer to all future names of that Department that has similar responsibilities.

	Government Departments
CTW	Central Tablelands Water
DoP / DP&I	Department of Planning & Infrastructure (former Department of Planning)
OEH / DECCW	Office of Environment & Heritage (former Department of Environment, Climate Change and Water)
DTIRIS/ DPI / I&I	Dept. of Trade and Investment, Regional Infrastructure and Services (former Department of Primary Industries / Industry and Investment)
DWE	Former Department of Water & Energy (now split across several government departments)
EPA	Environmental Protection Authority
LPMA / LPI	Land & Property Information (Former Land and Property Management Authority / Department of Lands)
NoW	Department of Primary Industries – Office of Water (part of NSW Trade & Investment)
NPWS	National Parks & Wildlife Service (part of Office of Environment & Heritage)
	Planning Terminology
EPI	Environmental Planning Instrument
SEPP	State Environmental Planning Policy
LEP	Local Environmental Plan
CLEP1991	Cabonne Local Environmental Plan 1991
DCP	Development Control Plan

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1. Strategy Overview

1.1. What is a Settlement Strategy?

The Cabonne Settlement (Land Use) Strategy ('Settlement Strategy' or 'Strategy') is a plan that identifies key issues facing each of the eight (8) key settlements in Cabonne and develops strategies to address those issues and manage the future growth and enhancement of each of the settlements for the next 10-20 years.

It is important that the community and key stakeholders have a say in the future development of their settlements and the Strategy will aim to summarise what the community (and Council) see as the vision for each settlement and how it will be achieved.

The strategies and recommended future land use arrangements will inform the drafting of new planning controls including a new Local Environmental Plan and Development Control Plan that will guide future development in each settlement.

1.2. List of Settlements/Study Area

This Strategy is limited to those settlements that currently classified as **Zone 2(v) Village** under Cabonne Local Environmental Plan 1991 ('CLEP1991'). This includes:

- Molong
- Canowindra
- Eugowra
- Manildra
- Cudal
- Cumnock
- Cargo
- Yeoval

The Settlement Strategy appreciates that there are other areas in Cabonne where there are historical settlements and existing groups of dwellings. However, these rural settlements do not currently have a Village Zone and are not addressed in this Strategy. This includes areas such as Mullion Creek, Borenore, Nashdale, Spring Terrace, Byng and March. These areas may be reconsidered in the future.

1.3. Why is a Settlement Strategy Important?

The value of documenting a Settlement Strategy is that it:

- Provides the community and key stakeholders with a chance to have a say in the future development outcomes for each settlement;
- Illustrates the desired future character and land use outcomes that the community (and Council) are aiming for and how the Council expects to achieve them;
- Helps Council staff and Councillors interpret and administer the planning instruments intended to implement the outcomes of the strategy and ensures greater consistency in land use decision-making;
- Promotes forward planning and increased certainty for the community and investors in each settlement and decreases the costs associated with assessing development;
- Assists with an improved understanding of how and why there may be changes to existing planning controls in Cabonne.

1.4. Objectives of the Settlement Strategy

The objectives of the Settlement Strategy for Cabonne's key settlements are:

- To determine the desired future character and vision;
- To review the key opportunities and constraints to sustainable growth;
- To set out key land use principles that will guide future development;
- To recommend strategies to address key challenges;
- To encourage sustainable development for future generations;

- To protect the environmental and cultural values and assets;
- To inform the drafting of new planning controls (a new Local Environmental Plan and Development Control Plan for Cabonne) that will implement the recommended strategies and land use arrangements for each settlement;
- To ensure the strategy and future planning controls are in accordance with the legislative and policy framework for Cabonne.

A key piece of legislation influencing this Strategy and future planning controls is the *Environmental Planning and Assessment Act 1979* ('EP&A Act') (see [Appendix 1](#) for more details). The objectives of the EP&A Act are also directly relevant to the objectives of this Strategy as follows (Part 1 - Clause 5) (*our underline*):

(a) *to encourage:*

- (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.*

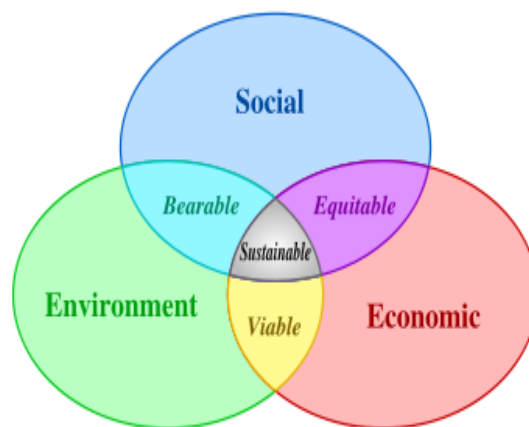
1.5. Sustainable Development

A key principle that will guide the Cabonne Settlement Strategy is that of 'Sustainable Development'. 'Sustainable Development' is defined as '*development which meets the needs of the present without compromising the ability of future generations to meet their own needs*' (United Nations; Brundtland Report 1987). This is also often known as the principle of 'inter-generational equity'. Sustainability seeks to integrate the requirements of social, environmental, and economic sustainability (see diagram opposite).

Proper management of growth is essential for land use planning. Sustainable growth / development is about maximising the efficient and economic use of land, managing the social issues associated with growth, and protecting and preserving the environmental values and assets of an area for future generations.

For example, the long-term sustainability of each settlement may consider:

- **Environmental Issues:** such as identifying environmentally sensitive lands and land severely constrained by natural hazards and locating land uses to as to enhance environmental outcomes and minimise hazards;
- **Economic Issues:** such as the provision of land for employment generation, the location of lands in each settlement where the cost of development is minimised (by avoiding sites with natural hazard constraints and encouraging growth where utilities and infrastructure can easily be augmented), minimising land use conflicts that may restrict the efficient use of land, and minimising transaction costs associated with economic activity;



- **Social Issues:** such as the demographics and socio-economic backgrounds of each community so that demand for community services, employment, open space & recreation etc can be provided to promote equity across Cabonne, between settlements, and between different groups in society.

Sustainable development can only occur if the social, economic and environmental opportunities and constraints are addressed together. For example, environmental protection is not sustainable if no-one has a job to feed their family. Likewise, developing the 'cheapest' land available may not take into account long term social and environmental costs.

1.6. Structure of the Document

There are three (3) core aspects of the Strategy including:

- **A Local Profile:** This explains the physical, social and economic circumstances of Cabonne and its people that are known at this time and that define the character of Cabonne and its settlements;
- **An Issues Paper:** This explains the opportunities and constraints facing Cabonne and each of its settlements and seeks to estimate how the local profile may change in the future; and
- **A Land Use Strategy:** This presents recommendations for land use arrangements that will seek to address the key opportunities and constraints facing Cabonne's settlements both now and in the future.

These three components are integrated throughout the document and addressed firstly at the local government level (which presents issues that are common to all settlements) and then at the level for each settlement (summarising additional local opportunities and constraints and then place-based recommendations that may affect future land use patterns in each settlement).

1.7. Integration with other Strategies

1.7.1. Rural & Industrial (Land Use) Strategy

It is important to note that lands outside the Village Zone are addressed by an adopted land use strategy entitled 'GHD (2008) *Councils of Blayney, Cabonne and Orange City - Sub-Regional Rural and Industrial Land Use Strategy* ('Rural & Industrial Strategy').

The Rural & Industrial Strategy provides land use strategies for all areas outside the Village Zone including the rural and environmental zoned lands, rural residential development (that is not in close proximity to a village zone), and larger-scale industrial development. A copy is available on Council's website.

This Settlement Strategy will seek to integrate with the Rural & Industrial Strategy to create a comprehensive set of land use strategies for all land uses in the Cabonne local government area.

The Rural & Industrial Strategy is made up of three (3) sub-documents including:

- **Local Profile (February 2008);**
- **Issues Paper (February 2008); and**
- **Final Strategy (July 2008).**

To minimise duplication, where information in the Rural & Industrial Strategy is relevant to the Settlement Strategy a reference is provided. The reference may sometimes be supplemented by additional relevant information. This includes the following:

Local Profile:

Chapter 4 – Regional Land Use (land use mapping and industrial land use and supply);

Chapter 6 – Natural Resources (water resources, topography, soils, climatic factors, land capability, mineral resources, biodiversity, natural hazards, and heritage);

Chapter 7 – Infrastructure (transport, water and sewer, utilities, waste management, and social infrastructure);

Issues Paper:

Chapter 4 – State Government Policies (land use, agriculture, water, soils, catchment management, and vegetation management);

Chapter 10 – Natural and Scenic Environment (existing situation, planning challenges and opportunities, community response, agency response, and implications for the strategy);

Chapter 11 – Heritage and Culture (existing situation, planning challenges and opportunities, community response, agency response, and implications for the strategy);

Chapter 12 – Growth Management (growth and sustainability, and development principles);

Final Strategy:

Chapter 3 – Summary of Key Issues (natural and scenic environment);

Chapter 4 – Vision and Guiding Principles (vision for the strategy, and guiding principles);

Chapter 5 – Growth Management (growth and sustainability, growth management strategy, and development principles);

Chapter 12 – Natural and Scenic Environment (objective, strategies and actions);

Chapter 13 – Heritage and Culture (objective, strategies and actions).

1.7.2. Heritage Study

Council is currently finalising a Community Heritage Study to inform this Strategy about items of heritage interest, heritage conservation areas, and items that are recommended for inclusion in the new LEP on the Schedule of Heritage Items. This study was not completed at the time of preparing this Strategy but information from the study has been used to inform the Strategy.

1.8. Overarching Principles for Strategy

The following principles should guide this Strategy and the outcomes for land uses in Cabonne:

1) Promoting land use efficiency

- a) Provide a shire-wide local planning context to future planning in Cabonne that will inform the preparation of a new shire-wide Local Environmental Plan ('LEP') and Development Control Plan ('DCP');
- b) Establish a hierarchy of settlements that supports social, economic and environmental principles at Cabonne and regional levels;
- c) Recognise and address supply and demand for each land use at a shire-wide level utilising a realistic appreciation of opportunities and constraints for Cabonne and each settlement but looking optimistically towards the future;
- d) Maintain and enhance the liveability and amenity of Cabonne as a place to live, work and pursue a lifestyle of choice;
- e) Foster links between the various settlements and communities in such a way that recognises the role of each settlement and the needs that place may have both within and outside Cabonne;
- f) Recognise the primary service centre roles that the townships of Molong and Canowindra have to all areas of Cabonne;
- g) Build on the existing and desired characters for each settlement as guided by each community;
- h) Provide for a variety of lot and housing sizes and types which acknowledge changing household structure, caters for all sections of the community, and accommodates the future growth in residential housing
- i) Promote the provision of affordable housing in Cabonne;
- j) Integrate large lot residential lands surrounding settlements and ensure that development of these areas is relatively unconstrained and meets sustainability objectives.

2) Supporting employment and economic development

- a) Ensure this Strategy and supporting planning provisions support and promote sustainable employment, industrial lands and specialised centres;
- b) Provide for and facilitate future economic growth in Cabonne;
- c) Ensure innovative and sustainable growth in the tourism sector;
- d) Encourage and support commercial and retail development in Cabonne;
- e) Ensure the provision of well-located, suitable land for future industrial purposes in key settlements.

3) Caring for the natural environment and heritage

- a) Minimise the risks and development expense associated with developing land subject to natural hazards;
- b) Protect and enhance areas supporting higher conservation values;

- c) Avoid fragmentation of the landscape and agricultural lands and seek to enhance and protect ecological corridors;
 - d) Protect and enhance the quality and quantity of local water resources;
 - e) Protect the heritage values of Cabonne.
- 4) **Providing an appropriate level of facilities and services**
- a) Recognise the diverse needs of a broader cross-section of Cabonne's community;
 - b) Recognise that the level of provision of facilities and services is related to the settlement's needs and aspirations, the economic viability of those services, and the relationship of each settlement to other settlements (both within and outside Cabonne);
 - c) Provide facilities that will seek to attract and support a range of ages and their needs to maintain a diverse community in each settlement;
 - d) Promote accessibility of facilities;
 - e) Provide for the recreational needs of the current and future population.
- 5) **Integrating transport and infrastructure provision with land uses**
- a) Integrate land uses, infrastructure and transport to reduce development cost and promote sustainable development;
 - b) Leverage off existing transport and infrastructure and support greater economic growth in areas with higher levels of transport and infrastructure;
 - c) Minimise the cost to Council, developers, and the community of extension of transport, utilities and infrastructure by promoting urban consolidation and careful release of land for new development that is aligned with efficient infrastructure provision;
 - d) Ensure the provision of a secure and reliable water supply to all settlements;
 - e) Ensure appropriate levels of sewer services for each settlement;
 - f) Ensure the adequate provision of electricity and telecommunications infrastructure;
 - g) Manage and minimise stormwater impacts and waste and encourage recycling and waste management.

1.9. Land Use Principles

This Strategy seeks to recommend appropriate locations for future land uses within each of the key settlements. These recommendations are guided by a set of 'land use principles' that can be applied equally to all settlements. This improves the transparency of the decision-making process and ensures equity among each of the key settlements.

1.9.1. General Principles (All Land Uses)

The recommendations in this Strategy are based on the following general principles that apply to all land uses. The aim for all settlement land uses:

1. **Existing Character:** Build on the existing zoning pattern and existing dominant land use / development patterns / character to ensure land owners are given reasonable development potential based on existing opportunities (equity);
2. **Desired Character:** Recognise desired future land uses / development patterns / character;
3. **Land Use Conflicts:** Avoid / minimise land use conflicts and protect social, economic and environmental amenity to maximise the efficient use of land;
4. **Environmental Impacts:** Avoid / minimise environmental impacts by determining for each land use the appropriate location, density, setbacks and buffers to environmentally sensitive lands (including land / water / biodiversity sensitivity);
5. **Drinking Water Catchment:** Avoid / minimise development in drinking water catchments where there is a risk of reducing drinking water quality or quantity;
6. **Natural Hazards:** Avoid / minimise impacts of natural hazards by identifying these hazards and determining for each land use the appropriate location, density, setbacks and buffers to these hazards;

7. **Heritage:** Protect key heritage assets and heritage streetscapes by identifying the desired character and ensuring new development is sensitive to and integrates with this desired character whilst not unduly preventing adaptive re-use of heritage items;
8. **Development Cost:** Direct development to sites with less natural hazards, less environmental sensitivity, less heritage constraints, and good access to utilities and infrastructure to reduce the overall cost of development and delay in development assessment;
9. **Site Planning:** Use good site planning to guide the location of buildings on each site to maximise environmental opportunities and constraints and integrate with the character of each settlement;
10. **Utilities & Infrastructure:** Promote growth and development in areas with higher level utilities and infrastructure to avoid expensive extensions of utilities and costs to the community and to increase the competitive advantage of the land use;
11. **Complementary Uses:** Integrate complementary business and community land uses to create strong settlement 'cores' with pedestrian activity, active street frontages, strong streetscapes, and a contribution to the settlement character;
12. **Efficient Use of Land:** Promote efficient use of land by avoiding unnecessary urban sprawl and promoting better serviced development;
13. **Land Supply:** Ensure sufficient land supply for 10 years for each key land use with a buffer to allow for unseen changes or changed growth rates;
14. **Dwelling Demand:** Recognise the current demand for dwelling lots with a more rural or landscape character and enhance those settlements with the ability to provide that development pattern;
15. **Development Expectations:** Clarify development expectations to community/applicants so energy and investment are directed towards sustainable development and the development assessment process can be streamlined for improved economic outcomes;
16. **'Split Zoning':** Match zone boundary to cadastre/lot where possible to avoid confusion over mixed zoning and development permissibility.

1.9.2. Community Facilities

Community land uses include a range of services including but not limited to educational establishments (including schools), emergency services facilities, health services facilities (hospitals, medical centres, health consulting rooms), information and education facilities, places of public worship, and public administration buildings.

Some community uses may be permissible in a wide variety of zones under the Standard LEP or through operation of the State Environmental Planning Policy (Infrastructure) and as such do not require a specific designated area or 'zone'.

The key land use principles for community facilities in Cabonne are as follows:

- **Social Inclusion:** Provide essential community services and facilities that meet local needs and promote social and economic well-being, equity, inclusiveness, and a sense of community;
- **Accessibility:** Utilise sites that are easy-to-find, with ease-of-access to the public, proximity to key transport routes and public transport, and ability to accommodate and manage parking and pedestrian connections and issues;
- **Adaptability:** Maximise adaptability and flexibility within the design to cater for a broad cross-section of the community and individual needs;
- **Land Use Conflicts:** Minimise conflicts with any sensitive neighbouring land uses (especially residential uses);
- **Activity:** Co-locate with other community or business uses to reinforce settlement centres and main streets;
- **Infrastructure / Utilities:** Ensure provision of adequate utilities, infrastructure, and supporting services;
- **Character & Design:** Ensure facilities are well designed and make a positive contribution to the streetscape and community identity (particularly in heritage conservation areas, in proximity to heritage items or as an adaptive re-use of heritage buildings);
- **Environmental Sustainability:** Set benchmarks for each settlement for water and energy efficiency and minimisation of environmental impacts.

1.9.3. Industrial Land Uses

Definitions for Industrial Land Uses

According to the Standard Instrument (Local Environmental Plans) Order 2006:

- *“**industry** means the manufacturing, production, assembling, altering, formulating, repairing, renovating, ornamenting, finishing, cleaning, washing, dismantling, transforming, processing or adapting, or the research and development of any goods, chemical substances, food, agricultural or beverage products, or articles for commercial purposes, but does not include extractive industry or a mine.*
- *“**light industry** means an industry, not being a hazardous or offensive industry or involving use of a hazardous or offensive storage establishment, in which the processes carried on, the transportation involved or the machinery or materials used do not interfere with the amenity of the neighbourhood by reason of noise, vibration, smell, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products, grit or oil, or otherwise.”*
- *“**heavy industry** means an industry that requires separation from other land uses because of the nature of the processes involved, or the materials used, stored or produced. It may consist of or include a hazardous or offensive industry or involve the use of a hazardous or offensive storage establishment.”*

Types of Industrial Activity

Please note that the Rural & Industrial Strategy sets out the key principles for industrial land uses including principles for identifying appropriate industrial land (Strategy – Section 10 – Industry, page 84).

The Rural & Industrial Strategy looks at a range of industry types including manufacturing, mining, agricultural industry, tourism and infrastructure. Mining and agricultural industry are generally related to rural lands outside the scope of this Settlement Strategy. Tourism and infrastructure are dealt with in this Strategy as either a business or community use. Therefore, this Strategy is primarily looking at manufacturing, logistics, and vehicle-related industries ('light industries').

Rural & Industrial Strategy Land Use Principles

An excerpt of the recommendations of the Rural & Industrial Strategy is set out below (Source: Strategy – Section 10 – Industry, page 84):

10.1 Objective

Provide adequate opportunities for employment-generating activities that will support the community and the economy of the Sub-Region.

10.2 Strategic Direction

Provision of adequate industrial land

The provision of well-located and suitable serviced land is vital in ensuring that land is available for industrial development when needed. This Strategy sets out the policy framework for achieving this objective by identifying the key areas and locations where industrial activities can be established. These areas:

- Will be protected from encroachment by activities that could hinder their effective operation, such as residential development;
- Are located near to transport and freight routes;
- Are located near existing zoned industrial land;
- Are located close to reticulated services (water and sewerage, and where necessary, natural gas) that have the capacity to accommodate the development level;
- Are free of hazards, such as flooding and bushfire; and
- Are located adjacent to areas with good access to a suitable workforce.

Terra Consulting (2000) *Strategic Planning Overview for Molong* (Section 3.3.1) provides additional principles for industrial land uses including:

- *Proximity or accessibility to markets;*
- *The topography should be relatively flat to facilitate the economic establishment of large buildings and open storage areas;*

- *Relative separation from sensitive land uses so as to minimise the potential for land use conflict* (this would include avoiding industry along key highway / road entrances to towns/villages to protect the visual amenity and character AND avoiding future growth areas for residential / dwellings to minimise impact on residential land supply).

Abacus Planning (2000) *Molong Strategic Study – Residential and Industrial Expansion* (Section) provides some further principles including:

- Industries should not be water intensive (as there is limited opportunity to provide treated or untreated water) both due to servicing costs and lack of secure water supply to meet future residential growth;
- The biggest single constraint is the ability to provide adequate infrastructure including roads, utilities services, and sewer and water reticulation at an economically viable cost.

This Strategy suggests that there should also be an avoidance of greenfield industrial sites that are a long distance away from supporting services and retail and entertainment where this is a reliance on additional transportation and infrastructure.

Buffers to Industrial Land Uses

A key aim in identifying future industrial lands is to minimise land use conflicts, particularly by incorporating buffer zones to sensitive land uses (e.g. residential / community uses) to minimise impacts and avoid restrictions on expansion and operation.

The Department of Industry & Investment (Primary Industries) sets out recommended setbacks or 'buffers' between higher impacts types of development and residential areas, urban development & rural dwellings. Some additional/similar buffers are set out in the Rural & Industrial Strategy (**Final Strategy – Appendix E** – Recommended buffer distances to industry types).

Land Use	Urban Res.	Rural Res.	Schools	Water-courses	Property Boundary	Roads
Intensive Animal Industries (e.g. piggeries/ feedlots/ poultry farms)	1000m	500m	1000m	100m	100m	100m
Dairies	500m	250m	250m	100m	100m	100m
Rural Industries (e.g. feed mills & sawmills)	1000m	500m	500m	50m	Depends	50m
Hazardous or Offensive Industry	1000m	1000m	1000m	100m	100m	100m
Extractive Industries (*-if blasting) (e.g. Molong Limestone Quarry)	500m *1000m	500 *1000m	500m *1000m	Depends	Depends	Depends
Sewerage Works (e.g. Molong STP)	400m	400m	400m	Depends	Depends	Depends

Table 1: Excerpt (summarised) of recommended buffer zones for higher impact industrial uses to sensitive land uses (Source: NSW Department Of Primary Industries (2007) *Living & Working In Rural Areas - A Handbook for Managing Land Use Conflict on the NSW North Coast*).

However, it is also important to attempt to locate industrial uses in reasonable proximity to existing settlements to improve access for employees and access to town amenities that can make employment more sustainable rather than identifying sites a significant distance from town. Due to the constraints in and around Molong the distance for investigation of land for large future industrial estates has been extended to 3-4km distance from the town centre.

Recommended Industrial Locations

It is important in this Strategy to maximise economic growth and employment through sustainable industrial activity whilst maximising integration with each of the settlements and minimising potential land use conflicts. The Rural & Industrial Strategy designates larger scale industrial locations in Manildra but does not highlight any other settlements for any particular industrial activity.

Therefore, it is assumed that only small-scale light industry is expected in the other settlements. However, only a limited number of the settlements (outside of Manildra) will be able to meet the industrial requirements noted above. In particular, this Strategy states that Eugowra, Yeoval, Cumnock, Cudal and Cargo are unlikely to be suitable for anything other than low-scale localised industry unless it is associated with rural or extractive industries in the area.

1.9.4. Business Uses

For the purpose of this Strategy, business land uses include both retail and commercial premises but do not include bulky good premises, industrial retail facilities, highway service facilities or tourism precincts that require their own specialised areas.

Retail / Commercial

The key land use principles for business land uses in Cabonne are as follows:

- **Primary Centre:** Reinforce the Towns of Molong and Canowindra as the primary business / retail / commercial cores of Cabonne with local services in other key settlements;
- **Main Streets:** Locate business uses in the 'core' area of each settlement. Development outside of the business core must not compromise the role and function of the centre;
- **Accessibility:** Promote accessibility by locating businesses near major private and public transport routes, cycle-ways, and higher level pedestrian facilities that may include footpaths, kerbs and gutters;
- **Compatibility:** Co-locate compatible business uses that complement each other whilst minimising impacts on adjacent sensitive land uses such as dwellings;
- **Parking:** Provide on-street and on-site parking (as required) to cater for parking needs whilst minimising impacts on parking for adjacent uses;
- **Character & Design:** Ensure sensitivity to key streetscapes through appropriate scale, massing and design and make a positive contribution to the streetscape and community identity (particularly in heritage conservation areas/ proximity to heritage items);
- **Activity:** Cluster business land uses in defined areas (especially in mature settlements such as Molong and Canowindra) to:
 - Create a clear 'centre' that contributes to settlement character and identity;
 - Minimise land use conflicts with sensitive land uses (e.g. noise, traffic etc);
 - Promote an 'urban' character that may involve higher densities;
 - Provide active street frontages with open storefronts and pedestrian activity;
- **Investment:** Support existing businesses and their ongoing development, while at the same time encouraging new business into each settlement.

Home Businesses

'Home businesses' are businesses conducted in a dwelling (or ancillary building to a dwelling) that is managed and operated by the owners of the dwelling, where the business is of such a small scale that the majority of goods or items sold are produced on the premises, and there are very limited impacts on neighbourhood amenity (e.g. traffic, noise, etc).

Whilst 'home businesses' are a type of business land use, it is Council's intent that they do not need to be located in designated business areas in each settlement and they will be permissible with consent in residential areas/ zones. This ensures that small business 'start-ups' are permissible in residential areas and it does not unduly constrict creativity or business operations.

However, if a business becomes larger, non-owner operated, or has greater impacts then it will need to be located in an area where business/retail uses are permissible (see section on 'Existing Use Rights' below).

1.9.5. Large Lot Residential

Please note that the Rural & Industrial Strategy sets out the key principles for residential and rural subdivision including principles for creating lifestyle blocks ([Strategy – Section 11 – Residential and Rural Subdivision, page 95](#)).

Development Types

This section refers to development often called either 'rural residential', 'large lot residential', or 'lifestyle blocks'. Under CLEP1991 the most applicable zone is Zone 1(c) (Rural Small Holdings). In the Standard Instrument and this Strategy they will primarily be referred to as large lot residential. In effect on the majority of these allotments the dominant use is for residential purposes and not for agricultural purposes (i.e. lot sizes are not of sufficient size to create a viable agricultural business), even if some ancillary agricultural practices are present.

Strategy Recommendations

An excerpt of the recommendations of the Rural & Industrial Strategy is set out below (Source: [Strategy – Section 11 – Residential and Rural Subdivision, page 96](#)):

A planned approach to subdivision for lifestyle blocks involves identifying those areas that are suitable for lifestyle blocks and permitting development to occur, whilst prohibiting such development in all other rural areas.

Once the areas for lifestyle blocks have been identified a planning framework needs to be established. The planning framework will achieve four key objectives:

- ▶ Protect agricultural land use resources wherever possible, by discouraging land uses unrelated to agriculture from locating on agricultural land and minimising the ad hoc fragmentation of rural land;
- ▶ Plan and provide for rural settlement where it can benefit and support existing communities and have access to appropriate community services and infrastructure;
- ▶ Minimise the potential for land use conflict by providing adequate separation distance between potential conflicting land uses, introducing management requirements that protect existing agricultural land uses, identify areas that are suitable and capable for intensive agricultural pursuits as agricultural priority areas; and avoid locating new rural settlements in areas that are likely to create conflict with established or proposed agricultural priority areas; and
- ▶ Carefully manage natural resources by discouraging development and/or subdivision that may result in land or environmental degradation; integrating land, catchment and water resource management requirements with land use planning controls and incorporating land management standards and sequential land uses change in the land use planning and development process.

Recommended Rural Residential Locations

It is important in this Strategy to provide some diversity of housing and lot sizes to meet demand and attract new residents to the rural and landscape character that large lot residential can offer whilst ensuring this development is sustainable in accordance with the principles above.

The Rural & Industrial Strategy primarily deals with 'stand-alone' large lot residential areas such as Mullion Creek, Windera and Strathnook Lane (that are mostly in closer proximity to Orange) and does not address large lot residential areas attached to each village (which is covered by this Strategy).

The Rural & Industrial Strategy recommends potential future new release areas in SA3 Weemilah, SA4 Spring Glen, SA 5 Mullion Creek, and SA6 Windera. It is necessary for landholders to prepare local environmental studies to support any rezoning application. At this stage only preliminary studies have been received for SA6 Windera.

Therefore, this Strategy reviews existing large lot residential areas surrounding the key villages and determines their opportunities and constraints and development potential. In accordance with the Rural & Industrial Strategy, this Strategy states that most areas do not require any additional large lot residential land supply.

1.9.6. Residential Land Uses (Settlements)

The key land use principles for urban residential land uses in Cabonne are as follows:

- **Land Supply:** Manage the outward growth of each settlement to ensure a minimum of 10 years estimated land supply for dwellings with a range of housing and lot choices whilst promoting an orderly and efficient pattern of development;
- **Housing Choice:** Provide a variety of lot sizes (and development densities) to meet household needs and particularly the needs of an ageing population and smaller household sizes;
- **Dwelling Density:** Permit higher dwelling densities only in areas in close proximity to key transport routes, retail & community services and facilities, higher level utilities, and open space and recreation;
- **Sustainable Development:** Focus larger scale urban residential development in the Towns of Molong and Canowindra where there are higher levels of service, infrastructure and facilities to support that growth;

- **Settlement Pattern:** Ensure that street, block and lot patterns promote connectivity and safety, whilst responding the natural topography and environmental requirements of the land;
- **Amenity:** Establish and maintain high quality living environments to improve amenity, safety, liveability, and saleability of residential areas whilst minimising land use conflicts;
- **Environmental Sustainability:** Promote environmentally sustainable and passive design principles (especially for new development) to minimise use of water, energy and materials and maximise adaptability and accessibility.

1.9.7. Village Zone

In settlements that will retain an equivalent of a 'Village Zone' under the proposed new LEP there will not be designated areas for each land use. However, this Strategy may still nominate preferred areas for each land use and the land use principles above may still be relevant to each applicable land use. However, there is less likely to be a dense development pattern or urban / business core. Additional land use principles for the Village Zone include:

- **Character:** Preserving and enhancing the unique 'village', rural and landscape qualities that defines each settlement and makes it an attractive place to live, work and play;
- **Heritage:** Maintain and enhance the unique historic identity and heritage of each settlement;
- **Services:** Promote the use of local business and community facilities to maintain local services;
- **Community:** Recognise the important role that community facilities, services, and community spirit play in maintaining each of the settlements;
- **Housing Choice:** Promote a range of lot and house sizes to cater for a range of future needs and, where possible, allow for ageing-in-place;
- **Infrastructure:** Ensure an efficient development pattern and lower development cost by maximising development in areas that already have a good level of utilities and transport infrastructure. Investigate the feasibility of improved utilities over the next 30 years with a focus on water, sewer and telecommunications;
- **Traffic:** Manage traffic speeds through improved visual cues, including signage, and landscaping.

1.9.8. Open Space & Recreation

The key land use principles for open space and recreation in Cabonne are as follows:

- **Need:** Creation of a range of quality recreational environments that meet a variety of needs including ecological, social and transport functions and both passive and active recreational needs;
- **Activity:** Provision of and integration of active sportsgrounds and sporting facilities that promote sports and activity in each settlement;
- **Character:** Location and design of open space areas that respond to natural and cultural values and contribute to the character and streetscape of each settlement;
- **Environment:** Integration of natural features such as creek lines, vegetated areas and ridgelines with appropriate protection of environmental and scenic values;
- **Accessibility:** Connection of open spaces to urban areas with linkages between key open spaces, settlement centres & activities, pedestrian and cycle routes, and key transport routes. Facilitate walking and cycling as effective means of short to medium distance travel. Walking and cycling routes should be direct, safe, and off-road as far as possible. Parks provide ideal spaces in which to provide these links, and development of a park and open space network should be viewed as an opportunity to provide for a local movement network;
- **Safety:** Focus on public safety and accessibility within open spaces with appropriate lighting, maintenance, design, and emergency escape routes in events of fire or flooding;
- **Amenity:** Provision of ancillary recreational facilities to support use of the open spaces and sportsgrounds where these facilities improve amenity without impacting on the character and scenic values of each area, safety or undue burden on Council's budgets;
- **Attraction:** Provision of open spaces that capitalise on passing tourist traffic, cater for local and regional sporting events and that encourage extended stays within Cabonne.

1.9.9. Existing Use Rights

Where this Strategy or the Rural & Industrial Strategy propose changes to land use arrangements, it is important to note that existing land uses will have legal rights to continue their current operations even if they are subsequently prohibited in future zones.

If any existing approved land use in a settlement is prohibited by a future 'zone' under the new Local Environmental Plan then that land use will have what are called 'existing use rights' that enable it to continue operating even though it is prohibited.

An 'existing use' (defined in Section 106 of the *Environmental Planning and Assessment Act 1979* ('EP&A Act')) is a use that is lawfully commenced but subsequently becomes a prohibited use under a new local environmental plan or other environmental planning instrument. The EP&A Act and the EP&A Regulation 2000 makes provision for the continuance of existing uses.

The existing use provisions aim to balance the potential hardship and dislocation that could result if landowners or occupiers were required to discontinue uses no longer permitted under current planning controls, against the need to transition to the new and preferred planning regime for the area. Existing use rights enable a prohibited land use to continue as if that use was permissible before the zone was changed for that property. Those land uses do not have to cease operations or move if the zoning were to change in the future.

For example, if a new business zone is introduced in the Towns of Molong and/or Canowindra then approved existing businesses that are not included in this business zone (and are likely to be prohibited in other zones) would have existing use rights to continue operating as a business.

There are some limitations to existing use rights including limitations on expansion of existing land uses and limitations on new developments that can occur on those properties with those rights. However, under SEPP No.22 (Shops & Commercial Premises) a business with existing use rights may have the ability to convert to another land use of a similar retail or commercial nature (even if they are both prohibited under the proposed future zoning) where there is only a minor environmental effect. Enlargement of these existing businesses may also be limited to 10% of the existing floor area. Minor alterations and additions are likely to be permitted but a full rebuild of the business may not be permitted.

Please note that existing use rights are a complex legal issue that is subject to change and we recommend that land owners do not rely on this information as a full interpretation of the those rights. It is recommended that you get your own legal advice if the zoning of your property is proposed to be changed.

1.10. Urban Design

Urban design is related to land use planning but also seeks to take into account the design and pattern of buildings, streets, spaces and landscape and how this affects the character and function of an area, particularly how all of these integrate to create public spaces and places. Key issues for Cabonne's settlements could include, but is not limited to the design of:

- The gateways and entrances to each settlement;
- Main streets and key pedestrian areas;
- Key public spaces and places;
- Street trees master plans and landscape design;
- Advertising and signage strategies;
- Integration of connections and transport to key public spaces.

This Strategy has not been tasked with conducting a full urban design study of each of the settlements as it is not mandatory for the purposes of investigating land supply and demand. However, an urban design study can have wide ranging benefits for assisting a settlement to define its desired character and making it an attractive and functional place to live, work and play. Council should review the opportunity for funding and resources to prepare a formal Urban Design Study for each of the settlements that address the key issues above.

Council should also review the opportunity for funding and resources to review and upgrade the existing Street Tree Master Plan, Landscape Strategy, and Maintenance Plan for each of the settlements. Council should review how the Village Enhancement Program and Community Investment Program can be integrated with the Settlement Strategy for improved and strategic outcomes for each of the settlements.



1. Strategy Overview

Cabonne Settlement Strategy



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2. Cabonne Overview

2.1. Spatial Overview

2.1.1. Regional Location

The Cabonne Local Government Area ('Cabonne') is located in the Central West region of New South Wales, approximately 250 to 350km west of Sydney. It is surrounded by ten (10) local government areas ('LGAs') including Orange, Blayney, Bathurst Regional, Cowra, Forbes, Parkes, Dubbo, Narramine, Wellington, and Mid-Western Regional Councils. As Figure 1 shows, many of Cabonne's key settlements are in close proximity to a number of key regional centres including the cities of Orange, Bathurst, Cowra, Forbes, Parkes, Wellington and Dubbo.

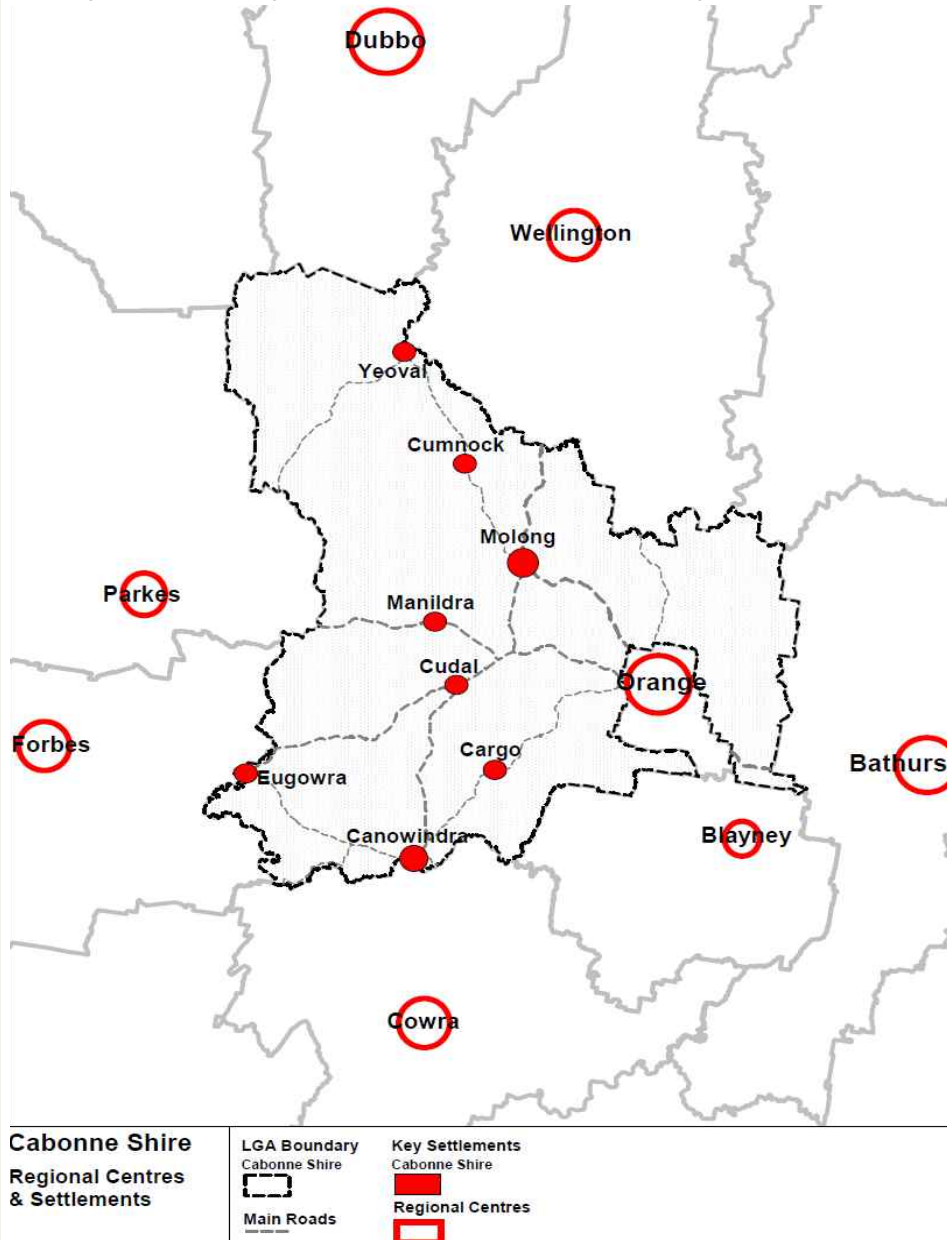


Figure 1: Location of each of the key Cabonne settlements in relation to the other regional centres (Source: Cabonne GIS 2010).

Issues & Strategies

Regional Approach: It is important to recognise that any land use strategy for Cabonne's settlements needs to accept that there are regional forces that may influence outcomes in Cabonne requiring an analysis of the relationship between regional centres and Cabonne's settlements as well as between Cabonne's settlements.

2.1.2. Existing Zoning Pattern

Figure 2 shows the existing zoning under *Cabonne Local Environmental Plan 1991* ('CLEP1991').

It is important to note that this Strategy primarily relates to the eight (8) key settlements within Zone 2(v) (Village Zone), those areas of Zone 1(c) (Rural Small Holdings) attached to the settlement, and parts of surrounding zones into which the settlement may grow in the future.

The other land use zones have been dealt with in GHD (2008) *Councils of Blayney, Cabonne and Orange City – Subregional Rural and Industrial Land Use Strategy* ('Rural & Industrial Strategy') previously adopted by Council.

In general, the urban areas (both Zone 2(v) and Zone 1(c)) are surrounded by Zone 1(a) General Rural. There are no Zone 1(f) Forestry areas in close proximity to these settlements. There are currently no specific zones for industrial, business or recreational land uses under CLEP1991 in Cabonne.

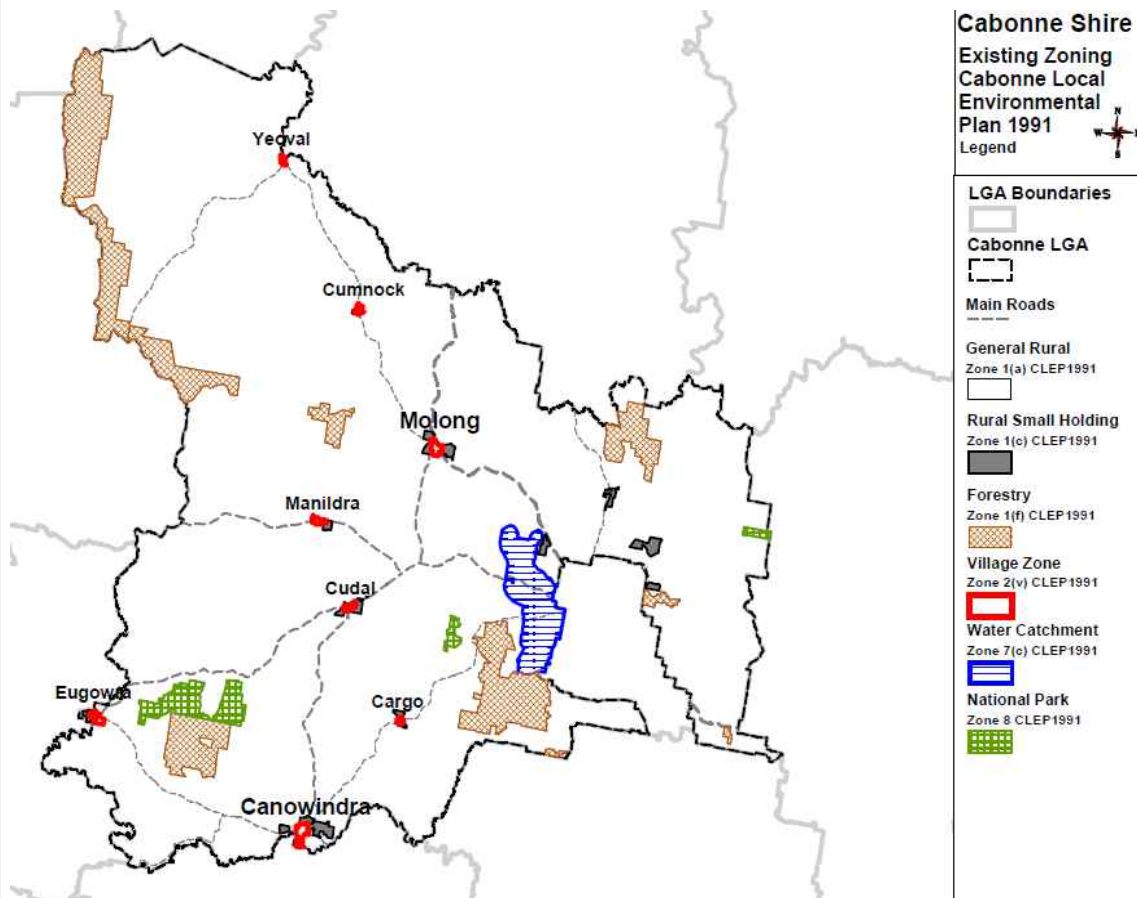


Figure 2: Existing Zoning Map for Cabonne (Source: CLEP1991 / Council GIS 2010).

Issues & Strategies

Review of Zoning Boundaries: It is the role of this Strategy to define appropriate areas for each land use within the urban areas of each settlement to ensure sufficient supply of land for a minimum of 10 years. This will then inform the preparation of new zoning boundaries under the proposed new Cabonne Local Environmental Plan ('LEP'). Any expansion of the urban area of a settlement into the surrounding rural lands needs to be justified as it may take up high quality agricultural land that is important to the Cabonne economy. The proposed future land use arrangements for each settlement are set out in the relevant chapters below.

2.2. Settlement Hierarchy

2.2.1. Overview

This chapter summarises each settlement's access to infrastructure, services and facilities and constraints that may impact on the growth potential of each settlement. This allows us to compare different growth factors between the key settlements in Cabonne and to rank each settlement according to their existing size and future growth potential in a 'settlement hierarchy'.

It is important to note the ability of a settlement to attract and support additional people and create demand for additional land and services is often a combination of factors. No one growth attraction on its own is likely to result in sustainable growth as it will require additional infrastructure, support and services. Therefore, a key aim of this Strategy is to determine the limiting factors for growth in each settlement that will promote 'sustainable development'. There is no point providing additional land supply in locations where other factors are likely to, if not limit growth, certainly make it more difficult for the community and environment to support.

2.2.2. Settlement Hierarchy

In the past, the majority of settlement have been broadly defined as 'villages' partly because they are included within a 'Village Zone' in the planning instrument (the Local Environmental Plan or 'LEP'). However, Cabonne's settlements can be differentiated in terms of a standard 'settlement hierarchy' (Figure 3).

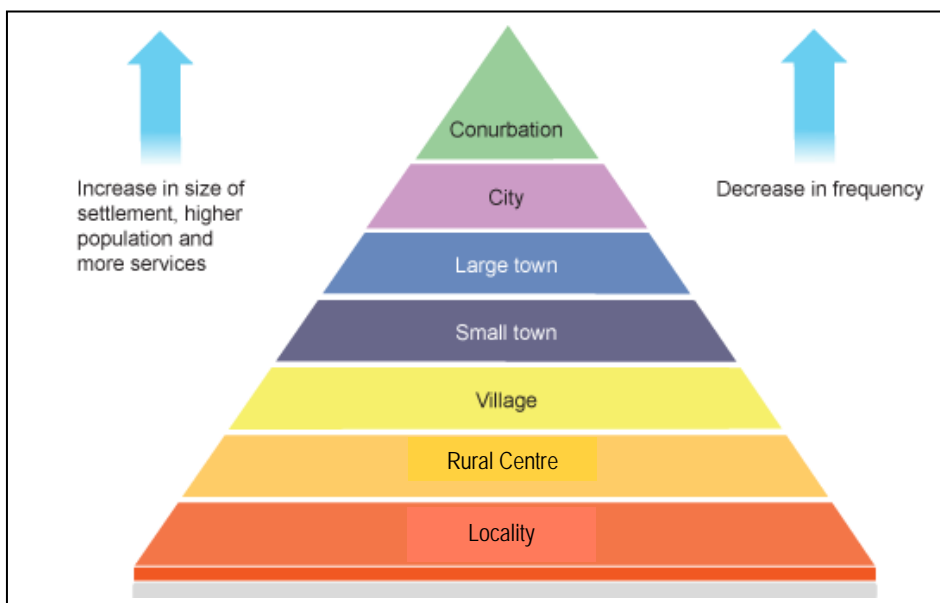


Figure 3: Illustrative Settlement Hierarchy (Source: www.bbc.co.uk - modified).

Please note that just because a settlement is higher in the settlement hierarchy than another settlement does not mean that it is 'better' than that settlement as a place to live or more deserving of government and community support. However, it may indicate a settlement's potential growth and capacity for sustainable development.

This classification does not exactly agree with the Department of Planning & Infrastructure's classifications in their regional strategies as they are very metropolitan focussed and use the term 'Strategic Centres' (of which there are none in Cabonne – Orange may classify as a 'major centre') and 'Local Centres' (which includes town centres, stand-alone shopping centres and neighbourhood centres). All of the centres in Cabonne are likely to be classified as 'neighbourhood centres' except for Molong and Canowindra which are likely to be 'town centres'. Rural centres are not considered in this hierarchy.

2.2.3. Key Growth Factors for Settlement Hierarchy

Whilst it is difficult to measure all factors that affect a settlement's growth potential and level in the settlement hierarchy, there are some general factors that play a significant role including, but not limited to:

- 1) **Existing Population Size:** In general, the larger the population the higher it is in the settlement hierarchy. A larger settlement has more need for services and employment but can also attract improved infrastructure. Towns are generally above 1,000 in population; Villages are generally between 100 and 1,000 people; and Rural Localities are less than 100 people (depending on levels of services/infrastructure and other factors below).
- 2) **Population Growth (Existing & Future):** If the historical and future growth projections indicate ongoing population growth then this may elevate the settlement in the hierarchy. Those settlements with decreasing populations may fall in the hierarchy.
- 3) **Proximity to Other Settlements:** Proximity of settlement to other higher level centres may be both an opportunity through access to higher level services, facilities, transport and employment but it can also be a potential challenge in that it can result in 'escape expenditure' to the higher level centres and less support for local services, facilities, and employment, limiting the growth potential of that settlement.
- 4) **Transport:** Access to transport provides the means for economic growth as well as access to higher level services in other centres. Transport options may include airports, road, rail, public transport (taxi/bus), cycleways and improvements for pedestrian amenity. The quality and safety of roads is a particular issue for rural shires.
- 5) **Utilities:** Access to utilities including water, sewer, gas, electricity, telecommunications etc is a critical issue in rural shires where there are vastly different levels of access and capacity of utilities that can add substantially to development cost and affects attraction of key land uses, particular larger industries and businesses with needs for higher level services.
- 6) **Retail Services:** Access to retail may be differentiated as follows:
 - a) Convenience shopping – shops with daily and basic needs such as bread and milk and newspapers and simple household items (costs may be higher/choice lower);
 - b) Weekly shopping – shops with a limited range of food, grocery and household shopping needs (sometimes a chain supermarket) (costs may be moderate/choice moderate);
 - c) Comparison shopping – shops with a range of larger household items and personal items such as whitegoods, furniture and clothing (costs may be lower/choice higher).
- 7) **Facilities:** Local facilities may provide access to a range of community, cultural, entertainment and recreational facilities that improves social amenity.
- 8) **Employment:** Employment is a key factor in economic sustainability of a settlement and may be limited to a few professional positions (e.g. teaching) and a few retail positions through to a range of employment options including professional and management; trades and manufacturing; services and retail etc.
- 9) **Natural Constraints:** Growth of a settlement is improved when a settlement is located where there are minimal constraints from natural hazards such as steep slopes, bushfire, flooding, rocky outcrops, water catchment etc which may restrict development potential and or increase development cost.
- 10) **Character, Identity & Community Spirit:** There are many qualities of a settlement that make it attractive to live, work and enjoy the settlement (including landscape, heritage, built form, and street character) and the community spirit that drives that community and may result in additional social, economic and environmental benefits.

Settlements with increased access to these opportunities (and less constraints) are more likely to be able to sustain growth and be more affordable.

2.2.4. Sustainability Matrix

Table 1 summarises some of the key findings of this Strategy on how the key eight (8) settlements would rate based on the key growth factors noted above.

Settlement	Existing Pop.	Est. Av. Ann. Pop. Growth (Max.)	Transport & Access	Utilities	Services & Facilities	Local Employment	Land Free from Natural Hazards
Molong	High (1711)	High (1%)	Med-High	Med-High	Med-High	Med-High	Low-Med
Canowindra	High (1782)	Med-High (0.7%)	Med	High	Med-High	Med-High	Med
Eugowra	Med (535)	Low-Med (0.3%)	Med	Med	Med	Low-Med	Low
Manildra	Med (515)	Med (0.5%)	Med	Med-High	Low-Med	Med-High	Med-High
Cudal	Med (434)	Med (0.5%)	Med	Med	Low-Med	Low-Med	Med-High
Yeoval	Low-Med (292)	Low-Med (0.3%)	Low-Med	Low	Med	Low-Med	Med-High
Cumnock	Low-Med (288)	Med-High (0.7%)	Low-Med	Low	Low-Med	Low-Med	Med-High
Cargo	Low-Med (278)	High (1%)	Low-Med	Low-Med	Low	Low	Med-High

Table 1: Summary of existing factors in this Strategy influencing the Cabonne settlement hierarchy.

Issues & Strategies - Existing Settlement Hierarchy:

It can be seen that **Molong** and **Canowindra** have a higher level of access to key growth factors than all of the other settlements and this supports their classification as 'towns' in the settlement hierarchy. **Manildra** is not large enough yet to warrant calling a 'town' but it has significant potential, particularly as it is highlighted as a core industrial centre for Cabonne. **Eugowra**, **Yeoval** and **Cudal** have significantly lower levels of access to key factors and slightly higher constraints to growth and are appropriately called 'Villages'. The key issue that arises is if there is substantial growth in any of these centres (particularly Eugowra and Yeoval) whether it can be supported by the existing services/facilities and how this will impact on growth.

Cumnock and **Cargo** are much smaller settlements and have a number of significant constraints to growth from limited access to key factors and higher constraints. However, these are the two centres that have the highest estimated future population growth percentages. Council wishes to support these settlements but recognises that the growth potential of these settlements may be constrained in the future without significant additional investment and infrastructure.

2.2.5. Settlement Hierarchy

Based on the review above it is possible to rank Cabonne's settlements in a 'settlement hierarchy' based on existing capacity and future growth potential. **GHD (Feb 2008) Sub-Regional Rural and Industrial Land Use Strategy - Issues Paper – Chapter 6.2** classifies Cabonne's settlements as:

- Towns – Molong & Canowindra;
- Villages – Cargo, Cudal, Manildra, Eugowra, Cumnock, Yeoval & Borenore;
- Rural Centre – Mullion Creek & Nashdale.

Issues & Strategies

Existing Settlement Hierarchy: This Strategy agrees with the existing settlement hierarchy set out in the Rural & Industrial Strategy except that Borenore is considered more of a 'Rural Centre' at this time as it is not currently within a Village Zone, has limited development potential, and has only very limited services. However, this may change in the future. Other localities throughout Cabonne not listed are likely to be rural centres (e.g. Spring Terrace).

2.3. Historical Overview

2.3.1. Aboriginal History & Cultural Heritage

As this is a Settlement Strategy that focuses on the growth potential of modern settlements the Aboriginal history that often pre-dates these settlements may be perceived to be less relevant to the future growth of these settlements. However, it is important to at least have a basic understanding of the relationship that Aboriginal people had with the lands that now form Cabonne for several reasons including recognition that:

- European settlement is not the only layer of history that has both affected and defined the Cabonne region and its settlements;
- Cabonne's settlements are often located in areas where there is access to rich soils, water and good climate that would have previously supported the local Aboriginal peoples;
- There may be a need to identify key cultural associations and protect archaeologically important places that may be impacted by the growth of settlements;
- Aboriginal people are a part of our society and communities and deserve inclusion and recognition in determining the way forward for Cabonne's settlements.

There is a limited amount of published information relating to the history of Aboriginal settlement in Cabonne. The following is summarised from the *Rural & Industrial Strategy' – Local Profile* (page 85).

"[The] Sub-Region falls into the lands of the Wiradjuri Aboriginal nation and possesses a rich history of indigenous population. Local indigenous communities possess a strong spiritual connection with the land, which also plays a large part in the social, political and cultural life and knowledge base of these communities."

"Numerous sites and areas of Aboriginal cultural significance are located throughout the Sub-Region. Identification of the location of these sites and areas is not considered appropriate, given the sensitive nature of these sites and area... Notwithstanding, predictive modelling of the location of sites and areas of Aboriginal significance would indicate that they are generally located close to water sources (rivers and creeks) and along ridgelines where vantage points are gained. They are also more likely to be found in areas that have not been disturbed by European settlement, such as areas of remnant native vegetation".

In general, the European settlements are less likely to be located along ridgelines and more likely to be located along key watercourses (including Molong, Canowindra, Cudal, Cargo, Cumnock, Manildra, Eugowra and Yeoval) so there is the potential for settlements to be located on sites where there would have been significant Aboriginal association and potential for cultural artefacts.

However, in the existing urban areas of each settlement (particularly where there is existing development) there is a high probability that the ground has been substantially disturbed and a lower likelihood of finding major archaeological deposits. In addition, this Strategy does not recommend many significant expansions of the urban areas so impacts on undisturbed rural areas are likely to be very limited or negligible. However, this does not mean that relatively undisturbed sites may not have both cultural or archaeological importance and individual site owners are still required to comply with the requirements of the *National Parks and Wildlife Act* that pertain to Aboriginal archaeology and sites.

NSW State Government data also shows that there are a number of Aboriginal land claims across Cabonne under the *Aboriginal Land Rights Act 1983* (NSW). A more accurate register of land claims can be found at the Office of the Registrar website (www.aralra.nsw.gov.au). In general, land claims can be made across Crown land, not privately owned land. It can be seen that land claims affect certain Crown land in each of the key settlements. Where Council or the NSW State Government wishes to utilise land where there is a land claim there is a requirement to follow due process under the *Aboriginal Land Rights Act 1983*. In addition, LALCs may own land in the key settlements.

Council has sought access through the Office of Environment & Heritage ('OEH') and consultation with the relevant Aboriginal groups to identify known sites of Aboriginal importance throughout Cabonne (Aboriginal Heritage Information Management System ('AHIMS') records). It is not appropriate to publicly provide a map of these sites in order to protect them from interference. However, Table 2 provides a general review for each settlement for both identified Aboriginal heritage sites in urban zones (Village Zone or large lot residential areas) as well as known land claims.

Settlement	Aboriginal Heritage Sites (OEH – September 2011)	Aboriginal Land Claims (LPI – July 2010)
Molong	No sites identified in existing/proposed urban areas where impacts/development likely to be higher and only 2-3 sites on surrounding rural lands. No known impact on proposed land use arrangements recommended by this Strategy. No known impact on Future Investigation Areas in this Strategy.	Land claims in urban zones on Crown/Council land as well as some private holdings. 1 large Crown lot affected that may be suitable for future reclassification and residential subdivision. Land claims will need to be resolved prior to infill development. 1 claim affects area proposed for transfer from large lot residential area to Village Zone but this area already subdivided.
Canowindra	1 site identified in existing/proposed urban areas where impacts/development likely to be higher. However, very limited development opportunity on this site – low risk. Limited known impact on proposed land use arrangements recommended by this Strategy. No known impact on Future Investigation Areas in this Strategy.	Land claims in urban & surrounding rural zones on Crown/Council land as well as some private holdings. 1 large Crown area affected that may be suitable for future reclassification and residential subdivision. Land claims will need to be resolved prior to infill development.
Eugowra	No sites identified in existing/proposed urban areas where impacts/development likely to be higher. No known impact on proposed land use arrangements recommended by this Strategy. No known impact on Future Investigation Areas in this Strategy.	Land claims in urban & surrounding rural zones on Crown/Council land as well as some private holdings. No major impacts on infill development, proposed land use arrangements or future investigation areas identified in Strategy.
Manildra	No sites identified in existing/proposed urban areas where impacts/development likely to be higher and only 2-3 sites on surrounding rural lands. No known impact on proposed land use arrangements recommended by this Strategy. However, one site in rural lands where future industrial expansion may occur under Rural & Industrial Strategy may need protection.	Land claims in urban & surrounding rural zones on Crown/Council land (particularly recreational areas) as well as some private holdings. 1 claim affects area proposed for transfer from large lot residential area to Village Zone but this area already subdivided and partially developed. Land claims may also affect future recreational development.
Cudal	No sites identified in existing/proposed urban areas where impacts/development likely to be higher or surrounding rural lands for expansion of settlement. No known impact on proposed land use arrangements recommended by this Strategy. No known impact on Future Investigation Areas in this Strategy.	Land claims in urban & surrounding rural zones on Crown/Council land as well as some private holdings. Proposed land use arrangements for future industrial growth may be affected so land claims/ownership will need to be resolved prior to infill development.
Yeoval	No sites identified in existing/proposed urban areas where impacts/development likely to be higher and only 2 sites in road reserves close to village. No known impact on proposed land use arrangements recommended by this Strategy. No known impact on Future Investigation Areas in this Strategy.	No known land claims in urban & surrounding rural zones. No impacts on infill development, proposed land use arrangements or future investigation areas identified in Strategy.
Cumnock	No sites identified in existing/proposed urban areas where impacts/development likely to be higher. No known impact on proposed land use arrangements recommended by this Strategy. No known impact on Future Investigation Areas in this Strategy.	Land claims in urban & surrounding rural zones on Crown/Council land as well as some private holdings. No major impacts on infill development, proposed land use arrangements or future investigation areas identified in Strategy.
Cargo	No sites identified in existing/proposed urban areas where impacts/development likely to be higher and only 2-3 sites on surrounding rural lands. No known impact on proposed land use arrangements recommended by this Strategy. No known impact on Future Investigation Areas in this Strategy.	Land claims in urban & surrounding rural zones on Crown/Council land as well as some private holdings. No major impacts on infill development, proposed land use arrangements or future investigation areas identified in Strategy.

Table 2: Review of known Aboriginal sites and land claims in or near settlements (Source: OEH 2011 / LPI 2010).

Aboriginal groups and their relationship to the land in New South Wales are managed through the Local Aboriginal Land Councils ('LALC'). There are four (4) LALCs that look after parts of Cabonne and the following key settlements including:

- Orange LALC – Wiradjuri Peoples (including Molong, Manildra, Cudal and Cargo);
- Cowra LALC – Wiradjuri Peoples (including Canowindra and Eugowra);
- Wellington LALC – Galangabang Peoples (including Cumnock and Yeoval);
- Peak Hill LALC – Wiradjuri Peoples (none of the key settlements).

Issues & Strategies

- **Aboriginal History:** There is a lack of published and peer reviewed information about the cultural heritage and archaeology of the Wiradjuri peoples in Cabonne. Council will continue to liaise with the NSW Heritage Branch of the DP&I and OEH and may prepare an Aboriginal Heritage Study in the future with an emphasis on Aboriginal cultural history and its relevance and application to Cabonne.
- **Protection of Aboriginal Heritage:** OEH has recommend that Council should aim to protect Aboriginal cultural heritage through:
 - The designation of appropriate zoning provisions and boundaries where possible;
 - Inclusion on the Heritage Map of any specific important areas identified (which will enable the mandatory clauses in the Standard Instrument to be effectively applied);
 - The generation of a cultural heritage constraints map;
 - Appropriate provision within DCPs to ensure adequate assessment and protection of Aboriginal cultural heritage values;
 - Formation of an Aboriginal Community Advisory Group to ensure ongoing input and dialogue on identification and management of Aboriginal cultural heritage for the LGA;
 - Land use strategies, LEPs and DCPs must include provisions to ensure the protection of Aboriginal cultural heritage, rather than relying on site by site development assessment

This Strategy has conducted a review of known Aboriginal sites and determined that there are 1-2 sites that have potential to be impacted by this and any other land use strategy – and these sites will be protected in the development assessment process. Ongoing work will be required to implement the recommendations of OEH above.

- **Setbacks from Waterways:** The predictive modelling would also suggest a higher likelihood of sites and areas of Aboriginal cultural significance along watercourses and ridgelines. There is a reasonable incidence of significant watercourses passing through many of the settlements and protection of these areas may be enhanced by setbacks from these areas for development and retention of these areas as open space. This Strategy has recommended reduced intensification of development along waterways in Cargo, Cumnock, Yeoval, and Cudal for this purpose.
- **Aboriginal Land Claims:** Aboriginal land claims and ownership is present in nearly all settlements across Crown/Council lands and some private lands. These land claims need to be resolved prior to any consideration for a change in use of these lands or any additional development. This may delay some infill development so communication with the relevant Aboriginal Land Council should commence as early as possible.

2.3.2. European History

The following short summary of European History is either quoted or paraphrased from "*A Big Country - A Contextual History of Cabonne*" as prepared for Cabonne Council by Times Past Productions (2002).

European explorers first arrived in the district around 1815. Following exploration of the district by George Evans in 1815, Governor Macquarie gave permission for limited occupancy of the

western lands, mainly to the east of the Macquarie River. During the 1830s to 1840s Cabonne's best known rural properties and the first main settlements of Molong and Canowindra appeared along with Cornish settlers of Byng. Copper Hill mine was established in the 1840s being one of the first in Australia.

The discovery of gold [and copper] at Ophir in 1851 had a significant impact on the growth of the area with a number of local mining activities occurring. New settlements appeared, including Cudal, Cargo and Eugowra. The Selections Acts, beginning in 1861, allowed for the settlement of men with families on smaller farms at the expense of the old large pastoral farms. Their presence spurred the establishment of new settlements including Cumnock and Yeoval.

In 1885 the Broken Hill Railway Line was extended to Molong, which was the first major community to be served by railway. It remained the terminus of the line until 1893. The line was then extended, via Manildra with further extension of branch-lines to reach Canowindra (1910), Eugowra (1922), Cumnock and Yeoval (1925).

The railway supported a consolidation of Cabonne's demographic and economic development in the early 20th Century, agricultural products, ranging from wheat, lucerne and fruit as well as new products such as marble could now be sent to market in Sydney.

Molong Town achieved municipal status in 1879. In 1907 local rural government was introduced with the establishment of shire councils of Amaro (later merging with Molong 1951), Boree and Canobolas. In 1977 Cabonne Shire was formed with the amalgamation of Boree, Molong and portions of Canobolas Shire. The remainder of Canobolas Shire was absorbed by Orange City.

Air Services was established in 1953 and was based in Cudal. Hazeltons Airlines spanned fifty years as a Cabonne based business.

However, the population and growth of the area soon began to decrease due to farm mechanisation, the impact of the motor car and accessibility of other centres such as Orange, the 1930s depression, and climatic conditions.

In the 1990s significant mineral deposits were found in the Cadia area and throughout Cabonne that has resulted in employment opportunities and economic growth in both Orange Council area and surrounding Shires. Cabonne Shire has grown minimally as a result.

A more detailed history and review of heritage is provided for each settlement in the relevant chapter for each settlement in this Strategy.

Issues & Strategies

- **Settlement History:** The European history of Cabonne is very important to understanding the pattern and location of settlements, key factors influencing their economic and population growth and decline, and the built form and natural heritage that it is an important asset to Cabonne. Whilst some settlements have a lot of historical information published, others have relatively little. There is an opportunity for preparation of a comprehensive history of each of the settlements to improve understanding of the cultural heritage and influence on settlement pattern and design.
- **Settlement Pattern:** The size and subdivision pattern of many of its settlements was based upon significantly larger populations that peaked in the early 1900s. A steady reduction in population in the majority of the settlements has impacted on the sustainability of some settlements, though some have experienced recent growth.
- **Heritage:** A benefit of periods of reduced growth is that there are many fine examples of historic buildings, particularly in Molong and Canowindra, that have been protected from demolition and redevelopment and these items offer the potential for tourism and heritage protection.

2.4. Historical Population

Please note that at the time of finalising this Strategy (August 2012) the Census 2011 figures had been released for Cabonne LGA and some statistical local areas but not for individual census districts / settlements. Where figures are available they have been provided.

2.4.1. Recent Population Statistics

Population Measurement

The population of Cabonne is measured by the Australian Bureau of Statistics ('ABS'). Cabonne is broken down into Statistical Local Areas ('SLAs') and further broken down into Census Districts ('CDs'). Figure 4 shows that historically Cabonne has been broken down into three SLAs – Parts A, B & C.

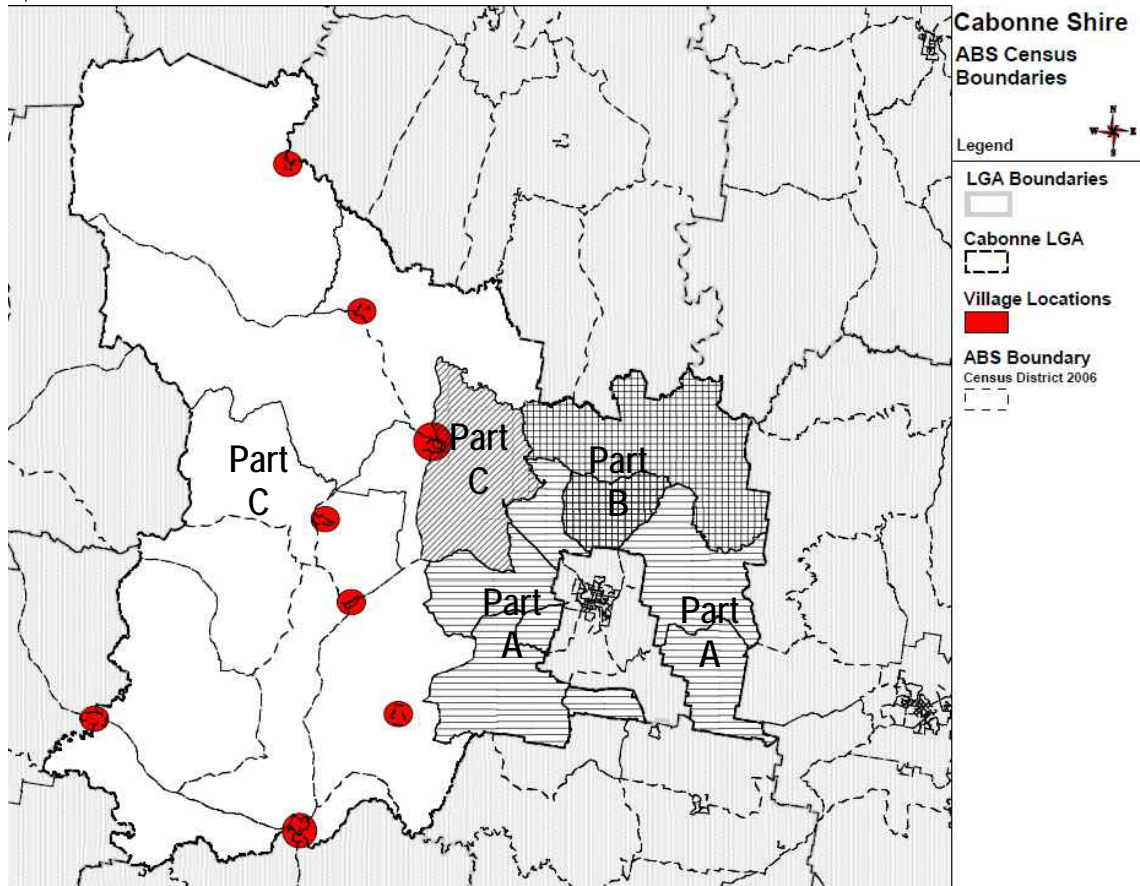


Figure 4: Australian Bureau of Statistics Statistical Local Areas (SLAs) and Census Districts (CDs) for Cabonne (Source: www.abs.gov.au / Council GIS 2010).

Table 3 sets out the historical population and changes in population of Parts A, B & C and all of Cabonne since 1976 on the date of the census showing where the population has increased (↑) or decreased (↓) compared to the previous census.

Cabonne's Population

Over the last 30 years there have been both census periods where the population has increased (1991–2001 and 2006–2011) and census periods where it has decreased (1981–1986 & 2001–2006). However, from 1976 to 2006 the population of Cabonne increased at an average rate of +0.25% per annum, a low but positive growth rate. With recent 2011 Census data, from 1976 to 2011 the population of Cabonne increased at a rate of +0.32% per annum average (due to a positive increase from 2006 to 2011).

Orange's Commuter Zone (Parts A & B)

In 2004 a study was carried out by Newplan on behalf of Cabonne Council to ascertain the demand for dwellings within commuting distance from Orange. The study defined the 'Orange

Commuter Zone' as the areas within 20-30 minutes drive of Orange (roughly 20-30 kilometres). Figure 4 shows that broadly Parts A & B align with the Orange Commuter Zone (if one SLA from Part C is included in the direction of Molong) whilst the majority of Part C is outside the Orange Commuter Zone (See also [Rural & Industrial Strategy – Local Profile – Section 2.1.3 – Orange Commuter Zone](#)).

Table 3 shows that Parts A & B have grown in population every census period since 1976. Part A has grown at an average annual rate ranging from ~1.4% to 1.8%. Part B has grown at an average annual rate ranging from 1.8% to 2.6%. These are both very strong average growth rates over a 30 year period. The growth rates have reduced slightly since 2001 but would suggest continued strong growth into the future (if all of the growth factors are supportive).

Outside Orange's Commuter Zone (Part C)

Table 3 shows that Part C has decreased in total population from 9,336 people in 1976 to 9,094 people in 2006 (and has decreased in four out of six of the censuses since 1976) with an average growth of negative 0.09% per annum. The most significant decrease was from 2001 to 2006 at a rate of -0.79% per annum. The important thing to note is that all of the eight (8) key settlements in Cabonne are in Part C.

Year	Cabonne Part A	Cabonne Part B	Cabonne Part C	Shire Population based on Place of Residence
1976	1,645	547	9,336	11,528
1981	↑1,670	↑623	↓9,142	↓11,435
1986	↑1,716	↑693	↓8,974	↓11,383
1991	↑1,813	↑740	↑9,182	↑11,735
1996	↑1,974	↑802	↓9,168	↑11,944
2001	↑2,180	↑890	↑9,470	↑12,540
2006	↑2,330	↑972	↓9,094	↓12,396
2011	Not Available	Not Available	Not Available	↑12,821
	Δ Pop. (Av. Ann Δ)	Δ Pop. (Av. Ann Δ)	Δ Pop. (Av. Ann Δ)	Shire Population Δ Pop. (Av. Ann Δ)
Δ1976-2006	+685 (+1.39%)	+425 (+2.59%)	-242 (-0.09%)	+868 (+0.25%)
Δ1986-2006	+614 (+1.79%)	+279 (+2.01%)	+120 (+0.07%)	+961 (+0.34%)
Δ1996-2006	+356 (+1.80%)	+170 (+2.12%)	-74 (-0.08%)	+452 (+0.38%)
Δ2001-2006	+150 (+1.38%)	+82 (+1.84%)	-376 (-0.79%)	-144 (-0.23%)
Δ2006-2011	Not Available	Not Available	Not Available	+425 (+0.69%)
Δ1976-2011	Not Available	Not Available	Not Available	+1,293 (+0.32%)

Table 3: Population and change in population of Parts A, B & C and total population of Cabonne from 1976 to 2011 (Source: www.abs.gov.au).

Issues & Strategies

Population Growth across Cabonne: As this strategy will show there are some settlement that have exhibited positive growth and some that have exhibited negative growth with the surrounding rural areas in Part C suffering the greatest decline in population. This clearly indicates that population growth is greatest within Orange's commuter zone and very low outside this Zone so Orange plays a significant role in the regional economy and growth.

2.4.2. Population by Settlement (Census Districts)

Table 4 shows the population of each of the ABS Census District for the eight (8) key settlements at the Census Dates on 1976, 1986, 1996, 2001 and 2006 as well as the change in population from 1976-2006 and average rate of growth/decline.

Note that the ABS population figures are limited to the census district for each village and may or may not include the surrounding Rural Small Holdings areas so they may not reflect the total 'urban' population of each settlement. Also, the 2001 & 2006 figures are from Quickstats and may not be exactly the same as the resident population shown in the Community Profiles (but are usually close in number).

The last column in Table 4 shows the recent **estimated** population of each of the eight (8) key settlements including the village zone (Zone 2(v)) and surrounding Rural Small Holdings (Zone 1(c)) areas. This is an approximation of the population of each village and may be different to the ABS population (see each Settlement chapter for more detail).

Settlement	1976 Pop. (ABS)	1986 Pop. (ABS)	1996 Pop. (ABS)	2001 Pop. (ABS)	2006 Pop. (ABS)	Pop.Δ 1976-2006 (ABS)	Total % Δ 1976-2006 (ABS)	Av. Annual % Δ 1976-2006 (ABS)	Estimated Urban Pop. (Zones 2(v) + 1(c)) Recent
Molong	1,504	1,400	1,604	1,560	1,569	+65	+4.3%	+0.14%	1,711
Canowindra	1,743	1,717	1,656	1,516	1,499	-244	-14.0%	-0.47%	1,782
Eugowra	651	579	612	589	535	-116	-17.8%	-0.59%	535
Manildra	557	520	533	513	503	-54	-9.7%	-0.32%	515
Cudal	373	352	420	409	389	+16	+4.3%	+0.14%	434
Yeoval	306	293	317	313	292	-14	-4.6%	-0.15%	292
Cumnock	259	236	297	270	288	+29	+11.2%	+0.37%	288
Cargo	--	180	242	260	278	--	--	+ growth	278

Table 4: Population of the each village in Cabonne (Source: www.abs.gov.au or estimated in Strategy).

Issues & Strategies

From 2001 to 2006 the populations in the census districts for the following settlements:

- Increased significantly for Cumnock and Cargo (moderate growth);
- Increased slightly for Molong and Cudal (low growth);
- Decreased slightly for Yeoval (decline);
- Decreased significantly for Canowindra, Eugowra and Manildra (decline).

However, this is just an average over 30 years and some settlements may have grown in recent years. Also it may not account for growth in proximity to the villages but outside the census districts (e.g. Canowindra's census district around the Village Zone has decreased in population but the total population has increased due to population growth in the surrounding Zone 1(c) (Rural Small Holdings) areas).

2.5. Demographic Profile

Please note that due to the small population in some settlements a small change in the population may have a significant impact on demographic information so this section can only be used as a 'snapshot' on the Census Night. At the time of finalising this Strategy (August 2012) the Census 2011 figures had been released for Cabonne LGA and some statistical local areas (included) but not for individual census districts / settlements.

2.5.1. Age Structure

In 2006, 22.0% of the Cabonne population were children aged between 0-14 years, and 29.9% were persons aged 55 years and over. The median age of persons was 41 years, compared with 37 years for persons in Australia (Table 5).

Location	Med Age	2001	2006	2001	2006	2001	2006	2001	2006	2001	2006	2001	2006
Years	--	0-4	0-4	5-14	5-14	15-24	15-24	25-54	25-54	55-64	55-64	65+	65+
Molong	40	7.9%	7.8%	14.1%	15.0%	12.0%	10.8%	35.3%	35.5%	11.0%	11.1%	19.5%	19.9%
Canowindra	44	5.3%	6.1%	14.9%	12.1%	11.4%	9.8%	36.3%	36.4%	11.4%	13.3%	20.1%	22.2%
Eugowra	50	6.1%	2.6%	18.5%	10.7%	6.1%	9.2%	33.4%	33.6%	13.4%	17.9%	23.3%	26.0%
Manildra	36	8.8%	6.8%	15.6%	16.5%	13.1%	11.7%	38.4%	38.2%	8.6%	10.5%	14.4%	16.5%
Cudal	44	6.1%	5.4%	17.6%	12.6%	9.8%	11.3%	41.1%	38.0%	11.5%	13.9%	15.6%	18.8%
Yeoval	47	2.6%	6.5%	17.3%	13.4%	8.9%	11.6%	29.7%	28.4%	11.8%	11.0%	24.9%	29.8%
Cumnock	42	7.4%	7.3%	13.7%	15.6%	14.8%	8.0%	35.2%	32.6%	14.1%	16.0%	14.4%	20.5%
Cargo	39	8.1%	6.8%	16.9%	12.9%	12.3%	10.8%	28.5%	43.5%	7.3%	9.7%	10.0%	16.2%
Cabonne	41	6.7%	6.4%	16.4%	15.6%	10.8%	10.0%	38.4%	38.1%	12.2%	13.6%	15.5%	16.3%
State NSW		6.7%	6.4%	14.1%	13.4%	13.4%	13.3%	43.3%	42.0%	9.4%	11.0%	13.1%	13.8%
Australia	37	6.6%	6.3%	14.2%	13.5%	13.7%	13.6%	43.5%	42.2%	9.4%	11.0%	12.6%	13.3%

Table 5: Summary of age brackets and median age across Cabonne (Source: www.abs.gov.au).

Issues & Strategies

- **Ageing Population (Cabonne):** A key issue for Cabonne is the ageing population. In Cabonne the over 65 years age group is 16.3% compared to 13.3% for Australia and the DoP projects this will increase to 27% by the year 2036. In addition, the 55-64 age group at 13.6% also exceeds the Australian rate of 11.0%. This will place increased pressure on a range of services and facilities including the provision of aged care, health services, emergency services, community services and housing choice which may not be met by many of Cabonne's settlements.
- **Ageing Population (Settlements):** Eugowra, Canowindra, Cumnock and Yeoval all have over 20% of their population over 65 years of age. Cumnock & Yeoval may struggle to maintain the necessary services. The remaining villages all have >16% aged over 65. The only settlements with significant hospital / medical centres are Molong, Canowindra and Eugowra (with Yeoval having some aged care). The other settlements may struggle to support an ageing population and there is a risk that the older citizens may have to leave these settlements, resulting in significant future impacts on maintaining sustainable populations.
- **Loss of Young Population (Settlements):** Whilst Cabonne overall has a reasonable number of 5-14 year olds who will continue to require local schools, Canowindra, Eugowra, Cudal, Yeoval and Cargo have falling rates of this age group which may affect the provision of public schools in the future.
- **Loss of Working Population (Cabonne):** Across the Shire, the higher percentages of older people and lower numbers of young people are resulting in a lower percentage of working aged people from 15 to 54 years of age. This could affect the economic development of Cabonne.

2.5.2. Labour Force

During the week prior to the 2006 Census, 63.9% of Cabonne's population were employed full-time, 25.9% were employed part-time, 3.7% were employed but away from work, 2.8% were employed but did not state their hours worked and 3.7% were unemployed..

Issues & Strategies

Unemployment: In general the level of employment/non-employment is similar in Cabonne to the Australian average, if not marginally better. This suggests that Cabonne is averaging well in terms of employment provision and this could result in improved socio-economic well being and growth in the area. However, there are higher rates of unemployment in Cumnock and

Yeoval compared to Australia and Cabonne and this may result in both economic and social issues for these settlements.

Labour Force (Pop. aged 15yrs+)	Total	Employed Full Time	Employed Part Time	Employed Away from Work	Employed Hours Not Stated	Unempl-oyed	Not in the Labour Force
% in Australia	--	60.7%	27.9%	3.5%	2.6%	5.2%	--
Cabonne	5,950	3,800	1,544	222	166	218	3,334
% in Shire	--	63.9%	25.9%	3.7%	2.8%	3.7%	--
No. in Molong	967	627	242	46	17	35	617
% in Molong	--	64.8%	25.0%	4.8%	1.8%	3.6%	--
No. in Canowindra	944	575	263	28	34	44	698
% in Canowindra	--	60.0%	27.9%	3.0%	3.6%	4.7%	--
No. in Eugowra	258	147	69	24	4	14	256
% in Eugowra	--	57.0%	26.7%	9.3%	1.6%	5.4%	--
No. in Manildra	221	142	60	9	0	10	143
% in Manildra	--	64.3%	27.1%	4.1%	0.0%	4.5%	--
No. in Cudal	164	113	37	3	3	8	137
% in Cudal	--	68.9%	22.6%	1.8%	1.8%	4.9%	--
No. in Yeoval	94	53	22	7	4	8	133
% in Yeoval	--	56.4%	23.4%	7.4%	4.3%	8.5%	--
No. in Cumnock	103	56	35	0	0	12	104
% in Cumnock	--	54.4%	34.0%	0.0%	0.0%	11.3%	--
No. in Cargo	377	246	97	17	3	14	150
% in Cargo	--	65.3%	25.7%	4.5%	0.8%	3.7%	--

Table 6: Summary of labour force / employment across Cabonne (Source: www.abs.gov.au).

2.5.3. Income

In 2006, the median weekly individual income for persons aged 15 years and over was \$411 (Cabonne) compared to \$466 (Australia); The median weekly household income was \$861 (Cabonne) compared to \$1,027 (Australia); and The median weekly family income was \$1,054 (Cabonne) compared with \$1,171 (Australia).

Income (Pop. aged 15yrs+)	Median individual income (\$/weekly)	Median household income (\$/weekly)	Median family income (\$/weekly)
Australia	\$466	\$1,027	\$1,171
Cabonne	\$411	\$861	\$1,054
Molong	\$424	\$803	\$1,017
Canowindra	\$335	\$626	\$813
Eugowra	\$307	\$584	\$1,027
Manildra	\$384	\$765	\$1,023
Cudal	\$343	\$690	\$972
Yeoval	\$323	\$591	\$875
Cumnock	\$276	\$534	\$668
Cargo	\$459	\$910	\$1,082

Table 7: Summary of median income for Cabonne (Source: www.abs.gov.au).

Issues & Strategies

Median Income: The slightly lower median individual income and household incomes in Cabonne suggest a prevalence of lower-paying jobs compared to the Australian average that may impact slightly on the ability of people in the region to afford more expensive property and services.

2.5.4. Occupation

In the 2006 Census, the most common responses for occupation for employed persons usually resident in Cabonne were Managers 25.2%, Professionals 14.5%, Labourers 13.1%, Technicians and Trades Workers 12.8% and Clerical and Administrative Workers 12.0%.

Occupation (Employed persons aged 15yrs+)	Cabonne 2006	Cabonne %	Australia %
Managers	1,443	25.2%	13.2%
Professionals	834	14.5%	19.8%
Labourers	751	13.1%	10.5%
Technicians and Trades Workers	734	12.8%	14.4%
Clerical and Administrative Workers	685	12.0%	15.0%
Community and Personal Service Workers	406	7.1%	8.8%
Machinery Operators And Drivers	406	7.1%	6.6%
Sales Workers	381	6.6%	9.8%

Table 8: Summary of occupation for Cabonne (Source: www.abs.gov.au).

Issues & Strategies

Occupation (Cabonne): Cabonne has a higher proportion than the Australian average in the fields of managers, labourers, and machinery operators (generally lower paid jobs) – but lower proportion in the fields of professionals, technicians and trades workers, clerical and administrative workers, community and personal service workers, and sales workers (generally higher paid jobs) . This would partially explain the slightly lower average individual and household incomes in the area.

2.5.5. Employment by Industry

In the 2006 Census, the most common industries of employment for persons aged 15 years and over usually resident in Cabonne were Sheep, Beef Cattle and Grain Farming 17.7%, School Education 4.9%, Hospitals 4.5%, Local Government Administration 3.1% and Grain Mill and Cereal Product Manufacturing 2.5%.

Industry of employment (Employed persons aged 15yrs+)	Cabonne 2006	Cabonne %	Australia %
Sheep, Beef Cattle and Grain Farming	1,013	17.7%	1.5%
School Education	279	4.9%	4.5%
Hospitals	260	4.5%	3.3%
Local Government Administration	180	3.1%	1.4%
Grain Mill and Cereal Product Manufacturing	142	2.5%	0.1%

Table 9: Summary of employment industries for Cabonne (Source: www.abs.gov.au).

Issues & Strategies

Employment (Cabonne): The choice of employment options are relatively limited in Cabonne compared to the regional cities. Farming continues to be the major employer. However, the trend is often for reduced farming populations. Local government is a key employer and there is a query whether Cabonne Council will be sustained in its existing form for the next 30 years. Hospitals and schools are also key employers but with increased centralisation of these services some settlements may lose these services/employers in the future. On a positive note, however, mining is likely to increase as a key employment industry in Cabonne.

2.5.6. Family Characteristics

In the 2006 Census, in Cabonne 45.2% were couple families with children, 43.2% were couple families without children, 10.6% were one parent families and 1.0% were other families. In 2011 there was a minor decrease in couple families with children (43.3%), minor increase in couple families without children (44.1%) and one parent families (11.7%). In general the family characteristics in Cabonne are not significantly different from the Australian average.

Family Characteristics	Total Families	Couple Families with Children	Couple Families without Children	One Parent Families	Other Families
% in Australia 2011	--	44.6%	37.8%	15.9%	1.7%
% in Australia 2006	--	45.3%	37.2%	15.8%	1.7%
Cabonne 2011	3,575	1,547	1,575	417	36
% in Shire 2011	--	43.3%	44.1%	11.7%	1.0%
Cabonne 2006	3,441	1,554	1,487	364	36
% in Shire 2006	--	45.2%	43.2%	10.6%	1.0%
No. in Molong	560	247	252	84	7
% in Molong	--	41.9%	42.7%	14.2%	1.2%
No. in Canowindra	590	222	275	79	14
% in Canowindra	--	37.6%	46.6%	13.4%	2.4%
No. in Eugowra	182	61	94	23	4
% in Eugowra	--	33.5%	51.6%	12.6%	2.2%
No. in Manildra	130	58	54	18	0
% in Manildra	--	44.6%	41.5%	13.8%	0.0%
No. in Cudal	104	46	43	15	0
% in Cudal	--	44.2%	41.3%	14.4%	0.0%
No. in Yeoval	67	26	27	9	5
% in Yeoval	--	38.8%	40.3%	13.4%	7.5%
No. in Cumnock	78	36	35	7	0
% in Cumnock	--	46.2%	44.9%	9.0%	0.0%
No. in Cargo	201	91	89	16	5
% in Cargo	--	45.3%	44.3%	8.0%	2.5%

Table 10: Summary of family characteristics for Cabonne (Source: www.abs.gov.au).

Issues & Strategies

Family Characteristics: Across Cabonne the percentage of couple families with children is similar to that of Australia and the percentage of one parent families is lower than that of Australia. However, at the settlement level, there are lower levels of couple families with children in Canowindra, Eugowra and Yeoval and higher levels of one parent families in Molong, Canowindra, Eugowra, Manildra, Cudal, and Yeoval compared to Cabonne. It is important to note that 10.6% of families are one parent families, and 45.2% are couples with children (a combined total of 55.8%). Couple families and one parent families are likely to require higher levels of support including, but not limited to health, education and community services.

2.5.7. Household Composition

In 2006 in Cabonne 73.4% of occupied private dwellings were family households, 22.3% were lone person households and 1.5% were group households. In 2011 in Cabonne 75% were family households, 23.5% were lone person households, and 1.5% were group households. Cabonne has a slightly higher percentage of family households than the Australian average and a slightly lower percentage of lone person households and group households. This is partially due to the lower percentage of rental properties and lack of major educational institutions that would prompt group housing.

Household Type – Occupied Private Dwellings	Family Household	Lone Person Household	Group Household
% in Australia 2011	71.5%	24.3%	4.1%
% in Australia 2006	67.4%	22.9%	3.7%
Cabonne 2011	3,527	1,106	71
% in Shire	75.0%	23.5%	1.5%
Cabonne 2006	3,409	1,038	71
% in Shire 2006	73.4%	22.3%	3.7%
No. in Molong	585	197	19
% in Molong	72.2%	24.3%	2.3%
No. in Canowindra	584	244	20
% in Canowindra	68.2%	28.5%	2.3%
No. in Eugowra	182	69	3
% in Eugowra	70.0%	26.5%	1.2%
No. in Manildra	130	63	11
% in Manildra	64.4%	31.2%	5.4%
No. in Cudal	107	43	0
% in Cudal	67.7%	27.2%	0.0%
No. in Yeoval	61	37	0
% in Yeoval	55.0%	33.3%	0.0%
No. in Cumnock	75	29	3
% in Cumnock	37.6%	26.1%	2.7%
No. in Cargo	203	56	3
% in Cargo	76.6%	21.1%	1.1%

Table 11: Summary of household type for Cabonne (Source: www.abs.gov.au).

Issues & Strategies

Household Composition: Cabonne has a slightly higher percentage of family households than the Australian average and a similar percentage of lone and group households. However, there are a significantly reduced number of family households in Yeoval and Cumnock. There are also an increased number of lone person households in Canowindra, Manildra and Yeoval. This could be related to a higher level of older citizens that are living alone. Higher percentage of lone person households may suggest a demand in the future for greater housing choice including smaller lots and house sizes.

2.5.8. Dwelling Type

In the 2006 Census there were 4,646 occupied private dwellings counted in Cabonne: 95.8% were separate houses, 0.5% were semi-detached, row or terrace houses, townhouses etc, 1.3% were flats, units or apartments and 2.4% were other dwellings. In the 2011 Census there was an overall increase in total and occupied private dwellings predominantly in separate houses and semi-detached/row/terrace houses. Cabonne has a significantly higher proportion of separate private dwellings (~96%) compared to the Australian average (74.8%).

Private Dwelling Character	Total Private Dwellings	Occupied Private Dwellings	Separate House	Semi-detached, row or terrace, townhouse	Flat, unit or apartment	Other Dwellings	Not Stated
% in Australia 2011	--	--	75.6%	9.9%	13.6%	0.9%	--
% in Australia 2006	--	--	74.8%	9.2%	14.2%	1.7%	0.1%
Cabonne 2011	5,456	4,706	4,504	66	67	64	0
% in Shire 2011	--	--	95.7%	1.4%	1.4%	1.4%	0.0%

Cabonne 2006	5,357	4,646	4,453	23	60	110	0
% in Shire 2006	--	--	95.8%	0.5%	1.3%	2.4%	0.0%
No. in Molong	934	810	764	9	15	22	0
% in Molong	--	--	94.3%	1.1%	1.9%	2.7%	0.0%
No. in Canowindra	980	856	791	5	28	32	0
% in Canowindra	--	--	92.4%	0.6%	3.3%	3.7%	0.0%
No. in Eugowra	304	260	245	0	7	8	0
% in Eugowra	--	--	94.2%	0.0%	2.7%	3.1%	0.0%
No. in Manildra	227	202	189	0	13	0	0
% in Manildra	--	--	93.6%	0.0%	6.4%	0.0%	0.0%
No. in Cudal	173	158	143	0	6	9	0
% in Cudal	--	--	90.5%	0.0%	3.8%	5.7%	0.0%
No. in Yeoval	125	111	106	5	0	0	0
% in Yeoval	--	--	95.5%	4.5%	0.0%	0.0%	0.0%
No. in Cumnock	125	111	107	0	0	4	0
% in Cumnock	--	--	96.4%	0.0%	0.0%	3.6%	0.0%
No. in Cargo	296	265	258	0	0	7	0
% in Cargo	--	--	97.4%	0.0%	0.0%	2.6%	0.0%

Table 12: Summary of household type for Cabonne (Source: www.abs.gov.au).

Issues & Strategies

Dwelling Type: Compared to Australia there is a higher level of separate dwellings and lower level of medium density dwellings (semi-detached, row or terrace houses) and higher density dwellings (flat, unit or apartments) which relates to its rural character and lower urban densities. The high percentage of single detached dwellings is likely to consume a higher percentage of land than other medium density housing alternatives and will promote less sustainable development. However, there may be slight increases in housing density in the next 10-30 years as it becomes less affordable to own a dwelling and there is increased urban consolidation around key services. There may be a need in the future for an increased range of dwelling choice (not just single detached dwellings) to cater for an ageing population, lower household occupancy rates, higher rates of lone person households, and demand for improved sustainability.

2.5.9. Dwelling Tenure

In 2006 in Cabonne 45.1% of occupied private dwellings were fully owned, 31.0% were being purchased and 18.5% were rented. In 2011 there was a slight increase in rentals compared to owned houses suggesting decreasing ability or desire to achieve home ownership in the current economy. Cabonne has a slightly higher percentage of private dwellings that are owned and a slightly lower percentage of rental properties than the Australian average. However, there is still a strong need for rental properties for those that cannot afford or choose not to buy property.

Occupied Private Dwellings	Fully Owned	Being purchased (includes rent/buy scheme)	Rented (includes rent-free)	Other tenure type	Not Stated
% in Australia 2011	32.1%	34.9%	29.6%	0.9%	2.5%
% in Australia 2006	32.6%	32.2%	27.2%	0.9%	7.1%
Cabonne 2011	2,050	1,575	917	51	112
% in Shire 2011	43.6%	33.5%	19.5%	1.1%	2.4%
Cabonne 2006	2,094	1,439	859	46	210
% in Shire 2006	45.1%	31.0%	18.5%	1.0%	4.5%

Occupied Private Dwellings	Fully Owned	Being purchased (includes rent/buy scheme)	Rented (includes rent-free)	Other tenure type	Not Stated
No. in Molong	338	251	183	7	30
% in Molong	41.7%	31.0%	22.6%	0.9%	3.7%
No. in Canowindra	405	200	210	9	33
% in Canowindra	47.3%	23.4%	24.5%	1.1%	3.9%
No. in Eugowra	142	61	48	3	7
% in Eugowra	54.6%	23.5%	18.5%	1.2%	2.7%
No. in Manildra	89	71	41	0	0
% in Manildra	44.1%	35.1%	20.3%	0.0%	0.0%
No. in Cudal	81	42	28	11	0
% in Cudal	51.3%	26.6%	17.7%	0.0%	7.0%
No. in Yeoval	60	16	24	0	6
% in Yeoval	54.1%	14.4%	21.6%	0.0%	5.4%
No. in Cumnock	62	29	11	0	8
% in Cumnock	55.9%	26.1%	9.9%	0.0%	7.2%
No. in Cargo	116	93	39	6	8
% in Cargo	43.8%	35.1%	14.7%	2.3%	3.0%

Table 13: Summary of household type for Cabonne (Source: www.abs.gov.au).

Issues & Strategies

Dwelling Tenure: Cabonne has a higher rate of home ownership, comparable rate of home purchase, and a lower rate of home rental compared to the Australian average. Home ownership in all settlements is higher than the Australian average. This suggests a strong commitment to these settlements and valuing property ownership. Home purchase is lower in Canowindra, Eugowra, Cudal, Cumnock, and Yeoval than the Australian average. Molong, Manildra and Cargo have comparable rates. Rental rates are lower in all key settlements compared to Australia with particularly low rates in Eugowra, Cudal, Cumnock and Cargo. The lack of rentals in these settlements may reduce access for lower socio-economic groups or itinerant workers.

2.5.10. Household Size & Median Rent/Loan

In 2006 in Cabonne the median weekly rent was \$108, compared to \$190 in Australia. The median monthly housing loan repayment was \$1,083, compared to \$1,300 in Australia. In 2011 the average median weekly rent and monthly housing loan repayments have increased significantly in both Cabonne and Australia.

In Cabonne in both 2006 and 2011 the average household size was 2.6 and the average number of persons per bedroom was 1.1. The average household size across the settlements ranges from a low of 2.3 in Eugowra and Yeoval to a high of 2.6 in Cargo. However, the GHD (2008) Subregional Rural and Industrial Land Use Strategy (*Local Profile, Table 2.13*) suggests that average household size has been falling in Cabonne since 1991 though it is slightly higher in the west of Cabonne and lower in proximity to Orange (*Local Profile, Table 8.16*).

Issues & Strategies

- **Rental Affordability:** The slightly lower average incomes in the area and the lower demand for housing may result in a slightly lower rent/housing loan repayment in Cabonne compared to the Australian average. More affordable housing is likely to be required in Cabonne. The average household size and number of persons per bedroom are the same in Cabonne and the Australian average.

- **Household Size:** It is projected that the future rate of occupancy will decrease to 2.3 per household by 2036 as a result of an increase in lone person households and a reduction in the average household size in the future (unless housing costs rise substantially). This will create additional need for additional dwellings to service the same sized population.

Dwelling Characteristics – Occupied Private Dwellings	Median Rent (\$/weekly)	Median Housing Loan Repayment (\$/monthly)	Average Household Size	Average No. of Persons/ Bedroom
Australia 2011	\$285	\$1,800	2.6	--
Australia 2006	\$190	\$1,300	2.6	1.1
Cabonne 2011	\$135	\$1,387	2.6	--
Cabonne 2006	\$108	\$1,083	2.6	1.1
Molong	\$130	\$1,040	2.5	1.1
Canowindra	\$115	\$500	2.4	1.1
Eugowra	\$91	\$748	2.3	1.1
Manildra	\$108	\$851	2.4	1.1
Cudal	\$130	\$780	2.4	1.1
Yeoval	\$105	\$703	2.3	1.1
Cumnock	\$85	\$598	2.5	1.1
Cargo	\$0	\$1,300	2.6	1.1

Table 14: Summary of median rent and average household size for Cabonne (Source: www.abs.gov.au).

2.6. Natural Environment

The natural environment can be both an opportunity for Cabonne's settlements (e.g.: an attraction for lifestyle, views, recreation, and water/power) but it can also be a constraint to settlement growth particularly where natural hazards increase the cost of development or make it unsustainable.

2.6.1. Climate

See [Rural & Industrial Strategy - Local Profile – Section 6.4 – Climatic Factors](#) for more detail on this issue.

Issues & Strategies

- **Climatic Design:** The temperate climate with low winter temperatures and reasonably high summer temperatures has impacts in terms of amenity for buildings within Cabonne, particularly with the need for both heating and cooling. Solar access and passive solar design are important strategies for improved amenity, particularly at the subdivision stage.
- **Climate Change:** Adaptation to climate change may have impacts on the sustainability of settlements in Cabonne including, but not limited to, impacts on agricultural productivity, ecological systems, flora and fauna, water supply, heating and cooling, flooding and storm damage. Setbacks from natural hazards and protection of prime agricultural lands and environmentally sensitive areas will improve the opportunity to adapt and minimise impacts.

2.6.2. Topography

Figure 5 shows the topography of Cabonne including the river valleys and areas with steeper gradients. Cabonne is predominantly undulating to hilly with extensive floodplain areas in the lower stretches of the creeks and rivers, particularly in the north and south-west.

The main topographical points of note include Mount Canobolas (south-east Cabonne); Mullion Range (east Cabonne); and Crokers Range / Herveys Rang and Goobang National Park (west Cabonne). It can be seen that most of the key settlements are located away from the hilly / steeper slopes and are generally located on key watercourses where water was available.

Issues & Strategies

- **Steep Gradients:** Whilst all of the settlements have variable topography, the only settlement with steep gradients that significantly impact on development and growth is at the north-western edge of Eugowra.
- **Cut and Fill:** Even lower gradients substantially increase the cost of development, require additional cut and/or fill to create a building platform or interfere with septic system design. These may all result in the need for larger lot sizes, which consumes urban land and results in a lower density development pattern. This affects nearly all of the settlements.
- **Flood Prone Lands:** Nearly all of the settlements have low-lying land along key watercourses that has the potential for flood prone land (see below for more detail).
- **Contour Data:** Currently Cabonne Council only has 10 metre contour data for Cabonne. Where possible, Council should seek more accurate topographic data for each of the settlements to assist in understanding drainage, flooding, and development opportunities and constraints. Council should liaise with the LPI on this issue.

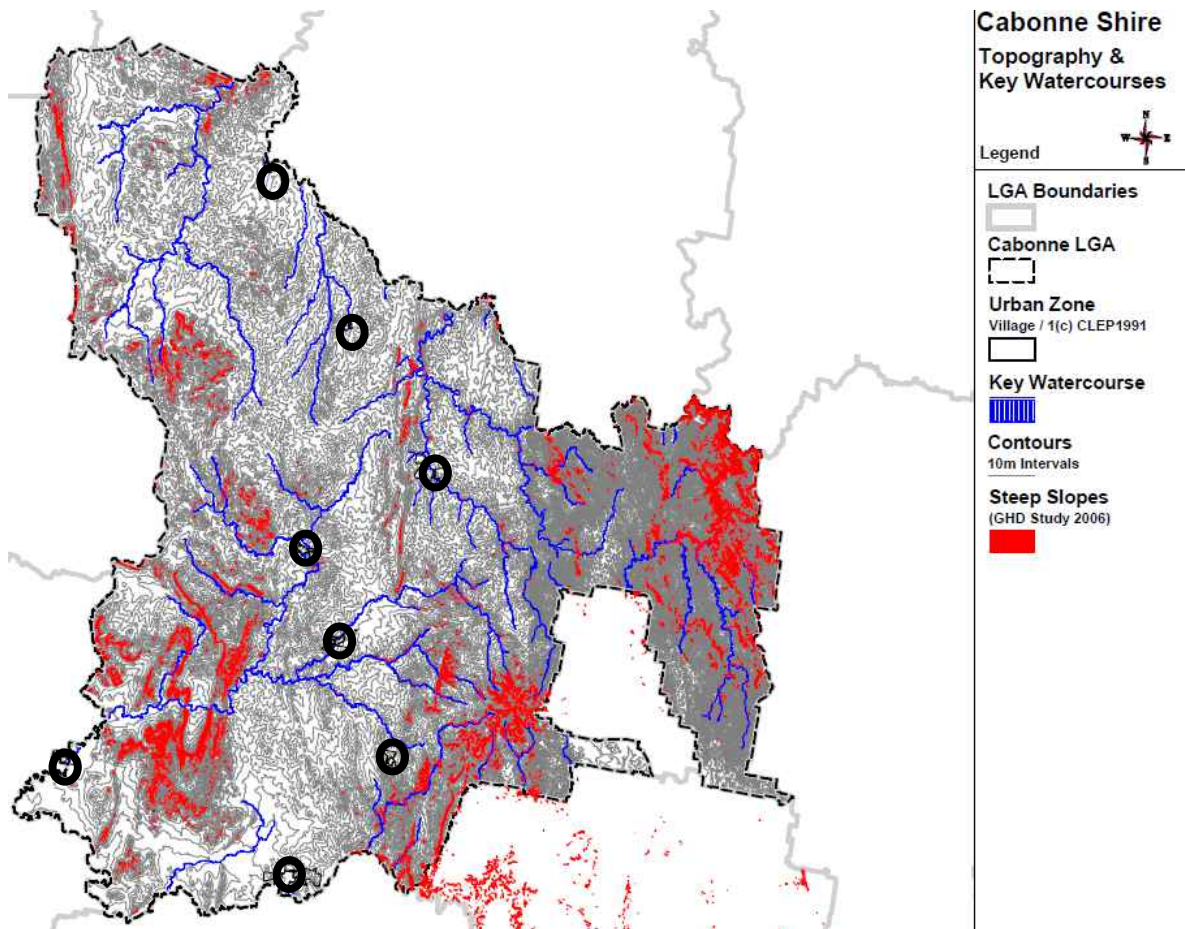


Figure 5: Contours, watercourses and areas of steep gradients in Cabonne (Source: Council GIS 2010).

2.6.3. Environmentally Sensitive Areas - Land Overlay

Figure 6 highlights the environmentally sensitive areas ('ESAs') – land overlay provided by the State Government including land subject to one or more of the following: steep slopes, shallow soils, salinity, temporary or permanent inundation, high proportion of rock outcrops, high dispersibility and erosion potential or the presence of a karst system (limestone/caves). Whilst these issues may not always be a barrier to development they are likely to increase the cost of development to protect buildings and the natural environment.

Issues & Strategies

ESA – Land Issues: Canowindra, Yeoval, and Cumnock are in proximity but not directly affected by environmentally sensitive lands. Molong is significantly affected by limestone / karst extent which makes it more difficult and expensive to develop sites and requires special management of on-site effluent. Development in these areas should be carefully managed. Eugowra, Cargo and Cudal are in proximity to area of land capability class V, VI, VII & VIII where development may or may not be suitable but the cost of development is likely to increase. Most settlements along significant watercourses have an issue with salt affected land along the edges of these watercourses which should be addressed by appropriate setbacks and revegetation of stream banks.

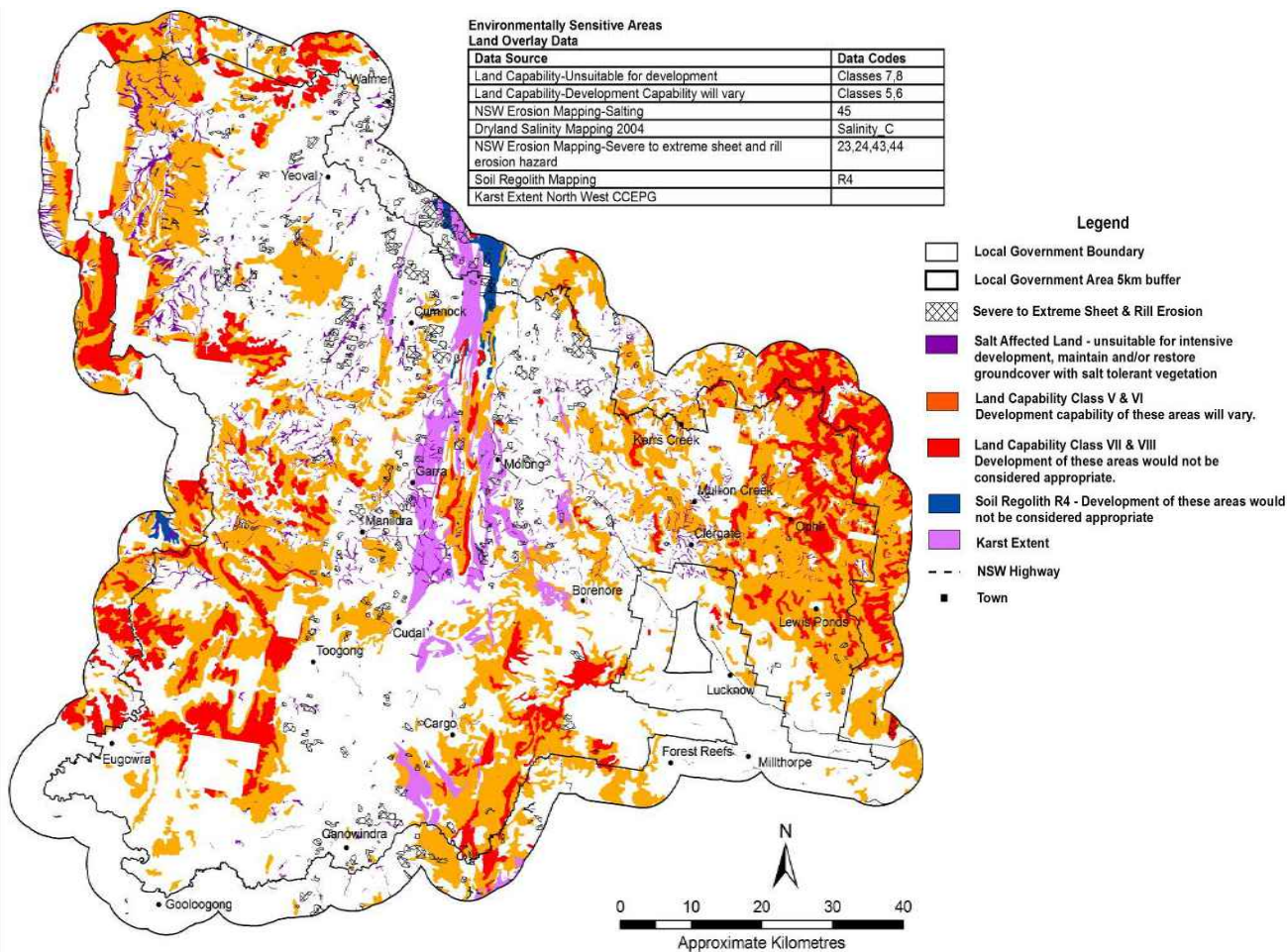


Figure 6: Environmentally Sensitive Areas – Land Overlay (2008) for Cabonne (Source: State Government).

2.6.4. Salinity

Salinity is addressed in detail in **Rural & Industrial Strategy - Local Profile – Section 6.1.4 – Catchment Salinity**.

Issues & Strategies.

Salinity: Figure 6 also shows the salt affected land across Cabonne which appear to occur along a large number of watercourses, particularly in the northern half of the Shire (including Yeoval, Cumnock, Molong, Manildra, and Cudal). The Local Profile also identifies a high salt load in the Lachlan River catchment and, in particular, in the Belubula River and its tributaries below Carcoar Dam. This poses a very high potential salinity hazard and could affect settlements along these watercourses including Canowindra but it is particularly damaging to the aquatic environment and salt-sensitive irrigated plants and viticulture. Attempts should be made to avoid increasing the salinity through appropriate stormwater and drainage management in each of the settlements and through improved riparian corridor ecology and environmental outcomes.

2.6.5. Agricultural Land Classification & Soil Protection

A key aim of state government is to protect quality soils for agricultural purposes and to also minimise erosion of valuable topsoil. See [Rural & Industrial Strategy - Local Profile – Section 6.3 – Soils](#) and [Local Profile - Section 6.5 – Land Capability](#) for more detail on this issue.

NSW Agriculture (DPI) has produced Agfact Sheet AC.25 entitled '*Agricultural Land Classification*' (2002) that provides a detailed summary of the agricultural land classification system and the five (5) classes of land in terms of its suitability for general agricultural use. The

fewer the constraints on land the greater its value for agriculture – based on a set of constraining factors common to most agricultural industries. In summary:

- Class 1 land is high value and suitable for intensive cultivation (subject to other factors);
- Class 2 land is suitable for regular cultivation for crops but not continuous cultivation;
- Class 3 land is grazing land or suitable for rotational cultivation;
- Class 4 land is land suitable for grazing on native or improved pastures but not cultivation;
- Class 5 land is unsuitable for agriculture or at best for light grazing.

Settlement	Agricultural Land Classification surrounding Settlement
Molong	C4 to west & east on sloping land and C3 to north & south. C2 further east and C5 further west.
Canowindra	C3 to north, east & south with C1/C2 to west and along river flats.
Eugowra	C3 to west, south & east with C4/C5 to north.
Manildra	C2 with larger areas of C3 to north-east & south-east.
Cudal	C2 with areas of C3 to the north & south-west.
Yeoval	C2 with isolated pockets of C4. C3 further to the west.
Cumnock	C2 & C3 with pockets of C4.
Cargo	C3 to north, east & south-east with C4 to west & south-west.

Table 15: Summary of agricultural land classification surrounding settlements (Source: Dept. of Agricultural Land Classification Map for Cabonne).

Issues & Strategies

- **Protection of Agricultural Lands:** An aim of this Strategy is to protect 'prime' agricultural lands, particularly Classes 1-3 which are essential to higher value agricultural production, food security, and protection of valuable topsoils. The existing Agricultural Land Classification mapping for Cabonne suggests that all of the settlements have Class 1-3 land surrounding them that should be considered before expanding the urban areas into rural lands. Perhaps the most valuable agricultural land surrounds Canowindra whilst the least valuable surrounds Cargo and Eugowra (depending on direction). This Strategy will show that there are only minor changes proposed to the urban boundaries of all of the existing settlements and, therefore, there will be limited impact on agricultural capability.
- **Agricultural Land Classification Update:** It is important to note that the Agricultural Land Classification map for Cabonne is significantly outdated and prepared only at a very broad scale so it unlikely to be accurate at the detailed scale. It is understood that DPI is currently preparing a new agricultural land classification map at this time.

2.6.6. Contaminated Land

Soils can also be contaminated by human land uses which can affect the future use of these lands unless the contamination is removed and the site remediated. The process for determining contamination is set out in *State Environmental Planning Policy No.55 (Remediation of Land)* ('SEPP55'). OEH encourages Councils to identify and manage contaminated land and SEPP55 sets out a list of land uses that are likely to require further review for contaminated land. OEH recommends that all contaminated land should be clearly identified and managed and Council should develop local registers using their knowledge of land use history or contribute to the State contaminated land register for sites regulated by the Department.

The 2008/09 *Regional State of the Environment Report* ('SoE Report') notes that contaminated sites may have a significant impact on land resources. Council is able to register contaminated sites on a Contaminated Land Register under the *Contaminated Land Management Act 1997*. Not all contaminated sites are required to be placed on this register. Please see the specific settlement chapters for more details.

Issues & Strategies.

Contaminated Land: Any development of land with known or potential soil contamination is required to address the requirements of SEPP55 (Remediation of Land) prior to use for another purpose. In summary, there are identified sites in Molong (Gasworks) and Canowindra (BP Service Station) but no other settlements. However, former industrial or service station uses are likely to have impacted on sites in all settlements.

2.6.7. Geology & Mineral Potential

Cabonne is located broadly in the geological area known as the Lachlan Orogen Belt which is one of the more metallic mineral provinces in Australia and extends north to Cobar and south to Victoria. It is this mineral belt that has resulted in finding of significant quantities of gold and copper (and other minerals) in the region. Figure 7 shows the mineral potential of the area as mapped by the Department of Industry and Investment in 2010.

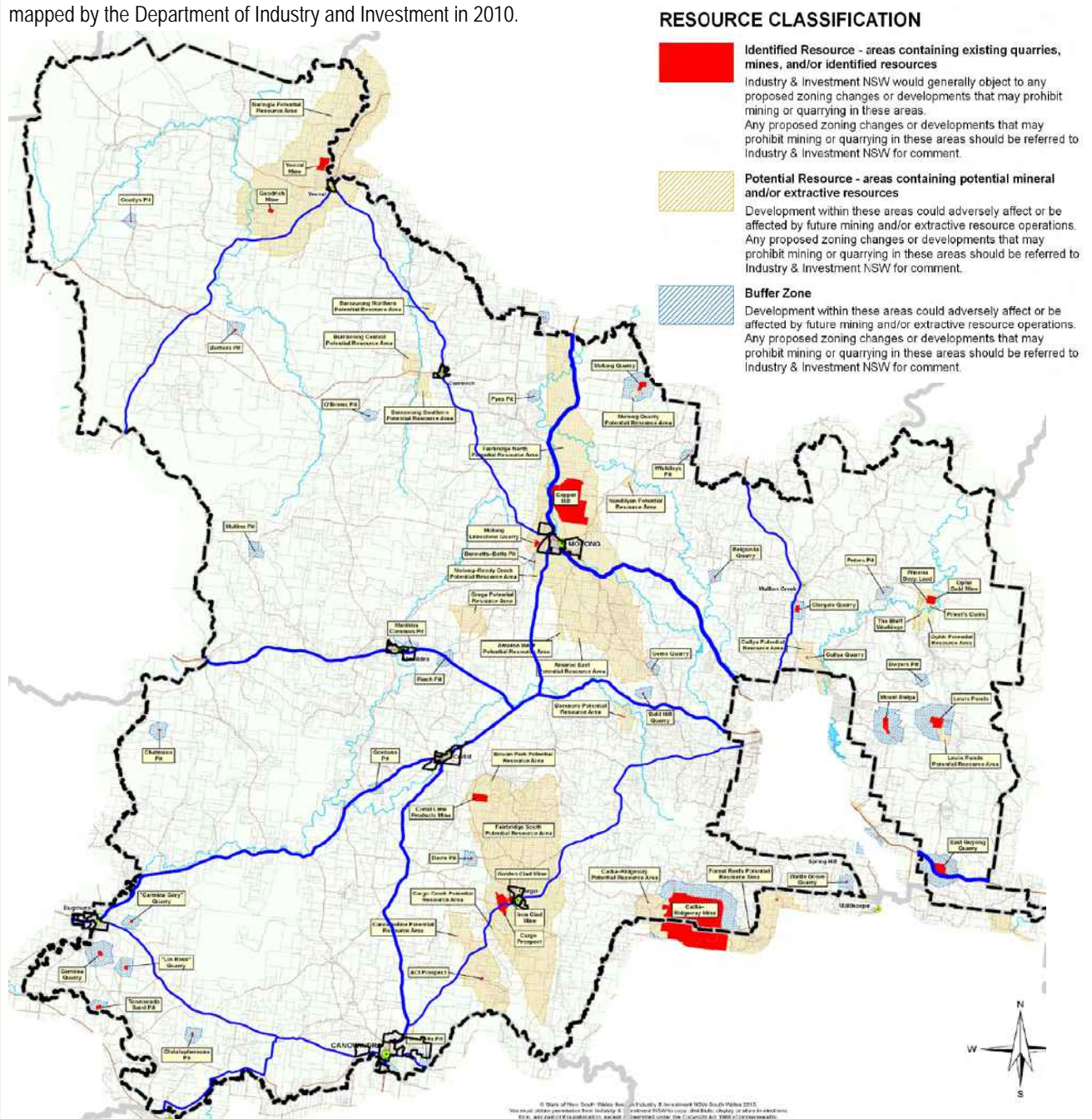


Figure 7: Mineral resource audit of Cabonne (Source: DPI 2010).

From a positive view mineral potential could result in the creation of a number of large scale mining operations that increase employment, economic growth, and social prosperity to settlements in Cabonne. It is clear that the growth in the Central West region can be partly attributed to large mines such as Cadia-Ridgeway.

From a negative view mining can have a number of environmental impacts on settlements including noise, vibrations, truck movements, dust and difficulties as well as social and economic issues associated with housing and servicing a large influx of mining employees.

Issues & Strategies.

- **Protection of Mineral Resource:** The DPI seeks to avoid zoning of existing and proposed mineral areas where it may prohibit mining or quarrying. Council would prefer to ensure mining and quarrying is prohibited in any urban zone but this is not expected to impact on exploration potential.
- **Existing Mines:** There are existing quarries, mines and/or identified resources in reasonable proximity to Molong (Copper Hill, Molong Limestone Quarry & Bennetts-Betts Pit), Cargo (Golden Clad Mine, Iron Clad Mine and Cargo Prospect) and Yeoval (Yeoval Mine and Goodrich Mine). These identified mineral resources may have the potential for significant positive and negative impacts on each of these settlements. In particular, they are likely to constrain growth in the direction of each of these mines. Existing smaller pits exist in proximity to Manildra, Eugowra, and Canowindra. The buffer zone for these pits is only likely to affect the urban zones of Manildra (Manildra Common Pit) and to a lesser extent Canowindra (The Falls Pit), but may affect potential industrial expansion in Eugowra to the south (Carmina Quarry).
- **Cadia:** The Cadia-Ridgeway Mine (and new Cadia East project) sits on the border of Cabonne and Blayney Shire local government boundaries. This mine already has significant positive economic and employment impacts on Cabonne. The closest settlements in Cabonne are Cargo, Cudal and Canowindra. Cabonne Council has been negotiating with the mine to get improved connections along Edinboro Lane but there are a number of hurdles to achieving this.
- **Potential Resource Areas:** Potential resource areas containing mineral and/or extractive resources are present across and surrounding Molong, Cargo and Yeoval. If these resources were to become an identified and viable resource then it may have both positive and negative impacts on each of these settlements. There is no current proposal to grow any settlements in a direction that may interfere with mining exploration.

2.6.8. Watercourses

Figure 8 shows the current locations of major and minor watercourses in Cabonne. It can be seen that major watercourses are located in or near Molong, Canowindra, Eugowra, Yeoval, Manildra and Cudal. Minor watercourses are located in or near Cumnock and Cargo.

The **Local Profile – Section 6.1 – Water Resources** states that:

“The Cabonne LGA is drained by the tributaries of two major river systems, the Macquarie and the Lachlan. Most of the northern portion of the council area drains northward via the Little and Bell Rivers, Summerhill Creek and Lewis Ponds Creek, all of which join the Macquarie River outside the council’s territory. The remainder drains in a westerly to south-westerly direction through the Belubula River and Mandagery Creek systems.

Most of the land within the Cabonne LGA is undulating or hilly, with extensive floodplain areas in the lower stretches of the creeks and rivers especially in the north and south-west. None of the council’s territory is remote from the headwaters of its various streams, and flood warning times are characteristically short – that is, in the order of hours rather than days. Flood waters tend often to be deep and fast-moving and are usually quick both to rise and fall which was evident in Molong in 2006.

The Little River rises in the Curumbenya Range and the Noahs Ark Ridge at elevations between 550 and 700 metres and drains most of the north-western portion of the council area. Its major tributaries are the Buckinbah and Sandy Creeks, which meet at Yeoval. Floodplain development on these watercourses is limited within the Cabonne LGA.

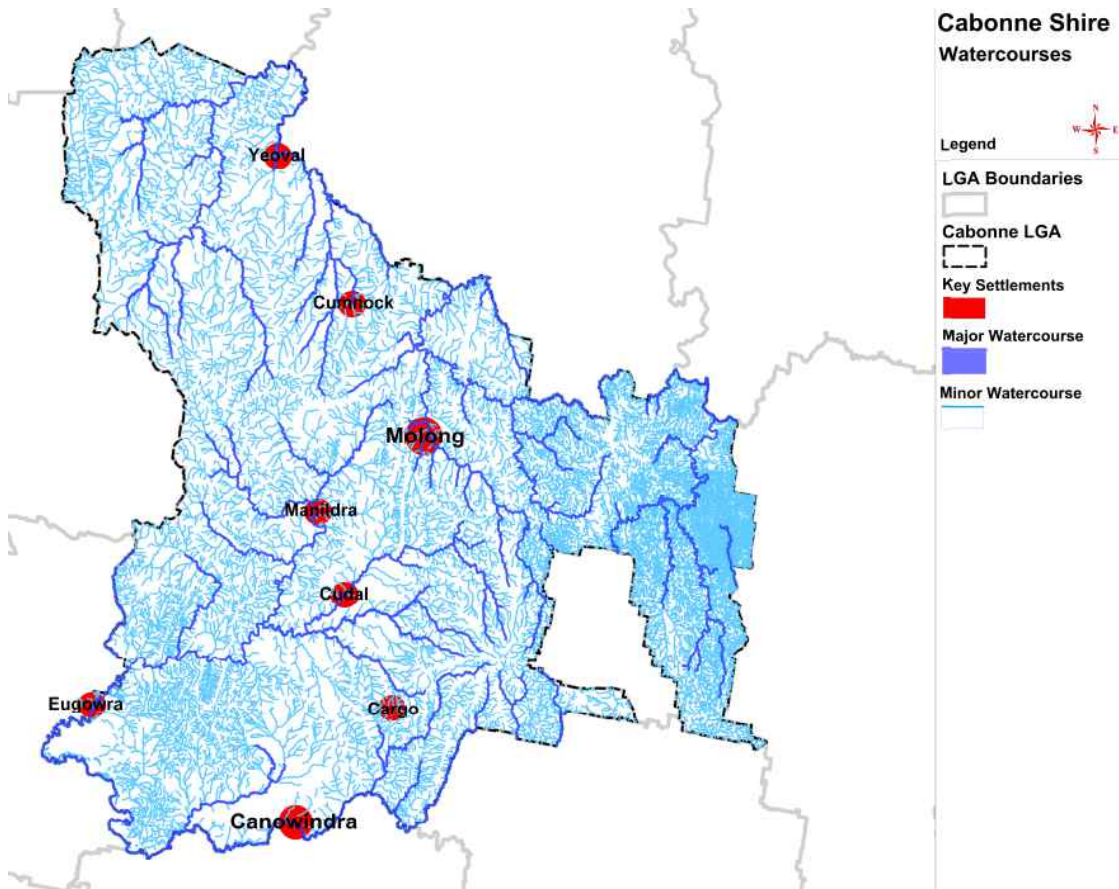


Figure 8: Major and minor watercourses in Cabonne (Source: Council GIS 2010).

The Bell River drains the central-northern portion of the Council area, its headwaters rising at over 800 metres elevation to the west and north of Orange. Its catchment area is separated from the Little River catchment by the Noahs Ark Ridge and from the Mandagery Creek catchment by the Macquarie range. Within the Cabonne LGA, the Bell's principal tributary is Molong Creek (sometimes known as Molong Rivulet), which flows through Molong and joins the main river 12 kilometres downstream of the town.

The land to the east of the Mullion Range is rugged and is drained by the Lewis Ponds Creek. The major tributary of this creek is Summerhill Creek, the headwaters of which rise in the Orange and Blayney Council areas at elevations up to more than 1,100 metres in the Mt. Canobolas area. Tributaries of Summerhill Creek have been dammed to form the Gosling Creek and Spring Creek reservoirs and Summerhill Creek itself includes the Suma Park Reservoir.

The Belubula River rises outside the council area in the undulating country along the Orange-Blayney and Blayney-Bathurst council boundaries and in the Stringybark and Bugs ridges. Most of its headwaters are at elevations between 900 and 1,100 metres. The Belubula River flows west and southwest, being joined by Coombing, Cowriga and Flyers Creeks and the Mandurama Ponds within the Blayney Council area and Panuara, Canomodine, Canangle and Nyrang Creeks within Cabonne and Jacks Creek form the Cowra Council area. In its upper and middle reaches the river flows through undulating and hilly country interspersed with only limited areas of alluvial floodplain. About 16 kilometres upstream of Canowindra the floodplain widens, and downstream of the town is several kilometres wide.

On this lower stretch, various creeks leave and re-join the main channel and numerous low levees protect farmlands from relatively low-level flooding. Periodically, floods overtop these levees and inundate large areas of rural lands. Particularly at and upstream of Canowindra, flood flows can be dangerously fast.

The Mandagery Creek and its tributaries rise in the Curumbenya Range and Noahs Ark Ridge on the slopes of Mt. Canobolas. The main tributaries are the Manildra, Boree, Bourimbla, Warree, Gillgilbury and Waterhole Creeks and the system as a whole drains in a catchment area of some 2,000 square kilometres. Flooding of rural areas along the [Belubula] and its tributaries is common, and the town of Eugowra is especially flood liable."

Issues & Strategies.

Protection of Water: OEH recommends that surface and groundwater quality should be protected and this Strategy should include actions to achieve this consistent with government endorsed, community based, environmental objectives (Letter – 21 December 2009). In particular, this Strategy seeks to be consistent with the current government endorsed Water Quality and River Flow Objectives that apply to Cabonne.

2.6.9. Environmentally Sensitive Areas - Water Overlay

Figure 9 highlights the environmentally sensitive areas – water overlay provided by the State Government including sensitive waterways and areas of groundwater vulnerability.

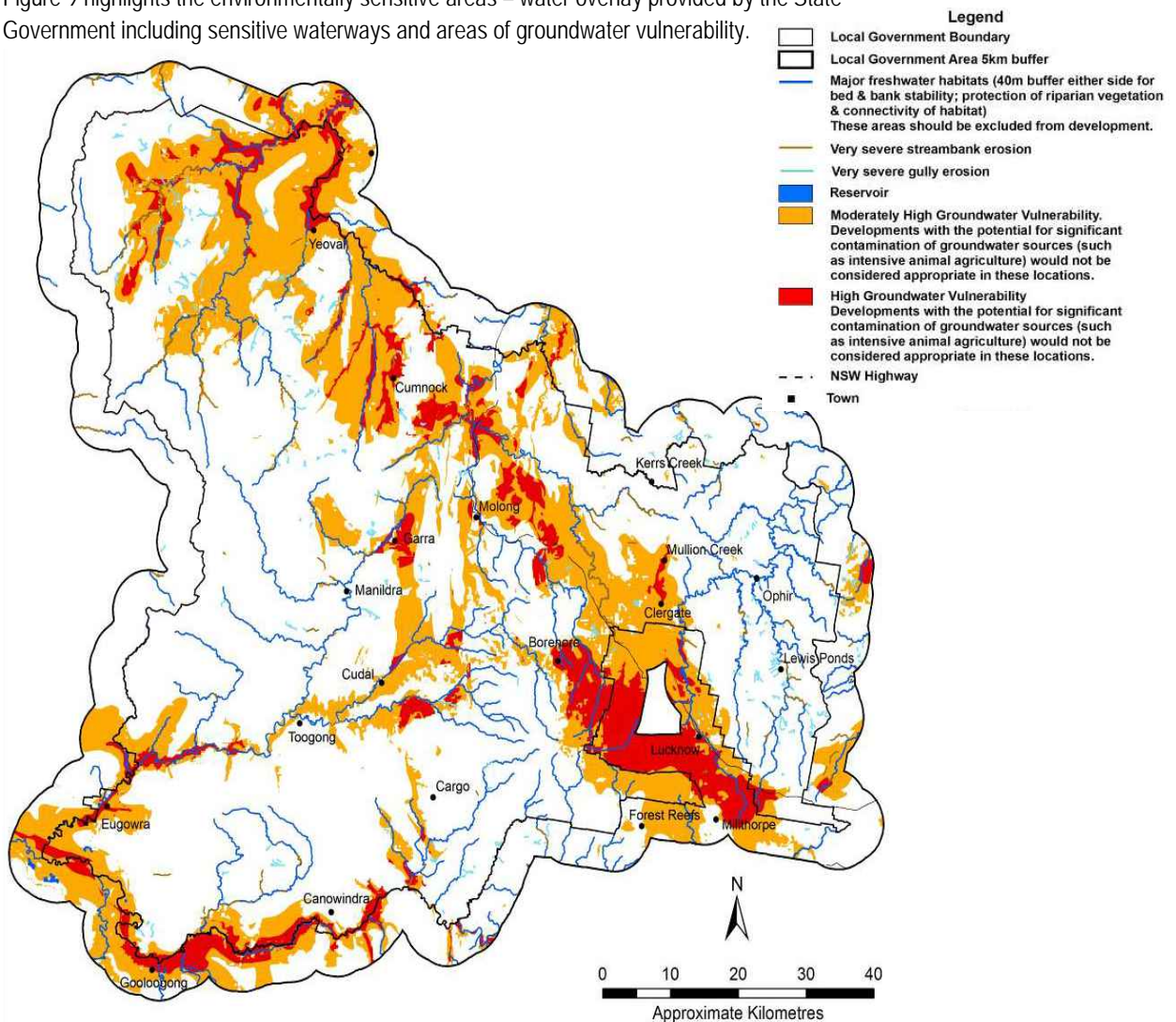


Figure 9: Environmentally Sensitive Areas – Sensitive Water Resources (2008) for Cabonne (Source: State Government).

Issues & Strategies

- **ESA - Sensitive Waterways:** OEH has recommended avoiding intensification of land use and settlement in environmentally sensitive areas (ESAs) and suggested appropriate zonings and overlays can be used to achieve this (Letter 21 December 2009). There are a number of the eight (8) key settlements that are located in proximity to sensitive waterways in Cabonne including Molong, Canowindra, Eugowra, Manildra, Cudal and Yeoval. These are major freshwater habitats and OEH recommends a 40m buffer either side of these watercourses for bed and bank stability, protection of riparian vegetation and connectivity of habitat. This Strategy seeks to setback development from key riparian corridors to achieve this in Cargo, Cumnock, Cudal and Yeoval.
- **ESA – Groundwater:** Molong, Eugowra and Yeoval are located on the edge of or in close proximity to areas of high or moderately high groundwater vulnerability. Development (particularly rural residential development) needs to be managed to avoid additional pressures being placed through bores on these groundwater systems.

2.6.10. Groundwater

Groundwater is addressed in detail in [Local Profile – Section 6.1.3 – Groundwater](#) which states that *“understanding where groundwater sources are is critical for the location of future development. This enables Council to maximise the availability of water for beneficial uses such as town water and agriculture, whilst minimising opportunities for pollution and competition with low beneficial uses.”*

Cabonne is covered by two main geological systems for groundwater which includes the Orange Basalt Area (predominantly to the south of the Orange LGA and in Cabonne out to Borenore and Nashdale) and the Lachlan Fold Belt (which covers most of the rest of the Shire and most of the settlements except Eugowra and part of Canowindra). There is also some Upper Lachlan Alluvium to the south west of Cabonne and Belubula Valley Alluvium to the south. The NSW Office of Water (NoW) has issued Groundwater Shortage Zone Order for the Orange Basalt 801 – Order 1 Area (purple) and the Lachlan Fold Belt 811 – Order 2 Area (brown) which restricts the use of groundwater in these zones.

Issues & Strategies

Groundwater: NSW Office of Water stated that zoning for additional residential, village, large lot residential and rural small holdings allotments are a concern if there is a likelihood for additional extraction of surface water and groundwater resources through a proliferation of Basic Landholder Rights (BLRs) under Section 52 of the *Water Management Act 2000* or there is the potential for degradation of vulnerable groundwater sources through on-site sewage disposal or contaminating industries. The aim of this Strategy is to focus intensification of development in Village Zones with the requirement for reticulated water and sewer to avoid the need for bores and minimise contamination to groundwater systems. In large lot residential areas on-site effluent management and bores may still be required – but where possible centralised water systems will be considered.

2.6.11. Drinking Water Catchments

As Figure 2 shows, the only area in Cabonne that forms part of a protected drinking water catchment is in the east of the Shire along the Molong Creek as far as Molong Dam. This area is in Zone 7(c) Environment Protection (Water Catchment). This zone is not in proximity to any of the key eight (8) settlements. However, Yeoval and Cumnock both draw drinking water supplies from nearby watercourses as do settlements in other LGAs downstream along the Macquarie and Lachlan Rivers, so effectively all watercourses form part of a drinking water catchment, whether it is for settlement within or outside Cabonne.

Issues & Strategies

Drinking Water Catchments: Council has a clear objective to protect key drinking water catchments. However, as these areas are not in proximity to the eight (8) key settlements it is not covered in detail in this strategy. However, there should be continued protection of the Molong water catchment along Molong Creek.

2.6.12. Flood Prone Lands & Drainage Issues

This section highlights the risk of flooding in Molong, Canowindra and Eugowra (and to a lesser extent in Manildra, Cudal, Cargo, Yeoval and Cumnock). Flooding is addressed in detail in [Local Profile – Section 6.8.1 – Flooding](#) as follows:

"Most of the land within the Cabonne Council area is undulating or hilly, with extensive floodplain areas in the lower stretches of the creeks and rivers especially in the north and south-west. None of the council's territory is remote from the headwaters of its various streams, and flood warning times are characteristically short – that is, in the order of hours rather than days. Flood waters tend often to be deep and fast-moving and are usually quick both to rise and fall" (Local Profile p.75).

Molong: *"Molong, located on the Molong Creek, is subject to flooding of residential areas and shops. Major flooding can occur with very little warning. Much of the commercial area lies within the floodplain and overbank flow is known to [have] entered the shopping area on four occasions, the last in 2005" (Local Profile, p.76).*

Canowindra: *"Canowindra is cut in two by a major flood, the main bridge across Belubula River (John Grant Bridge) being closed to traffic. A nearby footbridge (the Swing Bridge) is closed before the major flood level is reached and there is significant disruption to traffic on roads upstream and downstream of the town. In Canowindra itself, the main bridge has been closed for periods of up to eight hours during floods. About 16 kilometres upstream of Canowindra the floodplain widens, and downstream of the town is several kilometres wide. On this lower stretch, various creeks leave and re-join the main channel and numerous low levees protect farmlands from relatively low-level flooding. Periodically, floods overtop these levees and inundate large areas of rural lands. Particularly at and upstream of Canowindra, flood flows can be dangerously fast" (Local Profile, p.75).*

"The town is largely unaffected by major floods, apart from inundation at the rear of commercial allotments on the southern side of Gaskill Street and flooding in residential allotments in East Street. At the 1% AEP level of flooding about 26 residential allotments would be flood affected, but not houses would be inundated to above floor level" (Canowindra FRMS, p.S1).

Eugowra: *"Eugowra experiences particularly severe problems when the Mandagery Creek is in flood. Flows along the Mandagery River escape the main creek during floods and move down floodways on either side. They can be dangerously fast-moving, with velocities of up to 2 metres per second having been recorded. Puzzle Flat Creek, which joins the Mandagery at Eugowra, has been known to worsen flooding within the town in the past. Levee banks constructed in 1992 will reduce the frequency of flooding from this creek in the future, although the banks could be overtopped in a very large flood event" (Local Profile, p.75).*

Manildra: *"Manildra is located at the confluence of the Manildra and Mandagery Creeks. There are a very small number of houses which could be flooded and the river flats are inundated during flood periods. Local roads can be closed and the railway line cut" (Local Profile, p.75).*

Cudal: *"At Cudal, a number of low lying residential properties in Cudal can be inundated by Boree Creek after heavy rainfall. Boree Creek can rise quickly with little or no warning causing significant damage" (Local Profile, p.75).*

Yeoval: *"Yeoval is sited at the confluence of Sandy and Buckinbah Creeks and its low-lying areas are flood liable. Up to five houses at the low end of Obley and Ganoo Streets could be flooded from Sandy Creek. Other areas that could be flooded in a major flood event include the*

low-lying areas of the golf course and showground located at the northern edge of the town" (Local Profile, p.76).

Cumnock: *"Cumnock has three houses which may be flood liable at the northern end of Obley Street during a significant flood on Doughboy Creek. In an extreme flood event, up to three additional dwellings could be at risk of inundation"* (Local Profile, p.75).

Cargo: *"At Cargo, no flood problems sufficient to inundate dwellings or require evacuations are known to exist for this village. However flash flooding could occur after heavy rain and could close some local roads"* (Local Profile, p.75).

Please see the settlement chapters for more detail on flooding / drainage issues.

Current Studies

Cabonne Council has currently prepared the following Flood Studies and Floodplain Risk Management Studies ('FRMS'):

- Dept. of Water Resources (January 1994) *Eugowra - Flood Study Report*,
- Bewsher Consulting Pty Ltd (January 1999) *Molong - Floodplain Management Study*,
- Lyall & Macoun Consulting Engineers (1999) *Eugowra - Floodplain Management Study*,
- SMEC (February 2004) *Canowindra - Flood Study*,
- Lyall & Associates (October 2007) *Canowindra - Flood and Floodplain Risk Management Study and Plan* (Adopted by Council 17 November 2008);
- URS (August 2009) *Review of Molong Floodplain Risk Management Study (Draft Report)*
- Lyall & Associates (May 2011) *Review of Eugowra Floodplain Risk Management Study* (Adopted by Council in 2011).

Issues & Strategies

- **Flood Studies:** OEH recommends that comprehensive flood studies and floodplain management studies should be conducted, and a floodplain risk management plan prepared and adopted, for all urban and rural residential areas (Letter – 21 December 2009). Cabonne Council has prepared Flood Studies and Floodplain Risk Management Studies for Molong, Canowindra and Eugowra. Cabonne Council will continue to seek additional funding to prepare flood studies for the remaining settlements in Cabonne that are located on or near a significant watercourse to inform future development decisions in the area and the Local Environmental Plan.
- **Flood Prone Lands:** Flood prone lands (or subject to flash flooding /drainage issues) have been identified in all of the settlements. This Strategy summarises the known information and locations of flood affected land and attempts to minimise intensification of development on these lands through appropriate development controls. OEH has recommended adopting development controls to minimise flood risk to human life, property and the local environment while maintaining floodplain connectivity for environmental benefit (Letter – 21 December 2009) in accordance with the *Floodplain Development Manual*. Cabonne Council has prepared Development Control Plans to manage development and flooding issues for Molong and Eugowra and more general controls may need to be prepared for all flood prone lands in Cabonne.

2.6.13. Environmentally Sensitive Areas – Biodiversity & Native Vegetation Overlays

Biodiversity is addressed in more detail in [Local Profile – Chapter 6.7 - Biodiversity](#). A short summary is provided in this Strategy.

National Parks and State Conservation Areas

The following National Parks, nature reserves, and state conservation areas are located within Cabonne: Goobang National Park; Nangar National Park; Girralang Nature Reserve; Mt Canobolas State Conservation Area; and Mullion Creek State Conservation Area. Recently, there have also been the additions of the Kilonbutta Nature Reserve and Mandagery Nature Reserve (which used to be forestry areas).

Bioregion and Remnant Native Vegetation

The **Rural & Industrial Strategy - Local Profile – Chapter 6.7.1 – General** provides a summary of the biodiversity in Cabonne and highlights that a significant percentage has been cleared of native vegetation with the most threatened species including native grasslands, box woodlands, montane wetlands and riparian vegetation.

The key role of this Strategy should be in protecting native vegetation within and in proximity to the key settlements and along riparian waterways and avoiding significant intensification of development in these areas. OEH suggests that impacts on biodiversity caused by activities such as the clearing of house and building sites, the disturbance caused by infrastructure, and the construction of asset protection zones for statutory fire protection should be minimised through appropriate locations for development and development controls. In particular lot sizes should be sufficient to allow placement of dwellings to minimise vegetation removal.

The issues above have been summarised by the Environmentally Sensitive Area ('ESA') – Biodiversity and Native Vegetation map (Figure 10) provided by the State Government that shows the DECC/OEH Estate (national parks etc), Forests NSW land, wetlands, endangered ecological communities ('EECs'), vegetation on over-cleared landscapes, riparian vegetation, and other native vegetation.

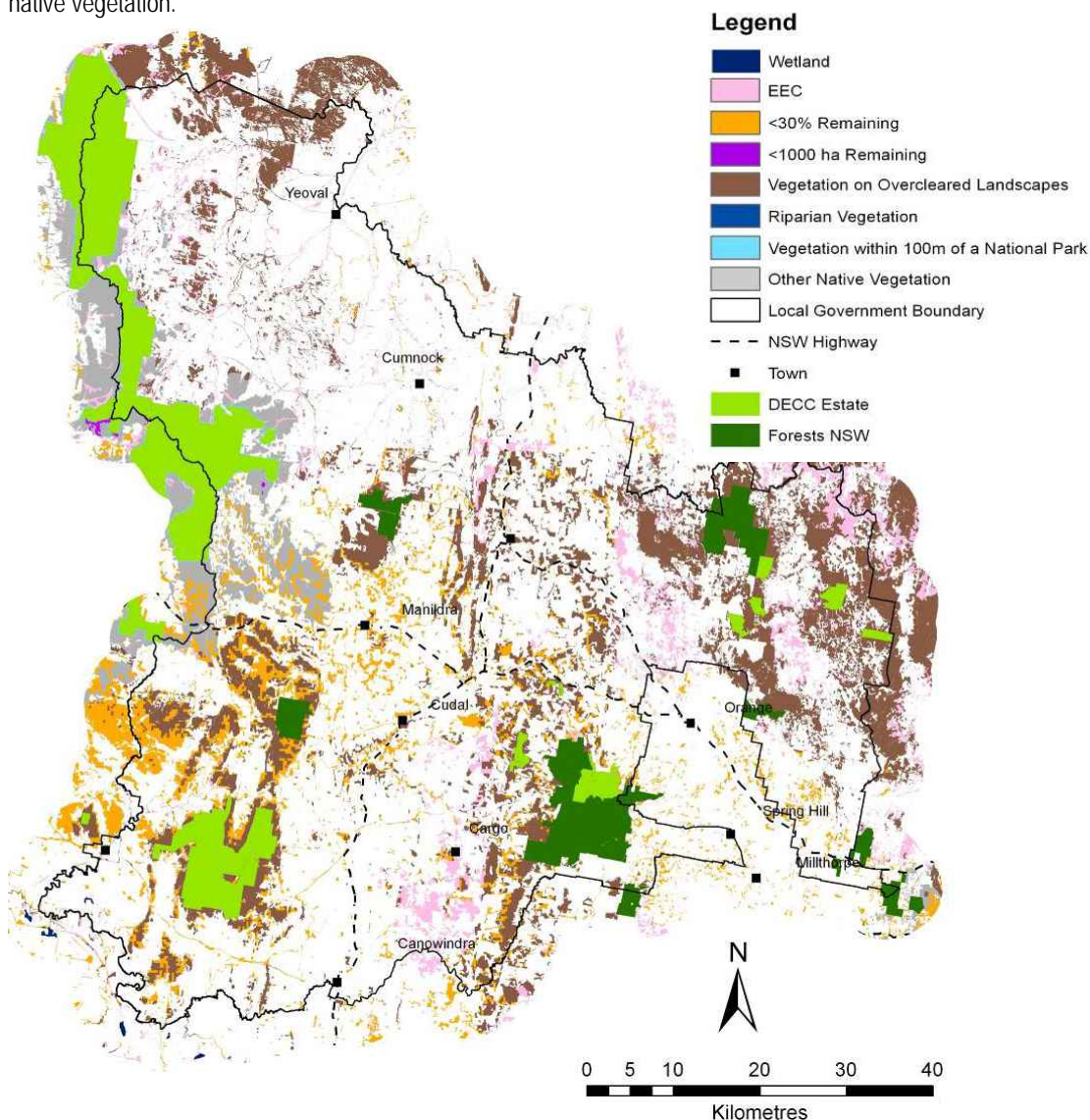


Figure 10: Environmentally Sensitive Areas – Biodiversity and Native Vegetation Overlay (2008) (Source: State Government).

OEH has recommended avoiding intensification of land use and settlement in environmentally sensitive areas (ESAs) and suggested that the following measures should be adopted in developing a new LEP including: Implement appropriate environmental zonings; Avoid development in remnant native vegetation; Establish large minimum lot sizes; Conduct comprehensive environmental studies if areas of high environmental sensitivity occur in sites where there is a strong imperative to intensify land use; and Define biodiversity protection and management measures in Development Control Plans. OEH has also recommended that an objective of this Strategy should be "no net loss of native vegetation" to ensure that the proposed new LEP supports the NSW State Plan via State Natural Resource Management Targets and Catchment Management Authority Action Plans (Letter – 21 December 2009).

Threatened Species and Endangered Ecological Communities

The **Rural & Industrial Strategy - Local Profile – Chapter 6.7.5 – Threatened Species** states that, according to the Atlas of New South Wales Wildlife (as at 2006) the following species are threatened (endangered or vulnerable) in the sub-region: 6 threatened flora species in Cabonne; 18 threatened birds recorded in the sub-region; 7 threatened mammals recorded in the sub-region; 4 threatened bats recorded in the sub-region; 3 threatened fish recorded in the sub-region (under the *Fisheries Management Act 1994*); and 5 endangered ecological communities in the sub-region including Montane Peatlands and Swamps, Myall Woodland, Fuzzy Box Woodland, and White Box/Yellow Box/Blakely's Red Gum Woodland.

Issues & Strategies

Biodiversity: Most settlements are affected to some extent by areas of high or moderate biodiversity sensitivity, most of this relating to potential riparian vegetation along watercourses or existing native vegetation. The settlements of Eugowra, Manildra, Cudal and Cargo sit in areas of Cabonne where there is less than 30% of previous vegetation remaining (brown on map). The settlements of Molong, Eugowra, Cargo, and Yeoval may be in proximity to pockets of Ecologically Endangered Communities ('EECs'). Molong, Manildra, Cudal and Cargo are in proximity to areas where there is vegetation on over-cleared landscapes. This Strategy should seek to ensure that the growth and development of all of the key settlements seeks to preserve and enhance the biodiversity of the region and protects existing native vegetation. This Strategy recommends the inclusion of the standard clause and mapping associated with protecting biodiversity in the new LEP. In addition, in Cargo, Cumnock, Cudal and Yeoval it is proposed to reduce the intensity of development along riparian corridors to allow appropriate revegetation.

2.6.14. Bushfire Prone Land

Bushfire is a natural hazard that can result in both property loss / damage and risk to human safety and lives. The aim is to avoid increasing development in areas of high bushfire risk and/or mitigate against bushfire risk for existing development. Figure 11 shows the areas of bushfire prone land (according to the Rural Fire Services in 2004). OEH recommends that higher density settlement in 'fire prone' locations should be avoided in the first instance. Where residential areas abut native vegetation there is pressure for the required Asset Protection Zones and other hazard management measures to encroach on that vegetation. The requirements of the *Planning for Bushfire Protection* policy should be followed.

Issues & Strategies

Bushfire Prone Lands: Settlements with bushfire prone land include Eugowra and Cargo. Bushfire significantly affects the western area of Eugowra and is a significant constraint to development. Cargo is bordered by bushfire prone lands to the west and this constrains growth in this direction. The remaining settlements are generally not constrained by significant areas of bushfire prone land. However, this does not mean there is no risk of bushfire spreading to these areas. Setbacks/asset protection zones should be maintained to significant vegetation in Molong, Manildra and Yeoval.

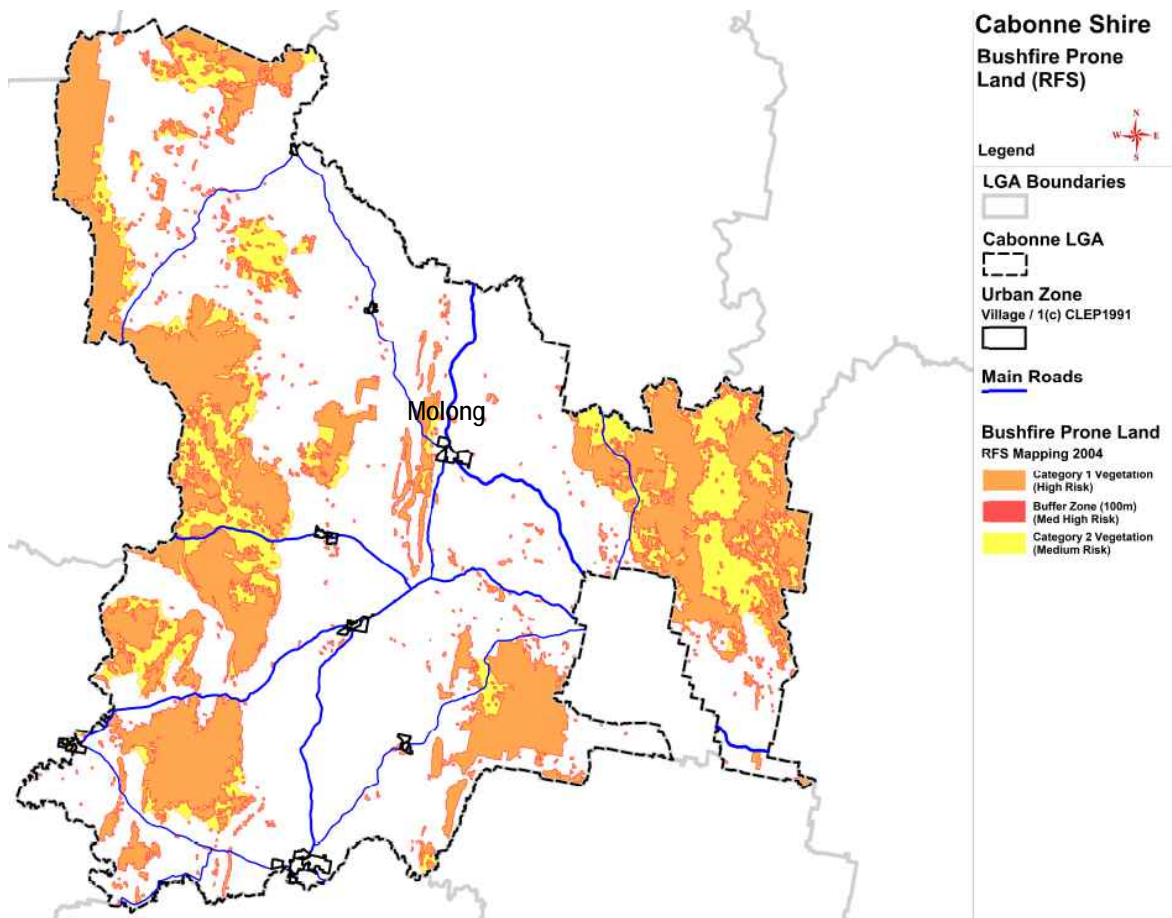


Figure 11: Bushfire prone lands across Cabonne (Source: Rural Fire Services 2004).

2.6.15. Environmental Pollution

The strategic planning process needs to identify and avoid potential land use conflicts. In particular, the relationship between settlement pattern changes and existing land use needs to address potential neighbour conflicts over such issues as noise, dust, odour and chemical use.

Council has an important responsibility as an Appropriate Regulatory Authority ('ARA') under the *Protection of the Environment Operations Act 1997* ('POEO Act'). As a regulatory body, Council will need to consider surrounding land uses and proposed activities in any planning process, particularly those activities where Council may subsequently be required to regulate. A key example would be any industrial uses proposed in any of the settlements.

OEH requires that careful consideration be given to potentially problematic premises in terms of potential neighbour conflicts. It is also an offence under the POEO Act to pollute without a licence so it is important to review the location of potential sources of pollution in close proximity to sensitive areas and watercourses. The POEO Register of Licensed Premises as of the 2nd June 2010 includes 12 items, four (4) of which are owned by Cabonne Council and eight (8) being privately owned. The only private licences within a settlement are for Manildra Flour Mills and the Canola Plant in Manildra. OEH is the ARA for Council premises which includes sewage treatment plants like that at Molong, Canowindra, Eugowra and Cudal and the limestone quarry near Molong.

Issues & Strategies

Environmental Pollution: OEH recommends potential land use conflicts over issues such as noise, dust, odour and chemical use, should be identified and avoided. OEH recommends that this Strategy must be consistent with the NSW Government's *Industrial Noise Policy* for new developments. This is primarily addressed by the Rural & Industrial Land Use Strategy.

OEH is concerned that effective zoning and development control occurs in relation to land uses adjoining and near to existing activities scheduled under the POEO Act, seek to ensure that those scheduled activities can be effectively regulated. There are six items that are in reasonable proximity to key settlements with the Limestone quarry (Molong), Manildra Flour Mills (Manildra) and MSM Milling Plant (Manildra) posing potential issues for development of these settlements. There may also need to be appropriate buffer zones around each of the Sewage Treatment Plans ('STPs') including the current plants at Molong, Canowindra, Eugowra and Cudal and proposed plants at Manildra, Yeoval and Cumnock.

2.6.16. Summary of Key Environmental Constraints for each Settlement

Table 16 provides a summary of the impact of environmental constraints on each of the eight (8) key settlements in Cabonne arising from this Strategy.

Settlement	Slope	ESA Lands	Minerals	ESA Water	Flooding	Biodiversity	Bushfire	SUMMARY
Molong	Med-High	Med-High	Med-High	Med-High	Med-High	Med	Low-Med	Med-High
Canowindra	Low	Low-Med	Low-Med	Med	Med	Low	Low	Low-Med
Eugowra	Med-High (west only)	Med	Low-Med	Med-High	High	Med	High (west only)	Med-High
Manildra	Low	Med	Low-Med	Low-Med	Med	Med	Low-Med	Med
Cudal	Low	Med	Low-Med	Med	Med	Med	Low-Med	Med
Yeoval	Low	Low-Med	Med-High	Med-High	Low-Med	Low-Med	Low	Med
Cumnock	Low	Low-Med	Low-Med	Med-High	Low-Med	Low	Low	Low-Med
Cargo	Low	Low-Med	Med-High	Low	Low-Med	Med-High	Med-High (west only)	Med

Table 16: Summary of the environmental constraints for growth of each settlement in Cabonne.

Issues & Strategies

Summary of Natural Hazards: Molong and Canowindra both have the greatest impacts from natural hazards including flooding, topography and bushfire which severely constrains certain types of development and makes development more expensive. This is a particular concern for Molong where growth potential is quite high but there is limited land that is suitable for development. Manildra, Cudal, Yeoval and Cargo all have some constraints but there is generally land that is not affected and suitable for development. Canowindra and Cumnock are relatively unaffected except for some flooding issues.

2.6.17. References

The following resources may provide additional information on these topics:

- Central West Catchment Management Authority (CMA) – www.cw.cma.nsw.gov.au;
- Central Tablelands Water (CTW) – www.ctw.nsw.gov.au;
- Department of Environment, Climate Change and Water (OEH), Threatened Species Listings (www.threatenedspecies.environment.nsw.gov.au);
- Department of Primary Industries (www.dpi.nsw.gov.au);
- GHD (2008) *Councils of Blayney, Cabonne and Orange City – Subregional Rural and Industrial Land Use Strategy*;
- Lachlan Catchment Management Authority (LCMA) – www.lachlan.cma.nsw.gov.au;
- NSW Office of Water (NoW) – www.water.nsw.gov.au;
- Office of Environment & Heritage (OEH) – www.environment.nsw.gov.au;
- OEH River Water Quality and River Flow Objectives (www.environment.nsw.gov.au);
- Western Research Institute (2006) *Regional Development in the Central West NSW: Water the Real Constraint*.

2.7.

Transport

2.7.1. Air Transport

Overview & Accessibility

Cabonne does not have an airport with public passenger services within Cabonne so the closest public airports are near the cities of Orange, Parkes and Dubbo and are serviced by either Regional Express (www.regionalexpress.com.au) or Qantas (www.qantas.com.au – Dubbo only). Approximate travel times (driving) from each settlement are as follows (Table 17):

Settlement	Orange Airport	Parkes Airport	Dubbo Airport	Level of Access
Molong	~40-45mins (48km)	--	--	Low-Med
Canowindra	~1hr (73km)	~1hr 15mins (99km)	--	Low
Eugowra	--	~45 mins (44km)	--	Low-Med
Manildra	~50-55 mins (58km)	~35-40mins (50km)	--	Med
Cudal	~40-45 mins (52km)	~45-50 mins (64km)	--	Med
Yeoval	--	--	~50-55mins (72km)	Low-Med
Cumnock	~1hr 10mins (72km)	--	1hr 10mins (95km)	Low
Cargo	~40-45mins (50km)	--	--	Low-Med

Table 17: Summary of access to public airports from Cabonne's settlements (Source: Google maps).

For most of the key settlements in Cabonne, the easiest regional airport to access is Orange airport, which is located to the just north east of the village of Spring Hill and Cabonne (within the LGA of Orange) (highlighted in [Figure.4.6.1](#)). For Eugowra, Manildra and Cudal it may be easier to utilise the Parkes Airport. For Yeoval it is also possible to utilise the Dubbo Airport. However, there are no formal public transport services to the public airports so private transport is required and travel times are generally between 40 minutes to 1 hour 15 minutes drive – so this would be considered low to low-medium accessibility to air transport for most settlements (except Manildra and Cudal which have proximity to two airports in under an hours drive).

Orange Airport

The Orange Airport is serviced by Regional Express (Rex) Airlines and provides local air services to Sydney with up to four flights per day throughout the week (25 return flights per week). It also services Orange Aviation (flying school and charter operations) and Wade Air (fuel, aviation radios and GPS equipment).

Orange City Council manages the facility and their website (www.orange.nsw.gov.au) states it provides an aerodrome terminal with supervisor's office, caretaker's cottage, ten private hangars, three sheds and a t-hangar complex with a 1,670 metre sealed runway and 900m clay runway. There have been discussions about the potential expansion and enlargement of this airport, particularly for mining interests that may improve access for Molong, Cudal and Cargo.



Parkes Airport

Parkes Regional Airport is located 5 kilometres east of Parkes off the Orange Road. Parkes Shire Council is the administrator and the website (www.parkes.nsw.gov.au) states that there are two runways, three hire car services and a taxis service. Parkes Regional Airport is well serviced by Regular Public Transport (RPT) being Regional Express (REX). There are currently 18 regular flights per week. It also services Parkes Aviation – aircraft maintenance and Parkes Aero Club – flying school and ARCAV Air Pty Ltd – aircraft refuelling agent (Source: Parkes Shire Council Website).



There is anecdotal evidence that flights from Parkes to Sydney may be slightly cheaper than from Orange to Sydney. There is also significant potential for the Parkes Airport to grow as Parkes becomes a significant regional industrial hub and this may improve future services and accessibility. This will improve air transport links for Manildra and Eugowra in particular.

Dubbo Airport

Dubbo City Regional Airport is located five kilometres North West of Dubbo on the Mitchell Highway. Serviced by Regional Express and Eastern Australian Airlines (QantasLink), the Airport provides regional passenger transport services between Dubbo, and Sydney.

Dubbo City Regional Airport is one of the leading regional airports in Australia with 154 Regular Public Transport (RPT) flights per week operating to and from the Airport, as well as charter flights, general aviation flight training and airfreight operations. The Airport is operated and maintained by Dubbo City Council (www.dubbo.nsw.gov.au) in conjunction with the RPT Airlines under regulations set by Air Services Australia and the Civil Aviation Safety Authority.

Dubbo City Regional Airport is well equipped with numerous buildings and facilities for aviation enthusiasts. The airport houses 13 aircraft hangars and the terminal building which has received a \$3.8 million facelift and now includes an area for Council's Aerodrome Reporting Officers. Dubbo City Regional Airport is also home to two flying schools, an Air Services Australia Workshop, a Royal Flying Doctor Service facility and Fire Chief's cottage.

Cudal Airport (Closed)

Cudal airport used to be the base for Hazelton Airlines from the 1970s until early 2000s when Hazeltons ceased operations. Whilst the Cudal Airport is no longer used as an airport and is now used for agricultural machinery sales, Council would like to see the airport remain available for future aircraft / airport uses. See [Chapter 7 – Village of Cudal](#) for more details.

Private Airfields

There may be up to 50 identified private airstrips in Cabonne that are located on private land and may be used for agricultural or private purposes. In general these are located in rural areas away from the major settlements so there are limited impacts.



Issues & Strategies

- **Airport Access:** As there are no public airports in Cabonne or in proximity to key settlements generally accessibility is low to medium with a minimum of 35 minutes drive. However, Manildra and Cudal have access to two airports within 50 minutes drive which gives them greater choice and accessibility. Whilst airport access is unlikely to constrain growth it may be a factor for people who need to regularly fly to larger cities such as Sydney and Canberra.
- **Airport Constraints:** Whilst Orange Airport is located in Orange City Council there will be potential noise impacts (and height of building limitations) that will affect any subdivision of the large lot residential area near Spring Hill (not addressed in this Settlement Strategy). There is also a potential future conflict between the Cudal Airport (currently closed but it may reopen in the future) and the growth of Cudal. Development in proximity to this airport should be managed to avoid impacts on any future re-opening of this airport as a key piece of transport infrastructure.

2.7.2. Rail

Overview

Access to railway lines for public passengers and freight is another key opportunity for each of the settlements. As the history section suggests, many of the settlements in Cabonne grew in response to the development of rail lines through Cabonne. These same settlements have been impacted by the closure of some rail lines and move away from rail transport. The key railway lines in Cabonne are shown in Figure 12.

Main Western Line

The Main Western Line connects Sydney to Dubbo via Bathurst, Blayney, Orange, and Wellington. This line heads north from Orange and passes through Mullion Creek but does not

pass through any of the key eight (8) settlements. This line supports the Countrylink XPT Passenger Service travelling from Sydney to Dubbo and return daily so there is no access to this public passenger service in any settlement and travel to Orange or Wellington is required. The Main Western Line also operates as a key freight route between Western NSW and Sydney but there are no freight road-rail interchanges located on this line in Cabonne.

Broken Hill Line

The Broken Hill Line connects the Main Western Line in Orange with Parkes, Broken Hill and across to Adelaide and Perth and therefore constitutes the primary cross-Australian freight and passenger rail route. In Cabonne it passes through Nashdale and Borenore (Rural Centres) and then Molong and Manildra (Key Settlements).

This route is primarily used for freight but it also supports the Broken Hill Outback Explorer (weekly) and the Indian Pacific from Sydney to Perth (via Adelaide) twice weekly in both directions. Neither of these passenger services stop for passengers at any key settlements in Cabonne so it is necessary to travel to either Orange or Parkes for this service. However, there is a private freight road-rail interchange at Manildra that is utilised by the Manildra Group that creates opportunities for industrial expansion in this location.

Rail Capacity

The Central West Transport Needs Study (2009) states that *"while rail capacity in the region is constrained by the limited load capacity of track, bridges, and passing opportunities, there are spare train paths within the region. However, rail operations from the region are severely impacted by constraints beyond the region. This is particularly the case for trains accessing the Sydney network and Port Botany, as a result of freight restrictions during commuter peaks and limited paths."* On this basis, it is not expected that there will be significant additional State or Federal funding for rail infrastructure in the Central West in the near future.

With increasing congestion on the Blue Mountains and Sydney rail lines, there may also be an opportunity for increased freight to pass through Manildra to utilise the Stockinbingal-Parkes line to connect to the Main South Line to get improved access to Sydney. There is also a current federal proposal to construct a high-speed rail line from Melbourne to Brisbane via Parkes which could improve freight access at Manildra but this is not due to be constructed until 2030 (Source: *The Melbourne-Brisbane Inland Rail Alignment Study*).

Issues & Strategies.

- **Rail (Passenger) Access:** No key settlements have access to passenger rail services and travel to Orange, Wellington or Parkes is required. Therefore, public passenger rail service access is low in all settlements. Whilst this has a low impact on growth, it may reduce public transport access to larger centres for people without private vehicles.
- **Rail (Freight) Access:** Manildra is the only settlement with any kind of road-rail freight interchange so freight rail access is relatively high in Manildra which supports a stronger industrial strategy for this settlement.
- **Rail Constraints:** Council should also manage development in proximity to both the Main Western Line and Broken Hill Line to maximise setbacks of sensitive land uses (e.g. dwellings) to minimise noise and vibration impacts in accordance with State government policies. Rail lines can also provide a barrier to pedestrian and traffic movement in settlements but will rarely constrain growth.

2.7.3. Road Hierarchy

Roads are an important issue for Cabonne and for each of its settlements as they provide the primary connection for most settlements for movement of people and goods and, therefore, have a significant impact on social and economic sustainability and access to employment, services, and facilities across Cabonne.

A primary issue is the distance of each settlement from other centres and activities. In addition, whilst all settlements have some level of road access, it is both the quality of this road and its place in the road hierarchy that determines the ease of access and affect on travel time/safety. However, there may also be additional impacts if higher level roads with heavier traffic and larger vehicle sizes pass through settlements and pose a higher risk of traffic and pedestrian danger.

The road hierarchy in Cabonne consists of (Figure 12):

- 1) **State highways** managed and maintained by the Roads and Traffic Authority including the Mitchell Highway (State Highway 7) connecting Bathurst to Dubbo via Molong;
- 2) **Regional roads** that are partly funded by State government but maintained by Council:
 - a) MR 61 & MR 377 – The Escort Way (between Orange and Forbes via Cudal and Eugowra);
 - b) MR 310 – Canowindra Road (between Cudal and Canowindra);
 - c) MR 359 – Peabody Road (between Molong and The Escort Way);
 - d) MR 237 – Cargo Road (between Orange and Canowindra Road);
 - e) MR 238 – Canowindra – Eugowra Road (Nangar Road);
 - f) MR 233 – Renshaw McGirr Drive (between Wellington and Parkes);
 - g) MR 234 – Banjo Paterson Way (between Molong and Yeoval);
 - h) MR 573 – Burrendong Way (between Orange and Wellington);
 - i) MR 526 – Mount Canobolas Road;
- 3) **Local roads – sealed** – owned and maintained by Council;
- 4) **Local roads – unsealed** – owned and maintained by Council; and
- 5) **State forest roads** (restricted access).

Cabonne Council is responsible for 1,820 kilometres of road, which consists of 460 kilometres of sealed local roads and 1,360 kilometres of unsealed local roads (Source: *Central West Transport Needs Study* (2009)).

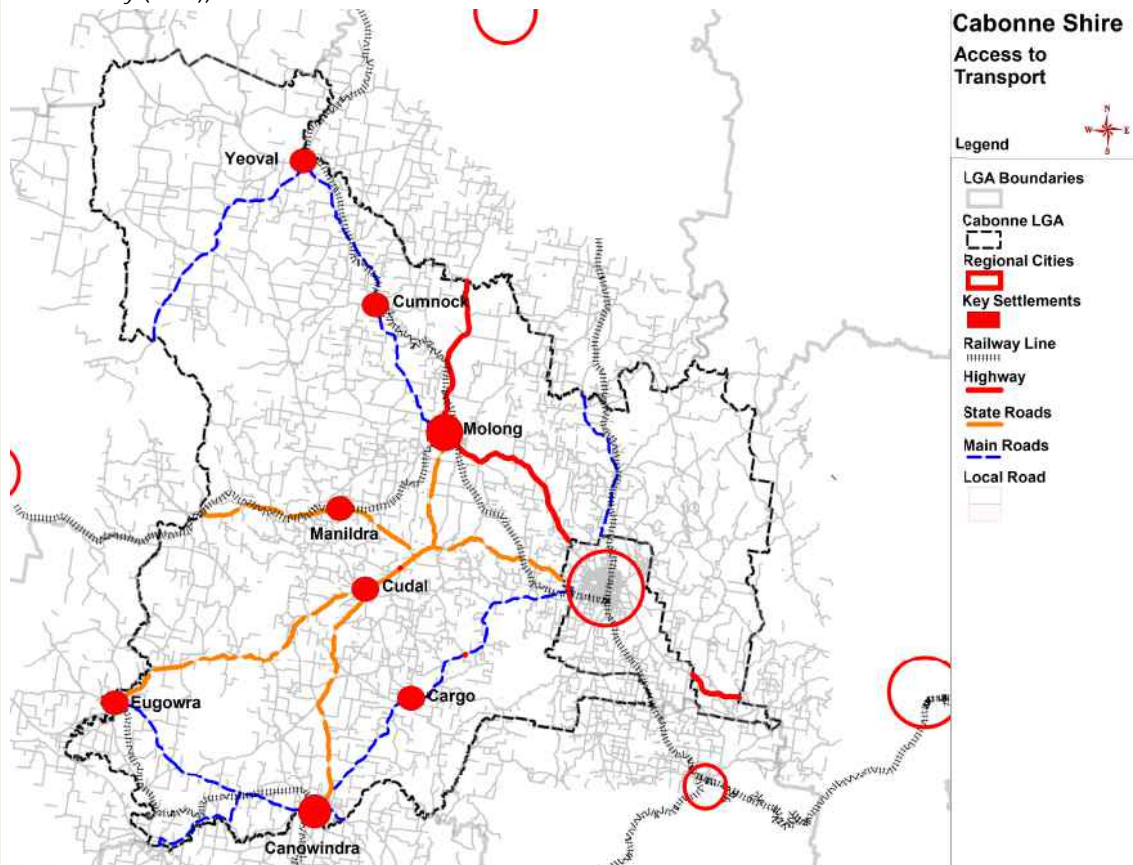


Figure 12: Key road and rail links in Cabonne (Source: Council GIS 2010).

The Central West Transport Needs Study (2009) states:

"The study found that when the future traffic volumes were applied to the existing network within the region, no capacity problems were identified. That is, the existing size of the network (road lanes and the number of train paths required to move traffic on the network) would be adequate for future needs for at least 25 years.

The main reason for this finding is that the existing network generally has considerable spare capacity and that the expected growth in population (0.47% pa over 25 years), employment and forecast economic activity can be accommodated. Since undertaking these forecasts, the NSW Department of Planning has released revised demographic forecasts indicating a lower population growth of the Central West region of 0.09% per annum" (Summary Report, p.6).

On this basis, it is not expected that there will be significant additional State or Federal funding for road infrastructure in the Central West in the near future other than minor upgrades to the Mitchell Highway.

Issues & Strategies

- **Road Access:** The road hierarchy has a significant impact on road access and quality of connection between settlements (particularly to primary centres) and may affect the ability of each settlement to access higher level services in other centres and to grow. Molong is the only settlements connected to the Mitchell Highway (State Road) resulting in the highest level of road access and ease of travel to other primary centres and good support for business and industrial uses. All of the other key settlements are located on regional roads that provide a reasonable grade of road and road access but may have less passing traffic and opportunities for business and industrial expansion. However, some connections between key settlements may only be local roads and have a lower standard. See each settlement chapter for more details.
- **Road Constraints:** Some local roads are either gravel or unformed in the urban areas. If there is significant development on some of these local roads then they may need to be upgraded to improve safety and durability and the expense may be prohibitive to development. Therefore, it is more affordable to promote infill development on existing sealed roads or concentrated new release areas where the costs of road infrastructure can be spread over several lots.

2.7.4. Bus

Public Bus Transport

Bus services change on a regular basis, but the following services are currently provided (2011) (www.countrytransport.131500.com.au):

- **Countrylink:**
 - Dubbo to Lithgow and return (passing through Molong) once daily in each direction (allowing connections using CityRail to/from Sydney);
 - Parkes to Orange and return (via Manildra) once daily in each direction;
 - Parkes/Forbes to Orange and return (via Cudal and Eugowra) every second day & weekends;
 - Parkes/Forbes to Orange/Lithgow and return (via Cudal, Canowindra, and Eugowra) daily in each direction;
 - Cootamundra/Cowra to Orange/Bathurst and return (via Cudal and Canowindra) every second day in each direction.
- **Orange Buslines** operates a service from Molong to Orange and return 3-4 times daily (weekdays only).

School Buses

There are a range of school bus services for each settlement that service the surrounding rural areas and generally centre on settlements with a local primary school or secondary school (particularly Molong, Canowindra and Yeoval with secondary schools). In addition, there are both public and private school bus services connecting into Orange's schools. In some circumstances school buses will pick up general public passengers for a fee but the service is at limited times.

Community Transport

Community transport is managed by Cabonne and covers the Cabonne Local Government Area and is available for disabled, aged and disadvantaged people and their carers. A service cost applies for door to door transport for any purpose including day care, shopping, hospital or medical appointment.

Regional Capacity

The Central West Transport Needs Study (2009) states that: *"Public transport in the Central West should be improved in stages, in line with passenger demand as assessed by the NSW Government. Additional or improved bus services are likely to be the least costly alternative to improved rail passenger transport services"* (Summary Report, p.8).

Issues & Strategies

Public Bus Access: It can be seen that there are reasonably regular public bus services provided to Molong, Canowindra, Eugowra, Cudal and Manildra along the key state and regional roads to nearby major centres which provides access to higher level services. However, there are no public bus services provided to Cumnock and Yeoval other than school and irregular community bus services so for people without access to a private vehicle it may be difficult to access higher level services from Cumnock and Yeoval. In addition, there are very limited services between most Cabonne settlements (except Cudal, Canowindra and Eugowra) that may limit the ability to commute between settlements without a private vehicle. The school bus network is relatively comprehensive and may take public passengers but only operates at limited times.

2.7.5. Pedestrians

Whilst the level of pedestrian infrastructure in each settlement is unlikely to have a major impact on settlement growth it can impact on amenity, safety and accessibility particularly for young children and senior citizens. Council has prepared a *Pedestrian Accessibility and Mobility Plan* ('PAMP')(June 2007) for each of the key settlements in Cabonne. A PAMP is a strategic document that identifies pedestrian infrastructure and provides associated action plans for management. Objectives of the PAMP are to: encourage walking for short trips; improve connections on key pedestrian pathways; reduce the number of pedestrian accidents; and provide pedestrian facilities that cater for the community. The PAMP was formulated using community consultation with stakeholders and the local community in each town. Please see each settlement chapter for the outcomes of the PAMP.

Issues & Strategies

Pedestrian Amenity: The proposed works program seeks to improve pedestrian amenity and upgrade existing footpaths in the majority of settlements. However, due to low levels of pedestrian activity in some settlements there is unlikely to be any major footpaths outside the main street. This may limit accessibility for people who are mobility impaired or aged (particularly wheelchairs) who live away from the main street. As part of any urban design review or identification of areas for aged care and seniors housing there may need to be a review of the footpath network. Higher densities should be promoted where pedestrian footpaths / infrastructure exist or are proposed.

2.7.6. Cycling

Council has prepared a Bicycle Plan for each of the Settlements in the Shire (Constructive Solutions Pty Ltd 2005) *Bicycle Plan 2005-2010*. The objectives of the Bicycle Plan are to develop a bicycle path system for all of the villages in Cabonne and provide linkages between some of the towns and tourist attractions in Cabonne and bicycle facilities to support the use of bicycles. Whilst cycle access may not constrain the growth of a settlement it can impact on recreational opportunities, connectivity for children between schools/recreation/homes, and the health and well-being of a settlement. Please see each settlement chapter for the outcomes of the Bicycle Plan.

2.7.7. Summary of Transport Levels for each Settlement

Table 18 provides a summary of the levels of access to transport for each of the eight (8) key settlements in Cabonne from this Strategy.

Settlement	Air (Public)	Rail (Public & Freight)	Road Hierarchy	Bus (Public)	Pedestrian & Bicycle	Summary
Molong	Low-Med	Low-Med (Rail line but no access)	High	Med-High	Med-High	Med-High
Canowindra	Low	Low (Line closed)	Med-High	Med	Med-High	Med
Eugowra	Low-Med	Low (Line closed)	Med-High	Med	Med	Med
Manildra	Med	Med (Rail line but freight only)	Med	Med	Med	Med
Cudal	Med	Low (No rail)	Med-High	Med-High	Low-Med	Med
Yeoval	Low	Low (Line closed)	Med	Low	Low-Med	Low-Med
Cumnock	Low	Low (Line closed)	Med	Low	Low-Med	Low-Med
Cargo	Low-Med	Low (No rail)	Med	Low	Low	Low-Med

Table 18: Summary of transport access in Cabonne's key settlements.

Issues & Strategies

Summary of Access to Transport: Molong has the highest level of access to transport and this may benefit business, industrial and residential growth if there is appropriate land available and impacts can be managed. Canowindra, Eugowra, Manildra and Cudal have moderate access to transport and this will assist with maintaining growth but may require additional transport improvements (particularly road and public transport). Yeoval, Cumnock and Cargo have low levels of access to transport with poor rail and bus connections and lower level road connections. This may pose a significant constraint to their future growth.

2.7.8. References

The following resources may provide additional information on these topics:

- GHD (2008) *Rural & Industrial Strategy - Local Profile* - Chapter 7.1 – Transport;
- NSWrail.net – a personal webpage detailing the history of all of the NSW rail lines and stations (www.nswrail.net);
- SKM (2009) *Central West Transport Needs Study* (Report prepared for the Australian Government).

2.8. Utilities & Infrastructure

One of the greatest constraints to growth and development of Cabonne's key settlements is the cost of provision of adequate utilities and infrastructure including both the capacities of existing systems and the cost of extending these systems to new areas. In general, where substantial development is proposed, the applicant/developer will be responsible for the majority of costs associated with provision of services to a lot boundary.

2.8.1. Water

Central Tablelands Water (CTW)

"Central Tablelands Water (CTW) is the trading name adopted by Central Tablelands County Council, a water supply authority constituted under NSW Local Government legislation. CTW services a geographically large, but sparsely populated area. This area ranges from Blayney in the east to Grenfell in the west. CTW currently have 5,200 connections and provide potable water to around 11,500 consumers in 14 towns and villages." (Source: GHD, p.91). CTW is constituted under the *Local Government Act 1993* as a county council but pays for a water licence from State Water to extract water from Lake Rowlands for distribution through its water supply network.

Villages with Potable Water

As Figure 13 shows, CTW provides a centralised potable (treated to drinking standard) water source (in Cabonne) to the following settlements: Canowindra, Eugowra, Cargo, Cudal and Manildra.

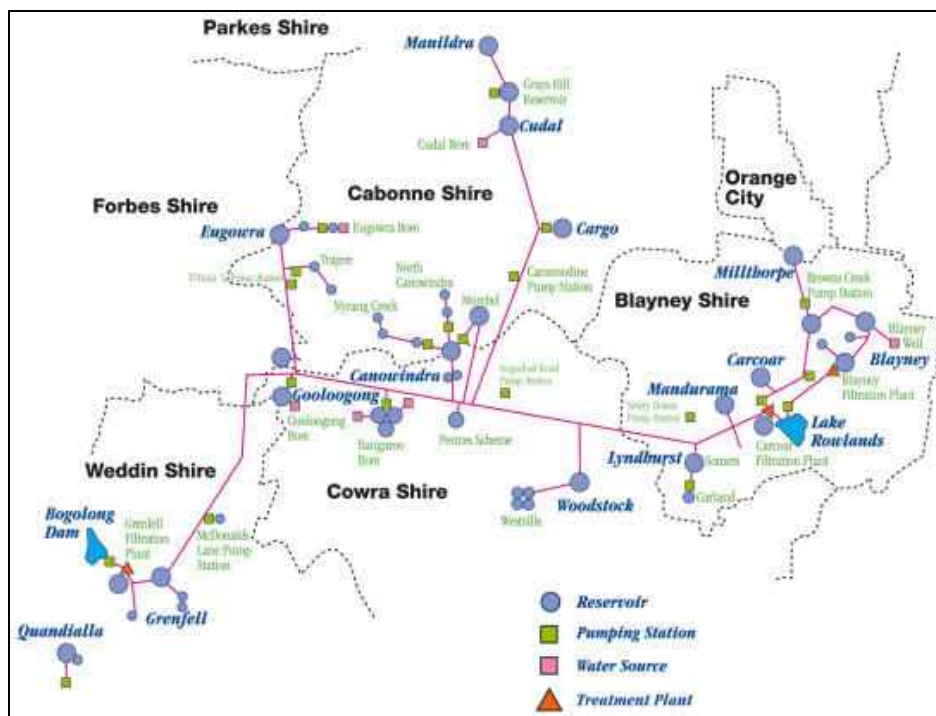


Figure 13: Water supply network for Central Tablelands Water (Source: IWCM Study, Figure.4).

Molong has a centralised potable water system provided by Cabonne Council that is sourced from Molong Dam. Cumnock and Yeoval do not have access to a potable water system but do have reticulated systems provided by Cabonne Council.

This Strategy assumes that there is a low likelihood of provision of centralised potable water to Cumnock and Yeoval in the next 5-10 years due to the small size of these settlements and the significant cost of providing the distribution infrastructure from the existing pipeline at Manildra. However, in the long term this may still be achievable.

Security of Water Supply – CTW Network

The main water source for CTW's system is Lake Rowlands. The dam's current capacity is 4,500 mega-litres and it has a water extraction licence for 4,257 mega-litres per annum (as at 2009).

In 1991, the NSW Public Works Department undertook a secure yield study of Lake Rowlands Dam to determine what annual water supply could be provided as a worst case scenario. Based on a storage capacity of 4,500 mega-litres, there is an estimated secure yield of 1,600-2,500 mega-litres per annum (with an average of 1,900 mega-litres per annum) (Source: IWCM Study, Section 3, pp.1-3).

CTW has reviewed the existing water supply potential and projected future demand and believes there is sufficient water supply to meet the needs of the projected growth of Cabonne for several decades. CTW has utilised a projected growth rate of 0.7% based on a population serviced by CTW of 13,493 (2009) and a current annual supply of 1,960 mega-litres (2006/2007).

Lake Rowlands was built in 1952/1953 and has not dropped below 39% (as at May 2008). However, there are increasing water needs in the area including Cadia Mine (and other potential future mines), additional water needs for Orange etc. In addition, the IWCM Study recognises that *"the extension of a potable supply from Lake Rowlands into the unserved villages within Blayney and Cabonne Shires would significantly increase the level by which the secure yield of Lake Rowlands is exceeded"* (Source IWCM Study, Section 3, p.31).

The Central Region Organisation of Councils ('CENTROC') (including Cabonne Council) have received funding from the NSW State Government to perform a study into regional water security. The primary focus of this report is to seek federal and state funding for review and possible implementation of recommendations to achieve a more secure water supply for the region. The draft report has been completed. The CENTROC Report makes a series of recommendations for water security in the region.

One of the key proposals of the CENTROC Report is the proposal to enlarge Lake Rowlands with another dam approximately 2.5 kilometres downstream to take total capacity from 4,500 ML to 26,500 ML pending the completion of the CENTROC Water Security Feasibility Study. It does not appear suitable to increase the height of the current dam wall due to engineering issues and potential for inundation of surrounding areas and roads. CTW is currently preparing more detailed designs for this proposal.

If Lake Rowlands were expanded then there would be greater potential for it to provide a secure water supply to a range of other centres including other settlements in Cabonne, the City of Orange and the Town of Cowra, with other network extensions in other Shires.

Water Treatment & Infrastructure

CTW operates two water treatment plants, the Blayney water filtration plant ('Blayney WFP') and the new Carcoar water filtration plant ('Carcoar WFP'). These treatment plants ensure that the water produced by CTW meets National Health and Medical Research Council (NHMRC) Drinking Water Guidelines (2004).

The Blayney WFP (commissioned in 1966) is a manually operated dual media filter plant with a capacity to deliver 6 mega-litres/day and is a conventional plant using coagulation, clarification, filtration, pH correction, chlorination and fluoridation. The Blayney WFP could be upgraded to 9 mega-litres/day if the filter material was upgraded. Currently, Blayney WFP provides water to Blayney reticulation system only. The Carcoar WFP (commissioned in 2002) has a design capacity of 9.5 mega-litres/day and can deliver as much as 13 mega-litres/day. This is a dissolved air flotation plant. The throughput of Carcoar WFP is proportional to water levels in Lake Rowlands as there is a gravity main feeding the WFP.

The IWCM Study states, *"the two existing WFPs in the CTW system have the capacity to provide approximately 15 ML/d. Figure 13 shows that the baseline "worst case" forecast peak day water demand for 2037 is approximately 15 ML/d. This means that, even though any water*

conservation measures are applied, the current water filtration plants have the capacity to satisfy the future demand, subject to modifications in the distribution pipelines" (Source: IWCM Study, Section 3, p.34).

Security of Water Supply – Molong Dam

Molong is not connected to the CTW network and has a water supply that is collected through Molong Dam and Borenore Dam (along the Molong Creek and Borenore Creek catchments).

Section 3.12.1 – Water Supply in the Molong Chapter goes into more detail about the security of Molong's water supply. In summary, however, there are some significant issues about whether significant growth can be supported in Molong if there is not improved water consumption practices and potential need for a larger water supply.

References

For more detail on existing and proposed water systems in Cabonne see the following reports:

- Cabonne Council (2007) *Molong Water Supply – 'Secure Yield' Study*;
- Cabonne Council (2007) *East Molong Rural Residential Zone – Water Supply and Sewerage Strategy Study – Preliminary Assessment and Concept Options*;
- Cabonne Council (2002) *Yeoval – Town Water Supply Augmentation – Scoping Study*;
- GHD (2008) Rural and Industrial Strategy - Local Profile - **Chapter 7.2 – Water and Sewer, Chapter 7.3 – Utilities & Chapter 7.3 – Waste Management** ('GHD');
- HydroScience Consulting (2009) *Joint Integrated Water Cycle Management (IWCM) - Evaluation Study* ('IWCM Study') for Central Tablelands Water, Weddin Shire Council, Blayney Shire Council and Cabonne Council ('IWCM Study');
- Western Research Institute (2006) *Regional Development in the Central West NSW – Water the Real Constraint*.

Issues & Strategies

- **Potable Water Supply:** There is provision of centralised potable water to the settlements of Molong, Canowindra, Eugowra, Cargo, Cudal and Manildra. Whilst there is a maximum supply capacity of the existing network, the existing demand of these settlements in Cabonne has not exceeded this capacity to-date and there is some capacity for growth of these settlements utilising the existing network.
- **Water Security:** The major constraint to provision of a secure yield of water is the storage capacity of Lake Rowlands Dam (CTW Network) and that of Molong Dam (Molong only). There is a current proposal to increase the capacity of the Lake Rowlands Dam by the expansion of the dam and a new dam wall. If this were to occur it would improve the security of water in the region.
- **Water Infrastructure:** Water storage, treatment and distribution facilities will need to be upgraded over time and Section 64 Contributions and Capital Contribution Charges will be levied by CTW to achieve this. Levies are likely to be subsidised by the whole network.

2.8.2. Sewer

As at 2011, Molong, Canowindra, Eugowra and Cudal have an operational Sewerage Treatment Plant and centralised sewerage systems. Manildra, Yeoval and Cumnock are scheduled to have a centralised sewerage system and Sewerage Treatment Plant implemented in the next few years. Cargo is the only settlement in Cabonne that is not currently scheduled to have a centralised sewerage system in the foreseeable future. This decision was made after consultation with the community.

Issues & Strategies

- **Effluent Management:** A more detailed review of the capacities and challenges faced in effluent management is contained in each settlement chapter. However, at this stage

there would appear to be some capacity within the existing and proposed (designed) centralised sewerage systems for all settlements except Cargo to allow for reasonable growth in accordance with this Strategy (subject to upgrades to existing infrastructure). Molong will require some extensions to the existing sewerage network to allow for an expanded Village Zone and infill development in or near the karst systems. Cargo may face some limitations to growth by relying on septic systems and the subsequent requirement for larger lot sizes.

- **Buffers to Sewerage Treatment Plants:** Where STPs are located in proximity to areas with any significant development potential (e.g. Molong and Canowindra) this Strategy recommends enforcing up to a 400 metre buffer or down-zoning around the STP infrastructure to avoid impacts on development from odours and/or impacts on STP operations.
- **Review of Septic Systems:** Council needs to conduct a review of all septic systems across Cabonne (with a particular focus on settlements) to ensure that all systems are able to meet the required environmental benchmark to avoid pollution of water catchments and other impacts. Continued monitoring by OEH and Council should ensure that water quality in all watercourses adjacent to settlements is not affected by ongoing and potential expanded use of septic systems and should also look at the cumulative effect of these systems.

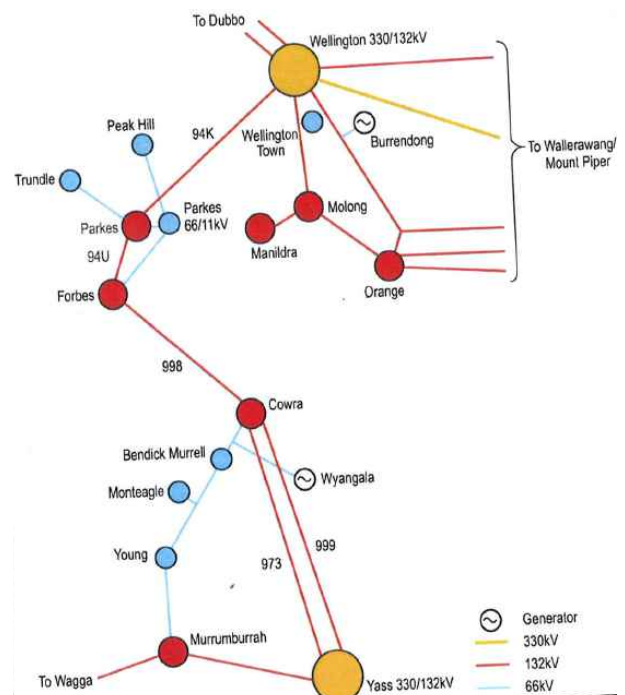
2.8.3. Electricity

High Voltage Transmission Lines

TransGrid is the State Owned Corporation responsible for provision of power between power generators and electricity distributors. TransGrid operates a network of high voltage transmission lines and substations or switching stations in Cabonne. 132kV transmission lines pass through Cabonne with a substation at Molong and a supply authority interchange point located at Manildra (Figure 14). To meet the increasing demand for electricity in central western NSW, TransGrid is proposing to build a new 330kV transmission line from Wollar (near Mudgee) to Wellington.

Figure 14 (Right): TransGrid's higher voltage electricity network in the Central West (Source: Transgrid 2010).

TransGrid is also planning to construct a new 132kV single-pole electricity line between the sub-stations at Manildra and Parkes (~81km). The Review of Environmental Factors for this proposal was on exhibition in late 2009 and construction is expected to be completed in 2011. This \$30 million project is designed to ensure that customers in the Central Slopes and Plains region have a reliable electricity supply and provide an alternative route. A potential additional benefit for Molong and Manildra may be an improved power supply for industrial uses that may provide an additional attraction for industrial companies to relocate to Manildra. The power line commences at the high voltage substation to the north-east of Manildra. The proposed route of the power line is to the east and south of the existing urban areas and is also below the proposed new industrial area to the south of Manildra. Therefore, there is no impact from the easement on these urban areas.



Low Voltage Transmission Lines

Country Energy then delivers electricity at a local level through 11kV rural networks. Country Energy has advised that the electricity network within and surrounding Orange has some potential for future growth. These supply networks connect each of the key settlements and radiate out into rural areas. As the Local Profile states:

"Limiting factors for urban growth are primarily the size and/or number of lines in the vicinity of the developments and the existing electrical loads in the vicinity. Major urban residential developments and industrial estates may require dedicated lines directly back to the nearest sub-transmission zone substation. This is generally the case for large individual industrial loads as well. Excess capacity in the rural 11kV networks throughout the Orange, Blayney and Cabonne Council areas is affected by many of the same factors as in the case of urban expansion. Generally the distribution lines supplying rural areas follow the route of the main arterial roads with many branches extending laterally along their length. However, distribution lines are often located on private land with new extensions being dependant on the agreement of land owners. The capacity in rural lines is dependant on the size of the cables, but is also significantly reduced with the increasing length of the line. This is compounded in the case of single phase lines which can make up a large part of rural electricity networks." (Source: Local Profile, p.94)

Issues & Strategies

Electricity: Preliminary investigations suggest there are no significant issues with the provision of electricity to each of the settlements to enable some reasonable growth in dwellings. However, larger energy consumers (such as larger scale industries) often require access to higher voltage electricity lines. Transgrid 132kV lines are only present at or near Molong and Manildra – so these are the best locations for larger scale energy-consuming industrial uses. Manildra has been identified in the Rural & Industrial Strategy as the location for significant industrial growth in Cabonne. In addition, there are opportunities for energy generation (e.g. solar and wind farms) that will require access to higher voltage networks. There are current proposals for a solar farm near Manildra.

2.8.4. Natural Gas

As Figure 15 shows, there are currently no natural gas pipelines or reticulated supplies of gas within Cabonne. Therefore, none of the eight (8) key settlements have existing access to piped natural gas. This is a significant constraint to attracting a range of industries in key towns and a lesser constraint in terms of increased amenity for residential users and reduced energy bills.

However, there is currently a proposal to construct a new high-pressure gas pipeline from Young to Wellington through Cabonne (Figure 15). This was lodged as a Part 3A (Major Projects) Application to the Department of Planning and approved in March 2011. If constructed, the pipeline may pass within 3km west of Canowindra, 2km west of Cudal, 7km east of Manildra, 8km west of Molong, and 6km to the east of Cumnock.

This Strategy notes that the cost of the infrastructure required to connect this supply through to any settlement is very high and is unlikely to be supported in the short to medium term by residential connections alone (particularly when there are less than 1,000 people in most settlements). However, industrial facilities often require much larger volumes of gas and a regular supply that can often make extensions more economically feasible so settlements with an existing or future significant industrial demand are more likely to warrant a connection. Therefore, Manildra, Canowindra and possibly Molong are more likely to support a future gas extension as they are the preferred locations for industrial development and a larger population.

Council made a resolution on 21 June 2010 to pursue further negotiations with the gas pipeline owner (ERM) to ensure that the pipeline incorporates valves in proximity to key settlements to allow for future extensions and connections for these settlements. Some industrial operators such as Manildra Mills are also approaching ERM separately.

It is important to note that the gas pipeline Young to Wellington is to be constructed for the purpose of providing gas to the proposed Wellington gas-fired power station and it will be run by a private company (ERM). The power station has preference over other users for use of this gas. Also, the reticulation of gas to residences/industry would require cooperation with the Australian Pipeline Trust under the legislative provisions of the *NSW Pipelines Act 1967*. Therefore, Council will also need to liaise with the Australian Pipeline Trust to arrange for provision of a reticulated supply in the medium to long term.

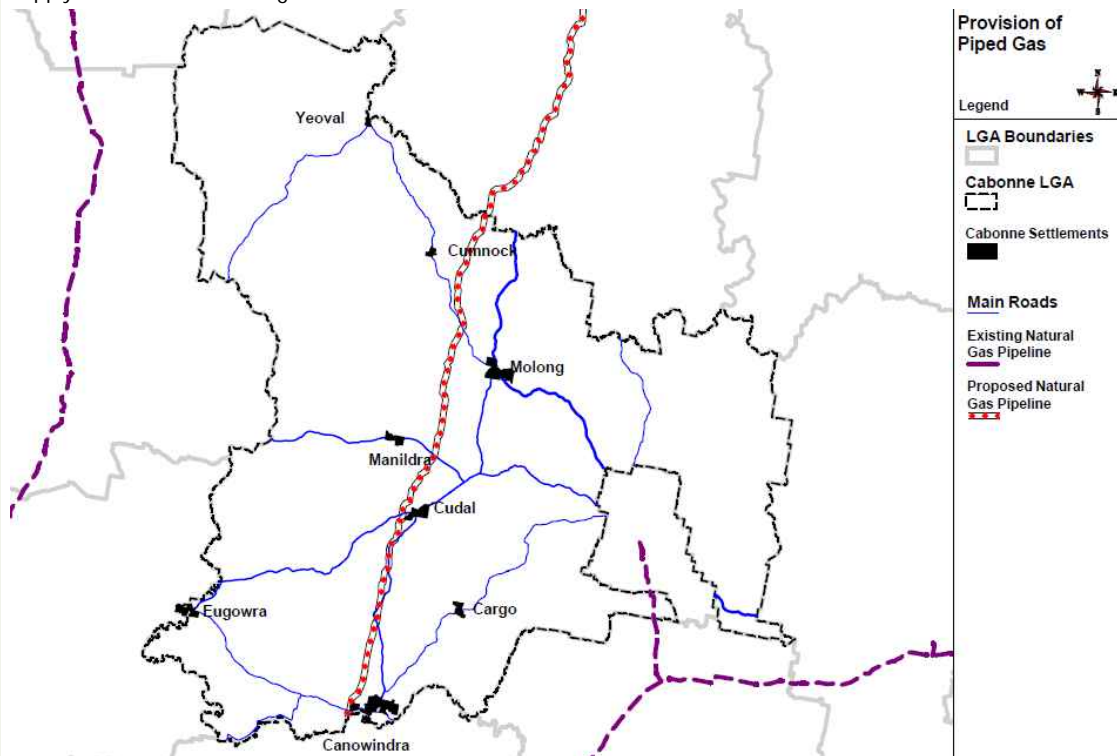


Figure 15: Existing & proposed natural gas pipelines in the Central West and their proximity to existing settlements (Source: Council GIS 2010 & ERM Power Pty Ltd 2010).

Issues & Strategies

- **Natural Gas (Existing):** There is currently no natural gas pipeline within Cabonne so no settlements have access to piped natural gas. This is a significant constraint to attracting a range of industries (competing with other centres such as Orange and Parkes) and a lesser constraint in terms of increased amenity/reduced energy bills for residential users.
- **Natural Gas (Proposed):** There is an approval to construct a new high-pressure gas pipeline from Young to Wellington through Cabonne that may pass within reasonable proximity of Canowindra, Cudal, Manildra, Molong and Cumnock. However, Manildra, Canowindra and possibly Molong are more likely to support a future gas extension as they are the preferred locations for industrial development and this may improve their attraction for future industrial operators. Manildra should be the primary focus for achieving a gas connection. The other settlements have a low likelihood of a gas connection and, for a variety of reasons, are less preferred locations for anything other than local industry (combined with the fact these smaller settlements also do not have access to high voltage electricity).

2.8.5. Telecommunications

Wired Telecommunication Services

Telstra provides a basic telephone service with a minimum data speed of 4800 bits per second as a part of its obligations under the Universal Service Obligation (USO) (unless there is a separate agreement). This service is provided under commercial consideration, and may be a combination of technologies, including copper line, a mixture of copper and fibre, or fibre or wireless. Telstra provides this service to the boundary of any property. Telstra has recently introduced a new arrangement to assist developers and Council regarding broadband and mobile phone coverage, and provision of a telephone service to all blocks in new developments. This arrangement is now available in all areas of NSW. The process revolves around the developers, the local councils and Telstra working together to ensure a planned development with appropriate infrastructure.

Generally there is an existing Telstra exchange located in each of the settlements but a review of the capacity of this exchange will require further consultation with Telstra. There are no known constraints to delivery of wired telecommunication services to new development areas in each of the settlements.

Public Payphones

The provision of public payphones is an important public service provided by Telstra. With the high rate of adoption of home and mobile phones there is often pressure to remove public payphones. However, they are often important for those without access to a private phone or where there is poor mobile reception. In particular, it is important to retain public phones with coin capability as some smaller villages do not have a local store, the local stores do not sell phone cards, or the local store hours are limited. In 2011 there was at least one public payphone in each settlement and Council is not aware of any proposals to remove any payphones. Council should continue to lobby Telstra to retain public payphones in each village to ensure equity for those without access to private phones and emergency access for the general travelling public.

Broadband Services

Broadband internet services are an increasingly important service for the population as a multitude of services and information is accessible via the internet and it can be a real disadvantage to either have no access to a service or a very slow connection speed that limits access to larger files. Most businesses would require some internet connectivity to operate and it can also provide improved education and community services.

There are a variety of methods of receiving internet connections either through fixed-line services (ADSL2+ - high speed, ADSL – moderate speed, or dial up services – slow speed), satellite, or wireless services. In general, our key settlements should be looking to have access to ADSL2+ and ADSL fixed line services as these are much faster, more reliable and more affordable than most other services. This is often dependent on the infrastructure in the local telephone exchange and the distance of the connection from this exchange.

This Strategy has not conducted a full review of internet services and speeds throughout Cabonne. However, it is possible to conduct a desktop review using services such as Telstra's website (<https://register.bigpond.com/check-availability.do>). In general, the provision of ADSL2+ is patchy across Cabonne but appears to be available in the larger centres of Molong, Canowindra, Eugowra and Manildra but only the slower ADSL/Satellite/dial-up services are available in Cudal, Yeoval, Cumnock and Cargo. This means that the larger centres are more likely to attract businesses that require a higher internet access speed.

There is an opportunity to improve internet connection speeds and access throughout the settlements in Cabonne and this may occur over the coming years through the National Broadband Network (NBN) proposal by the federal government. The proposed coverage map shows fibre optic cables extending from Orange out to Molong and then down to Cowra so it is assumed that there will be direct fibre optic connectivity in Molong and perhaps in Cudal and

Canowindra. The majority of other settlements appear to be within the fixed wireless footprint and the rest of the Shire will only have satellite access. This requires further review once detailed mapping is available. However, the NBN network is unlikely to roll out in the Central West for at least the next 3-5 years.

Mobile Phone Reception

There are two main service providers (Telstra and Optus) for mobile coverage in Western NSW. Due to the undulating topography of the area, mobile coverage is inconsistent and sometimes unreliable. The main centres and surrounding area have generally reasonable to good coverage.

Mapping from Telstra appears to suggest that all digital mobile services are available (from Telstra) in Cabonne (Next G, 3G & GSM). However, Telstra admits that mapping only predicts likely area of coverage and has not been tested. It may be less in some areas due to physical or geographic constraints to signal transmission.

Anecdotal evidence suggests that mobile reception on several systems including 3G is spotty in the area and unreliable, particularly in settlements such as Molong. Other settlements have little or no mobile reception. These settlements have to rely on land line or public phones. This is a significant constraint to the pursuit of home-based and mobile businesses in Cabonne, particularly trades-people.

Issues & Strategies

- **Telecommunication for Larger Developments:** Council should seek to require a high level of telecommunication infrastructure for all larger new residential, commercial and industrial subdivisions by liaising with Telstra and the developer.
- **Payphones:** Council should continue to lobby Telstra to retain public payphones in each village to ensure equity for those without access to private phones and emergency access for the general travelling public.
- **Broadband Access:** In general, the provision of ADSL2+ is patchy across Cabonne and limited to Molong, Canowindra, Eugowra and Manildra. The remainder of the settlements are generally limited to either ADSL or dial-up services. There is definitely an opportunity to improve internet connection speeds and access throughout the settlements in Cabonne.
- **Mobile Access:** Mobile coverage is not only limited in rural areas, but also limited in a number of the key settlements in Cabonne. This is a significant constraint to the attractiveness of these villages for home-based businesses and industries. Council should contact Telstra, Optus and the other major providers to open discussions on how mobile reception can be improved throughout Cabonne, particularly in higher level settlements.

2.8.6. Waste Management

Whilst waste management issues are less likely to be a major determinant for settlement growth, appropriate waste management solutions can make it easier to dispose of and recycle waste and make development more sustainable.

Waste Depots

Council's waste depots are located in reasonable proximity to the villages of Canowindra, Cargo, Cumnock, Eugowra, Manildra and Yeoval. All six of Cabonne's waste depots do not currently require to be licensed under the *Protection of the Environment Operations (Waste) Regulation* 2005. Yeoval does not have an active landfill and it acts as a waste transfer station with general waste transferred to the Cumnock facility. There is also a historic depot near Molong that is no longer used as a landfill but does accept car bodies and green waste on limited weekends throughout the year. Cudal does not have a waste depot in close proximity to the settlement.

There are waste transfer stations at all six of Cabonne's landfills sites. Transfer stations are also sited at Mullion Creek. Molong has recycling bins but is considering the need for a waste transfer station. These facilities include: Waste, paper and cardboard bins; Recyclables – plastic, P.E.T and glass; E-Waste; Material buy back area; DrumMuster; Battery area; Timber Pallet area; and Waste Oil (Canowindra and Manildra).

Waste Types

General waste goes to all six of Cabonne's waste facilities. Most recycling is picked up by contractors and may go to the Orange facility. There are not sufficient volumes for a Material Reclamation Facility in Cabonne at this time.

Green waste is accepted at all depots. An appointment must be made for the site to be opened for collection of the chipped green waste. The aim is to create an economically viable market for waste streams e.g. chipped green waste to cater for green waste.

There is currently no licence to deal with hazardous wastes in Cabonne depots and currently no hazardous waste treatment sites in the region. However, there is a waste oil facility at the Canowindra and Manildra depots. It is also possible to take asbestos to the Manildra and Eugowra depots by appointment where it is put into a specialised landfill. There is currently a development approval for a facility in the Blayney Industrial Area to recycle hazardous wastes (paints, solvents, oils, soil farming etc). This could potentially be utilised by Cabonne.

Waste Depot / Landfill Capacities

Council has conducted several reviews of its waste depot / landfill capacities including the Quadro (2008) *Review of Cabonne Shire Council's Landfill and Transfer Station Operations* ('Operations Report'); Quadro (2009) *Review of Landfill Capacity Across Cabonne Council's Existing Landfills*; and Quadro (2011) *Waste Management Facilities Strategic Management Plan*.

These reports suggest that several of the waste depots are reaching capacity for landfill and their lifespan depends on the methods of waste compaction that are to be used. As Table 19 shows, the Cargo and Cumnock facilities have up to only 2-3 years lifespan and they are likely to be closed at this time. Yeoval does not have an active landfill and waste is currently transferred to Cumnock.

METHOD OF WASTE COMPACTION	LANDFILL LIFE (yrs)					
	Cargo	Canowindra	Cumnock	Eugowra	Manildra	Yeoval
Traxcavator used on all sites (existing standard)	0.9	10.1	2.2	102.5	16.2	0.0
Specialised landfill compactor used at Manildra and a traxcavator used at the other four sites	0.9	10.1	2.2	102.5	31.5	0.0
Specialised landfill compactor used at Manildra and Canowindra and a traxcavator used at the other three sites	0.9	20	2.2	102.5	31.5	0.0
Specialised landfill compactor used at all five sites	1.4	20	3.1	193	31.5	0.0
650kg/cu.m compaction achieved at all sites (DECC standard for rural landfills)	1.3	15	2.4	147.5	23.8	0.0

Notes to Table:

1. Assumed compaction achieved by traxcavator is 450kg per m³
2. Assumed compaction achieved by a specialised landfill compactor is 850kg per m³
3. The data presented was based on preliminary designs and was considered to have a margin of error of ±10%.
4. Changes to the design of the landfill capping layer will have a direct bearing on the landfill volume available and hence the estimated landfill life.

Table 19: Potential lifespan of existing waste depots based on different methods of waste compaction (Source: Quadro (2011) *Waste Management Facilities Strategic Management Plan* (Table 4.1)).

With the closure of Cargo and Cumnock landfill sites in the next 5 years and the transfer of waste to Canowindra and Manildra then the lifespan of these landfills will be reduced (Table 20).

	LANDFILL LIFE (yrs)			
	Cargo	Canowindra	Cumnock	Manildra
Landfill Life	0.9	10.1	2.2	16.2
Landfill life with waste diversion	0.9	9	2.2	8.5

Notes to Table: Landfill life based on a compaction rate of 450kg per m³

Table 20: Effect of the closure of Cargo and Cumnock Landfills (Source: Quadro (2011) Waste Management Facilities Strategic Management Plan (Table 4.2)).

Waste Collection

JR Richards is contracted to collect all waste types (general and recycling). Kerbside collection services extend to all of the eight (8) key settlements including Molong, Canowindra, Eugowra, Manildra, Cumnock, Cudal, Cargo and Yeoval. The service is also available to any property that the truck passes on the route to these settlements. Recycling pick-ups are generally fortnightly on the same day as the general garbage pick-up service for each settlement/area. Council has in place contractual arrangements via the Netwaste Group for the processing of both green-waste and wood-waste.

JR Richards takes most general waste to the closest waste depot for each settlement. Waste from Molong goes to the Manildra or Cumnock waste depots. Waste from Cudal goes to the Manildra waste depot.

Green waste bins are not currently provided at this time but are included in the current contract with JR Richards to allow for a future service. There are irregular roadside pick-ups of green waste notified on the garbage collection calendar. There are also irregular roadside pick-ups of bulky waste notified on the garbage collection calendar.

Shredding of tyres has been in the past been undertaken by a private contractor at the Canowindra depot but this has not occurred for a while. There is also a 2011/2012 budget for tyre shredding to occur at Cumnock.

Waste Charges

Land within collections districts (villages) is levied a charge according to the property being occupied or vacant. Current charges are Occupied \$266.10 (increasing to \$275.40 for 2010/2011) and Vacant \$127.20 (increasing to \$131.70). Cabonne eastern districts collection areas are charged \$223.90 (increasing to \$231.70 in 10/11). Other areas outside the collection districts are levied a Waste Management Charge - \$33.60 (increasing to \$34.80) and a Waste Facility Upgrade Fee - \$24.70 (increasing to \$25.60). The waste levy in Sydney Metropolitan area does not apply west of the Blue Mountains (~\$43/tonne on top of facility gate charge). A Waste Levy encourages diversion of waste away from landfill.

NetWaste

NetWaste is a voluntary waste group made up 28 Councils, including Cabonne Council. Cabonne Council is involved in each joint contract organised by NetWaste (see the NetWaste website for a list of the Councils that participate as part of the NetWaste group and the list of waste contracts).

NetWaste has also created a *Regional Waste Management Plan 2008* and *Sub-Regional Waste Management Plan 2001/2002* (see website). NetWaste will be conducting a review of all landfills in the NetWaste region in the next 2 years and sets project priorities to assist member Councils. Waste is an issue that will be partly addressed by preparation of a Sustainability Action Plan. Funding is currently applied for by NetWaste to prepare this plan.

Historically, NetWaste focused on domestic waste, looking now towards construction and commercial waste. There is no regional facility yet but this may change with the Orange proposal. NetWaste is a project based organisation but is increasingly moving toward addressing

the bigger policy issues. Over next 3 years NetWaste are focusing on decreasing the amount of organics going into landfills, increasing the amount of composting at land fill, home composting units, and educational programs. Relies on finding a market for organics to make separation viable as well as a combination of site specific and centralised separation methods.

Orange

Orange City Council operates a Resource Recovery Centre on Ophir Road. Orange City Council is currently proposing to construct a new Resource Recovery and Waste Management facility at Euchareena Road near Molong. Due to Cabonne Council opposition to this facility, Cabonne is no longer a partner in this facility with Orange City Council and will not be utilising this facility in the near future. Therefore, all waste from Molong must continue to be transported to other waste depots.

Issues & Strategies

- **Landfill Capacity:** Whilst there are no current constraints to the growth of the settlements based on waste management waste landfills at Yeoval and Molong are already closed and Cumnock and Cargo are expected to close in the next few years with reliance on waste transfer stations. This will place increased pressure on Manildra, Canowindra and Eugowra depots and increased transportation of waste and there may be the need to identify additional landfill capacity in the future. However, it is also expensive and has environmental effects to operate a number of small landfill sites so consolidation may be more effective. For this reason there should be an increased focus on reducing the amount of waste going to landfill by improving waste minimisation, re-use, and recycling. There may be an opportunity to enhance waste management controls in the new DCP for all of the settlements in Cabonne.
- **Waste Services:** There may be opportunities to expand waste collection services to green waste in the future and to avoid this waste stream going to landfill. This should be reviewed on a regular basis by Council. It may require a survey of each population to see whether this service is required and whether the additional costs are acceptable. There is an issue with provision of waste services to smaller localities outside key settlements that is currently being considered by Council.

2.8.7. Summary of Access to Utilities for each Settlement

Table 21 provides a summary of the relative level of access to utilities for each of the eight (8) settlements in Cabonne arising from this Strategy.

Settlement	SUMMARY	Water Supply	Reticulated Sewer	Electricity	Potential for Piped Natural Gas	Telecommunications
Molong	Med-High	Med	High	High (High voltage)	Med	Med-High
Canowindra	High	High	High	Med	Med	Med-High
Eugowra	Med	High	High	Low-Med	Low	Med
Manildra	Med-High	High	Low (but in pipeline)	Med-High (High voltage)	Med-High	Med-High
Cudal	Med	High	High	Low-Med	Low-Med	Med
Yeoval	Low	Low	Low (but in pipeline)	Low-Med	Low	Med
Cumnock	Low	Low	Low (but in pipeline)	Low-Med	Low	Low-Med
Cargo	Low-Med	High	Low	Low-Med	Low	Low-Med

Table 21: Summary of access to utilities in Cabonne's settlements.

2.9. Heritage

2.9.1. Heritage Listings

The specific heritage listings in each settlement are detailed in each settlement chapter. This section provides a brief overview of some of the sources of heritage listing in Cabonne.

Register of the National Estate

As stated by the Federal Department of the Environment, Water, Heritage and the Arts (Source: www.environment.gov.au/heritage/places/me/index.html):

"The Register of the National Estate is a list of natural, Indigenous and historic heritage places throughout Australia. It was originally established under the Australian Heritage Commission Act 1975. Under that Act, the Australian Heritage Commission entered more than 13,000 places in the register. In 2004, responsibility for maintaining the Register shifted to the Australian Heritage Council, under the Australian Heritage Council Act 2003 (AHC Act). Following amendments to the Australian Heritage Council Act 2003, the Register of the National Estate (RNE) was frozen on 19 February 2007, which means that no new places can be added, or removed. From February 2012 all references to the Register will be removed from the EPBC Act and the AHC Act. The RNE will be maintained after this time on a non-statutory basis as a publicly available archive".

There are seventeen (17) items in Cabonne on the Register of the National Estate including Barton Nature Reserve (Cargo), Bookanan (Byng), Boree Cabonne (The Escort Way), Borenore Caves Reserve (Borenore), Cadia Cornish Engine House (Cadia), Canowindra Fish Fossil Site (Canowindra), General Cemetery (Canowindra), Urban Conservation Area (Canowindra), Freemantle Nature Reserve (Gowan Road), Indigenous Place (Manildra), Indigenous Place (Garra), Kangarooie (Kangarooie Road), Molong Courthouse Group (Molong), Mount Canobolas Volcanic Complex, Nangar National Park (Eugowra), Springfield House & Outbuildings (Byng) and Yuranigh's Grave (Molong) (as at 2011).

National Heritage List

As stated on the website www.environment.gov.au, "on 1 January 2004, a new national heritage system was established under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). This led to the introduction of the National Heritage List, which was designed to recognise and protect places of outstanding heritage to the nation, and the Commonwealth Heritage List, which includes Commonwealth owned or leased places of significant heritage value." There are no items in Cabonne on the National Heritage List.

The National Trust

As stated by the National Trust (Source: www.nationaltrust.com.au/register/default.asp):
"Following its survey and assessment of the natural and cultural environment, the Trust maintains a Register of landscapes, townscapes, buildings, industrial sites, cemeteries and other items or places which the Trust determines have cultural significance and are worthy of conservation. Currently, there are some 12,000 items listed on the Trust's Register. They are said to be Classified. The Trust's Register is intended to perform an advisory and educational role. The listing of a place in the Register, known as 'classification' has no legal force however it is widely recognised as an authoritative statement of the cultural significance of a place".

NSW Heritage Register

The Heritage Council of NSW through the NSW Heritage Branch of the Department of Planning maintains a list of places of State significance and these are protected under the NSW *Heritage Act*. The NSW Heritage Register can be found at www.heritage.nsw.gov.au. There are five (5) particular sites that are listed including the Amusu Theatre (Manildra), Cadia Engine House (Cadia), Yuranigh's Grave (Molong), Railway Station Group (Molong), and the Ben Hall Sites – Escort Rock (Eugowra) (as at 2011).

Statutory Authorities

Statutory organisations such as schools, the rail authority, and Australia Post are required under the NSW Heritage Act to maintain a list of sites of heritage significance and to maintain them. The places are also listed within CLEP1991 schedule maintained by Cabonne which is designed as a comprehensive list.

Cabonne Local Environmental Plan 1991 ('CLEP1991')

Cabonne Local Environmental Plan 1991 ('CLEP1991') is the primary local listing of heritage items and it provides protection for heritage items in Cabonne. There are 41 items currently listed in CLEP1991 of which there are heritage items listed in the urban areas of Cudal (3 items), Cumnock (3 items), and Molong (10 items). In addition there are heritage conservation areas listed for Bank Street in Molong and Gaskill Street in Canowindra. There are no specific heritage items listed in Canowindra, Eugowra, Manildra, Yeoval or Cargo – though there are a number of items in these settlements that are of heritage interest or value. Therefore, the current list of heritage items in CLEP1991 is only a small subset of the items that should be considered of heritage value and worthy of protection.

Cabonne Draft Community Heritage Study 2003

In order to update the list of heritage items, Council has prepared the Cabonne Draft Community Heritage Study 2003 ('Heritage Inventory'). The Heritage Inventory provides an integrated listing using the format established by the NSW Heritage Council for all local Government Councils and Agencies. The Heritage Inventory provides information about the heritage significance of each property and is available in hard copy and in future on the internet.

It is clear that CLEP1991 has not historically recognised or protected a large number of buildings, places or items that are worthy of heritage protection. The 2003 Study has recommended a significant increase in the total number of items of heritage interest and there are now items identified in each of the eight key settlements. Based on the 2003 Study, Council will seek to adopt a new Schedule of Heritage Items that will be incorporated into the new local environmental plan ('LEP') in 2012. Those items not included in the new LEP for Cabonne will remain as items of heritage interest. In addition, there will be an ongoing review process to continue to add items to the heritage inventory once their significance has been determined. This will be supplemented by new heritage controls in the future LEP and DCP.

Issues & Strategies

- **Heritage Items:** The current list of heritage items in CLEP1991 is not complete and does not represent all of the key heritage buildings or streetscapes of interest or value, particularly as only 3 out of the 8 key settlements have listed items. The *Community Heritage Study* (Draft) (2003) has sought to update the list of items of heritage interest. It is expected that this will increase the number of heritage items from 41 in CLEP1991 to over 243 items recommended for the new local environmental plan (subject to review).
- **Heritage Listing:** Items registered on the National Estate or by the National Trust should be included, where appropriate, in the heritage inventory for consideration as items under the new LEP. There should also be an update to the NSW State Heritage Register once the final Heritage List is complete.

2.9.2. Heritage Conservation Area

Council may also seek to apply a Heritage Conservation Area ('HCA') to part or all of a settlement. The aim of a HCA is to protect more than just individual heritage items but also to consider the overall character and streetscape of streets, areas and settlements as having heritage importance. This requires that all development within the HCA addresses the character and design requirements of the HCA with a particular focus on street character.

In Cabonne, under CLEP1991 there are currently HCAs for the main streets of both Molong (Bank Street) and Canowindra (Gaskill Street). CLEP1991 sets out additional controls for development in these key streets under Clause 29. This is supported by additional controls for signage and advertising in DCP No.13 – Advertising Signage in Conservation Areas (Molong and Canowindra). Where there is a significant collection of heritage items or their contribution to a particular area or street is very strong then Council may consider either extending or creating a new HCA as part of this Strategy and the associated Heritage Strategy.

2.9.3. Heritage Controls

The existing heritage items in Cabonne are mainly protected by the heritage controls in CLEP1991 and signage controls in *SEPP No.64 – Advertising and Signage* and *DCP No.13 – Advertising Signage in Conservation Areas (Molong & Canowindra)*. These controls are limited and need to be expanded / clarified to protect and enhance items and streetscapes both within and outside the heritage conservation area.

Issues & Strategies

Heritage Controls: There is a need to review the existing heritage controls to ensure they protect and enhance heritage items and the streetscape whilst allowing some infill and new development to support the growth of the town. The Standard LEP Template includes core heritage controls. These could be supplemented by a new DCP for Cabonne that covers all settlements with heritage items, provides controls for the Molong and Canowindra Heritage Conservation Areas, and controls for development of and in proximity to heritage items.

2.10. Services & Facilities

Access to services and facilities is one of the key factors in determining the place of each settlement in the settlement hierarchy and its growth potential. This section seeks to summarise each settlement's access to retail, emergency, health, and community services.

2.10.1. Retail Services

Villages can be distinguished by whether they have access to just essential goods, a mix of shopping goods, a supermarket with the full range of goods, or a range of retail services.

As stated in the *Rural & Industrial Strategy – Issues Paper – Chapter 6.2 – Settlement Typology*, *“one of the factors that categorises a settlement is the shopping facilities that are available in the centre. There are three basic shopping trips:*

- **Convenience shopping** relates to the daily shopping needs of bread and milk as well as newspapers and emergency purchases not done at other times.
- **Weekly shopping** is for the basic food and household shopping needs and is usually done in a chain supermarket.
- **Comparison shopping** is the shopping trips done for larger items of household and personal items such as whitegoods, furniture and clothing.”

In effect, only the larger regional centres (e.g. Orange, Dubbo & Bathurst and to a lesser extent Parkes, Cowra and Wellington) provide true comparison shopping across a range of retail options. Molong and Canowindra are more likely to be used for weekly shopping for basic food and household needs. There is only convenience shopping, if any, at the other six villages.

For the purposes of this Strategy we have provided a slightly more detailed breakdown of access to retail services as follows and reviewed this for each settlement in Table 22:

- **None** - No retail shops or services.
- **Low** - Only 1-2 small shops/services with only essential goods (bread, milk, papers) that service the local community that may or may not include a local post office.

- **Low - Medium** - Approximately 3-10 small shops/services which includes essential goods, perhaps a post office, and some tourist related services and/or craft stores that primarily only serves the local community.
- **Medium** - Approximately 10-20 small to medium sized shops/services which includes a general store with a wider range of goods that meets local shopping needs, a post office, bank(s), and some comparison shopping (e.g. clothing stores) which serve the local community and small rural catchment.
- **Medium - High** - Greater than 20 small to medium shops/services, one or more larger supermarkets (major chains), all administrative functions, restaurants, and a reasonable range of comparison shopping catering for food, clothing and some specialised goods such as electrical and white goods with a higher level of competition which serves the entire local government area.
- **High** - Large number of shops with comparison shopping and larger retail providers with 2-3 major grocery stores, major electrical and clothing stores etc (Orange, Dubbo & Bathurst).

Settlement	SUMMARY	Grocery Shops	Post Office / Banking	Restaurants / Take Away	Clothing Shops	Electrical Whitegoods Stores	Specialised Retail Services
Molong	Medium-High	1 large + 1-2 small	PO + 2 Banks + ATM	3-4 (pubs + cafes)	2-3 (limited)	Limited (hardware)	5-10 (local)
Canowindra	Medium-High	1 large + 1-2 small	PO + 2 Banks + 2 Agencies	5-10 (rest. / cafes / pubs)	3-5 (tourism)	Limited (hardware)	10-15 (local + tourism)
Eugowra	Med	2-3 small	PO + RTC + ATMs	2-3 (cafes + pubs)	1-2 (limited)	Limited (hardware)	3-5 (local)
Manildra	Low-Med	1-2 small	PO (Agency) + Credit Union (Agency) + ATM	2-3 (cafes + pubs)	Limited	Limited (hardware)	3-5 (local)
Cudal	Low to Low-Med	1-2 small	PO + ATMs	2-3 (cafes + pubs)	None	None	Limited
Yeoval	Low-Med to Med	1-2 small	PO (Agency) + ATMs	3-5 (cafes + pubs)	Limited	Limited (hardware)	3-5 (local)
Cumnock	Low-Med	1-2 small	PO (Agency) + ATMs	3-5 (cafes + pubs)	Limited	Limited (hardware)	3-5 (local)
Cargo	Low	1 small	PO (Agency)	1-2 (take-away + pub)	None	None	Limited

Table 22: Summary of access to retail services in the eight (8) key settlements (as at 2011).

2.10.2. Emergency Services

Access to emergency services is summarised below and in Table 23:

NSW Police Service

There are NSW Police services in Cabonne with police stations in seven of the settlements (Molong, Canowindra, Eugowra, Manildra, Yeoval, Cumnock and Cudal), however, the stations at Manildra, Cudal, and Yeoval are not necessarily staffed during the day. Where settlements do not have 24 hour services they are serviced by other 24 hour police stations.

Ambulance Service

The Molong Ambulance services the area surrounding Molong with Orange providing support to all areas. The Canowindra Ambulance services the area surrounding Canowindra with Orange and Cowra providing support.

NSW Fire Brigades

The NSW Fire Brigade is located in Molong and Canowindra and deal with any structural or life threatening fires and motor vehicle accidents in Cabonne. Other matters are dealt with by the Rural Fire Service ('RFS').

Rural Fire Service

The Rural Fire Service ('RFS') in Cabonne is part of the Canobolas Zone and is managed from Orange but there are generally local RFS stations in each of the settlements and also throughout Cabonne. The RFS are the key referral agency for development applications in bushfire prone lands. The NSW Planning for Bushfire Protection Policy sets out the key controls that govern development in NSW and, in general, no additional controls are required. However, there may be need for improved education and enforcement by Council.

State Emergency Services

The State Emergency Services ('SES') only has major bases at Molong, Canowindra and Eugowra. The SES has responsibilities under the *State Emergency Rescue Service Act 1989*. Key roles are in flood emergency management and storm damage. The Draft Local Flood Plan has been prepared in 2009 and it sets out roles and responsibilities and emergency responses. The SES works with DOCS who maintain evacuation centres to house people in emergencies.

Department of Community Services

The Department of Community Services ('DOCS') is based in Orange but services Cabonne. DOCS has a number of responsibilities including childcare centres (licensed by DOCS), looking after refuges, and offering a family support unit.

Animal Services

There are veterinary clinics in Molong, Canowindra and Orange. The Molong Clinic is a part of the Orange Veterinary Hospital. Cabonne Council also has a part-time ranger that collects wandering animals and runs the Council pound for Cabonne.

Settlement	SUMMARY	NSW Police Service	Ambulance Services of NSW	NSW Fire Brigades	Rural Fire Service	State Emergency Services	Animal Services
Molong	High	✓	✓	✓	✓	✓	✓
Canowindra	High	✓	✓	✓	✓	✓	✓
Eugowra	Med	✓ Serviced after-hours from Cowra or Orange	✓ Volunteer Service	×	✓	✓	×
Manildra	Low-Med	✓ Residence but not manned full time – goes to Molong	×	×	✓	×	×
Cudal	Low-Med	✓ Residence but not manned full time – goes to Orange	×	×	✓	×	×
Yeoval	Low-Med	✓ Residence but not manned full time – goes to Wellington	✓ Volunteer Service	×	✓	×	×
Cumnock	Low-Med	✓	×	×	✓	×	×
Cargo	Low	×	×	×	✓	×	×

Table 23: Summary of access to emergency services in the eight (8) key settlements (as at 2011).

Issues & Strategies

- Emergency Services:** There were no major comments by the community that the emergency services in their settlement are not suitable for the size of each settlement. Whilst communities would like higher levels of police and ambulance services these are operational rather than land use planning issues. However, ambulance services should be linked to existing/required health care services and demand from an ageing population which would affect all settlements but particularly Yeoval, Eugowra and Manildra. Most services have suitable locations / land supply. A growing issue is access to community services (particularly housing and support services) for low socio-economic areas and where lower socio-economic groups are attracted to settlements (e.g.

Cumnock's rent-a-farmhouse program) this may need to be supported by additional community services.

- **Development Controls:** The only common issue for emergency services that may be addressed by development control is ensuring appropriate access and operations for emergency vehicles. These are primarily addressed by engineering requirements for driveway designs and access to land, buildings and water for fire-fighting. In addition, emergency services would like improved controls to minimise development of land subject to flood or bushfire potential.

2.10.3. Education Services

Access to education services is summarised below and in Table 24 (please note that there are also primary schools provided outside the key settlements in Mullion Creek, Borenore, Nashdale, Spring Terrace and Clergate):

Settlement/ Level	Pre-School & Day Care	Public Primary	Secondary
Molong Med-High	Molong Pre-School 14 Riddell Street (~65 enrolments – Limited capacity)	Molong Central School, Phillip Street (~230 enrolled Primary) St Josephs Primary School, Edward Street (~42 enrolled)	Molong Central School, Phillip Street (~248 enrolled Secondary)
Canowindra Med-High	Canowindra Pre-School & Kindergarten Incorporated Ferguson Street (~26 enrolments – Limited capacity)	Canowindra Public School, Tilga Street (~173 enrolled) St Edwards Primary School, Tilga Street (~73 enrolled)	Canowindra High School, Browns Avenue (~225 enrolled)
Eugowra Med	Eugowra Pre-School Nanima Street (~30 enrolments – Additional capacity)	Eugowra Public School, Hill Street (~32 enrolled) St Josephs, Pye Street (~42 enrolled)	Not available
Manildra Med	Manildra Pre-School 65 Cudal Street (~18 enrolments – Additional capacity)	Manildra Public School, Molong Road (~46 enrolled) St Josephs Catholic Primary School (~39 enrolled)	Not available
Cudal Low-Med	Cudal Community Pre-School, Main Street (~35 enrolments – Nearing capacity / limited days)	Cudal Public School, Toogong Street (~55 enrolled)	Not available
Yeoval Med-High	Yeoval Pre-School King Street (~21 enrolments – Nearing capacity)	Yeoval Central School (~90 enrolled Primary) St Columba's School (~15 enrolled)	Yeoval Central School (~70 enrolled Secondary)
Cumnock Low-Med	Cumnock Village Pre-School, Obley Street (~20 enrolments–Additional capacity / limited days)	Cumnock Public School, Railway Street (~63 enrolled)	Not available
Cargo Low	No formal facilities	Cargo Public School, Hutton Street (~23 enrolled)	Not available



Table 24: Summary of access to educational services in the eight (8) key settlements (as at 2010).

Issues & Strategies

- **Pre-Schools / Day Care:** There are formal pre-school or day care services in all settlements except Cargo. Molong and Canowindra had limited additional capacity (in 2010) and Cudal and Yeoval were nearing capacity. There may be more demand for access to day care services in some settlements. There are no major issues with land supply for these services. Cabonne also provides a shire-wide family day care service

with full time care, occasional care, overnight care and before and after-school care by licensed care-givers.

- **Primary Education:** Primary schools (both public and private) are located in all of the eight (8) key settlements and provide a key community service. Most of the primary schools have additional capacity for students if there is growth. There is no predicted need for additional primary schools in Cabonne at this time. There is a real issue with maintaining public schools when enrolments fall below 20-30 students (e.g. Cargo) or maintaining teacher numbers with falling enrolments (e.g. Cudal) which may be linked to settlement size or ease of access to alternate schools by bus to other centres. However, there are no plans known to Council to reduce primary school services at this time and federal funding has resulting in improved facilities at most schools. The aim should be to attract young families to the settlements to support local schools (e.g. Cumnock's rent-a-farmhouse program).
- **Secondary Education:** Secondary high schools are only located in Molong, Canowindra and Yeoval and, in this way, these settlements are key educational centres for Cabonne. In all other settlements there is a need to travel to these centres by bus or to Orange, Wellington or Cowra. There is generally capacity within all secondary schools for additional students if there is growth. There is no predicted need for additional secondary schools in Cabonne at this time. However, there may be pressures on existing secondary schools (e.g. Yeoval) if student numbers fall as there are reduced school age children or students travel to larger schools in regional centres. Remote access to additional secondary classes and training fills an important gap in services at most secondary schools.
- **Tertiary Education:** There are no tertiary education facilities in Cabonne. There are campuses of Charles Sturt University and/or TAFE at Orange, Bathurst, Wellington, Parkes and Dubbo which are a 30-60 minutes drive from most areas in Cabonne. There are also community colleges located in Orange, Bathurst, Parkes, Forbes and Dubbo. It may be difficult to retain young adults in Cabonne when there is limited access to tertiary education and they are attracted to larger regional centres. It would not be expected that new tertiary education facilities will be required in the near future in Cabonne's settlements. However, links to apprenticeship programs may be useful.

2.10.4. Health Services

Access to emergency services is summarised below and in Table 26:

Hospital Facilities

There are public hospitals located in Molong (Molong District Hospital) and Canowindra (Canowindra Soldiers Memorial Hospital). They are administered by the Greater West Area Health Service (NSW Health).

Molong: The Molong District Hospital on King Street includes services for aged care, community health, inpatient care, emergency care, radiology and pathology. The hospital provides a 24 hour emergency service but relies on Rural Remote Medical consultation services, based in Bathurst, and specialist advice from Orange when on call doctors are not available.

Canowindra: The Canowindra Soldiers Memorial Hospital on Browns Avenue includes services for: general medical care; inpatients – 18 acute beds and 10 nursing home type beds; non-inpatients – 24 hour emergency care; two visiting medical officers (Dr. A.S. Kumar and Dr. N. O'Ryan); access to all Canowindra Health Service and visiting community and allied health professionals; Canowindra Day Hospital Transitional Care (activities at Canowindra Soldiers Memorial for aged, disabled and developmentally disabled groups); physiotherapy; and radiology-X-rays (limited days).



Other: Originally there were hospitals in Yeoval, Cudal and Eugowra but these have been shut and/or converted into community health centres with a more limited range of services or only provided aged care services (see below).

Community Health Facilities / HealthOne

Molong: In 2009 the Waluwin Community Centre (HealthOne) was opened in Molong and provides: general practice services with a doctor and practice nurse; community nurse; child and family health nurse; space for visiting medical specialists; allied health professionals including occupational health and fitness leader; pathology service; home & community care (HACC) services; and Anglicare (Source: www.health.nsw.gov.au). The Waluwin Community Centre in Molong offers outreach services to surrounding communities including Yeoval, Manildra, Cumnock, Cudal and Cargo.

Canowindra: The Community Health Centre on Ryall Street is open most days (limited times on weekends) and has services including: district nursing at health centre or home; monitoring; dressings; diabetes management and education; immunisation; medication assistance; referrals; health resources; child and adolescent mental health (once a fortnight); child and family health (Tuesdays & Wednesdays); child and family health (1st and 3rd Thursday each month); healthy lifestyle groups; hearing clinic; nutrition and dietetics (weekly by appointment); occupational therapy; psychology (monthly by appointment); and speech pathology.

Eugowra: Eugowra has a new Multi-Purpose Service that includes a Level 1 emergency department, 14-bed aged care accommodation (including dementia suitable, respite and palliative care), clinical and operational support services, a wide range of community health care services (including physiotherapy and podiatry), day care services, and a resident and visiting / general practice service. This was opened on 30 September 2010 by the Minister for Health. This facility ensures that there is a reasonable level of local health care to meet a range of needs including aged care services. However, many emergency patients are still transferred to larger regional hospitals where there are better facilities and skills. In addition, there is the Eugowra Health Centre at the CWA rooms in Nanima Street where the Community Nurse works (Monday to Friday) doing home visits and health promotions and education. There are also clinic hours for dressings and medications. A child and family health nurse visits once a month.

Manildra: The Manildra Community Health Centre is open 8.30am-4.30pm, Mondays to Fridays. It operates with 2 visiting part-time doctors. One doctor is available Mondays and Wednesdays from 10am to 12 noon, the other on Tuesdays and Fridays from 9am to 1pm. For the rest of the time, a community nurse is available.

Cudal: The new Cudal Community Health Centre was built in 2006 (run by the Department of Health) and offers: accident & emergency; physiotherapy; child and family health services (one day a week); pathology (2 ½ days a week); child and family health nurse; and dietician (comes if required). The key issue is ensuring that there are registered nurses on premises to be able to perform at least some of the medical functions of the original hospital. There are no acute care or specialist services in Cudal and patients have to go to Molong or Orange.

Yeoval: Yeoval was the first location in NSW to receive a multi-purpose health centre and aged care unit. However, in recent years this facility has been down-graded to a low care hostel facility for aged care with limited community health services. There are no high-care residents, no emergency capability and no acute beds. The facility advertises that services include material & child health, immunisation, community based nursing, palliative care and diabetes education with visiting services including occupational therapist, speech pathologist, women's health nurse, dietician and social worker. The existence of these services in 2011 would need to be reconfirmed. There is a community nurse who takes all calls directed to Community Health Centres of Yeoval and Cumnock and is available on Mondays, Wednesdays and Thursdays. Doctor Robin Williams and his practice nurse Kate Yelland visits Yeoval on Tuesdays and Dr Ian Spencer visits on Thursdays (from Wellington).



Cumnock: The Cumnock Community Health Centre is open Monday to Friday and offers a range of remote services including maternal and child health, immunisation, community based nursing, palliative care, diabetes education, occupational therapist, speech pathologist, women's health nurse, dietician and social worker.

Medical Practitioners/Doctors

There are doctors available in Molong, Canowindra, Eugowra, Manildra and Cudal. However, only Molong, Canowindra and Manildra have resident local doctors. Molong has doctors at both the Molong Surgery and the Waluwin Community Centre. Canowindra's medical centre at 106 Gaskill Street has a doctor available by appointment and is open Mon/Tue/Wed/ Fri/Sat. There are also two general practitioners. In Manildra there is one (1) doctor (currently Dr Vikki Mymer). Visiting doctors attend to the other health centres.

The primary private and public health related services (particularly specialist services) are located in Orange. One of the key issues is the difficulty attracting medical professionals to the Central West, especially to the smaller towns in Cabonne.

Dental Facilities

Dental services are only available in Molong with Dr Andrew Green. Otherwise people must travel to the larger regional centres.

Associated Services

There are a number of associated medical services in Cabonne. This includes pathology, pharmacy, psychologists, optometry, podiatry, massage therapy and alternative health services. However, the higher level services are generally only available in Molong or Canowindra or by visiting services at the other settlements. The Lyndon Community in Blatchford Street assists with residential rehabilitation; alcohol and other drugs treatment; counselling; and group education, therapy and support services.

Aged Care & Retirement Facilities

The Aged Care facilities within Cabonne are shown in Table 25:

Settlement	Name	Total Capacity
Molong	Molong Lodge Retirement Village (UPA)	16 self care units
	Prunus Lodge UPA Hostel	6 bed hostel
	Arcacia Lodge	12 bed dementia unit 3 units and a 3 bedroom house
Canowindra	Moyne Eventide Nursing Home	43 beds low care 29 beds high care
	Canowindra Soldiers Memorial Hospital	10 hostel & full time care
	Development approval retirement village and senior living facility (Cnr Mill & Blatchford Streets)	14 dwellings
Eugowra	Eugowra Hospital	14 Residential Care
	Eugowra Self Care Units	5 units for independent living
Manildra	Lions Mandagery Lodge	13 aged residential units
Cudal	Boree Lodge	3 single units 2 double units
	Approval for a new aged care and assisted care facility (not yet constructed)	200 aged care units 60 assisted care rooms
	Yeoval Community Nursing Home & Hostel	9 bed nursing home 8 bed special care dementia unit 9 bed hostel
Yeoval	Yeoval Aged Persons Community	6 units

Table 25: Summary of access to aged care & retirement services in the eight (8) key settlements (as at 2010).



Summary

Table 26 provides a summary of all of the key health services in each settlement.

Settlement	SUMMARY	Hospital	Health Centre	Doctor	Dentist	Chemist	Physio	Aged Care	Other
Molong	High	✓	✓	✓	✓	✓	×	✓	Waluwin Community Centre includes Pathology Occupational Therapist and Fitness Leader / Nurse Services
Canowindra	Med - High	✓	✓	✓	×	✓	×	✓	Canowindra Community Health Centre / Lyndon Community Optometrist first Tuesday of month / Pathology / Podiatrist second Wed each month.
Eugowra	Med	MPS	✓	✓	×	✓ Deliveries on request	×	✓	Eugowra Health Centre – Community Nurse Naturopath by appointment
Manildra	Low	×	✓	✓ Visiting	×	×	×	✓	Manildra Community health Centre 2 part time doctors
Cudal	Low	×	✓	✓ Visiting	×	×	×	✓	Community Centre includes Pathology / Occupational Therapist and Fitness Leader / Primary Nurse / Dietician / Doctor visits once a week
Yeoval	Low-Med	×	✓	✓ Visiting	×	✓ Part-Time	×	✓	UPA Aged and Community Health Centre
Cumnock	Very Low	×	✓	×	×	×	×	×	Cumnock Community Health – District Nurse Tuesday 10-1.30 Child and Family, Clinic 2- 3pm
Cargo	Very Low	×	✓	×	×	×	×	×	Outreach services

Table 26: Summary of access to health services in the eight (8) key settlements (as at 2010)

Issues & Strategies

- Hospitals:** There is ongoing community concern about the long-term maintenance and viability of the Molong District Hospital and Canowindra Soldiers Memorial Hospital as larger regional health centres are developed in regional centres like Orange. Molong and Canowindra are primary centres in Cabonne and Council will be seeking to ensure that their hospitals provide local and regional services to meet the community needs. Council is awaiting further reviews by the Department of Health on the future provision of services at these hospitals.
- Health Centres:** The creation of health centres in each settlement (particularly the new HealthOne / Multi-Purpose Centres at Molong and Eugowra) are part of a new health direction to proactively treat injuries and illness and reduce the need for hospital services. However, these services often cannot treat the full range of acute/emergency patients, provide palliative care, or address all health issues so transport is often required to larger centres. Several of the communities are concerned about the loss of community health centres (particularly Manildra). The key issue for communities is getting access to medical practitioners and registered nurses and attracting them to live in the local communities. Outreach services meet some of the needs but due to limitations of these health services this will affect certain segments of the demographic that require access to higher level health services.
- Aged Care:** As [Section 2.5 – Demographic Profile](#) shows there is an ageing population in all settlements and the majority need to ensure local access to health and aged care services to meet their needs and avoid loss of population to larger centres. Due to the higher level health services in Molong, Canowindra and Eugowra these settlements are likely to be able to support significant additional aged care services ranging from smaller housing complexes to hostels and higher care facilities. There is a need to identify lands in close proximity to key services and transport to support growing aged-care services and dwellings. Council has also approved 200 aged care units and 60 assisted care

rooms on land in eastern Cudal in 2006. The potential development of a large retirement facility in Cudal would have significant benefits for Cudal but it may also place some significant pressures on existing services including but not limited to the sewerage system, health services, and the need for more local shops and facilities for entertainment. As at 2011, construction on roads at the facility has commenced but no accommodation has been released. There may be opportunities for the development of small-scale seniors living facilities in the other smaller settlements that can facilitate older citizens remaining in those settlements with smaller dwellings and reasonable access to care and health services. However, they may not be suitable for those citizens requiring access to high care facilities. Further work should be conducted on this issue in each settlement.

2.10.5. Community Services

This section provides a summary of the major community services that are available in Cabonne as at 2010. This does not include all community groups or support services that may be available or phone services.

Local Government

There are two (2) local government bodies that have responsibilities for aspects of Cabonne including Cabonne Council (all Shire) and Central Tablelands Water (water supply). Cabonne Council has its main office located in Molong with Council's Engineering Department located in Cudal and a small office located at Canowindra. Central Tablelands Water has their office located in Blayney.

Post Offices

There are post offices in all of the villages. A number of the post offices are stand-alone Australia Post facilities and others provide Australia post facilities through a local retail outlet. Some facilities provide personal and business banking, post office boxes and travel services but these are generally limited to the larger Australia Post offices. The post offices in Cabonne that have banking facilities are Molong, Canowindra, Manildra, Cudal, Yeoval and Eugowra.

Libraries

There are three (3) full service public libraries in Cabonne including: Molong Library (Railway Station), Bank Street; Canowindra Library, Gaskill Street; and Manildra Library, Derowie Street. A wide range of material is available including books, adult and junior, fiction and non-fiction, audio books, compact disks and videos. There is no mobile book service in Cabonne. There is also a Community Lending Library sited at the Crossroads Building in Cumnock open Mondays, Wednesdays and Fridays from 3.00pm to 5.30pm for limited library services.

Cultural / Community Facilities

There are a range of cultural/community facilities in each settlement including but not limited to:

- **Molong:** Molong Museum, Cnr Riddell and Gidley Streets; The Yarn Market, Bank Street; Community Hall, Bank Street; St Vincent de Paul, Bank Street; Scouts Hall, Hill Street; and Molong RSL, Riddell Street;
- **Canowindra:** Age of Fishes Museum; Canowindra Community Hall, Gaskill Street; CWA Hall, Blatchford Street; Masonic Hall, Blatchford Street; Moorbel Hall, Mandurama Road; Uniting Church Hall, Blatchford Street; and the Canowindra Services & Citizens Club (recently damaged by fire). There is also the Men's Shed;
- **Eugowra:** Willawa Activity Centre, Hill Street; Eugowra Country Women's Association Hall and the Masonic Lodge; Eugowra Historical Museum and Bushranger Centre;
- **Manildra:** Masonic Hall in Duff Street; Soldiers Memorial Hall in Kiewa Street; Amusu Theatre and Museum;
- **Cudal:** Cabonne Food and Wine Centre; Cudal Community Centre, Main Street (opposite the Council building); and parish halls associated with some churches;



- **Yeoval:** Yeoval Museum at 26 Forbes Street (opened in 2007 - limited hours / by appointment – owned by Cabonne Council), Red Cross at 31 Forbes Street, Yeoval Community Hall at 25 Forbes Street (owned by Cabonne Council), and Masonic Hall at 43 Forbes Street (owned by the Yeoval Masonic Hall Trust). Yeoval also has the weekly Satellite newspaper (39 Forbes Street) that was established in 1957. It also has the Little River Landcare Group offices (24 Forbes Street);
- **Cumnock:** Cumnock Community Centre; CWA Rooms; and the Cumnock Crossroad building that support a range of local clubs and societies for sport, charities, and village associations; and
- **Cargo:** Other than the school and churches, a focal point of the community is the Cargo Community Hall on the corner of Belmore and Molong Street, Cargo.

Churches

Churches in each settlement include:

- **Molong:** St Laurence O'Toole - Catholic Church, Riddell Street; St John's Anglican Church 42 Edward Street; Uniting Church, Edward Street; Assemblies of God, 89 Gidley Street; Brethren Church, Cnr Molong & George Streets; and Baptist Church, 35 Thistle Street. There has been no identification of a need to provide additional lands for these facilities at this time;
- **Canowindra:** All Saints Anglican Church, Lola Street; Canowindra House Church, Tilga Street; St Edward's Catholic Church, Tilga Street; Uniting Church, Blatchford Street; and the Salvation Army;
- **Eugowra:** Welsh Memorial Uniting Church; St Matthews Anglican Church; and St John the Baptist Catholic Church;
- **Manildra:** Manildra has three churches servicing broad number of faiths including the Manildra Uniting Church, Cudal Street; St Luke's (Anglican) Church, Packham Drive; and St Michaels (Catholic) Church;
- **Cudal:** St James (Anglican) Church, Toogong Street; Uniting Church, Toogong Street; and St Columbanus Catholic Church, Main Street;
- **Yeoval:** St Luke's Anglican Church (11 Obley Street); Uniting Church (7 King Street); Church of our Lady Catholic Church (2 Forbes Street) and Yeoval Baptist Church (30-32 Forbes Street);
- **Cumnock:** St Matthew's Anglican Church (12 McLaughlan Street) the Roman Catholic Church just to the north of the village (Obley Road) and the Bruce Memorial Church (1908 - on Bruce Street). Only the Anglican Church appears to be active; and
- **Cargo:** St John's Anglican Church, Hamilton Street; and St Patrick's Catholic Church.

Issues & Strategies

- **Local Government:** Cabonne Council is a key employer in the area with particular benefits for employment opportunities in Molong and Cudal (and Canowindra) and limited benefits at depots across Cabonne. There are increasing pressures for amalgamations between Councils that challenge the provision of local services to the community and flow-on effects for local employment and sustainability. The creation of the WBC Alliance of Councils aims to create efficiency in service provision that will delay or minimise the risk of amalgamation for the foreseeable future.
- **Community Services:** In general there are limited community services outside of Molong, Canowindra, Eugowra and Manildra. However, this is unlikely to change significantly unless there is major population growth in other settlements. No additional land requirements have been identified in this Strategy. Increasingly there will need to be co-location of services into single facilities (e.g. post offices in local stores) to be able to meet local needs.



2.10.6. Open Space & Recreation

Open space and recreation is dealt with in more detail in each settlement chapter.

Issues & Strategies

Open Space & Recreation: In general there are a range of open spaces that are available to the public in each settlement that can provide some active and passive recreation opportunities. The key issue is the quality of these spaces and the associated facilities to meet the needs of a range of recreational needs for each settlement. As each settlement grows, there will need to be a more detailed review of the quantity, quality and facilities at each of these spaces to ensure growing needs are met. This should be completed as part of a Shire-wide recreation and open space assessment and strategy. This should be integrated with the existing Cabonne Pedestrian Access Management Plan and Bicycle Plan.

2.10.7. Summary of Access to Services / Facilities

Table 27 provides a summary of the relative level of access to services / facilities for each of the eight (8) settlements in Cabonne arising from this Strategy.

Settlement	SUMMARY	Retail / Services	Emergency Services	Education	Health & Aged Care	Community / Cultural
Molong	Med-High	Med-High	High	Med-High	High	High
Canowindra	Med-High	Med-High	High	Med-High	Med-High	High
Eugowra	Med	Med	Med	Med	Med	Med
Manildra	Low-Med	Low-Med	Low-Med	Med	Low	Med
Cudal	Low-Med	Low to Low-Med	Low-Med	Low-Med	Low	Low-Med
Yeoval	Med	Low-Med to Med	Low-Med	Med-High	Low-Med	Low-Med
Cumnock	Low-Med	Low-Med	Low-Med	Low-Med	Very Low	Med
Cargo	Low	Low	Low	Low	Very Low	Low

Table 27: Summary of access to key services/facilities in each of the eight (8) key settlements (as at 2010/2011).

Issues & Strategies

Access to Services/Facility: Whilst the provision of services and facilities can grow with a settlement's population, the summary of access for Cabonne's settlements indicates where significant growth may be constrained in the short to medium term. Molong and Canowindra currently have the best level of services to support significant growth for a broader section of the community. Eugowra and Yeoval have a range of services but may be constrained particularly for older citizens who need higher level health care services. Manildra, Cudal and Cumnock have significant service issues but can meet basic needs. Cargo has relatively limited services but has the benefit of proximity to Orange and Canowindra to access many of these services – though this results in reliance on private transport that may not be available for older or younger citizens.

2.11. Future Population Projections

2.11.1. Factors Affecting the Projected Population of Cabonne

Projections of the population of Cabonne are difficult to identify accurately and dependent on a number of factors that result in increased natural population growth and migration to the area, with a need for reasonable economic growth and employment opportunities to support any increase in the population.

Factors likely to Increase the Cabonne Population

In addition to the growth factors discussed in each settlement chapter, the following key factors are likely to increase the Cabonne population in the next 30 years:

- **Mineral potential and the opening of new mines:** Cadia East has recently opened and has a 20-30 year lifespan. There are also key deposits around Molong (Copper Hill), Cargo, and Yeoval. If these deposits are found to be economically viable for mining then it is likely to increase the economy, employment and demand for housing in the nearby settlements.
- **Cost of Living in Orange (& other Regional Centres):** Whilst Orange is likely to have a strong demand in the future there are a number of constraints to its growth including land supply, water provision, cost of land, and demand pushing up prices. This is likely to support growth in the surrounding rural shires including Cabonne and Blayney.
- **Rural Character & Lifestyle:** There continues to be a strong demand for rural lifestyle and character and the affordability of our rural settlements. There is a key demand shown for rural residential or 'lifestyle' blocks that is unlikely to be provided in the Orange LGA. The rural nature of many villages and average block sizes may also increase.
- **Region's Tourism Potential:** The tourism potential of the area appears to have sufficient growth potential and opportunity. The Cabonne region continues to support the food and wine tourism based around Orange, and other parts of the Shire have formed links with surrounding Councils such as Cowra and Forbes/Parkes to allow a range of tourist related services and businesses.

Factors likely to Decrease the Cabonne Population

In addition to the growth constraints discussed in each settlement chapter, the following key factors are likely to decrease the Cabonne population in the next 30 years:

- **Ageing Population:** There is undoubtedly an ageing population in Cabonne. However, many of the settlements are unable to provide a high quality of health care, aged care, services, entertainment or housing choice to meet the needs of this population and there is a reasonable risk that a high proportion of aged citizens may choose to relocate to better serviced centres like Orange. Aged care needs to be tied to improved health services.
- **Cost of Utilities, Infrastructure & Development:** One of the greatest constraints to growth is the ever increasing cost of providing and maintaining utilities and infrastructure such as roads and the costs of materials and building. Even though some land prices are reasonable in Cabonne, the cost of development is often so large that there is a high risk of not getting a suitable return on investment for release of larger numbers of lots/dwellings. The only way to reduce this is to concentrate development around existing services where there is capacity for growth and release development in an orderly fashion once there is proven demand.
- **Provision of Water:** A secure water supply is a high priority for growth of the region, not just for agriculture, but also for settlements. Whilst the water supply is not secure (not guaranteed) in Yeoval and Cumnock and while there are question marks about growth potential in Molong this will continue to constrain development. This would be assisted by a more regional approach to promoting water security and distribution.

- **Employment:** The choice of employment options are relatively limited in Cabonne compared to the regional cities. Farming continues to be the major employer. However, the trend is often for reduced farming populations. Local government is a key employer and there is a query whether Cabonne Council will be sustained in its existing form for the next 30 years. Hospitals and schools are also key employers but with increased centralisation of these services some settlements may lose these services/employers in the future.
- **Tourism:** There is a strong reliance on tourism as being part of the solution for Cabonne. However, it is important to note that domestic tourism is falling across Australia and this is having significant impact on tourist-related businesses. It is difficult to determine whether this trend will be continued for the next 30 years.

2.11.2. Settlement Strategy – Summary of Settlement Growth Projections

Table 28 provides a summary of the maximum growth rates and affect on settlement population from 2006 to 2036 as predicted by this Strategy. It shows the total urban population increasing from 5,835 in 2006 to 7,172 in 2036, an increase of 1,337 people over 30 years or an average of +0.76% per year.

Settlement	Growth Rate Max.	2006	2011	2016	2021	2026	2031	2036	Pop. inc. 2006-36
Molong	+1.0%/yr	1,711	1,798	1,890	1,986	2,088	2,194	2,306	+595
Canowindra	+0.7%/yr	1,782	1,845	1,911	1,979	2,049	2,122	2,197	+415
Eugowra	+0.3%/yr	535	543	551	560	568	577	585	+50
Manildra	+0.5%/yr	515	523	531	539	547	555	563	+48
Cudal	+0.5%/yr	434	445	456	468	480	492	504	+70
Yeoval	+0.3%/yr	292	296	301	305	310	315	319	+27
Cumnock	+0.7%/yr	288	298	309	320	331	343	355	+67
Cargo	+1.0%/yr	278	288	298	309	320	331	343	+65
TOTAL	--	5,835	6,036	6,247	6,466	6,693	6,929	7,172	+1,337

Table 28: Summary of projected maximum population growth rates and affect on settlement population from 2006 to 2036 from this Strategy.

2.11.3. State Government Population Projections (2010)

Table 29 shows the latest (2010) state government projections for Cabonne. It is estimated the Cabonne total population will only increase by approximately 400 people between 2006 and 2036 which is a relatively low level of growth.

Historical and projected population and selected characteristics - Cabonne								
	Population				% aged	% aged	Depend-	Median
Year	Males	Females	Persons	Sex ratio ¹	0-14	65+	ency ratio ²	age
1996	6,200	6,100	12,300	101	24%	14%	61	37
2001	6,400	6,200	12,500	103	22%	15%	60	39
2006	6,600	6,300	12,900	103	22%	16%	61	41
2011	6,600	6,400	13,000	103	20%	17%	60	42
2016	6,700	6,500	13,100	104	19%	20%	63	44
2021	6,700	6,500	13,200	104	18%	22%	66	45
2026	6,800	6,500	13,300	104	18%	24%	72	46
2031	6,800	6,500	13,300	104	17%	26%	77	47
2036	6,800	6,500	13,300	104	17%	27%	80	48

¹ Sex ratio is the number of males per 100 females.

² Dependency ratio is the number of people aged 0-14 and 65+ per 100 people aged 15-64.

Table 29: Department of Planning (2010) projections for Cabonne Shire (Source: www.planning.nsw.gov.au).

Comparing this to the known Cabonne populations in 2006 (12,396) and 2011 (12,821 people) it would suggest that the Department's current projections are not greatly dissimilar and may represent a reasonable estimate of future population growth rates across the LGA.

Table 30 suggests that increasingly deaths will exceed births resulting in a negative natural increase and with a low net migration to Cabonne there will be a decreasing growth rate for Cabonne's population. The Department have also projected an increase in the +65 age group (from 16% in 2006 to 27% in 2036) and a decrease in the 0-14 age group (from 24% in 2006 to 17% in 2036) with an increase in the median age from 37 (2006) to 48 (2036).

Historical and projected components of population growth - Cabonne						
Period	Births	Deaths	Natural increase	Net migration	Total growth	Annual growth rate ³
1996-2001					240	0.4%
2001-2006					340	0.5%
2006-2011	630	580	60	70	130	0.2%
2011-2016	630	590	40	80	120	0.2%
2016-2021	620	600	20	80	100	0.2%
2021-2026	600	620	-20	80	70	0.1%
2026-2031	580	640	-60	80	20	0.0%
2031-2036	560	670	-100	80	-30	0.0%

³ Growth rate is calculated using the exponential formula $\ln[\text{pop}(t)/\text{pop}(t-5)]/5$.

Table 30: Department of Planning (2010) projections for Cabonne Shire – with the projected components of population growth each period (Source: www.planning.nsw.gov.au).

2.11.4. CENTROC Projection (2008)

The *CENTROC Population Projections* (Western Research Institute: Dec 2008) has extrapolated from Australian Bureau of Statistics data to obtain the following population projections for Cabonne taking into account major new developments expected in Cabonne in the next 30 years (Table 31).

Comparing this to the known Cabonne populations in 2006 (12,396) and 2011 (12,821 people) it would suggest that the Department's 2005 and 2010 projections are not greatly dissimilar to historical growth rates (an average annual growth rate of +0.12% to +0.31%). However, this Strategy projects that growth may increase to +0.37% (WRI Scenario C). This is based partly on the mining potential of the area (including, but not limited to, Cadia East) as well as the demand for lifestyle blocks.

	2006 Quick stats	2011	2016	2021	2026	2031	Δ Pop. 2006-2031	Projected Growth from 2006-2031	Projected Av. Ann. Growth 2006-2031	2036 Proj-ected
DoP (2010) Projection	12,900	13,000	13,100	13,200	13,300	13,300	+400	+3.1%	+0.12%	13,300
DoP (2005) Projection	12,396	12,710	12,850	13,030	13,210	13,360	+964	+7.78%	+0.31%	13,521
WRI (2008) Scenario C	12,396	13,186	13,422	13,539	13,559	13,550	+1,154	+9.31%	+0.37%	13,742
WRI (2008) Scenario B	12,396	13,581	14,363	14,751	14,805	14,802	+2,406	+17.72%	+0.71%	15,203
WRI (2008) Scenario A	12,396	14,076	15,540	16,266	16,360	16,361	+3,965	+31.99%	+1.28%	17,022

Table 31: Estimated population projections for the Cabonne Shire by Department of Planning (DoP) and CENTROC/Western Research Institute (WRI) to 2031 (Source: *CENTROC Population Projections* (2008)).

2.11.5. Rural & Industrial Strategy Projection (2008)

The **Rural & Industrial Strategy – Local Profile – Section 2.1.4 - Population Projections** uses projections from the Transport and Population Data Centre (2005 release) and set out the following rates of growth in Cabonne to 2036:

- Part A is +1.1% average annual growth;
- Part B is +1.7% average annual growth;
- Part C is -0.1% average annual growth.

As this Strategy only deals with the key settlements that are all within Part C, this Strategy accepts and is based upon the growth rates for Parts A & B set out in the Rural & Industrial Strategy.

However, this Strategy seeks to 'refine' the growth rate for Part C to take into account a positive overall growth rate for the majority of the key settlements, resulting in an average annual growth rate in Part C of +0.2%.

2.11.6. Settlement Strategy - Projection for Cabonne Parts A to C

As Table 32 shows, the following projections for Cabonne are predicted based upon the predicted growth rates for Cabonne – broken down into Parts A to C. It is important to note that whilst there is a projected increase of 1,337 people in Cabonne's settlements (in Part C), the total growth rate for Part C is estimated to be +562 as it is predicted there will be a loss of people in the rural areas surrounding the settlements.

Year	Cabonne Part A +1.1%/yr	Cabonne Part B +1.7%/yr	Cabonne Part C +0.2%/yr	Cabonne Total Pop. Av. Ann. Growth – +0.536%
2006	2,330	972	9,094	12,396
2011	2,461	1,057	9,185	12,725
2016	2,599	1,150	9,278	13,062
2021	2,746	1,252	9,371	13,409
2026	2,900	1,362	9,465	13,765
2031	3,063	1,481	9,560	14,130
2036	3,235	1,612	9,656	14,505
Δ Pop. 2006-36	+905	+640	+562	~2,100

Table 32: Projected Cabonne growth rates (including Parts A, B & C) through to the year 2036 (based on the results of this Strategy).

The Settlement Strategy projection is based on an average annual growth rate that is constant over the 30 year period, however, in reality the growth is unlikely to be constant but will vary either side of the average.



2. Cabonne Overview

Cabonne Settlement Strategy



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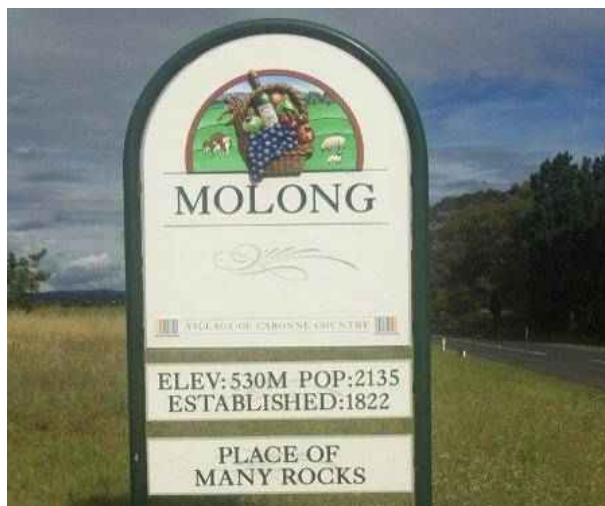


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Document Control

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A	December 2010	A.Napier	Draft	Internal Review
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3. Town of Molong

Please note that **Chapter 3 – Town of Molong** should be read with **Chapter 2 – Cabonne Overview** as some of the Issues and Strategies applicable to all settlements are not reproduced in this chapter.

3.1. Executive Summary & Proposed Land Use Arrangements

3.1.1. Historical Population Growth

The ABS Census District for the Town of Molong includes the Village Zone and West Molong Zone 1(c) (Rural Small Holdings) area but does not include the Zone 1(c) lands in North and East Molong. At the 2006 Census, Molong's Census District had a population of 1,569 people.

The additional large lot residential areas outside the Molong Census District have an estimated population of approximately 142 additional people. Therefore, Molong is estimated to have a total population of approximately 1,711 people (including both the Village and large lot residential areas).

As Table 1 shows, looking at the Molong Census District population only, the population peaked with 1,604 people in 1996 but there has been a minor overall decrease in the settlement population over the last 10 years. The population increased from 1986-2006 by 169 people (0.6%/year) but at a slower rate (0.12%) between 2001 and 2006.

Year	1976	1981	1986	1991	1996	2001	2006
Population	1,504	1,374	1,400	1,551	1,604	1,560	1,569
Av. Ann. Change from previous Census	N/A	-1.73%	+0.38%	+2.16%	+0.68%	-0.55%	+0.12

Table 1: Census population and population change for Molong's Census District.

3.1.2. Key Factors Influencing Population/Economic Growth

Molong has a number of potential positive influences that could result in positive population growth and demand for land including, but not limited to: its proximity to services/ employment in the City of Orange; access to the Mitchell Highway; location on the Broken Hill Railway; a good population base exhibiting continuous growth; its role as the seat of local government; local access to health care and primary/secondary education; access to reticulated water and sewer; existing manufacturing and industry; the potential for growth of mining in the area; the provision of affordable housing (compared to Orange); aged care facilities and support services; reasonable tourism attractions and facilities; and the attraction of the rural lifestyle and community spirit in Molong.

Molong has a number of potential negative influences that could hamper population growth and demand for land including, but not limited to: proximity to Orange that can result in 'escape expenditure'; natural constraints such as topography, flooding and limestone outcrops that reduce land supply and add to development cost; limited public transport access; lack of zoned industrial land and limited suitable land for industrial expansion; heavy reliance on a limited number of employers; and queries about the sustainability of future mining opportunities and security of the town's water supply to meet growth potential.

3.1.3. Projected Population Growth

Based on the opportunities and constraints, the Town of Molong's population is expected to grow from +0.3%/year (minimum) through to +1.0%/year (maximum) with an average projection of +0.7%/year. *(Note that growth rates will change over time and this is an estimated average growth rate over the 30 year period).*

Based on a **maximum** growth rate of +1.0%/year the total population will grow from 1,711 people in 2006 (estimated of the Village Zone and large lot residential areas) to 2,109 people

by 2036 - an increase of 398 people. This growth will create some additional demand for residential, business, industrial, community and open space/recreation land uses that will need to be provided in Molong and the region.

3.1.4. Proposed Land Use Zone(s)

It is good planning practice that settlements above 1,000 in population that are growing should consider adopting specific zoning for each land use ('complex zoning'). The aim of this requirement is for 'mature' towns to restrict certain land uses (especially higher impact industries and businesses) to specific areas ('zones') to minimise potential land use conflicts with more sensitive land uses and allow industry and business to grow without restrictions.

As Molong's population is well above 1,000 people and the growth rate of the town is likely to result in increased land use conflicts, this Strategy recommends that Molong adopts 'complex zoning' in the new LEP. This would result in the removal of the existing Village Zone and adoption of a range of zones including, but not limited to areas for land uses for business, industry, and dwellings.

3.1.5. Summary of Proposed Changes

As shown in Figure 1, the following proposed land use areas (and changes) are recommended by this Strategy (in summary) (for more detail see specific land use sections in this Chapter):

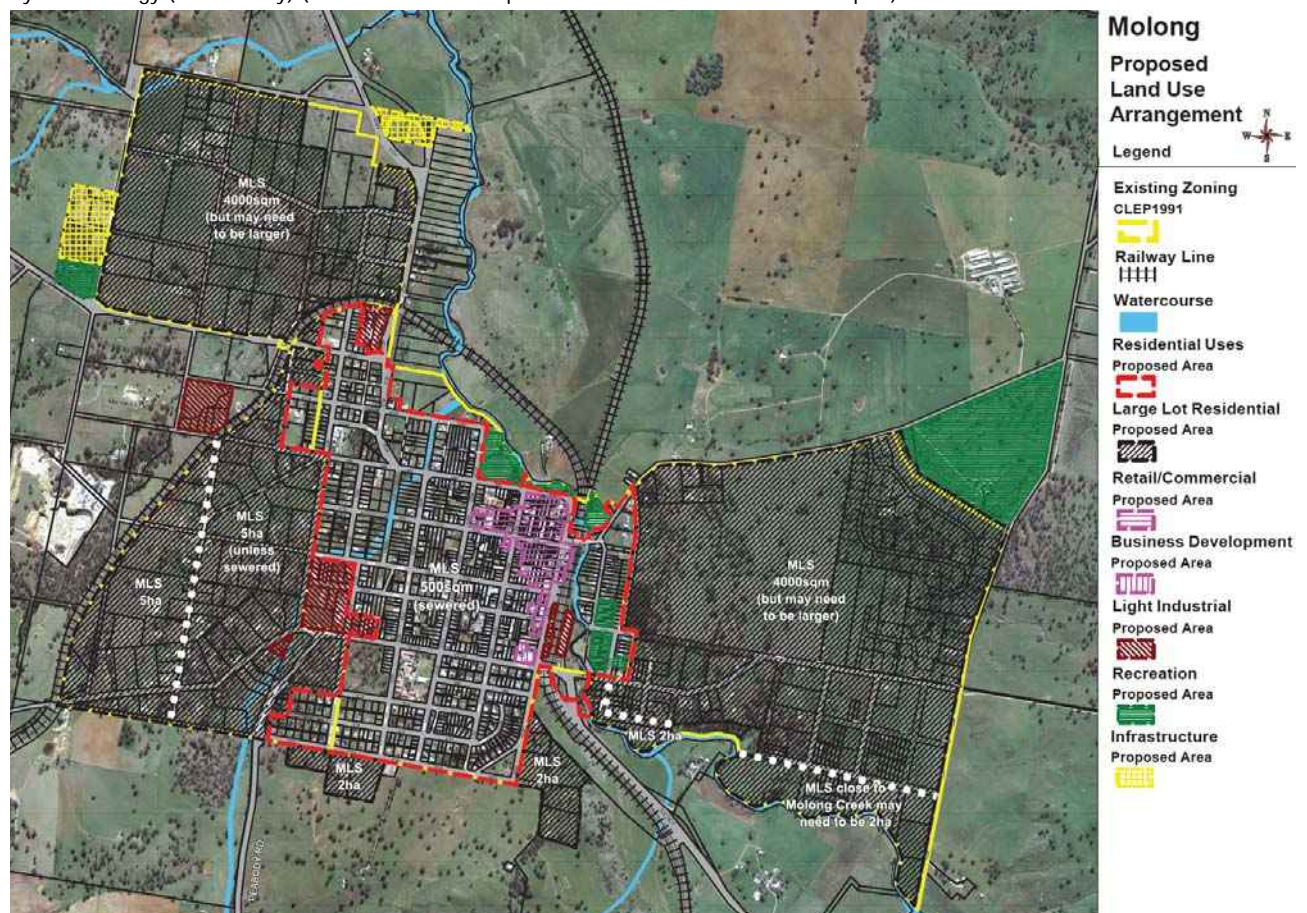


Figure 1: Summary of proposed land use arrangements for the Town of Molong (Source: Council GIS 2012).

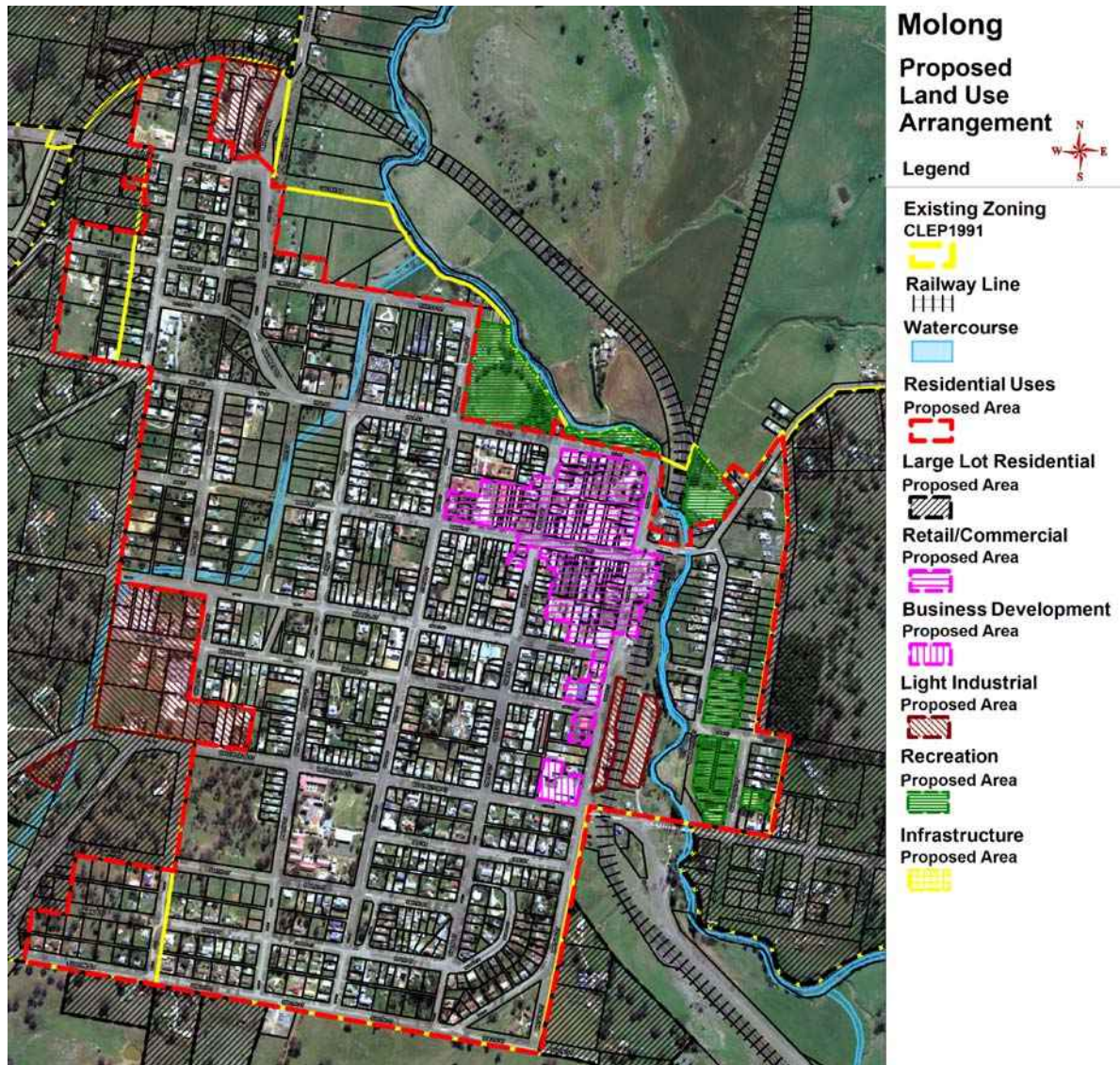


Figure 2: Summary of proposed land use arrangements for the central area of the Town of Molong (Source: Council GIS 2012).

This Strategy recommends replacing the existing Village Zone in the Town of Molong with the following areas:

a) Business Areas

This Strategy recommends the introduction of a new business area that is predominantly located along Bank Street and Watson Street and incorporates the majority of existing businesses. The aim is to create an area where business uses (retail/commercial) are supported and have the capacity to develop and expand whilst minimising impacts on residential properties.

b) Light Industrial Areas

This Strategy recommends the introduction of light industrial area(s) to reinforce existing light industries including the North Molong Industrial Estate (Enterprise Place), Jamnev Holdings Estate (Starlea Road), the GrainCorp sites (Watson Street / Railway Line) and the collection of sites between the Davimac site (Wellington Street) and the Council Depot (Molong Street). Further consideration is required for a light industrial area including the original Tri Steel site and extending around to Molong Street.

c) Urban Residential Area

Proposed Urban Residential Area:

It is proposed that the remainder of the original Village Zone that is not in the proposed business or industrial areas are designated for a range of urban residential types and densities as well as some supporting uses such as neighbourhood shops and home businesses/industries etc. However, these areas would not permit larger scale business (retail/commercial) or industrial uses other than those with 'existing use rights'.

It is proposed to make some minor changes to the outer boundaries of the existing Village Zone as follows:

- Increasing the urban residential boundary in the areas around Thistle to Hill Streets and Smith to South Streets to allow for additional residential development on existing smaller lots that have the potential to connect to the existing reticulated water and sewer systems;
- Decreasing the urban residential boundary along Castle Street (west) and Castle Street / Thistle Street (east) to remove flood or karst affected land with very limited development potential.

Minimum Lot Size

The existing minimum lot size ('MLS') of 500m² for lots created by subdivision (Clause 17 CLEP1991) should be retained in the core residential areas where there is connection to centralised sewer. If there is no sewer connection then an MLS of 2,000m² may be required. When applying to build on a lot it is preferred that the lot size meets this minimum of 500m² but lots below this size may still be able to apply for a building subject to consent.

d) Large Lot Residential Area(s)

Proposed Large Lot Residential Area

This Strategy proposes to replace the existing Zone 1(c) (Rural Small Holdings) with large lot residential area(s) that, in effect, would support similar styles of large lot residential development.

There are some minor amendments to the existing large lot residential boundary as follows:

- West Molong: Reduction in areas where there is an expansion of the urban residential area (see above) and minor increases in other areas;
- North Molong: Reduction in area where lots have limited development potential due to 400m buffer zone to Molong Sewerage Treatment Plant (STP) and karst/limestone;
- East Molong: Removal of Crown land adjacent to Molong Creek but retention of remainder of existing rural small holdings in large lot residential area (subject to further review of potential for urban residential expansion);
- South & South-East Molong: New large lot residential area to the south (South Street) and south-east (between Watson Street (south) and the railway line). These areas have an existing large lot residential character and the intent is to reflect this in the zoning. However, no additional subdivision should be promoted due to constraints on this land (subject to further review of potential for urban residential expansion).

West Molong Large Lot Residential Area ('West Molong LLR')

As stated in this chapter, there is a 2009 moratorium / resolution of Council to restrict any further subdivision of land in West Molong LLR due to a number of factors including proximity to the Molong Limestone Quarry and future mineral potential / expansion, the cumulative impacts of additional septic systems and new bores in the limestone / karst, and the need to avoid higher densities along the rail corridor. In accordance with the Council resolution of April 2009, the new LEP provides an opportunity to review this Council policy.

Council proposes to maintain a policy of preventing further subdivision west of McGroder Street but allowing applications for dwellings on existing vacant lots (subject to consent). This will allow a suitable buffer (at least 500 metres) to the quarry operations (including blasting) whilst

minimising new development over the karst areas. Therefore, the MLS for subdivision in this area should be at least 5 hectares to preclude further subdivision. Council will conduct a further review to identify if the quarry buffer can be reduced to permit some limited dwelling development along the western frontage of McGroder Street.

To the east of McGroder Street further subdivision will be prevented by a minimum MLS of 5 hectares unless the new lots can be connected to reticulated sewer and water when a reduced MLS of 4,000m² would apply. This would allow further subdivision where it addresses many of the issues associated with intensification of development on the karst areas by avoiding use of on-site effluent management systems and the need for additional bores. However, the investigation and extension of the sewer and water networks is subject to funding and contributions and Council is conducting further works on this issue. As noted above, applications will continue to be accepted for dwellings on existing vacant lots (subject to consent).

North Molong Large Lot Residential Area ('North Molong LLR')

As stated in this chapter, there are several key constraints on the North Molong LLR area including limestone and rocky outcrops, the need for a 400m buffer zone from the Molong Sewage Treatment Plant ('STP'), difficulties supporting septic systems in the limestone soils, and the need to avoid higher densities along the rail corridor. This area is also unserved and may require bores for non-potable water supply.

It is proposed that the existing MLS of 4,000m² is adopted for North Molong LLR. However, there may be large areas affected by karst or steep topography where it will not be possible to achieve an MLS this low and consent for subdivision will be subject to applicants satisfying Council that the subdivision/development will be appropriate and address environmental and residential amenity issues.

East Molong Large Lot Residential Area ('East Molong LLR')

As stated above, there are several key constraints on the East Molong LLR area including significant vegetation and bushfire risks, some flooding potential, some steeper slopes and their scenic/landscape potential, the potential need to provide bores for non-potable water supply, and the need for on-site effluent management areas (which should not conflict with bores).

It is proposed that the existing MLS of 4,000m² is adopted for East Molong LLR at this time. However, it is likely that a higher MLS will be required in the future on areas in proximity to Molong Creek that have flood potential and are part of the riparian corridor. In addition, where there is significant native vegetation there may need to be larger lot sizes to preserve the landscape/scenic amenity of these areas (up to 1-2 hectares).

Please note that Council may investigate a future urban residential extension (with reduced MLS) on the land adjacent to the existing Village Zone subject to detailed studies showing that smaller lots can be supported (down to 2,000m²) and the land can be serviced with reticulated water and sewer.

South Molong Large Lot Residential Area ('South Molong LLR')

The new proposed large lot residential area to the south of the Village Zone of Molong aims to provide a zoning that reflects the existing large lot residential character of this area (existing dwellings). However, due to constraints on this land it is not recommended that there is additional subdivision of this land. As the largest lots are 2.5-3 hectares in size, a proposed MLS of 2 hectares will limit subdivision potential but provide a suitable zone for these existing residential uses. In the future these areas may form part of an urban residential expansion for Molong and the zoning/MLS will be reviewed.

e) Recreation

This Strategy recommends the designation of key recreation areas for the Dr Ross Memorial Oval, Molong Swimming Pool, Molong Bowling Club, Molong Showground & Golf Course, Hunter Caldwell Sportsground, hockey grounds, and horse sports area on Banjo Paterson Way.

f) Infrastructure/Other

Council may also seek to designate special infrastructure areas such as the Sewage Treatment Plant ('STP'), the cemetery, and the Orange City Council waste recycling centre.

3.1.6. Dwelling Supply & Projected Demand

As dwellings are the greatest 'consumer' of urban land, this Strategy has estimated the projected demand for future dwellings and compared this to existing supply of vacant land.

Existing Vacant Land for Infill Development

Vacant land likely to be utilised for infill development is summarised as follows (Table 2). This Strategy has estimated that approximately 328 existing and future vacant lots could potentially be created and developed over the coming 30 years (assuming compliance with development controls). Please note that this is a summary of the findings in [Section 3.16 - Vacant Land](#):

Area	60% of Historically Subdivided Lots	100% of Recently Subdivided Lots	50% of Potential Future Subdivisions	Likely Lots / Detached Dwellings by 2036
Village Zone	35	9	10	54
East Molong	16	98	75	189
North Molong	9	--	40	49
West Molong	6	--	30	36
Total	66	107	155	328

Table 2: Estimated total number of lots available for development by 2036 in Molong.

Estimated Demand for Residential Dwellings in Village Zone

Table 3 summarises the findings in this chapter to suggest that approximately 216 additional (new) dwellings (on smaller urban lots) will be required by 2036 (30 years) compared to the 2006 figure in Molong's Village Zone.

Projected No. of Dwellings Required by 2036 based on following calculation method	Increased No. of Dwellings 2006 to 2036
Projected Population Growth (Max. 1%/year)	260
Projected Development Applications	161
Projected Historical Dwelling Growth (Max. 1%/year)	226
<u>Average 260 + 161 + 226 = 647 / 3</u>	216 Additional Dwellings (Urban residential only)

Table 3: Projected additional dwellings needed by 2036 based on a variety of projection methods.

Estimated Demand for Large Lot Residential Dwellings

It is harder to estimate the true demand for large lot residential dwellings in and around Molong due to the lack of historical and ABS data from which to project demand. However, this Strategy assumes that there is demand for approximately 4-5 dwellings per year. This would result in demand for an additional 150 dwellings over 30 years.

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Existing Supply & Demand

A comparison of supply and demand can be summarised as follows (Table 4):

Supply/Demand to 2036	Estimated Supply	Projected Demand	% Supply / Demand	Years
Village Zone	54 Lots/Dwellings	216 Dwellings	25%	~7.5 years
Large Lot Residential	274 Lots/Dwellings	150 Dwellings	183%	~55 years

Table 4: Summary of supply and demand for dwellings in Molong to 2036.

Therefore, there is a distinct under-supply of smaller urban residential lots in close proximity to the town centre and an over-supply of large lot ('rural') residential blocks. This Strategy recommends that there is some immediate expansion of the Village Zone to address this issue combined with investigation for a future expansion of the urban residential area to the south of Molong to meet this demand. There may also be potential to consider converting some large lot residential land to an urban residential zone where it is adjacent to the existing urban zone.

Proposed Supply / Demand (Short Term)

Based on the proposed Strategy recommended changes the following additional dwelling supply is estimated and may provide sufficient short to medium term supply to allow for future investigation areas to be reviewed and considered for rezoning. This is expected to provide an additional 3-4 years supply in the urban residential areas (existing Village Zone) in addition to the existing supply noted above.

Location	Possible Dwellings	Likelihood	Likely Dwellings
South-West Molong (South Street to Park Street)	7-8	60%	4-5
North-West Molong (Thistle Street to Hill Street)	12-15	60%	7-9
TOTAL	19-23	--	11-14

Table 5: Summary of short term additional supply of dwelling potential from Strategy recommendations.

3.1.7. Future Investigation Areas

This Strategy recommends future investigation of a range of alternatives to provide a medium to long term supply of residential land (at least 140-150 dwellings) for the Town of Molong to meet demand to 2036 including:

- **Medium Density Housing:** The adoption of medium density dwelling types (than single detached dwellings on large lots) within recommended blocks in the Village Zone close to services and transport to provide increased dwelling demand with lower land consumption (see [Section 3.20.7 – Medium Density Housing](#));
- **Rezoning of Additional Urban Residential Land:** The investigation of additional land for urban residential uses outside the existing Village Zone including areas to the South of Molong and East of Molong (with a preference for the South of Molong unless this land is not able to be released) (see [Section 3.20.8 – Future Investigation Areas \(South or East Molong\)](#));
- **Infill Development of Crown Land / Large Lots (South-West):** The investigation of additional land for urban residential uses on one large Crown lot within the Village Zone and one large private lot adjacent to the Village Zone (subject to a number of constraints) (see [Section 3.20.9 – Future Investigation Areas \(Crown Land / Large Lot\)](#)).

The Strategy also recommends additional studies into new industrial lands that could form part of a larger light industrial estate outside the urban boundaries of Molong subject to a review whether the proposed light industrial areas in this Strategy will meet future demand.

3.2. Regional Location

The Town of Molong is located on the Mitchell Highway between Orange and Wellington (Figure 3) and is one of the primary centres in Cabonne.

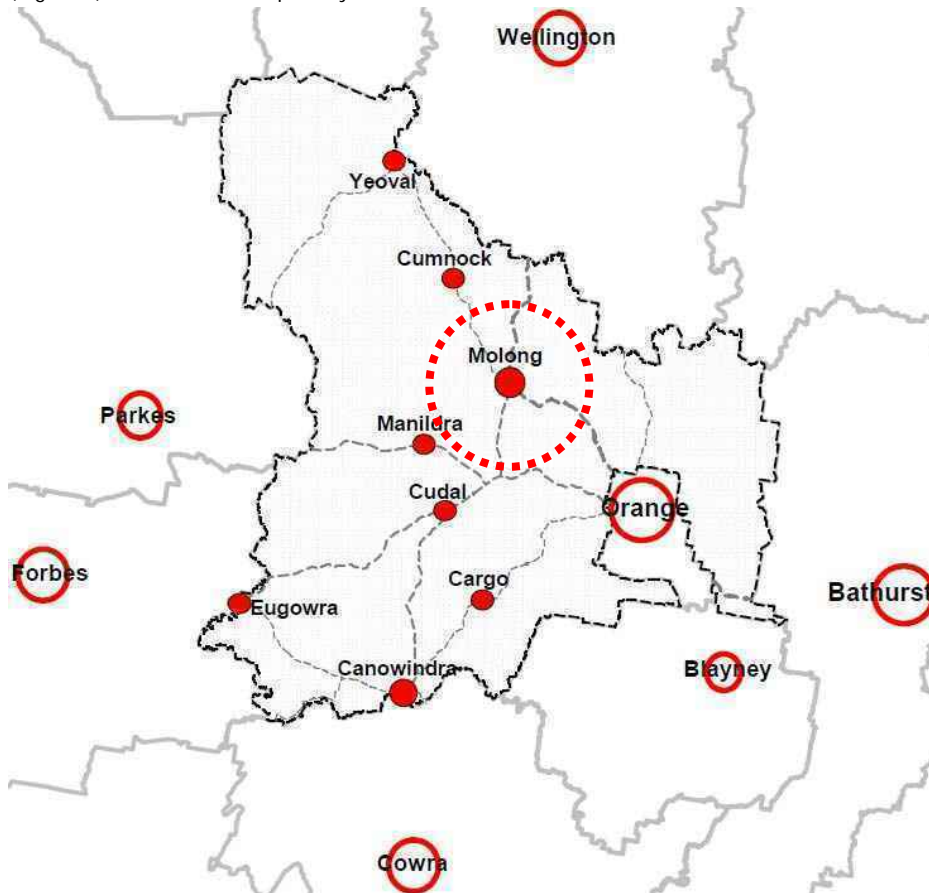
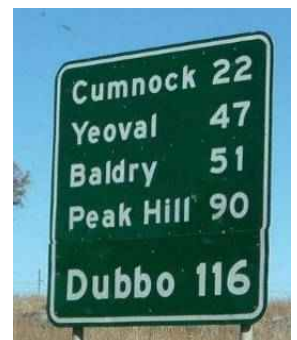


Figure 3: Location of the Town of Molong and proximity to key regional centres and settlements (Source: Council GIS 2010).

Molong is located approximately:

- 22km (25-30 minutes drive) from Cumnock via the Banjo Paterson Way;
- 22km (25-30 minutes drive) from Manildra via the Packham Drive;
- 29km (30-35 minutes drive) from Cudal via Peabody Road and The Escort Way;
- 33km (30-35 minutes drive) from the City of Orange via the Mitchell Highway;
- 65km (45-50 minutes drive) from Wellington via the Mitchell Highway;
- 64km (55-60 minutes drive) from Canowindra via Cudal;
- 77km (1 hour 20 minutes drive) from the Town of Parkes via Manildra;
- 116km (1 hour 30 minutes drive) from the City of Dubbo via Wellington or via Yeoval.

It can be seen that Molong is just on the edge of the 'commuter zone' (25-30 minutes drive) of the City of Orange, and therefore, Orange is likely to be nearest major centre that can provide a higher level of services and retail to meet the needs of Molong.



Issues & Strategies

- **Proximity to Cabonne Settlements:** Molong is within 30 minutes drive of Cumnock, Cudal and Manildra and less than 1 hours drive to Yeoval, Canowindra and Eugowra. In this way Molong is relatively central to most of the key settlements in Cabonne and acts as a centre for local government and some key services for Cabonne's settlements.
- **Proximity to Major Centres:** Molong's location on the Mitchell Highway between Orange and Dubbo provides access to a key transport route and a range of other major centres. The proximity of Molong to Orange can be a positive in terms of access to

transport, services and retail in the higher level centre. However, it can also be a negative in that it can have *"the effect of encouraging 'escape' expenditure, investment and development away from smaller settlements such as Molong"* (Terra Consulting, 2000).

3.3. Existing Zoning

Figure 4 shows the existing zoning pattern in and around Molong under CLEP1991 including:

- **Zone 2(v) (Village Zone)** - The core urban area of Molong (Total area ~230ha);
- **Zone 1(c) (Rural Small Holdings)** - The surrounding large lot residential areas (Total area ~ 547ha) including:
 - North Molong ~145ha;
 - West Molong ~147ha; and
 - East Molong ~255ha.
- **Zone 1(a) (General Rural)** for all surrounding areas.

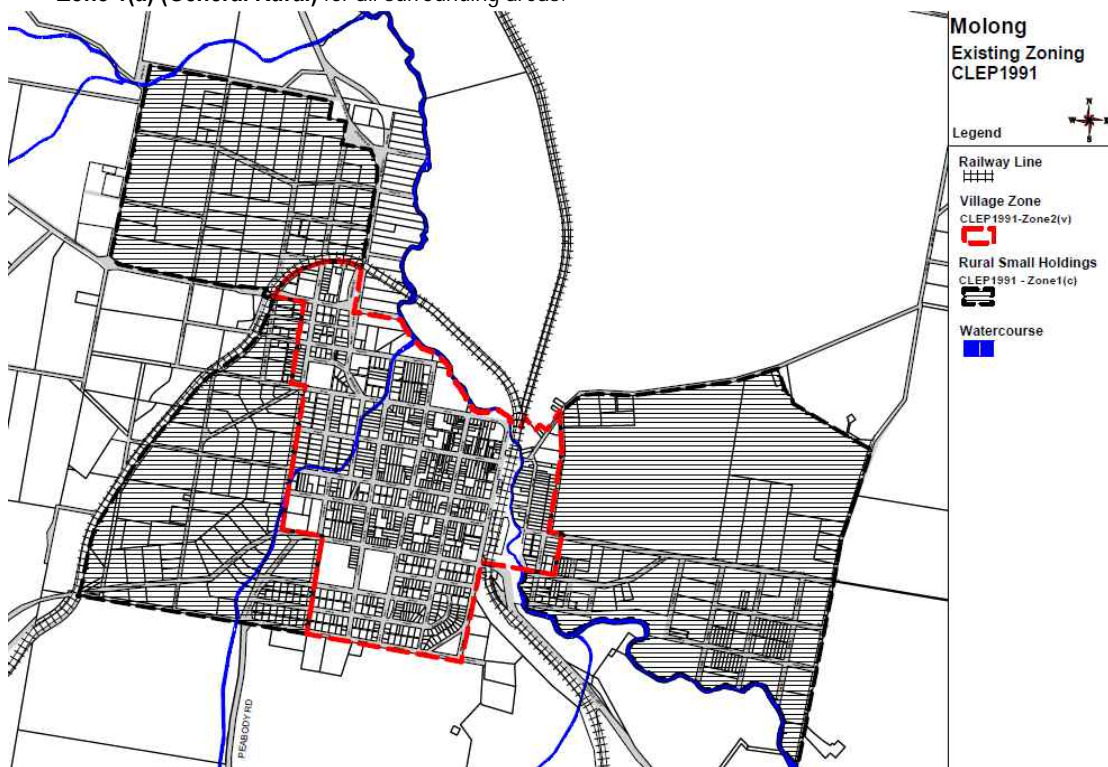


Figure 4: Existing zoning for Molong and surrounds (Source: CLEP1991 / Council GIS 2011).

The 'urban' boundary of Molong has expanded and contracted over time as the population has varied. Whilst it is difficult to pin-point dates when boundaries have changed, it would appear that from the early 1900s the 'town' boundary of Molong was in a similar location to now but included land as far as Stuart Street in east Molong and up to Jason Street in north Molong with Parker Street/King Street being the western boundary.

Subsequently in the late 1900s the lands that were flood prone or too rocky to the east, west and north of Molong were placed into the large lot residential zones with the western boundary retracted to King and George Streets and the northern boundary retracted to Castle Street. CLEP1991 substantially expanded the Zone 1(c) Rural Small Holdings areas.

After CLEP1991 commenced, Amendment No.5 (1994) re-expanded the Village Zone from Castle Street to the Broken Hill Railway Line (west of Market Street) to create the North Molong Industrial Area.

Issues & Strategies

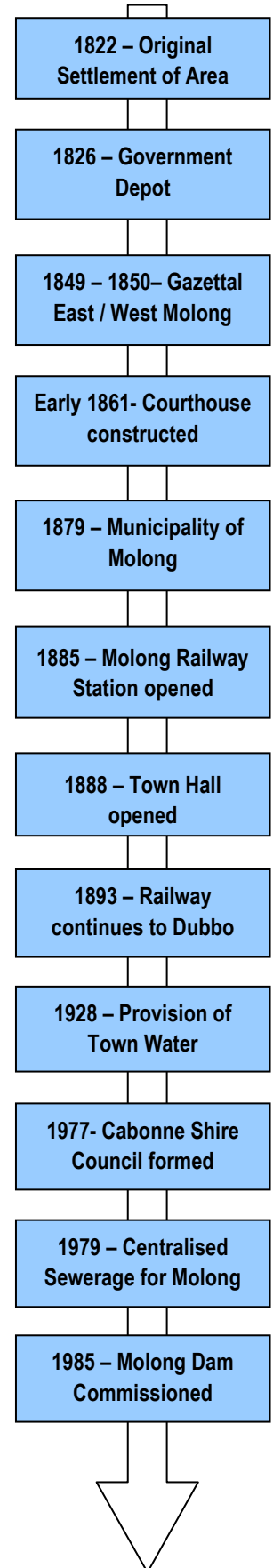
Review of Zoning Boundaries: It is the role of this Strategy to define appropriate areas for each land use within the urban areas of each settlement to ensure sufficient supply of land for the next 5-10 years. This will then inform the preparation of new zoning boundaries under the proposed new Cabonne Local Environment Plan. Molong's Village Zone is relatively compact and the majority is subdivided into smaller lots. Molong has historically had a fairly large area of Rural Small Holdings, not all of which is developed to its full potential. Any expansion of the urban area of a settlement into the surrounding rural lands needs to be justified as it may take up important agricultural land that is important to the Cabonne economy.

3.4. Settlement History

History is important because it explains why a settlement is located in its present location and how the settlement has changed over time. The name Molong is from an aboriginal word meaning "place of many rocks". The town boasts an early Austen-European main street, which is classified by the National Trust and is a heritage conservation area under CLEP1991.

Some key dates influencing the formation of the town are as follows:

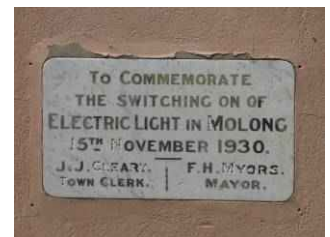
- **1822** - The original settlement was located about 1.5km east and little is known of this earlier site which accommodated the embryonic township for more than 20 years. It began as a Government Stock Station in 1822 which served as a stopping point for stock travelling to the convict station established at Wellington in 1823. Molong Creek was the limit of permissible settlement set by the government.
- **1826** - Government Depot on Bathurst – Wellington Road. This depot was established to provide support of the larger government settlements at Wellington.
- **1832** - First land grant to William Lee.
- **1840s** - Beginning of settlement in Molong.
- **1845** - Copper was discovered at Copper Hill. Post Office established.
- **1846** - Courts of Petty Sessions and Local Court commenced in Molong.
- **1849-1850** - Townsite to the west of Molong Creek was gazetted for settlement as government attempted to move town from private land.
- **1850** - Yuranigh, an Aboriginal tracker who accompanied Major Thomas Mitchell on his exploration of inland Australia, dies. Yuranigh was buried south of the present town. Aboriginal scarred trees mark the grave site.
- **1851** - Discovery of Gold at Ophir.
- **1856** - First land sales of newly gazetted village at Molong.
- **1857** - Methodist Church constructed on Bank Street.
- **1861** - Courthouse constructed. Bowler's Cottage (now Yarn Market) constructed.
- **1864** - Molong's first show behind the Freemasons' Hotel.
- **1866** - Cobb & Co was operating a coach route to Orange 3 times a week.
- **1870** - Coach House built and used for stables for the New Royal Hotel.
- **1871** - First Government Savings Bank agency established.
- **1879** - Incorporation of the Municipality of Molong – a status that allowed the town to raise taxes and undertake civic improvements (Municipalities Act of 1858). Molong was the only Cabonne community to become a municipality at the time.
- **1880** - Post Office opened.



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- **1881** - Decision to build railway boosts the town's development: banks being established, shops being built.
- **1884** - CBC Bank opened.
- **1885** – 20 March – East and West Molong proclaimed towns.
- **1885** - Opening of Rail Line / Station (21/12/85).
- **1886** - Arrival of first train. Molong became the terminus of the main western line from Sydney from 1886-1893.
- **1888** - Town Hall opened.
- **1893** - Railway continues to Dubbo, Molong loses economic advantage of rail terminus. Combined with Depression in the late 1890s, growth slows.
- **1893** - Gas works commenced operation for production of gas to Molong in Hill Street. Gas lighting was used for street lighting until electricity came into operation in 1930.
- **1906** - Legislation brought the remaining areas of present day Cabonne under Shire Council Administration.
- **1907** - Three Shires created in Cabonne area – Amaroo, Boree and Canobolas – Excluding the Municipality of Molong.
- **1928** - Provision of Town Water with finalisation of Borenore Dam. 42 buildings connected.
- **1930** - Switching on of Electric Light in Molong. 1930s Depression. There was little new building development after 1930.
- **1938** - Fairbridge Farm School, Molong established.
- **1951** - Molong Municipality and Amaroo Shire were amalgamated to form Molong Shire with headquarters in Molong.
- **1970s** - Housing scheme created with potential to borrow from Council.
- **1977** - Cabonne Shire was formed from amalgamation of Boree, Molong and portions of Canobolas Shires (the rest went to Orange City).
- **1979** – Centralised sewage system provided to Molong.
- **1980/90s** - Realignment of Mitchell Highway away from Bank Street.
- **1985** – Commissioning of Molong Dam to provide a secure water supply for town.
- **2010** - The opening of the Waluwin Community Centre. New Railway overpass entrance to Molong South over railway line.



The peak period for Molong was in the late 1800s and early 1900s, however, there has been reasonably steady growth since the early 1900s due to a variety of economic and infrastructure investments. The settlement was supported initially by the railway and providing support to western region of NSW but its strength reduced once the railway extended out to Dubbo. Molong now acts more as a local service centre to Cabonne and surrounding rural areas.

Issues & Strategies

Understanding the History: The history of Molong and its surrounds is an important factor in understanding the location of the settlement, how it grew, key opportunities and constraints to its growth, and as a fundamental building block for business, industry, tourism and community spirit. There are a number of comprehensive historic reviews of Molong and access to these should be enhanced to allow Molong to continue to appreciate and build on its history and protect and enhance the key heritage items and character. See [Section 3.13 – Heritage](#) for the proposed strategies for heritage items.

3.5. Settlement Pattern

3.5.1. Historical Subdivision Pattern

A great deal of the existing subdivision pattern dates back to the early 1900s with only minor extensions of the village boundary in the last 100 years, some limited subdivision, and the creation of the Rural Small Holdings Zones in East Molong and North Molong.

The vast majority of the historic subdivision patterns in settlements in Cabonne were based on a grid pattern with perpendicular streets and regular block sizes. In Molong, the blocks are generally oriented with the majority of streets running roughly north/south and east/west (with the grid pattern oriented slightly to the east of north).

At the time of the original subdivision of the town a rear lane was incorporated through the middle of most blocks in the Village Zone to allow the collection of sewage from the toilets at the backs of the lots. Some of these rear lanes still exist today and provide an alternative access to lots, but they are not all fully formed or sealed.

Issues & Strategies

- **Subdivision Pattern:** Future road and subdivision patterns should integrate with the historical grid pattern (where possible) and seek to improve connectivity whilst responding to the topography.
- **Rear Lanes:** Council and the LPMA need to conduct an assessment of all of the public mid-block rear lanes and determine whether anything will be done to protect their public nature and whether they will be preserved or released for sale to the adjacent land owners.

3.5.2. Street Dimensions

Most of the streets in Molong are approximately 30 metres in width. This allows for a road with a lane in each direction and substantial on-road parking areas and kerb/pedestrian areas. A 30 metre road width also allows the potential for incorporation of street trees in the road corridor with minimal impact on parking / pedestrian areas.

3.5.3. Block Sizes

Figure 5 shows some of the indicative block areas, lengths and widths in Molong. In general, the blocks are square or rectangle in shape with dimensions ranging from approximately 100 metres to 200 metres. Rear lanes are often incorporated and range from 6 to 10 metres in width. Therefore, the area of the blocks generally ranges from 2 to 4 hectares in area.

Issues & Strategies

Connections: Where there is a grid road/subdivision layout there is generally good permeability and ease-of-navigation with relatively short walking distances. However, the standard 200m blocks may result in slightly longer walking distances to traverse the town.

3.5.4. Lot Sizes

The historical plans shows that the original lots in Molong used to be fairly regular in size and dimension (approximately 40m by 50m, area = ~2,000m²). However, over time there have been subdivisions and amalgamations which have increased the irregularity of lots with a range of lot sizes from as little as 300m² to 2,000m², with the majority averaging 1,000m²/lot.

For lots of size greater than 1,000m² the lot depth and width is generally sufficient to allow the placement of a dwelling with good side setbacks and a good rear yard. For lots less than 800m² there may be need for clear controls to guide setbacks and ensure good house and building design on these narrower lots. This will be guided by current state government initiatives to allow complying development within residential zones on smaller lots.

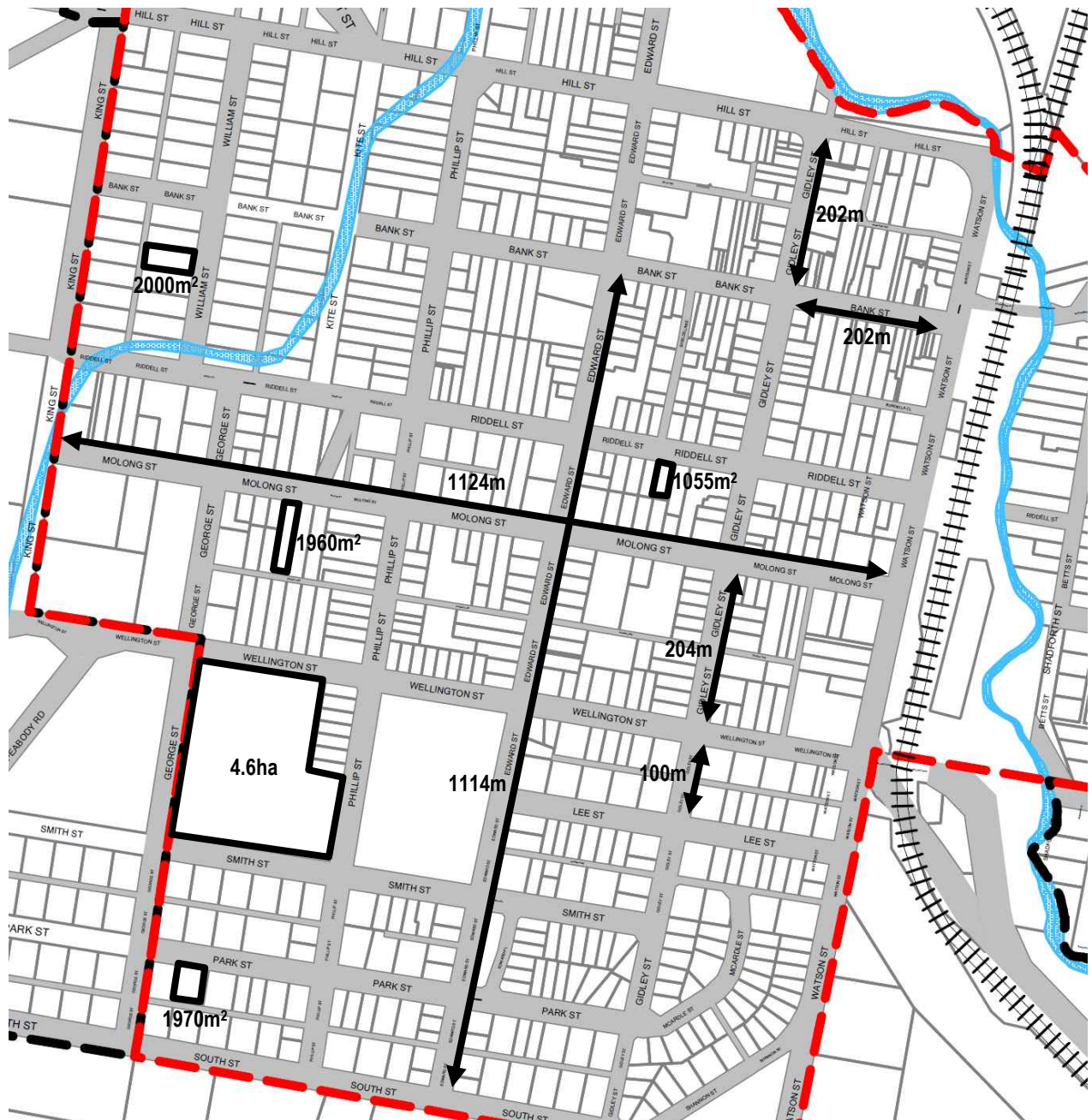


Figure 5: Areas, lengths & widths for some of the standard blocks and lots in Molong.

Issues & Strategies

Smaller Lots: For lots less than 800m² there may be need for clear controls to guide setbacks and ensure good house and building design on these narrower lots. As Molong is sewered and has centralised water supply then there is potential for an increase in smaller lot sizes (down to the current minimum of 500m²) where this can be shown to protect the desired streetscape and heritage character. Larger lot sizes will be needed for multiple dwellings on a single lot, but there should also be investigation of smaller lot sizes for medium density housing development.

3.6. Historic Population

3.6.1. Census Area

The Australian Bureau of Statistics (ABS) Census Collection District ('CD') is the area that ABS uses to calculate the population and demographics for an area. Figure 6 shows that there are several CDs (yellow lines) that cover the urban area of Molong (red + black lines). The urban CDs enclose all of the existing Village Zone and most of West Molong Rural Small Holdings.

However, the Rural Small Holdings to the north and east are incorporated into broader CDs for Cabonne which are not included in the census data / population count for the Town of Molong. Therefore, the ABS results for Molong can be utilised as a reasonably accurate measure of the population in the Village Zone but would need to be adjusted upwards to include all of the Rural Small Holdings zones.

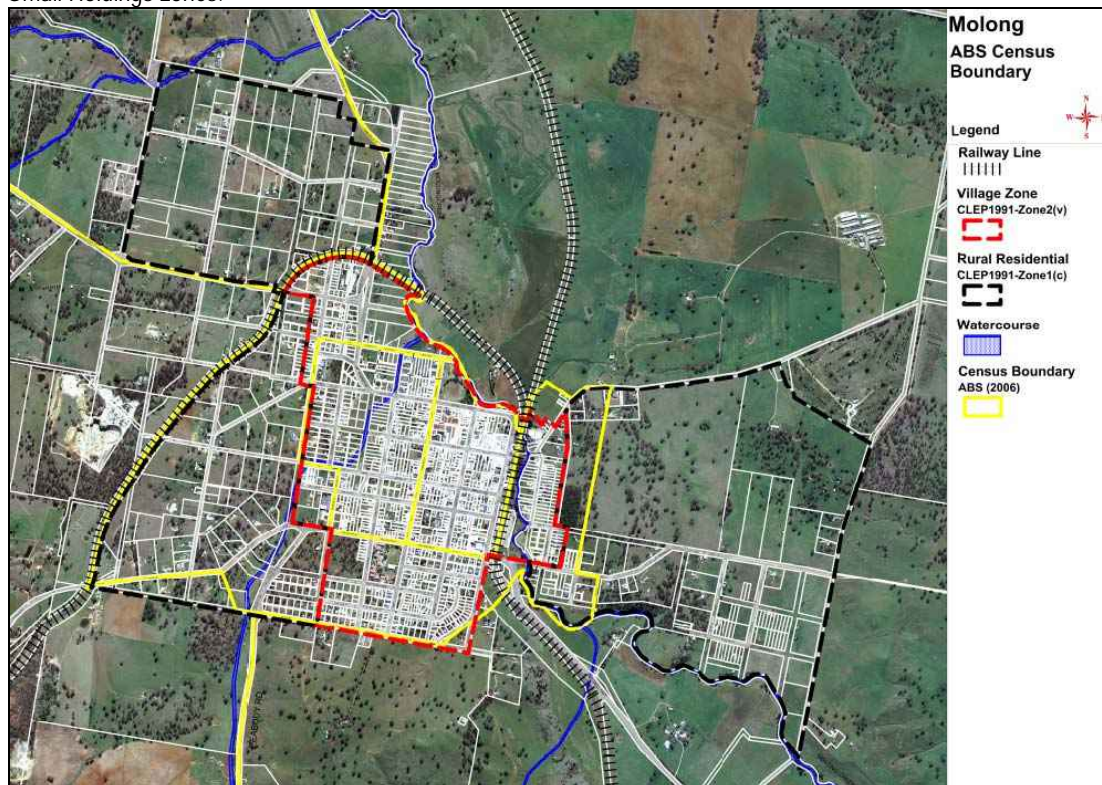


Figure 6: Alignment of the ABS Census Collection Districts in relation to Molong's urban zones (Source: Council GIS 2009 & www.abs.gov.au).

Issues & Strategies

Measuring the Catchment: The Molong Collection District ('CD') includes the majority of the Village Zone but does not include all of the Rural Small Holdings Zones around Molong. Therefore, it is not a totally accurate reflection of the residential population that resides in and around Molong. The population of the rural residential area has been estimated for the purposes of this Strategy below. However, this estimate does not take into account the surrounding rural catchment that utilises Molong as its primary service centre.

3.6.2. ABS Census Population of Molong

Table 6 shows that the historical ABS population for the Molong urban CDs (predominantly the Village Zone) has varied from around 1,400 to a high of 1,604 people over the last 30 years with an average annual change ranging from -1.73 to +2.16%. The average population growth in Molong's Village Zone from 1976-2006 (+0.14% per year) shows low but positive growth peaking in 1996 and reducing since then.

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Year	Population (Quickstats)	Change	% Change from Previous Census	Average Annual % Change
1976	1,504	N/A	N/A	N/A
1981	1,374	-130	-8.64%	-1.73%
1986	1,400	+26	+1.89%	+0.38%
1991	1,551	+151	+10.79%	+2.16%
1996	1,604	+53	+3.42%	+0.68%
2001	1,560	-44	-2.74%	-0.55%
2006	1,569	+9	+0.58%	+0.11%
1976-2006		+65	+4.32%	+0.14%
1986-2006		+169	+12.07%	+0.60%
1996-2006		-35	-2.18%	-0.22%
2001-2006		+9	+0.58%	+0.12%

Table 6: ABS population and population change for Molong's urban census districts from 1976-2006
(Source: www.abs.gov.au).

Issues & Strategies

Population Growth: The core Village Zone of Molong (and west rural residential area) has experienced population growth ranging from negative 1.73%/year to positive 2.16%/year since 1976. From 1976-2006 it had an average population growth rate of 0.14%/year. However, these counts do not include the rural residential areas in the north and east of Molong (see below). The population of Molong over the last 30 years has fluctuated slightly but has generally retained a population of 1,400 to 1,600 people since the early 1900s. This may suggest a steady but low growth rate for Molong in the future unless there is a significant change in key economic drivers (e.g. mining).

3.6.3. Estimated Population of Rural Residential Areas

North Molong Rural Residential Area

The Rural Small Holdings Zone in North Molong is within CD No.1140106 which extends as far as the edge of Cumnock. The CD had a population of 307 (2006) and 296 (2001) which is an increase of 11 persons over the 5 years or 0.74% per year growth. As at the end of 2009 there were approximately 20 dwellings in North Molong Zone 1(c) (compared to 141 dwellings in the CD). It is assumed that they are all occupied. The average household occupancy rate in 2006 for this CD was 2.5 persons per dwelling. Therefore, there are approximately 50 people in the North Molong rural residential area.

East Molong Rural Residential Area

The Rural Small Holdings Zone in East Molong is within CD No.1140109 which covers all of the lands to the east of Molong including the area known as Amaroo. The CD had a population of 566 (2006) and 554 (2001) which is an increase of 12 persons over the 5 years or 0.43% per year growth. As of the end of 2009 there were approximately 33 dwellings in the West Molong Zone 1(c) (compared to 242 dwellings in the CD). It is assumed that they are all occupied. The average household occupancy rate in 2006 for this CD was 2.8 persons per dwelling. Therefore, there are approximately 92 people in the East Molong rural residential area.

Issues & Strategies

Rural Residential Population Growth: It is difficult to obtain accurate population growth data for the rural residential areas. Instead, an estimate of the population as at 2009 can be found from existing dwelling and occupancy rates. In general, it is assumed that the population in the rural residential areas is increasing at a rate of 0.4% to 0.7%/year.

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3.6.4. Total Estimated Population of Molong in all Urban Zones (Zone 2(v) + Zone 1(c))

The total estimated population of Molong in all urban zones in 2006 (including the Village Zone and Rural Small Holdings Zones) is set out in Table 7:

Village Zone + West Molong (2006 Census)	North Molong (Estimate from Dwelling Nos - 2009)	East Molong (Estimate from Dwelling Nos - 2009)	Total
1,569	50	92	1,711

Table 7: Total estimated population of Molong in all urban zones in 2006-2009 (Average).

Issues & Strategies

Estimated 2006/2009 Population: The current estimated population for the urban areas of Molong (both Village Zone and adjacent rural residential areas) is 1,711 people. At this size, Molong is a significant centre for Cabonne and a small town for the region subject to regional changes in economic growth, opportunity and employment.

3.6.5. Historical Population

Council only has anecdotal records of the population of Molong prior to the ABS Census.

Some records suggest the following historical populations (Table 8):

Year	Population	Source
1891	>1,000	Rutherford, D.A. (1979) <i>One Hundred Years of Local Government in Molong</i> (page.12)
1904	~1,100	Rutherford, D.A. (1979) <i>One Hundred Years of Local Government in Molong</i> (page.14) Perumal Murphy Pty Ltd (1988) <i>Heritage Study of Bank Street, Molong</i> (page.11)
1912	1,672	Perumal Murphy Pty Ltd (1988) <i>Heritage Study of Bank Street, Molong</i> (page.11)
1927	1,500	Rutherford, D.A. (1979) <i>One Hundred Years of Local Government in Molong</i> (page.28)
1932	1,600	Unknown

Table 8: Historical population estimates for Molong (variety of sources noted above).

Issues & Strategies

Population Growth: This shows that the majority of Molong's population growth was prior to 1912 (closely correlating with the arrival of the railway and key economic investment in the town). Since the early 1900's the population has been relatively steady at around 1,600 to 1,800 people.

3.7. Summary of Opportunities & Constraints

It is important to try and summarise the potential for Molong to grow both in population and economic growth. Please note that more detail is provided on each of these issues in the subsequent sections of this Chapter.

3.7.1. Positive Factors

The key **POSITIVE** influences that may assist growth include:

- **Proximity to Regional Centres:** Location less than 30 minutes drive to the City of Orange where most significant growth and demand is occurring in the region. In this way Molong has the potential / acts as a 'commuter suburb' to Orange and also has access to the higher services and employment of Orange;
- **Transport (Road):** Location on the Mitchell Highway between Orange and Wellington/Dubbo provides excellent access to regional road networks and reasonable access to public transport services (bus) and freight transport with some demand generated by passing traffic;
- **Transport (Rail):** Location on the Western Rail Line provides the opportunity for some additional rail access (however, there are currently no passenger or freight interchange services in Molong);
- **Population:** The current population (estimated 1,711 people in 2009) makes it a core centre for Cabonne and large enough to support a range of local services and facilities;

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- **Employment:** Molong is the seat of local government in Cabonne and has the primary local government offices and Council Chambers. Local government is one of the largest employers in Cabonne and Molong;
- **Industry:** There is some provision of industry (including manufacturing and quarrying) in and around Molong which diversifies employment, and could stimulate economic growth;
- **Mining:** There is mineral potential at Copper Hill that is currently being investigated to determine mining feasibility. If this were to eventuate then there is strong potential for Molong to act as a residential and service centre for Copper Hill with significant economic flow-down effects;
- **Rural Character:** Attraction of the rural character, landscape and village lifestyle with proximity to Orange and other key villages / industries for employment;
- **Affordability:** Attraction of a reasonable supply of affordable land (primarily in the large lot residential areas) compared to larger centres like Orange;
- **Aged Care:** Provision of a range of aged care facilities and support services that can meet the needs of a growing aged population and allow this section of the population to 'age-in-place' and integrate with the community;
- **Water:** Access to a centralised water supply (Molong Dam) with provision of potable water throughout the Village Zone. Secure water studies suggest that this supply will need to be augmented in the next 20 to 30 years;
- **Sewer:** Provision of a centralised sewerage system which would support smaller lot sizes and some additional subdivision whilst maintaining environmental outcomes and residential amenity;
- **Education:** Access to both local primary and secondary schools which makes it attractive for families with children;
- **Health:** Provision of both a local hospital with limited emergency services and health-one facility with local doctors, dentists, pharmacists and nurses which is an attraction for the whole community, but particularly for retaining older citizens in the community;
- **Tourism:** Significant potential for increased tourism due to its location on the Mitchell Highway, the village's character and heritage, a range of accommodation opportunities, a range of cultural facilities, its community spirit, and a range of things to do and see;
- **Recreation:** Access to a good range of recreation facilities including both passive and active recreation areas and sporting facilities, particularly with school sports;
- **Rural Service Centre:** The higher level of rural services meets the needs of a larger catchment that extends throughout most of the northern part of Cabonne. This larger rural catchment supports Molong;
- **Community Spirit:** Good community associations that can foster community spirit and local solutions to community needs.

3.7.2. Negative Factors

The potential **NEGATIVE** influences on growth include:

- **Proximity to Regional Centres:** The proximity to Orange may have the negative effect of resulting in 'escape expenditure' outside of Molong that could limit Molong's growth in services, employment and industry and may result in lower investment in local business;
- **Flooding:** The eastern area of the town is significantly affected by the potential for flooding and drainage issues. This includes a significant part of the core business district and there is a major economic cost and risk associated with regular floods. It also limits additional development in these areas;
- **Limestone Outcrops:** Limestone and karst outcrops and the terrain are an additional constrain on the development of some land throughout Molong, particularly in the Rural Small Holdings areas. Karst areas are sensitive environmental areas and are poor at

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supporting septic system or high impact land uses. This can add to the cost of development, making it less feasible.

- **Topography:** The rolling terrain may make it more expensive to identify and develop suitable sites, particular for larger format industrial buildings;
- **Transport:** The lack of a passenger service or freight rail interchange limits the benefit of the rail system. The highway and the rail line can also have negative effects through heavy vehicle traffic, pedestrian safety, noise, vibration and dividing the town;
- **Employment:** There is a heavy reliance on a limited number of key employers including local government, schools, the hospital and the rural sector. This may not be robust enough to survive economic, social and political change which would have a significant impact on economic growth and the population;
- **Industry:** Whilst Molong is a key centre, there is a lack of a dedicated, separated, zoned industrial area to attract a range of light industries that could enhance employment and economic opportunities. Council has had difficulties locating land for this purpose and the terrain and natural hazards make this a difficult proposition;
- **Mining:** There is no certainty that Copper Hill mine (or any other mineral exploration areas in Cabonne) will proceed due to the difficulty achieving a viable yield. Even if a mine were to commence it may be 5-10 years before the full economic and population flow down effects were to eventuate. In addition, the presence of the limestone quarry to the west of Molong may require a 500m - 1km buffer for blasting, vibration and dust which limits development intensities in this area;
- **Retail & Entertainment:** Limited local retail services / entertainment and range of opportunities, particularly after-hours;
- **Water Supply:** The most recent scientific studies on the security of water yield from Molong Dam suggest that there are limitations to the ability of the current supply. Therefore, there is significant additional cost and difficulties associated with augmenting the current supply and this may impact on growth potential and water outcomes;
- **Utilities:** The cost of servicing new 'green-field' (undeveloped) sites is relatively high and augmentation of the existing sewer and water infrastructure may be prohibitive to substantial new development;
- **Protection of Amenity:** There may be some issues with identification of new employment and industrial lands as people value their residential and rural residential amenity and this may sterilise a large amount of land from future industrial development. Attempts by Council to get expressions of interest for new industrial sites have had limited feedback from the community;
- **Tourism:** Limited items of tourist interest compared to some other settlements in the region and limited tourist infrastructure or services to maintain more than short stays. There are also some issues with identifying a clear character and identity for Molong as part of any tourist trail.

Issues & Strategies

Population Growth: In conclusion, the positives for the Town of Molong tend to outweigh the negatives and suggest that Molong has the potential to exhibit low to medium population growth over the next 10 to 30 years within some limited demand for additional land and/or services. However, there are a number of challenges to growth and land supply that will need to be addressed to maintain these growth rates.

3.8. Projected Future Population

Warning: The estimated population in 2036 is only an estimate based on the factors considered in this chapter and it may be affected by future changes in growth potential.

For all of the above reasons, it is estimated that the projected average annual growth rate for Molong is likely to be in the range of 0.3% to 1.0% with an average annual growth of 0.7%. Table 9 shows how the existing and projected rates of growth for Molong fit with other growth rates in the area and the resulting population projections (based on an estimated 2006 population of 1,711 – including the Village Zone and the Rural Small Holdings Zones).

Range of Potential Average Annual Population Growth Rates	Av. Ann. Growth Rate	Projected Population						Δ in pop. 2006-2036
		2011	2016	2021	2026	2031	2036	
MINOR NEG. GROWTH Projected Cabonne Part C	-0.10%	1702	1694	1686	1677	1669	1660	-51
LOW GROWTH	+0.10%	1720	1728	1737	1746	1754	1763	52
LOW-MEDIUM GROWTH <u>Proj. Growth Rate Minimum</u>	+0.30%	1737	1763	1790	1817	1844	1872	+161 Minimum
MEDIUM GROWTH ABS 1986-1996 Cabonne	+0.50%	1754	1799	1844	1890	1938	1987	+276
MEDIUM-HIGH GROWTH <u>Proj. Growth Rate Average</u> ABS 1996-2001 Cabonne	+0.70%	1772	1835	1900	1967	2037	2109	+398 Average
HIGH GROWTH <u>Proj. Growth Rate Maximum</u>	+1.00%	1798	1890	1986	2088	2194	2306	+595 Maximum
VERY HIGH GROWTH	+1.50%	1843	1986	2139	2304	2483	2674	+963

Table 9: Projected population growth for Molong based on different growth scenarios.

Issues & Strategies

- **Regular Review:** The growth rate for Molong should be reviewed every census period (5 years) to see whether it accords with the estimated rates of growth and, if not, then growth projections and the supply of land may need to be modified to take into account the new estimated growth rate.
- **Negative Growth:** There is a low but real possibility that Molong may experience a slight negative growth over the next 30 years and this would have a substantial impact on the sustainability of the town. However, this has been discounted at this time due to the number of positive growth factors present.
- **Average Growth:** Assuming an average projected population growth rate for Molong at the medium-high rate of 0.7%/year to 2036 there will be an increase in population of an additional 398 people, resulting in a total population of 2,109 people.
- **Maximum Growth:** Assuming a maximum projected population growth for Molong in the high range of 1.0%/year there will be an increase in population by 2036 of an additional 595 people, resulting in a total population of 2,306 people.
- **Unsustainable Growth:** If Molong were to grow at a very high growth rate above 1.5%/year then this would place great pressures on housing, employment, services, utilities, transport and facilities and is likely to be unsustainable under existing conditions.
- **Supply & Demand:** The increase in population will result in an increase in demand for additional housing, employment, services, and facilities. The greatest demand (in area) will be for residential land.

3.9. Demographics

Warning: The demographic information in this chapter is only valid on the Census night in 2006 and due to the small census population it is subject to significant change over time.

The following provides a short summary of the demographics for Molong's Collection District in 2006 that are relevant to this Strategy and/or different from the demographics for Cabonne.

Please see [Section 2.6 – Demographics](#) for a comparison of all of the settlements and Cabonne.

- a) **Age:** 19.9% of Molong's population were over the age of 65 years of age and 31% of the population was over the age of 55 years of age. The median age of Molong was 40 years compared with 41 for Cabonne and 37 years for Australia.
- b) **Labour Force:** 4.2% of the labour force in Molong (27 people) were unemployed compared to 3.7% for Cabonne and 5.2% for Australia. 521 people over the age of 15 were not in the labour force.
- c) **Occupation:** 14.9% of employed people were labourers; 14.6% professionals; 14.4% technicians and trades workers; 13.1% clerical and administrative workers; 12.3% managers; 10.4% machinery operators and drivers; and 10.2% community and personal service workers.
- d) **Employers:** 6.3% were employed in local government & administration; 5.0% in sheep, beef cattle and grain farming; 4.2% in hospitals; 3.6% in manufacturing; and 3.6% in school education.
- e) **Income:** The median individual income (\$397), median household income (\$753), and median family income (\$953) were slightly less than the Australian averages (\$466, \$1,027, \$1,171 respectively).
- f) **Family Characteristics:** 40.2% were couple families with children (C=45.2%; A=45.3%); 41.4% are couple families without children (C=43.2%; A=37.2%); and 17.5% are one parent families (C=10.6%; A=15.8%).
- g) **Dwelling Characteristics:** There were 694 private dwellings (of which 603 were occupied) on the night of the census. 95.5% were separate houses and 4.5% semi-detached or terrace houses. The average household size was 2.5 people per dwelling compared to 2.6 in Cabonne and Australia. 92.5% of all dwellings were detached houses (compared to 95.8% in Cabonne and 74.8% in Australia).
- h) **Household Composition:** 69.5% were family households (C=73.4%; A=67.4%); 24.9% were lone person households (C=22.3%; A=22.9%); and 1.8% were group households (C=1.5%; A=3.7%).

Issues & Strategies

- **Age:** With such a high percentage of older citizens and a higher median age than Australia there will be significant increased pressure and demand for aged care and health services and a corresponding lack of younger / employment aged people to provide economic growth in Molong. Molong is fortunate to already have health infrastructure and services to support this group but it will need to be maintained and grow to support a growing aged population or there could be a significant loss of older people away from Molong over time which will impact on population growth rates.
- **Employment:** There is a reasonable mix of employment types in Molong but there is a heavy reliance on local government, the rural sector and health sector for local employment. If there were to be economic, social or political circumstances that resulted in the reduction or loss of any of these employers then it would have a significant impact on Molong.
- **Income:** Molong has a slightly lower median income than the Australian average which may affect slightly affect economic growth and the options available to the community.

- **Family Characteristics:** A reduction in families with children and increase in families without children may result in less support for the local schools. A slightly higher percentage of one parent families also require additional assistance and services.
- **Dwelling Characteristics:** The dominance of detached housing combined with an ageing population may indicate a need for greater housing choice in the future.
- **Household Composition:** The high percentage of lone person households (24.9%) may reflect the older age but also supports demand for smaller houses in the future.

3.10. Environment & Natural Hazards

3.10.1. Topography & Views

The urban area of Molong lies between approximately 520 metres and 580 metres above sea level (Figure 7). The high points are located to the west, south and east of the Village Zone falling down to Molong Creek and Boree Hollow. These hills provide an important landscape backdrop to the denser development in Molong and are an important part of the settlement's character. However, the changing topography does place some limitations on growth and land uses.

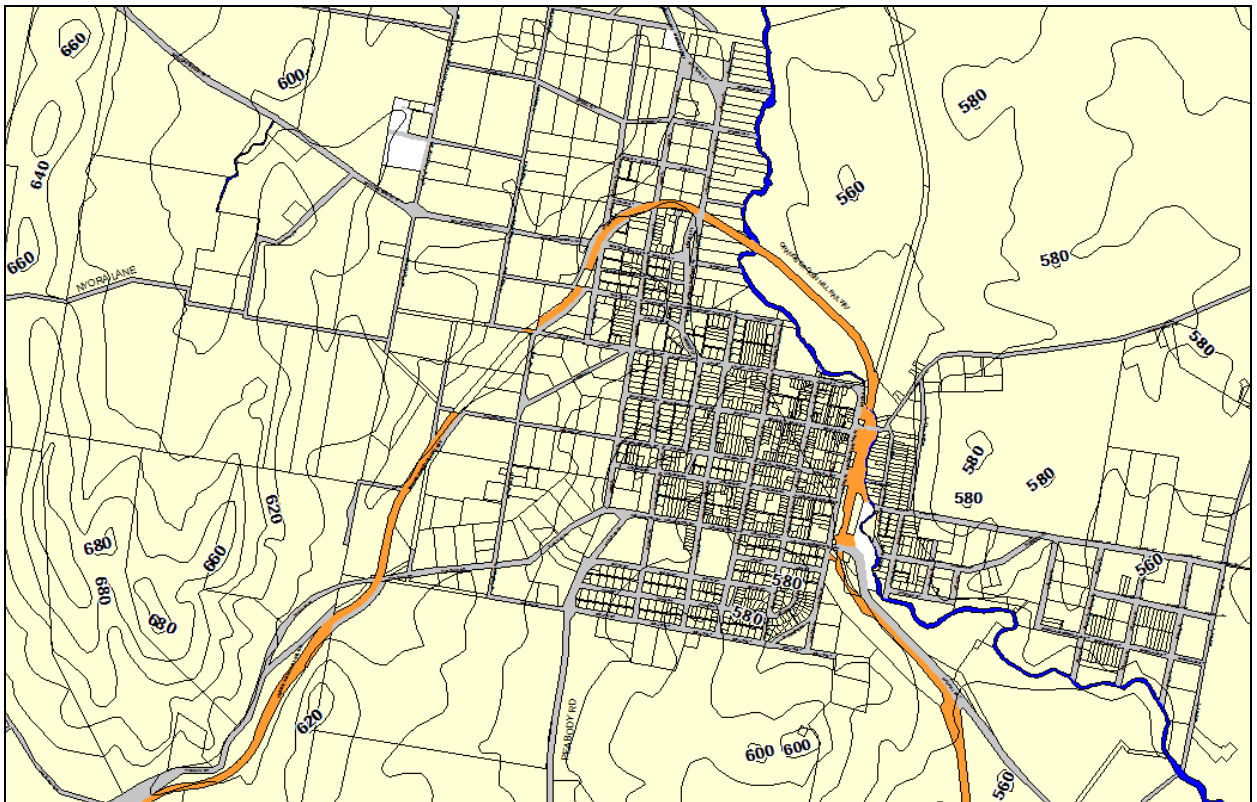


Figure 7: Topography of Molong showing contour lines and relative levels – 10 metre intervals (Source: LPMA contour data / Exponare 2010).

Issues & Strategies

- **Visual Importance:** The undulating topography and surrounding hills creates a strong visual landscape, backdrop to development, and character for Molong and are worthy of protection. This may affect appropriate locations for settlement growth, certain land uses, or the use of key development controls including 'scenic protection' areas. A particular area of concern is growth in East Molong and North Molong rural residential areas which are clearly visible from the highway and/or town centre.
- **Constraints to Development:** Molong is located in an area of undulating topography/hills that results in some steeper slopes and low-lying areas that would be

less suitable (or more costly to develop) for settlement growth or for certain land uses. Where possible, land uses should be located so as to minimise the need for cut and/or fill of land to create a suitable construction site to protect the environment and reduce development expense.

- **Industrial Land Uses:** *"The relatively undulating to hill topography of Molong and its hinterland represents a constraint to industrial development. The fundamental requirement for most industrial pursuits is for large areas of gentle slopes to allow the practice and economical establishment of large buildings, plant and infrastructure without the need for extensive earthworks and site stabilisation"* (Terra Consulting (2000) p.2). The identification of appropriate industrial land is significantly constrained by this issue.
- **Rural Small Holdings:** The topography is not such a constraint for rural residential development as it is considered to be a desirable element as it provides aesthetic appeal and opportunities for privacy and views (Terra Consulting (2000) p.2).
- **Inundation:** The strong gradients throughout Molong lead to faster overland flow of water during heavy rainfall events and can lead to flooding, inundation, and drainage issues particularly on lower lying lands (see below for more details).

3.10.2. Geology

Overview of Geology

A review of the geology in and around Molong can be found in Hydroilex – *Molong Limestone Quarry – Geological Review of Karst Systems at Molong in relation to the Proposed Upgrade* ('Hydroilex Report') (Appendix 2 to Cabonne Council (2008) *Molong Limestone Quarry Mining Operations Plan 2008-2015*) ('Quarry Report'). The Hydroilex Report states:

"The geology of the Molong township area is unique in respect of the extent of limestone outcrop, where limestones of three geological periods are recognised in a relatively complex zone of tectonic deformation. The town is perhaps the only town constructed on limestone within the state. Limestones of the Ordovician Reedy Creek Formation, the Silurian Molong Limestone, and the Devonian Garra Formation are defined along a northerly trending corridor within and adjacent to the town (page 1)."

Limestone Karst & Rocky Outcrops

Molong is located on a belt of limestone karst (purple in Figure 8) which has the positive benefit of allowing mining for limestone (e.g. Molong Limestone Quarry), but the challenge of rocky outcrops is that it can make sites more expensive to develop, there is potential for sensitive underground cave systems, and limitations on the ability of soils to support a functional on-site sewerage management system. It can be seen that this affects nearly all of the lands in the North and West Molong Rural Residential areas and some areas along Molong Creek and in the Village Zone. This is a significant constraint to growth to the west of Molong unless this issue is appropriately considered and addressed.

It is important to note that there are caves, sinkholes, and boreholes that intersect with cave zones throughout the rural residential and village areas. These may pose a constraint to development. For more detail see Hydroilex Report.

Limestone Quarry

A benefit of the limestone karst is that Cabonne Council owns and operates a limestone quarry to the west of Molong off Bloomfield Road/Banjo Paterson Way. Limestone is a major raw material used in cement, lime, coarse aggregate, glassmaking, ceramics and other applications. The Molong Limestone deposit is identified as a key deposit for future use. There are some indications that when other limestone quarries in the state reach the end of their life that the Molong quarry could be a significant state resource.

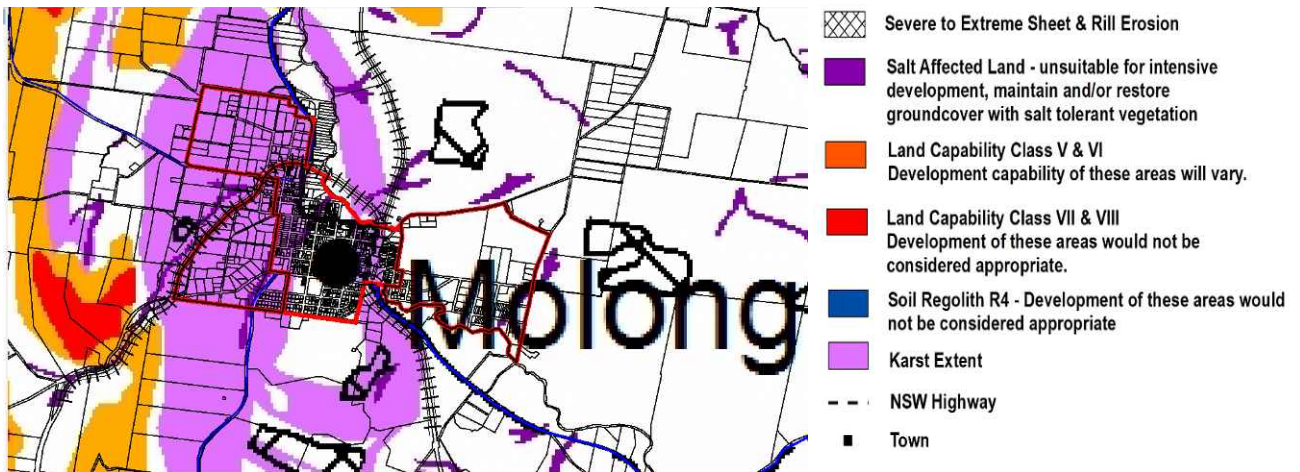


Figure 8: Excerpt from Environmentally Sensitive Area - Land Overlay showing land issues surrounding the Town of Molong (town boundary highlighted in red)(Source: DECCW 2008).

Currently it is quarried on a small scale for aggregate and agricultural lime. Therefore, there is significant potential for future expansion of the limestone quarry. The quarry is likely to expand towards the western face of the quarry away from the Town of Molong (see Quarry Report).

Quarrying involves potential impacts on existing development from blasting, dust, truck movements and vibration. Therefore, there is a need to minimise conflicts between quarrying and urban areas. The former Department of Primary Industries recommends that all urban development (including subdivision) and rural dwellings are setback a minimum of 500m (and up to 1000m where there is blasting) from extractive industries (Source: *Living and Working in Rural Area: A handbook for managing land use conflict on the NSW North Coast* (2007)).

There are obviously existing residences within the 1000m buffer zone and, as a result, the quarry has a management plan that seeks to minimise the impacts of noise and vibration on these residences when blasting. Impacts include vibration, noise (both operational and from blast overpressure), light pollution, dust and truck operations etc.

These recommendations formed the basis for a resolution of Cabonne Council (6 April 2009) resulting in a moratorium on further subdivision in Zone 1(c) Rural Small Holdings to the west of Molong (which is predominantly within the 1km distance from the Limestone Quarry). In addition, there are issues associated with supporting dwellings on smaller lots due to the limestone affecting the operation of on-site effluent management systems (particularly septic systems with absorption trenches).

This Strategy appreciates that there is a substantial area of land in the West Molong area that, but for the karst, would be highly suitable for redevelopment where it is outside a 500 metre buffer from the quarry (effectively east of McGroder Street). Due to development pressures addressed later in this chapter this Strategy recommends that land east of McGroder Street be able to be subdivided down to 4,000m² **only where** dwellings are connected to reticulated water and sewer as this will address the key issue of impact of development on the karst system. However development will still need geo-technical studies that address any issues of subsidence in building over the karst areas.

Within 500m of the quarry (west of McGroder Street) the moratorium should remain and a minimum lot size in excess of the largest existing lot size should be maintained. This will allow those existing land holders to build a dwelling on their existing vacant lots (subject to consent) whilst allowing continued operation of a significant state limestone resource that has economic benefits for the township and the region.

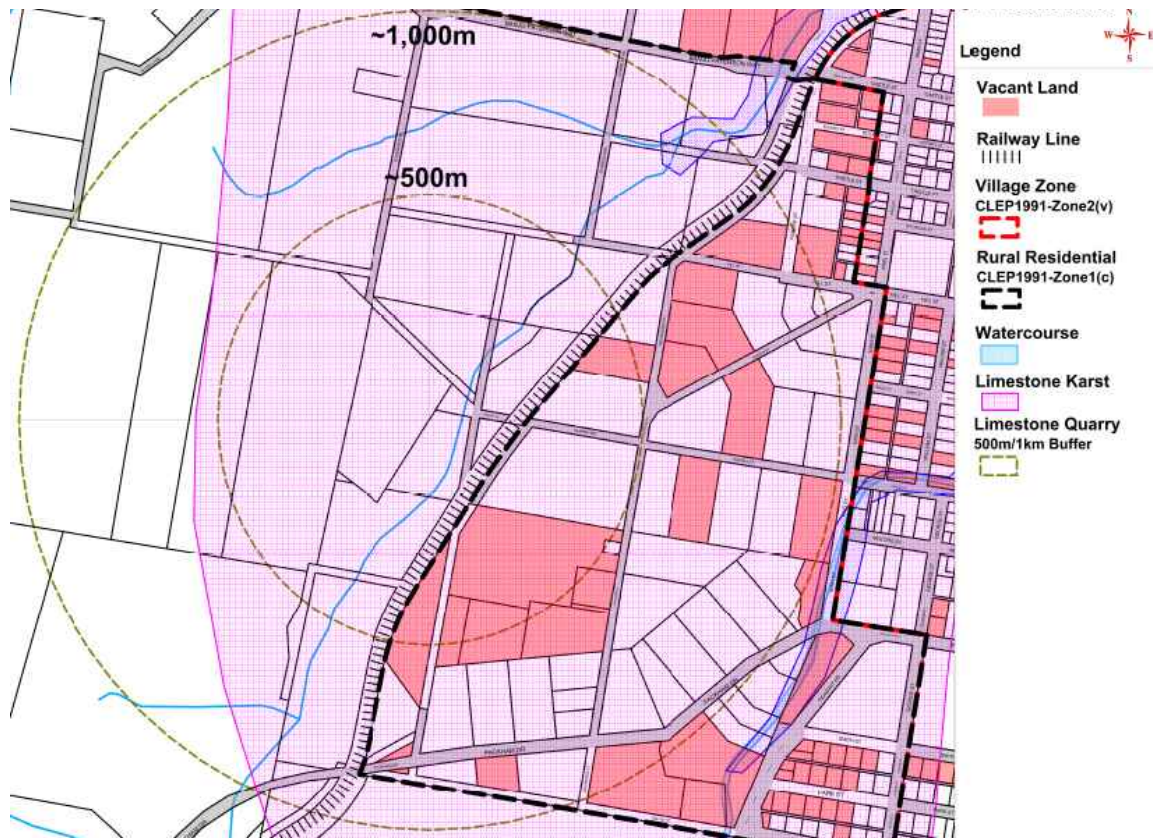


Figure 9: Map showing 500m/1000m buffers from the Limestone Quarry in West Molong and the karst overlay (Source: Council GIS 2010).

Mineral Potential

The Department of Primary Industries (as of 2011) has provided Council with a Mineral Resource Audit of Cabonne dated February 2010 (Figure 10). Please note that this is based on existing information and there may be additional mineral resources not identified on this map as there are exploration licences across a significant percentage of Cabonne.

The Mineral Resource Audit shows that the entire urban area of Molong is included in a 'potential resource' area which could be affected by future mining and/or extractive industry. The Molong-Reedy Creek Potential Resource Area to the south of Molong is a limestone deposit whereas the Fairbridge North Potential Resource Area (including Copper Hill) has copper and gold deposits.

Therefore any proposed zoning changes need to be referred to the former Department of Primary Industries (Minerals Division). In addition, there is the existing Molong Limestone Quarry to the west of the urban area, Bennetts-Betts Pit to the south-west (road base) and the known Copper Hill resource to the north of Molong. These known resource are likely to restrict expansion of Molong in these directions, particularly if there is expanded use of these resources.

Soils

As stated in the Appendix 2 (Hydroilex Report) to the Cabonne Council (2008) *Molong Limestone Quarry Mining Operations Plan 2008-2015* (page 5) – "The nature of the soils in the Molong area are problematic from a construction point of view, and are known to cause serious problems due to the existence of expanding clays. The cause of concrete floors cracking, and brickwork failure, is more likely to be associated with inherent problems of ground inhomogeneity, expanding clays and poor drainage, than the effects of shock waves from blasting at the quarry."

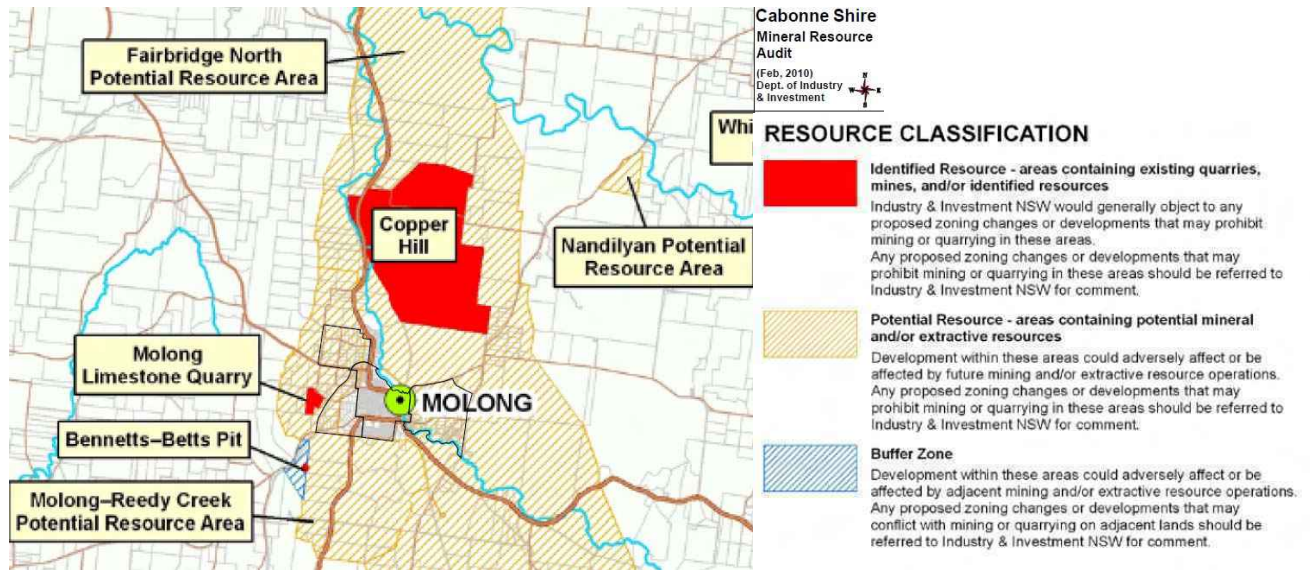


Figure 10: Excerpt of Mineral Resource Audit of Cabonne (Source: DPI, February 2010).

Issues & Strategies

- **Limestone Karst:** Limestone and rocky outcrops are "a key reason for the number of sites within the town and on its fringe that remain vacant." (Terra Consulting (2000) p.2). This may affect up to 50% of the North Molong Rural Small Holdings area and nearly 100% of the West Molong Small Rural Holdings area and parts of the Village Zone. This Strategy reviews the use of zoning and development control to avoid development of land that cannot support dwellings or septic systems, particularly in the north and west rural residential areas. Additional development controls may be required to ensure that development in these areas is sustainable, avoids key karst areas, and minimises impacts on any underground karst systems.
- **Limestone Quarry:** This Strategy recommends that the moratorium on further subdivision in the Zone 1(c) Rural Small Holdings area to the west of Molong is reduced so that it only applies within 500m of the quarry (west of McGroder Street) in any future LEP/DCP. However, any development east of McGroder Street will need to be connected to reticulated water and sewer before it could be subdivided down to 4,000m².
- **Limitations to Growth:** Whilst the mineral potential in and around Molong may result in increased industry and employment there are issues with the growth of Molong into areas that may have future mining or extractive industry potential. Where possible urban expansion should not occur into mineral potential areas, particularly towards Copper Hill, without a consideration of these factors.

3.10.3. Contamination

The only registered contaminated site in Molong's urban area is the former gasworks site located on Hill Street (Please note that this does not mean it is the only site with potential contamination issues). This item was gazetted in December 2010 as a contaminated site under Section 11 of the *Contaminated Land Management Act 1997* (Declaration No.20101118).

The EPA has found that the site is contaminated from its previous gasworks operations and these pollutants have affected the site and groundwater. The site is owned by Council and will require substantial remediation works. Council is developing a Remediation Action Plan and in 2012 has engaged a contractor to remediate the site. This will ensure that the area is capable of supporting a broad range of commercial and possibly residential uses.

There are likely to be additional sites that may have contamination (e.g. fuel station sites, industrial sites, sites along the railway line) but these are not currently a constraint to future land uses or growth. No sites around the periphery of the existing urban area that are

proposed for increased development potential are known to have any historical uses that may suggest a contamination risk but this would need further assessment at the subdivision / development application stage.

Issues & Strategies

Gasworks Site: The current intent is that future use of site would be limited both by the level of remediation that can be afforded and its flood prone land status. However, the site may be suitable for a low intensity use such as car-parking, open space or at most a commercial use – subject to the remediation achieving the necessary level of safety.

3.10.4. Groundwater

Figure 11 shows the areas with moderately high or high groundwater vulnerability as well as the location of existing bores in and around Molong. It highlights the ongoing potential conflict between the increasing number of bores to supply non potable water across Molong and the sensitivity of the groundwater systems are located.

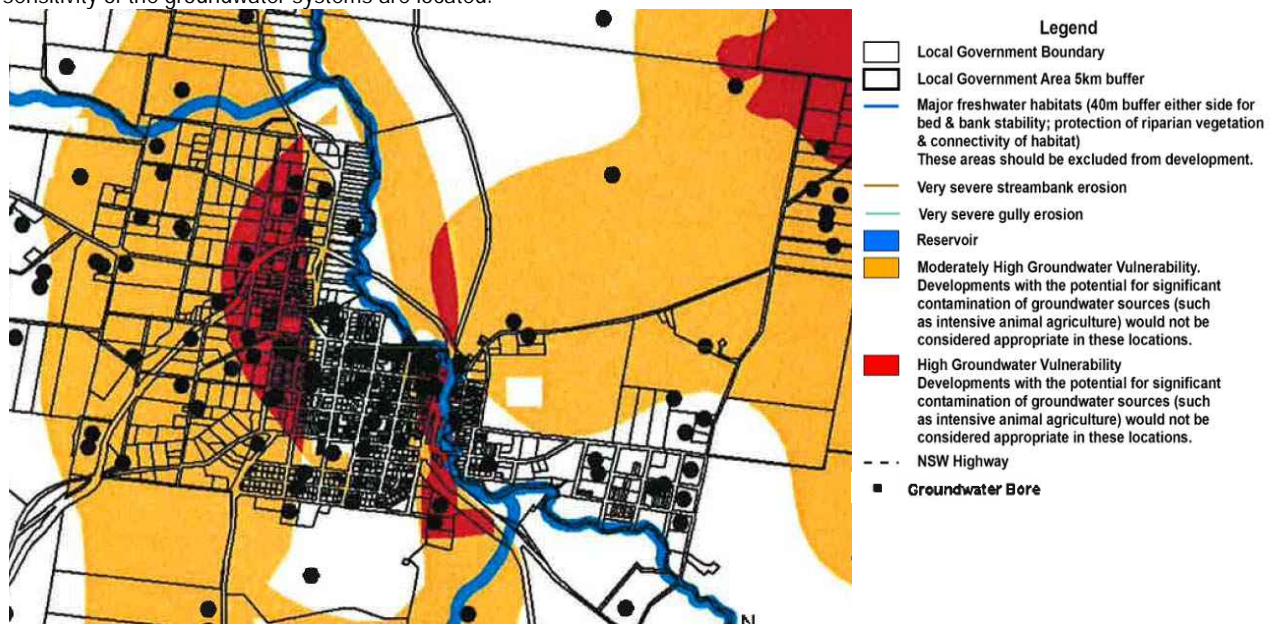


Figure 11: Excerpt from *Environmentally Sensitive Areas - Sensitive Water Resources for Molong* (Source: DECCW 2008).

Issues & Strategies

Groundwater Vulnerability: There is either a high or moderately high groundwater vulnerability affecting all of the North and West Molong rural residential areas and a significant percentage of the East Molong rural residential area and Village Zone. These areas would be less suitable for land uses with potential for significant contamination of groundwater sources (potentially including heavier industries or intensive animal agriculture) and it may also affect intensification of large lot residential uses that increase the number of bores (and reliance on groundwater) in these areas. Further consultation with the Office of Water is required to review further subdivision in these areas and bore licensing.

3.10.5. Watercourses & Flooding

Watercourses

Water management is an important aspect of land use planning. The general aim is to minimise impacts on natural water systems from development and manage local drainage and flooding issues. Biodiversity is addressed in more detail below. The key watercourses in and around Molong's Village Zone are Molong Creek (east/north), Boree Hollow (west), Moss Hollow (north), and Reedy Creek (east) (Figure 12). Molong Creek is a primary watercourse

and flows into the Bell River and then into the Macquarie River (as part of the Macquarie River catchment).

Flood Prone Lands

There have been several studies of flood issues in Molong including:

- Water Resources Commission (1983) *Flood Inundation Map of Molong* (1956 flood extent);
- DLWC (1995) *Molong Flood Study*;
- Bewsher Consulting Pty Ltd (1997) *Molong Floodplain Management Study*; and
- URS (November 2011) *Review of Molong Floodplain Risk Management Study*.

These flood studies relate primarily to the Village Zone and, therefore, there is limited information for the Zone 1(c) Rural Small Holdings Areas. Therefore, estimated flooding areas have been shown in Figure 12 for these areas based on contours.

Please note that this Strategy provides only a broad overview of potential flood prone lands based on existing studies and estimations. However, this Strategy should not be relied upon in determining flood impacts on any particular property. Please refer to the original studies for more detailed information.

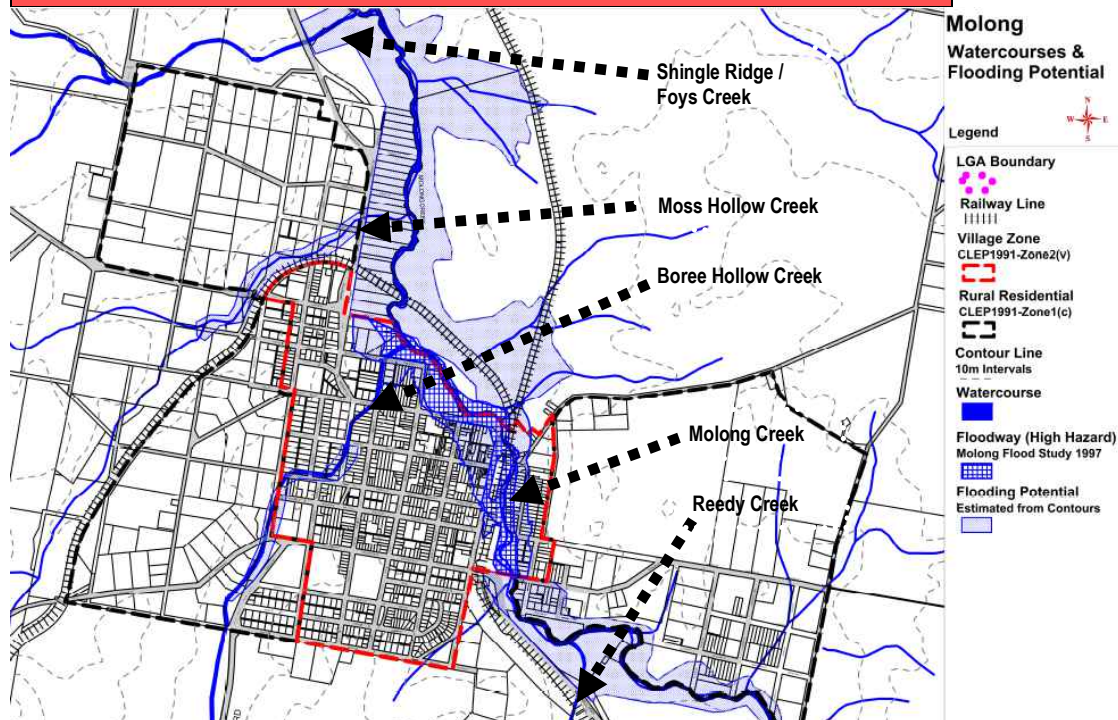


Figure 12: Key watercourses in Molong and the estimated flood/drainage affected land (based on 1997 flood studies in the Village Zone and estimates outside the Village Zone) (Source: Council GIS).

Flood History

As Figure 12 shows, Molong does have some land that is considered to be flood prone. There have been key floods throughout history including, but not limited to, 1928, 1956, 1971, 1972, 1974, 1990, 1996 and 2005. The 2005 flood was believed to be similar in height/effect to a 1 in 100 year flood event.

The catchment for Molong Creek extends up to Mount Canobolas and is relatively short, resulting in limited warning between significant rainfall and flood events. This potentially increases the risk of damage and hazard.

Flood Prone Lands

Please see the above reports, the NSW Floodplain Development Manual (2005) and **Chapter 2 – Cabonne Overview** for a more detailed explanation of flood classification and its potential impacts. The impacts are summarised below.

As Figure.13 shows, in Molong there is a high probability (5% AEP/1 in 20 Annual Recurrence Interval ('ARI')) of flooding affecting land to the north of Hill Street and between the Mitchell Highway/Watson Street and Betts Street with a high probability of impact on some residential properties. These lands are not suitable for any significant development as they have a high flood risk as they are located in the 'floodway'.

There is a slightly lower probability (1% AEP/1 in 100 ARI) of flooding extending west of Watson Street up Bank Street nearly as far as Gidley Street with significant impacts on the majority of the lower two blocks that form part of the Molong business area as well as a number of residential properties along Betts Street. These lands are suitable for some development, subject to development controls, but there may be additional costs that may make some development less feasible.

The existing Clause 22 of CLEP1991 + DCP No.10 requires development in flood affected land to demonstrate it is not likely to impede the flood waters, imperil the safety of persons, aggravate the consequences of flood waters, or have an impact on the water table. For this reason it is preferable to exclude all flood liable land when identifying infill development sites or areas for future development in this Strategy (but this does not prevent landowners from making applications for development to Council).

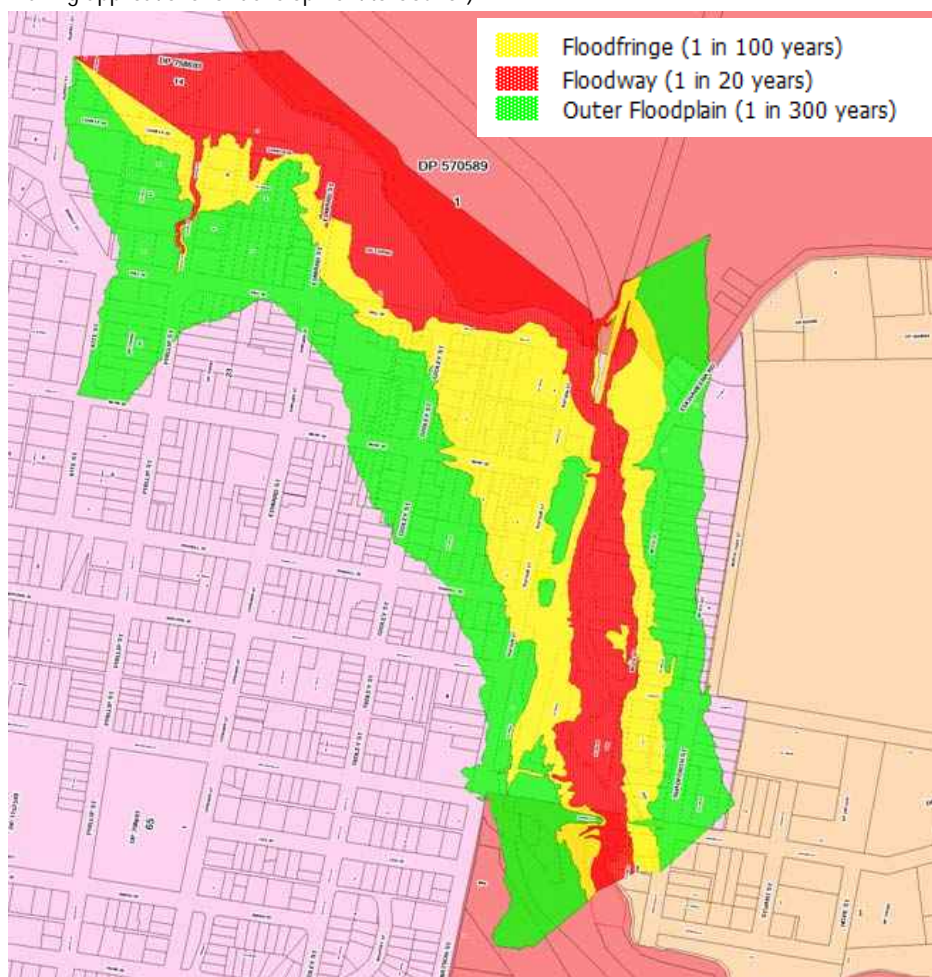


Figure 13: Flood prone land map (URS (2011) Review of Molong Floodplain Risk Management Study / Exponare 2012).

Issues & Strategies

- Flood Prone Lands:** There is a potential for high hazard flooding along the low-lying areas close to Molong Creek and Boree Hollow. There is a potential for lower hazard flooding to occur over most low-lying lands in the north-east of the Village Zone, particularly up Bank Street as far as Gidley Street. Overland flows are an additional issue in the steeper lands around Molong. This is a significant constraint to the development of a significant portion of land in Molong.
- Additional Information:** The URS (2009) Study should be finalised to update current information for the new LEP. 1% AEP flood line is only known within the Village Zone. Outside the Village Zone it has been estimated. Council should consider extending future flood study reviews to the area currently in Zone 1(c) Rural Small Holdings to assess potential impacts on development in these areas.
- Constraint to Growth:** The potential for flooding may limit expansion of Molong to the east and north of the settlement, including existing vacant lots in these areas where development may either be prohibited or significantly more expensive to meet development controls. There is an additional issue that areas east of Molong Creek may be potentially cut off in extreme floods.

3.10.6. Biodiversity & Vegetation

As Figure 14 shows, most of the significant vegetation in and around Molong is outside the Village Zone except for open space areas and areas of Crown Land.



Figure 14: Environmentally sensitive areas (biodiversity) in and around Molong (Source: DECCW ESA Data 2008 & Council GIS 2011).

Vegetation is scattered through the Rural Small Holdings areas that are currently used for agricultural purposes. In addition, there is some significant vegetation located along Molong Creek and adjacent lands with some additional vegetation in reserves, recreation areas and as street trees. "Vegetation is scattered with dominant yellow box communities combining with red gum, grey and white box and some apple box prevailing on the Southern and Eastern sides of Molong ... The Western side of Molong is dominated by grey and yellow box communities with red gum, apple box, bastard box, and broad-leaved peppermint also present" (Abacus Planning (2000) p.15).

A list of threatened, endangered and/or vulnerable species in Cabonne can be found on the website for DECCW. There are no known threatened species and/or endangered ecological communities under the *Threatened Species Conservation Act* in the Village Zone at Molong, however, this does not mean that there are not any in existence. Each development application will need to address this issue.

Issues & Strategies

- **Ecological Corridors:** There is a need to protect and enhance remaining significant remnant or native vegetation in or around Molong. Attempts should be made, where possible, to plant native vegetation and enhance ecological corridors, particularly along the adjacent watercourses and adjacent allotments. This may necessitate the removal of non-native or invasive species and sourcing of native seeds from the local area.
- **Street Tree Planting:** There is potential to enhance street tree planting in Molong. Whilst urban areas do not necessarily require native species in gardens and streets, Molong may be suited to some native street tree planting – though only in accordance with the existing 1997 Street Tree Masterplan.

3.11. Access, Transport & Parking

3.11.1. Air Transport

Please see summary in Cabonne Chapter [Section 2.7.1 – Air Transport](#). In general public air transport access is considered low-medium for Molong with a 40-45 minute drive to Orange Airport the nearest available.

3.11.2. Rail

Please see summary in Cabonne Chapter [Section 2.7.2 – Rail](#). The Broken Hill Railway Line passes through Molong. Whilst limited passenger services (Broken Hill Outback Explorer / Indian Pacific) pass through Molong they do not stop in Molong so there is low passenger rail access and transport to Orange or Wellington is required. Passenger access at Molong could be reconsidered in the future but would require realignment of the railway line adjacent to the station and is unlikely to occur in the short to medium term.

The Broken Hill Railway Line is a key freight line but there is no road-rail freight interchange in Molong at this time. As a result, any industrial development is likely to be dependent on road transport for goods which may have a reduced competitive advantage with other centres. However, there is a railway line (closed) that extends up to Copper Hill and may provide a future opportunity for rail loading of freight or minerals (mostly likely subject to Copper Hill Mine proceeding).

Issues & Strategies

- **Rail Access:** Whilst Molong's location on a key railway line is a potential benefit, the lack of access to this rail line (either for passengers or freight) means that the infrastructure is under-utilised. This creates a high reliance on road transport and fails to maximise opportunities for growth. Council should liaise with RailCorp on long-term opportunities to improve use of the existing infrastructure and rail station and potentially relocate the rail back to the platform (unlikely in the short to medium term).
- **Rail Constraints:** The Broken Hill Railway Line encircles Molong to the east, north and west. As a result, there is a need to avoid significant intensification of sensitive development (e.g. dwellings) in proximity to the rail line to minimise noise and vibration impacts. The rail line also acts as a barrier to passenger and traffic connections and the creation of additional over-passes/crossing would be expensive and may limit development outside the core centre of the town.

3.11.3. Road Hierarchy & Vehicle Traffic Impacts

Please see [Section 2.7.3 – Road Hierarchy](#) for more details. The primary road passing through Molong is the Mitchell Highway which connects through parts of Watson, Hill and Market Streets. This runs along the eastern and northern edge of the Village Zone. As the Mitchell Highway connects western NSW through Dubbo and Orange and on to Sydney it is one of the key NSW country highways and has significant traffic numbers and heavy vehicle use. This route passes along the eastern and northern edges of the Molong Village Zone. The Mitchell Highway used to pass through Bank Street but was diverted in the late 1980s/early 1990s and now has less impact on the main business area of Molong. Growth of Molong and new land uses in proximity to the highway will need to demonstrate that it will not impact on the operation, amenity and safety of the highway. If new intersections or highway entries are proposed then this may pose a constraint to certain developments.

Next in the hierarchy are Peabody Road (State Road) connects Molong to the south through to The Escort Way and Cudal and the Banjo-Paterson Way (Main Road) connects Molong to the north-west through to Cumnock and Yeoval.

The remaining roads are generally local roads. The pattern of local roads in Molong generally follows a grid-pattern which assists with navigation except where broken by topography and watercourses. Most local roads within the Village Zone are formed and paved but there are some roads that are gravel or unformed that may place a constraint on further development.

Issues & Strategies

- **Survey:** The survey for the Community Plan 2025 indicates that roads are a very important priority (65.1%) (No.2), a key concern (No.3) and a key infrastructure issue (No.1) for the Molong Community.
- **Highway:** The Mitchell Highway (along with the rail line and Molong Creek) separates Molong's Village Zone from East Molong and also creates a barrier to connections to recreation areas to the north of Hill Street. The road supports heavier vehicles and high numbers of traffic which may impact on additional access roads and pedestrian safety and amenity.
- **State/Regional Roads:** Peabody Road (State Road) and the Banjo-Paterson Way (Regional Road) are important arterial routes and result in heavier vehicles and numbers of traffic passing along residential streets including Castle, Wellington and Edward Streets to connect to the Mitchell Highway. This can impact upon residential amenity and safety along these routes, particular where it passes key community facilities such as schools.

3.11.4. Bus

Please see [Section 2.7.4 – Bus](#) for more details. Molong has access to Countrylink Services that provide connections to Dubbo and through Orange and Bathurst to Lithgow daily in each direction as well as and Orange Buslines Services several times daily to Orange and return. In addition there are school bus services that bring children from the surrounding rural areas to Molong's primary and secondary schools and also connect to schools in Orange.

Issues & Strategies

Bus Access: Public bus transport is available for people living in Molong for connections along the Mitchell Highway (including Orange and Dubbo). This enables trips to key regional centres and provides some mobility for those without access to private transport. However, there are limited public bus transport connections between Molong and other settlements in Cabonne, other than the school bus network. This may affect those seeking to work or shop in Molong from other settlements.

3.11.5. Parking

Molong is reaching a size where parking in the main business street can be sparse during key times of the day. This could be partially as a result of the density of business along the main street, peak times for shopping activity (e.g. before and after school), business owners parking in the street outside their stores, or employees parking in the street during working hours.

Issues & Strategies

Provision of Parking: There are a few community responses to the Community Plan 2025 Survey suggesting that there is insufficient parking in Molong, but this is not raised by a majority of people as a key issue. There may be some impetus to create a new parking area but the cost of this currently exceeds the demand requirements. Council should conduct a specific survey of the community on this issue and review the viability of future sites for off-street parking. Business owners and employees should be encouraged to park in side streets or off-street parking where possible to maximise on-street supply for the public during business hours.

3.11.6. Pedestrian Access

Pedestrian footpaths are provided in Molong in the key pedestrianised areas close to the business centre including east Hill, Bank and Riddell Streets and north Edward, Gidley and Watson Streets as well as along Betts Street in Zone 1(c). A large area of Molong does not have fully formed footpaths and these are unlikely to be provided in the short to medium term. Council's Pedestrian Accessibility and Mobility Plan ('PAMP') (see [Section 2.7.5 – Pedestrians](#) for more details) includes, but is not limited to, new footpaths, drop kerbs and refuges along parts of Bank, Hill, Riddell, Edward, Molong, Gidley, Wellington, Phillip, King Streets and Ironbarks Road to a total of \$295,000. Council is currently acting on this work program.

3.11.7. Cycle Access & Facilities

Molong is situated on the Mitchell Highway (SR7) and provides a unique set of issues to connect the town whilst also managing highway crossings. Council's Bicycle Plan (2005) (see [Section 2.7.6 – Cycling](#) for more details) recommends the following improved connections as follows:

- Corner of Bank Street/Mitchell Highway to Sports Oval and Tennis Courts (year 1) (completed but damaged during floods in 2010/2011);
- Sports Oval and Pool to Central School (year 3);
- Bank Street between Mitchell Highway and Gidley Street (year 4)
- Tennis Courts to Central School via Wellington Street (year 5)(affected by new highway alignment/railway overpass).

Not included in the program is the connection Sports Oval to Pool along Molong Creek/Betts Street option running through the park beside the Creek/ connection Sports Oval to Bank Street via Edward Street. As at 2010, the off-road bicycle connection along Molong Creek has been completed with significant community and Council involvement but may need additional works for restoration after recent flooding.

3.12. Utilities & Infrastructure

3.12.1. Water Supply

Background Studies

There are a number of relevant studies to understanding Molong's water supply:

- Hydrosience (Feb 2009) *Joint Integrated Water Cycle Management (IWCM) – Evaluation Study* (on behalf of Central Tablelands Water, Weddin/Blayney/Cabonne Shire Councils) ('IWCM Study');
- Cabonne Council (2008) *Draft – Strategic Business Plan – Water Supply Schemes* ('Draft SBP');
- Cabonne Council (2008) *Draft – Drought Management Plan* ('Draft DMP');
- Cabonne Council (2008) *Development Servicing Plan for Water Supply and Sewerage Schemes* ('DSP Water/Sewerage');
- Cabonne Council (July 2007) *Molong Water Supply – Potential Future Demand* ('Demand Study');
- Cabonne Council (July 2007) *Molong Water Supply – 'Secure Yield' Study* ('Secure Yield Study');
- Cabonne Council (March 2007) *East Molong Rural Residential Zone – Water Supply and Sewerage Strategy Study – Preliminary Assessment and Concept Options* ('East Molong 2007 Study');
- Department of Public Works & Services (Aug 1998) *Capacity Study* ('1998 DPWS Study');
- Cabonne Council (Nov 1984) *Molong Water Supply Investigation Report* ('1984 Study');
- SMEC (October 2010) *Review of Safe Yield for Molong Creek Dam and Borenore Creek Dam* ('SMEC 2010 Study');
- Hydrosience (December 2010) *Draft Technical Note – Options & Costing – Joint IWCM Strategy Study* (on behalf of Central Tablelands Water, Weddin/Blayney/Cabonne Shire Councils) ('Options & Costing Study 2010').

Water Provider

Molong's Village Zone is not connected to the Central Tablelands Water supply system and there are no indications from Central Tablelands Water that this supply would be extended to Molong in the foreseeable future as there is already local water supply provision by Council. Council is the water provider for Molong.

Borenore Dam

The original water supply for Molong was the Borenore Dam located on the Borenore Creek, a tributary of Molong Creek. This dam was commissioned in 1928. Due to siltation, Borenore Dam now has an estimated capacity of 230 ML. Whilst the pipelines from Borenore Dam feed into the existing water supply system, this water is not currently utilised as a water source due to water quality issues. There is no licence condition relating to extraction volume. However, the water catchment area (indicated roughly by Zone 7(c) (Environment Protection)) includes the catchment for both Molong and Borenore Dams.

Molong Dam

Molong's water supply is currently sourced from Molong Dam which is fed by the tributaries of Molong Creek. Molong Creek commences on the slopes of Mount Canobolas and feeds through Lake Canobolas (owned and operated by Orange City Council). Molong Dam was commissioned in 1985 and has a capacity of 1000 ML (IWCM Study s.3, p.10). Council has a licence for extraction of water (subject to conditions for environmental flows). The lowest level Molong Dam has reached in April 1991 when the remaining volume was estimated at 370 ML and the second lowest level occurred in 2006/07.

Mains / Storage / Pumping

The gravity mains from Molong Dam has a capacity of 4.06 ML/day. The water runs to Wellington Street Railway Reservoir (1 ML capacity for raw water aeration if necessary) and is pumped to the filtration plant by Wellington Street Pumping Station.



Water Treatment

Water is treated at the Molong Water Filtration Plant ('WFP'/'WTP') in Park Street, Molong (see Table 10) that was commissioned in 1960. Raw water is pre-dosed with soda ash, aluminium chlorohydrate, poly-electrolytes and powdered activated carbon before settling in an up flow clarifier and final polishing through a sand filter. The product is disinfected using gaseous chlorine. Molong's WFP's peak capacity is assumed to be 2 ML/day (IWCM Study, s.3, p.11).

Reservoirs & Pumping Station

Council owns and maintains two reservoirs including Gidley Street Reservoir (1928 – 1.36 ML) and High Level Reservoir (1976 - 1.6 ML). Water flows from both dams to the WFP via parallel gravity mains (capacity 4.1 ML/day). From the WFP the water goes to the Gidley Street reservoir by gravity where the main pumping station is located (1.7 ML/day). Filtered water gravitates to the low level reticulation system for Molong. A pump lifts water to the High Level Reservoir which provides pressure to the high level reticulated system. The capacity of the reticulated main is assumed to be no more than 2 ML/day, which is the maximum capacity of the WFP.

Existing Water Production & Demand

The Demand Study in 2007 conducted a field survey of residential water supply connections (both within and outside the Molong Village Zone) and determined the following number of connections (Table 10):

Location	Low Density Connections	Medium Density Connections	Total
Within Village Zone	577	42	619
Outside Village Zone	61	0	61
Total Connections	638	42	680
Low Density = 1 Equivalent Tenement		Medium Density = 0.3 Equivalent Tenement	
Total Equivalent Tenements	638 ET	~13 ET	~651 ET

Table 10: Number of water connections in Molong (Source: 2007 Demand Study).

From 1989 to 2007, the average annual consumption of water was 302 ML (minimum 223 ML / maximum 400 ML) (Secure Yield Study, p.5). Water demand patterns mostly reflect the weather conditions except for minor changes when 'pay-for-use' was implemented in 2002/03 and during two periods when the Molong Creek Dam storage fell below 78%. The East Molong 2007 Study adopted a current demand of 260 ML/year.

In 2006/2007 during the worst year for rainfall in the last 18 years the actual consumption was 250.852 ML/year for all land uses. The 2007 Demand Study has concluded that this is a 'typical drought year demand'. Therefore, the drought year demand per equivalent tenement (ET) is 385kL/ET.

Water Security

"Secure Yield" is defined as "the annual volume of water that the 'system' can reliably supply every single year in all conditions including droughts and sequences of droughts" (Secure Yield Study, p.3). This aims to determine the most conservative supply of water that could be relied upon to meet human needs. There have been a number of studies to predict the Secure Yield of Molong Dam and there are varying figures as follows (Table 11).

The SMEC 2010 Study is the latest information and provides two clear possibilities for secure yield at 300ML/year (5/10/10 rule) or 230ML/year (5/10/10 CSIRO 2030 Conditions). As a result, the Options & Costing Study 2010 provides the following graph indicating the different secure yield levels and projected water demand (Figure 15).

3. Town of Molong

Cabonne Settlement Strategy

Study	Secure Yield (Water) Molong Dam	Secure Yield (Water) Borenore Dam
1984 Study	(No longer valid) 512 ML/year	N/A
1998 DPWS Study	305 ML/year	N/A
2007 Secure Yield Study	300 ML/year	N/A
East Molong 2007 Study	(Range of 300-520 ML/year) 375 ML/year OR (Range 250-395 ML/year) 285 ML/year when upstream post dam development incl. Overall Recommendation 250 ML/year	30-110 ML/year (depending on level of riparian releases) but recommended 0ML/year (due to siltation)
SMEC 2010 Study	1. Existing yield both Molong and Borenore Dams at 5/10/2010 is 318 ML/year 2. If Council choses to adopt the proposed 5/10/10 rule for water supply security estimate the safe yield of the system is 300 ML/year 3. Under the assumed CSIRO 2030 conditions, translated as a 25% reduction in daily runoff, the (5/10/10) safe yield would be reduced to 230 ML/year	

Table 11: Secure Yield of Molong Dam in a variety of studies.

Predicted Water Production & Demand

The IWCM Study (s.3, p.27) states that the predicted growth rate for Molong's population is 0.67%. This is roughly the same as the predicted average growth in population in this Settlement Strategy (0.7%). The DSP Water/Sewerage Study (2008) and the Options & Costing Study 2010 have adopted a 1% growth rate for the future. This aligns with the maximum growth rate in this Strategy.

Molong Water Demand Projections and Molong Water Supply System Safe Yield

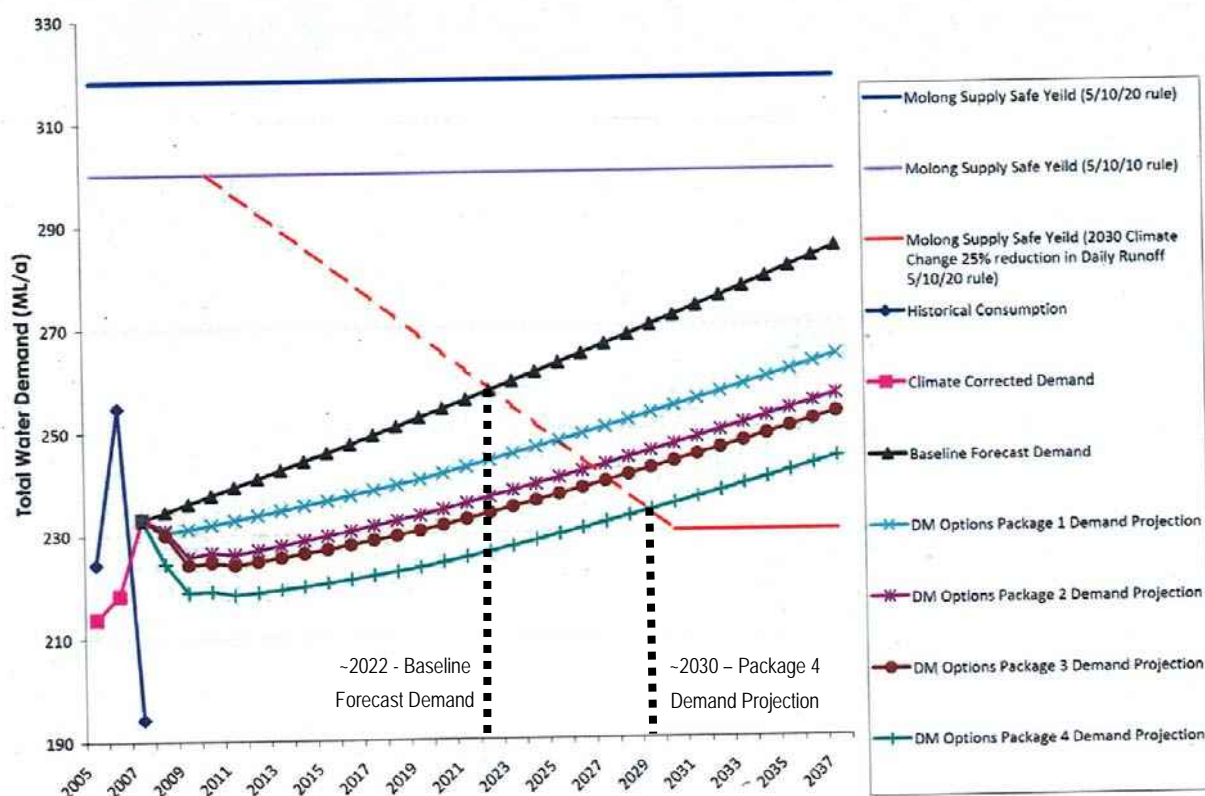


Figure 15: Graph of projected water supply and demand including four (4) different methods for increasing supply / reducing demand (Source: Options & Costing Study 2010; Figure.4, p.24).

The IWCM Study (s.3, p.40) states that the baseline 'worst-case' forecast peak day water demand for the year 2037 is approximately 1.9ML/day which is less than the 2ML/day capacity of the WFP and this could be improved by the introduction of water tanks in properties in

Molong. Similarly, the raw water main will satisfy the 2037 demand and the distribution system will only just satisfy future water demands.

The Options & Costing Study 2010 suggests in Figure 15 that there is sufficient supply for at least the next 30 years if 300ML/year is the secure yield – but notes that under the baseline forecast demand this will run out by approximately the year 2022 if the CSIRO predictions on climate change result. The Study has put forward a number of options to reduce demand/increase supply including water conservation measures (Package 4).

This Strategy suggests a maximum growth rate of 1% would result in the need for ~260 additional dwellings (~260 ETs = 100 ML/year in total). This would result in a total estimated demand of ~350ML/year and exceed the current secure yield by 50ML/year (and more for the CSIRO model) but may still be achievable if the 'worst case' scenario does not eventuate and other water conservation measures are adopted. Therefore, this Strategy suggests that a maximum growth rate of 1% may exceed the secure yield in 10-15 years but it may be longer if the average growth rate of 0.7% is achieved, other water saving measures are adopted, or alternative water supplies are utilised.

In 2011/2012 Council is currently investigating the use of a bore located near the Council Depot in Molong Street as a backup supply that may improve the secure yield. However, as noted in the sections above, the increase in bores and the potential for groundwater contamination from on-site effluent management systems (particularly to the west of Molong) may conflict with this new water source.

Rural Small Holdings Zones

Council's existing general policy is that areas outside the Village Zone of most villages will not be serviced by centralised water systems. As noted above, there are some limited connections outside Molong's Village Zone, predominantly in West Molong.

The East Molong 2007 Study states that in response to proposed subdivision in East Molong, Council agreed in 2006 to allow an extension of the Molong town water scheme to provide a 'limited' potable supply and that Council would require the provision of a supplementary non-potable water supply. However, the East Molong 2007 Study concludes that based on its assumptions about secure yield of Molong Dam (250 ML/year) and the predicted need for development in the Village Zone which exceeds this (317 ML/year) there is no existing capacity in the existing system to service the East Molong area.

Therefore, at the ordinary meeting of Council (16 April 2007) Council adopted a policy (Minute number 99/1/24-18/1/99) that roof water storage tanks was the preferred strategy for water supply to all allotments to the East Molong rural residential area. There should be no commitment to any extension of the Molong Water Supply outside the Village Zone until the Secure Yield of the dams is clarified, the future demand of the Village Zone is determined, and the fire fighting capacity of the service reservoirs is undertaken. However, there is current debate on the provision of water to the East Molong rural residential area, particularly the approved 73 and 23 lot subdivisions. The current proposal is to provide water from Borenore Dam (untreated) to service these allotments but not when water security is threatened.

Issues & Strategies

- **Water Catchment Protection:** It is clear that the security of Molong's water is tied up with the issue of protecting water quality and quantity in the catchment for both Molong and Borenore Dams. The new LEP & DCP should provide controls to manage future land uses in the water catchment and minimise impacts on water provision to Molong.
- **Water Security:** The most recent studies would suggest that the current secure yield of both Molong and Borenore Dams (combined) would be 300ML/year. However, this may reduce to 230ML/year if climate change affects rain patterns in the next 10-20 years. Therefore, there is a need for Council to consider a mix of water conservation, water pricing, and increased storage to ensure secure yields can cater for growth up to 1% in population per year.

- **Water System Capacity:** The IWCM Study states that “although no current system capacity issues have been identified, Molong WFP should be assisted with other water sources, such as rainwater tanks, to ensure the water demand in 2037 won’t exceed the Molong WFP capacity” (s.3, p.41).

3.12.2. Stormwater & Drainage

Figure 16 shows that kerb and gutters are generally limited to Bank, Riddell, Wellington, Gidley, and Edward Streets, and parts of South, Park, Smith, Lee, Molong and Hill Streets. This correlates with the key pedestrianised streets or streets that have significant drainage issues.

The remaining streets utilise grass swales for drainage, except for the odd under-road pipe for cross street drainage. In addition, to flood issues addressed above, there are significant issues associated with flash flooding and overland flows from stormwater during peak rainfall events. This is exacerbated when it floods as there is no path for water to escape so it backs up along several of the streets.

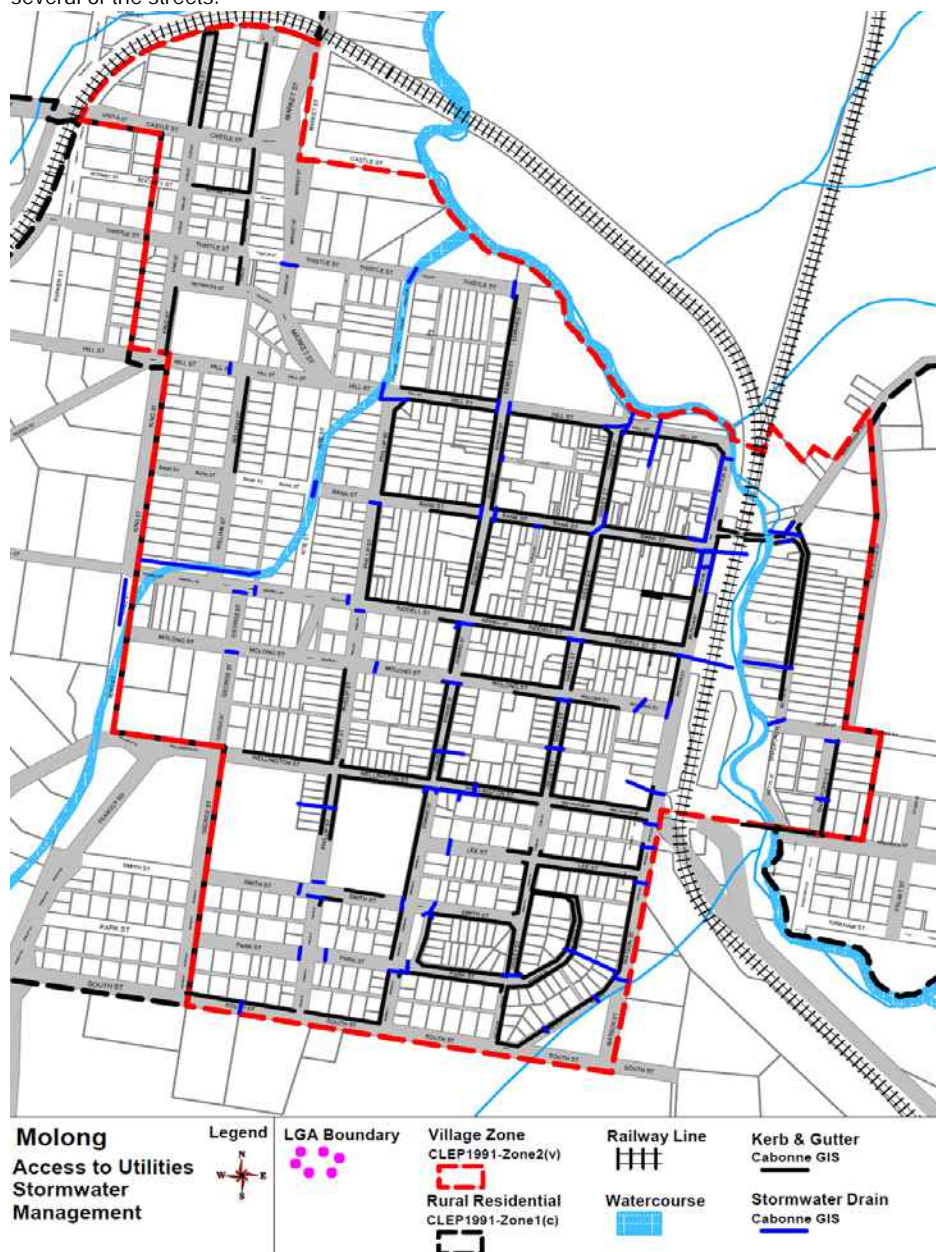


Figure 16: Existing kerb & gutter and stormwater drainage system in Molong (Source: Council GIS 2009-accuracy is not warranted).

Issues & Strategies

- **Drainage:** A number of drainage and stormwater related issues occur in Molong during peak rainfall events including flooding along the key watercourses. Council is limited in methods to address these issues as additional stormwater infrastructure does not always solve the problem. However, there should be a program of increasing kerbs, gutters, and drains along key affected streets to minimise overland flows.
- **Stormwater Management:** Part of the solution to drainage issues may include ensuring maximum impermeable surface areas on lots so that water infiltration is maximised.
- **Stormwater Harvesting:** Council should consider in the future re-use of stormwater for potable and non-potable uses. However, this may not be suitable due to topography and the cost of this infrastructure.

3.12.3. Sewerage

Village Zone

As Figure 17 shows, the majority of the Village Zone is serviced by centralised sewerage in Molong with an extension outside the Village Zone along the Mitchell Highway / Market Street to the north.

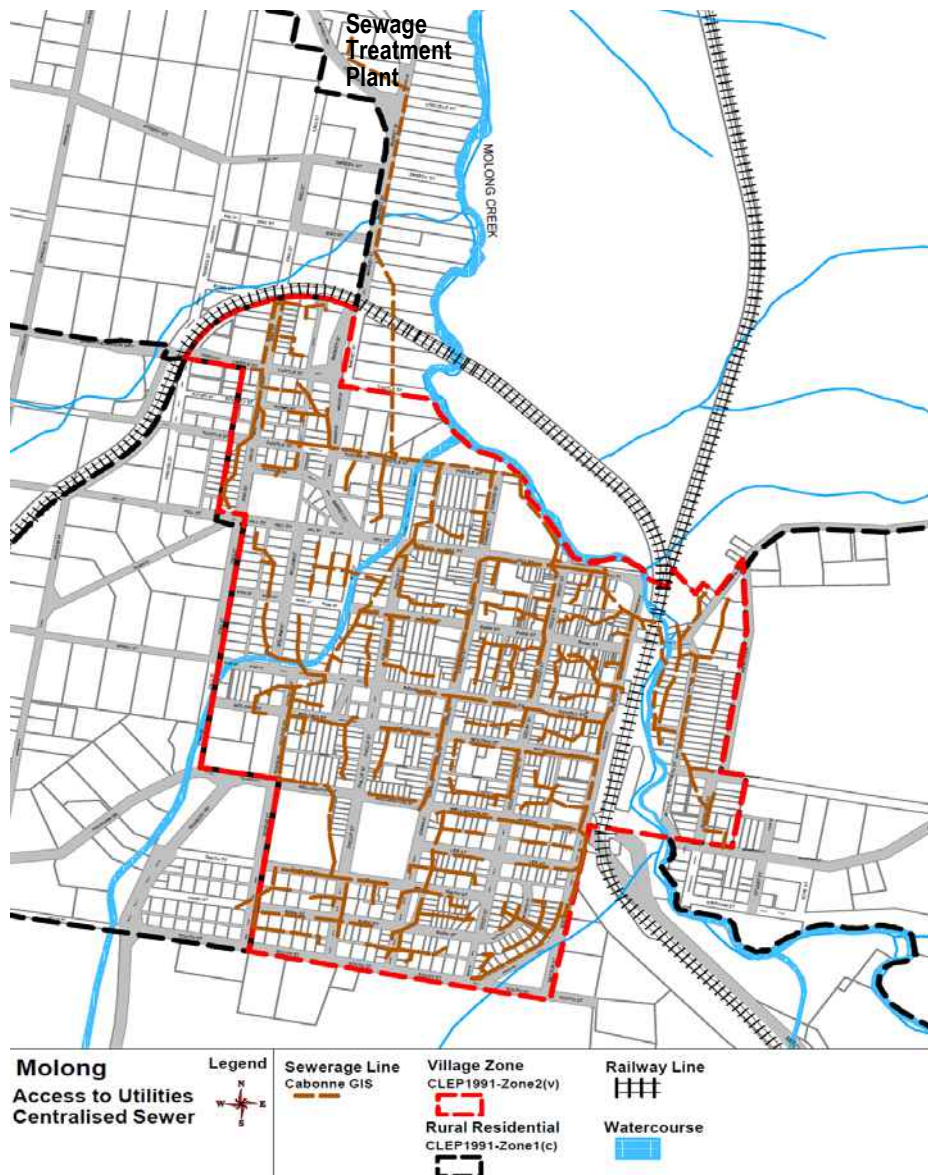


Figure 17: Location of existing sewer lines in Molong (Source: Council GIS 2010).

The Development Servicing Plan ('DSP 2008') sets out the capacity of each component of the sewerage system and the predicted year when that capacity is taken up. The current Sewage Treatment Plant ('STP') has a capacity of 833 equivalent tenements ('ETs') or 2000 equivalent persons (EPs).

Based on the population of the Village Zone in 2006 (1,569 people) there is some limited capacity in this system. The DSP 2008 states that the capacity is not predicted to be exceeded until 2024/2025. However, with perhaps only 25% capacity remaining this may place a constraint on significant growth, particularly if larger scale residential or industrial development produces larger volumes of waste water.

Council has already included in proposed future works plans an upgrade to the STP for quality and capacity for an additional 250 ETs which will extend the life of the STP to 2039/2040. There may also need to be additional upgrades to the pumps and reticulation systems.

Potential Extensions of Centralised Sewerage

A strategic study by Terra Consulting in January 2000 ('Jan 2000 Study') provides an approximate indication of areas where centralised sewer extension is possible without pump stations (including limited areas to the south of Molong and east of Molong) and areas where sewer extension will require pump stations, rising mains etc (most of the remaining land surrounding the Village Zone) (See Figure 44 for diagram).

Issues & Strategies

- **Constraints to Growth:** The economic provision of sewer to extended areas of the settlement is best suited by extension to south and east. *"The ability to provide sewer to new areas to the north and west is considered difficult or expensive due to the need to provide a pump station and rising main"* (Terra Consulting (2000) p.7).
- **Septic System Pollution:** Continued monitoring by DECCW and Council should ensure that water quality in adjacent creeks / watercourses and nearby groundwater systems is not affected by ongoing and potential expanded use of septic systems and should also look at the cumulative effect of these systems.

3.12.4. Electricity

As Figure 18 shows, access to lower voltage electricity lines is readily available along most of the key streets in the Molong Village Zone and most major streets in the Rural Small Holdings areas except for the issues noted below. Extension of the Village Zone would require extension of these services (at the cost of the developer). It may also be important to identify industrial sites that have access to reasonably reliable electricity supply. Ideally any new industrial estates should have access to higher voltage electricity to allow for industries that are higher energy consumers and require greater reliability of supply. However, most local industries currently only require access to low voltage electricity for low-scale manufacturing. Potential new industrial sites near the high voltage line running along the eastern edge of Molong or near the Transgrid 132kV substation site off Euchareena Road should be investigated.



Issues & Strategies

- **Electricity Access:** Electricity access is not known to be a significant constraint to growth in Molong for low-scale development and dwellings. However, the provision of electricity to new subdivisions in the rural residential areas may pose a significant cost for expansion in these areas. Molong has the advantage of access to high-voltage (132kV) transmission lines that may support larger-scale industries (but would require the identification of an appropriate land supply).
- **Easements:** Electricity easements, particularly for high voltage distribution lines with an easement width of approximately 45m, may be a constraint to future growth. The location of the existing high voltage power lines and electricity substations may impact on future village expansion areas (particularly to the south of Molong) so this constraint would need to be addressed in future lot layouts and the identification of building sites.

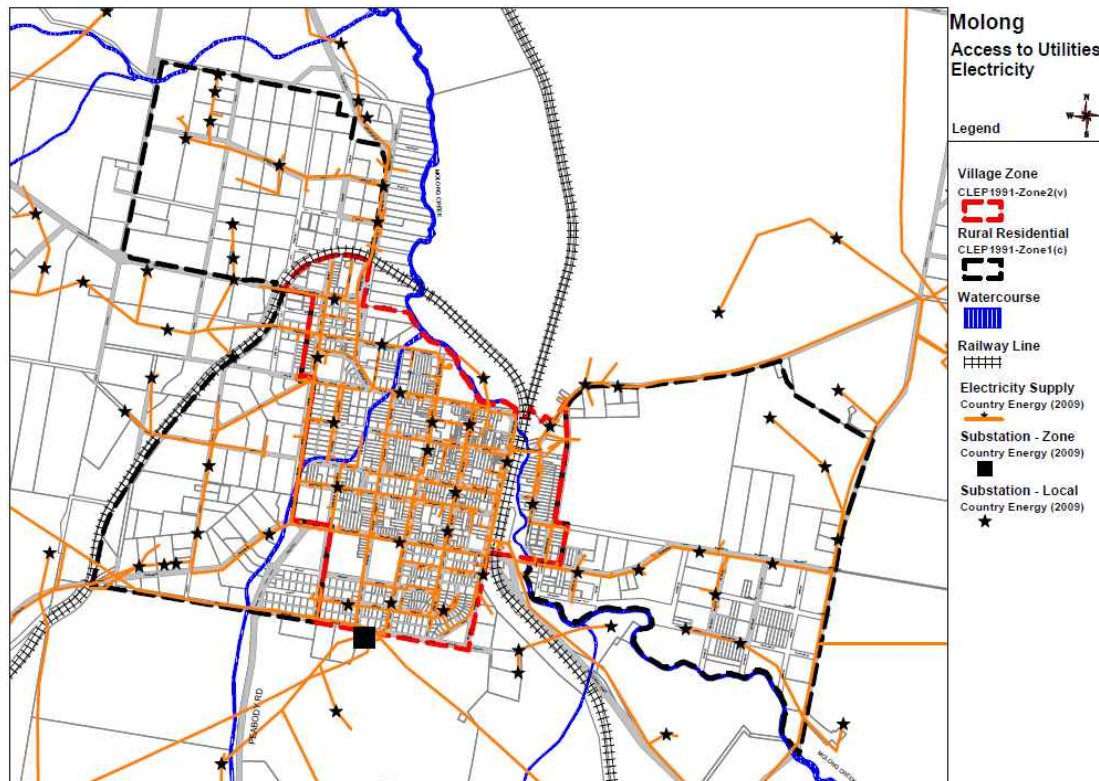


Figure 18: Location of electricity supply lines (orange) and substations (stars) in Molong. (Source: Country Energy (2009) – not confirmed as accurate).

3.12.5. Telecommunications

Please see [Section 2.8.5 – Telecommunications](#) for a review of access to fixed, mobile and broadband telecommunication services in Molong and across Cabonne's settlements.

Issues & Strategies

Telecommunications: The key issue for Molong is spotty mobile phone coverage that may be resolved with recent changes to mobile phone towers. Molong has the potential for future access to fibre optic cable as part of the National Broadband Network that may offer opportunities for high speed access to information for business, education and community groups. There are no major constraints to growth from telecommunications.

3.12.6. Waste Management

Please see [Section 2.8.6 – Waste Management](#) for a review of access to waste management services in Molong and across Cabonne's settlements. Molong's existing waste depot on Packham Drive does not accept general waste and it must be transferred to either Manildra or Cumnock. There is a proposal for a regional waste facility just out of Molong on the Euchareena Road that has been approved by the Minister for Planning. However, due to Council opposition to this facility, Cabonne is no longer a partner in this facility with Orange City Council and will not be utilising this facility in the near future. Therefore, all waste from Molong needs to be transported to other waste depots.

Issues & Strategies

Waste Management: Currently Molong's general waste needs to be transported to either Manildra or Cumnock Waste Depots. Council is currently investigating whether there is a need to identify a waste transfer depot for Molong but it may not be necessary at this time. Cabonne is not currently a partner in the regional waste facility on Euchareena Road.



3.13. Heritage

3.13.1. Heritage Items

Currently under CLEP1991 there are ten heritage items listed for Molong. In addition, CLEP1991 includes a heritage conservation area along Bank Street which does provide some degree of protection to the key items which are located within that area. However, many items of heritage interest are located outside the conservation area.

Council is currently finalising the Community Heritage Study building upon work that was conducted in 2003 and 2006. There are approximately 150 heritage items listed for the Molong area in the 2003 Draft Inventory but many of these are unlikely to be recommended for heritage listing. At the time of writing, there was a recommendation for a total of 58 heritage items to be recommended for listing in the new local environmental plan.

3.13.2. Heritage Conservation Area

Molong is one of two key settlements (also Canowindra) that has a Heritage Conservation Area ('HCA') under CLEP1991. This HCA is primarily located along Bank Street, extending from Watson Street up just to the west of the intersection with Phillip Street and is generally the depth of 1-2 lots (Figure 19). Molong's HCA is listed as an item under the National Trust and under the 2003 Community Heritage Study 2003 (MG2).

This Strategy only seeks to make minor amendments to the existing HCA. In particular, the original HCA in CLEP1991 is based on a historical subdivision pattern which has been amended over time and in some cases the HCA does not match the existing property boundaries. Therefore, this Strategy proposes to amend the boundaries to extend to the full extent of every lot. There are no new lots proposed in the HCA. It is expected that Molong's HCA will be incorporated into the new planning controls (LEP & DCP) being prepared by Council and there will also be amended/additional controls governing HCAs in Cabonne.

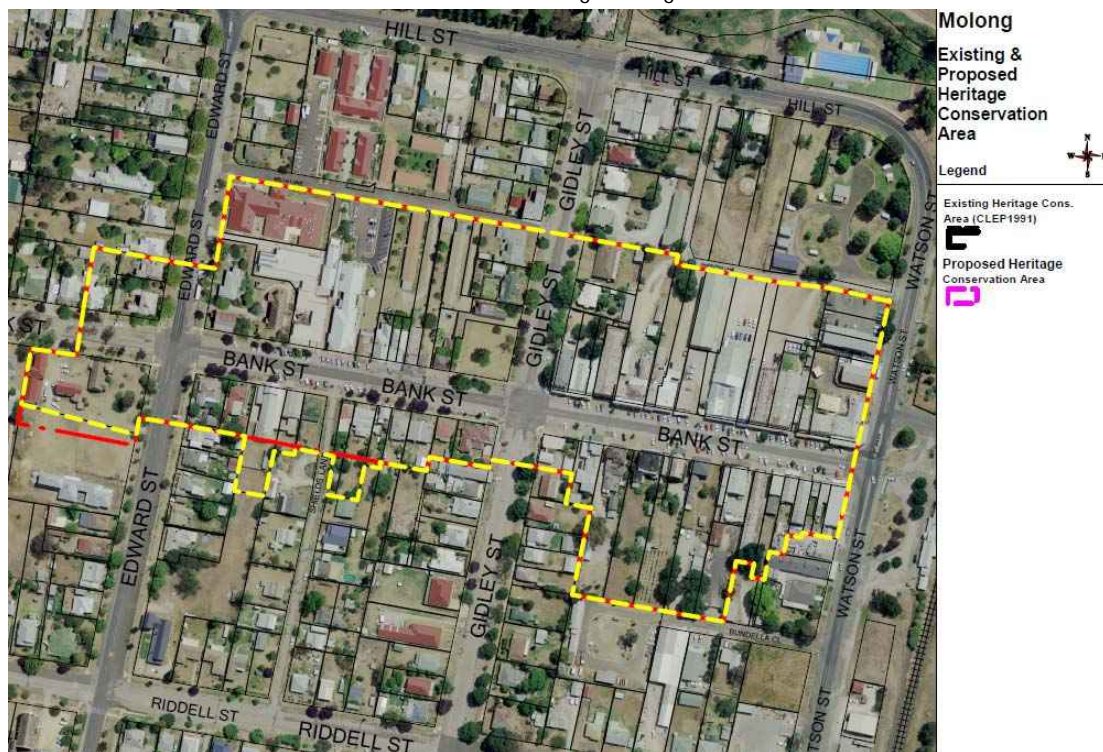


Figure 19: Existing and Proposed Heritage Conservation Area boundary for Bank Street, Molong (Source: Council GIS 2010).

3.14. Summary of Existing Land Uses (Village Zone & Rural Small Holdings)

There is a total of approximately 1,296 lots in the existing Village Zone and Rural Small Holdings Zones around Molong (as at 2010) as follows (Figure 20 and Table 12):

A) Existing Village Zone	No. Lots	% of Lots in Area	Description
Total Lots – Village Zone	935	100%	Includes Crown land & open space
Vacant Lots	156	16.7%	No existing dwelling or business on lot
Dwelling Land Use Lots	612	65.5%	Dwellings (estimated to be 588 dwellings on 612 lots)
Business Land Use Lots	74	7.9%	Retail, commercial & tourism services
Industry Land Use Lots	21	2.3%	Light industrial uses (e.g. manufacturing)
Community Land Use Lots	40	4.3%	Health, Religious, Community, Emergency, Tourism etc
Open Space & Recreation	32	3.4%	Parks, Reserves & Crown land
B) Existing Rural Small Holdings Zone (North Molong)			
Total Lots – Rural Small Holdings	56	100%	Mostly vacant agricultural land
Vacant Lots	36	64.3%	No existing dwelling or business on lot
Dwelling Land Use Lots	20	35.7%	Detached housing
C) Existing Rural Small Holdings Zone (East Molong)			
Total Lots – Rural Small Holdings	198	100%	Mostly vacant agricultural land
Vacant Lots	148	74.7%	No existing dwelling or business on lot
Industrial Land Use Lots	2	1.0%	
Dwelling Land Use Lots	47	23.7%	Detached housing (33 dwellings on 47 lots)
Open Space & Recreation	1	0.5%	Parks, Reserves & Crown land
D) Existing Rural Small Holdings Zone (West Molong)			
Total Lots – Rural Small Holdings	107	100%	Majority are Lifestyle Blocks
Vacant Lots	53	49.5%	No existing dwelling or business on lot
Dwelling Land Use Lots	53	49.5%	Detached housing (53 dwellings on 53 lots)
Business/Industry Lots	1	0.9%	Gelato factory

Table 12: Summary of Land Uses in the Village Zone and Rural Small Holdings Zones in Molong (as at December 2009) (Source: Aerial photo & brief inspection).

Issues & Strategies

- **Supply & Demand:** The aim of this Strategy is to review the supply of land for each land use in the urban area of each settlement and determine the estimated future demand for each land use to ensure there is sufficient supply of urban land for the growth of the settlement.
- **Residential Demand:** Residential land uses are the greatest consumer of urban land and take up 65.4% of the Village Zone and 37.4% of the Rural Small Holdings Zones.
- **Vacant Infill Development:** A significant proportion of existing total lots are currently vacant and may be able to support some of the additional growth of this settlement, subject to these lots being suitable for development.
- **Land Use Areas:** This Strategy seeks to identify appropriate areas in Molong for specific land uses such as industry, business, residential, open space and recreation, and environmental outcomes that seek to minimise land use conflicts and maximise accessibility.



Figure 20: Location of each key land use in Molong's Village Zone (as at December 2009).









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3.15. Open Space & Recreation



Figure 20 and Table 13 shows the location of existing open space areas in Molong

In the Village Zone

Key Spaces	Activities	Owner / Lot/DP	Area	Photo
Village Green Bank Street	Passive recreation area incorporating heritage items, public art, proposed war memorial, flag pole, seating areas and maintained grass areas.	Owned by Cabonne Council Lot 22 DP569966	~1,320m ²	
Molong Swimming Pool Hill Street (Mitchell Hwy)	Public swimming pool with toilet/change-room facilities and public amenity areas. Generally open during warmer months.	Owned by Cabonne Council Lot 2 DP1151531	~8,090m ²	
Dr Ross Memorial Oval Hill Street (Mitchell Hwy)	Sports-field and public park with new skate park and associated toilet and change-room facilities. Suitable for both active and passive recreation.	Owned by Crown Lot 1 DP1120962	~3.45ha	
Adams Corner Market Street (Mitchell Hwy)	Small public park with decorative garden for passive recreation only. Important gateway feature at northern entrance to Molong. There may be a Native Title and Land Claim across this Crown Land.	Crown Lands Lot 7303 DP1149586	~4,270m ²	
Molong Hockey Ground Cnr Bett & Dean Streets	Hockey grounds for active recreation and team sports.	Owned by Cabonne Council Lots 30-35 DP1089785	~9,700m ²	
Hunter Caldwell Park Shadforth St	Team sports ground for active recreation including soccer, football, touch football and cricket.	Owned by Cabonne Council Lots 1-11 Sect 219 DP758693	~15,500m ²	
East Molong Tennis Club Shadforth St	Tennis Courts.	Owned by the Trustees, East Molong Tennis Club - Lots 1&2 DP16660	~2,750 m ²	
Pillans Park Park Street	Small park for passive recreation.	Owned by Cabonne Council Lot 1 DP229187	~2,175m ²	

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Key Spaces	Activities	Owner / Lot/DP	Area	Photo
McGroder Park Wellington, Phillip & Smith Streets	Reserve No. 48134. Limited use due to access and maintenance issues. Drainage corridor. Currently there is a Native Title and Land Claim across this Crown Land.	Crown Lands – Council is Trustee Lot 7323 DP1152548	~4.61 ha	
Molong Bowling Club 8 Euchareena Road	Bowling Greens and Club.	Owned by Molong Bowling Club Lot C Parcel 12910 DP80964	~1.35ha	
Total Area			13.8ha	

Outside the Village Zone

Molong Golf Club & Showground Euchareena Rd (Outside Village Zone)	18 hole golf course and golf club. Showground buildings.	Owned by Molong Showground Trustee Lot 131 DP756883	~32.23ha	
Horse Arena Molong Cemetery Rd	Horse arena for rodeo and campdrafting events and other horse events.	Owned by Crown Lot 165 DP750133	~2.84ha	
Total Area			~35ha	

Table 13: Summary of major open spaces / recreation areas in the Town of Molong (as at 2010).

Supply & Demand

There are a range of passive / active and formal / informal recreational areas spread throughout Molong with over 13.8 hectares within the Village Zone and additional lands outside the Village Zone. With an estimated 1,711 people this equates to approximately 80m² per person. Molong is also fortunate to have a new skate park facility for youth. Therefore, there are reasonable facilities for the current population.

Issues & Strategies

Open Space: There is reasonably good level of open space per person in Molong (both inside and outside the Village Zone) and a range of recreational opportunities (both passive and active) for the current population. However, there may be additional recreation needs if the population continues to grow.

3.16. Vacant Land

Vacant lots are important as they can provide the potential for infill development within the existing Village Zone that may take up some of the projected future growth of each settlement.

3.16.1. Total Vacant Lots

A vacant lot is identified as any lot that does not currently contain any significant building (dwelling or business - active or vacant) and may be capable of supporting a dwelling. However, it may contain ancillary sheds, garages, gardens or septic systems on these lots and these lots may be held by an adjacent non-vacant lot. Figure 21 and Table 14 shows there are approximately 393 vacant lots in the existing urban zones (as at December 2009). Subject to consent, each of these existing lots is likely to be able to support a building/dwelling (assuming it meets the minimum lot size).

Zone	No. Vacant Lots	% of Total Vacant Lots
Village Zone	156	39.7%
Rural Small Holdings (West Molong)	53	13.5%
Rural Small Holdings (North Molong)	36	9.2%
Rural Small Holdings (East Molong)	148	37.7%
Total Vacant Lots	393	100%

Table 14: Summary of vacant lots in Molong's urban zones (as at December 2009).

3.16.2. Vacant Lots and Natural Hazards or Constraints

As the history section suggests, many of the settlements in Cabonne were created by the historical subdivision of land which sometimes did not take into account the natural hazards or topography that may make it difficult or costly to develop some lots.

As Figure 21 and Table 15 show, in Molong's urban zones, there are approximately 151 vacant allotments that have a low potential for future development due to natural hazards such as flooding, significant vegetation, difficult access, and steep gradients that would make development significantly more expensive and less likely to occur (Figure 21). In addition, sites that are highlighted in this Strategy for future industrial use are removed so that the remaining vacant land is able to support additional dwellings or businesses.

As a result, the total number of vacant lots (393) is reduced down to approximately 242 vacant lots that have a potential of being able to support a business/dwelling (subject to detailed studies and development consent). As these lots are already subdivided, it is assumed that they could be put on the market at any time and may be capable of supporting a dwelling (subject to consent). This is made up as follows:

Zone / Area	Vacant	Constrained	Unconstrained	% of Unconstrained
Village Zone	156	89	67	27.7%
Rural Small Holdings (West Molong)	53	19	34	14.1%
Rural Small Holdings (North Molong)	36	19	17	7.0%
Rural Small Holdings (East Molong)	148	24	124	51.2%
Total	393	151	242	100%

Table 15: Summary of vacant lots affected & unaffected by constraints (as at 2009).

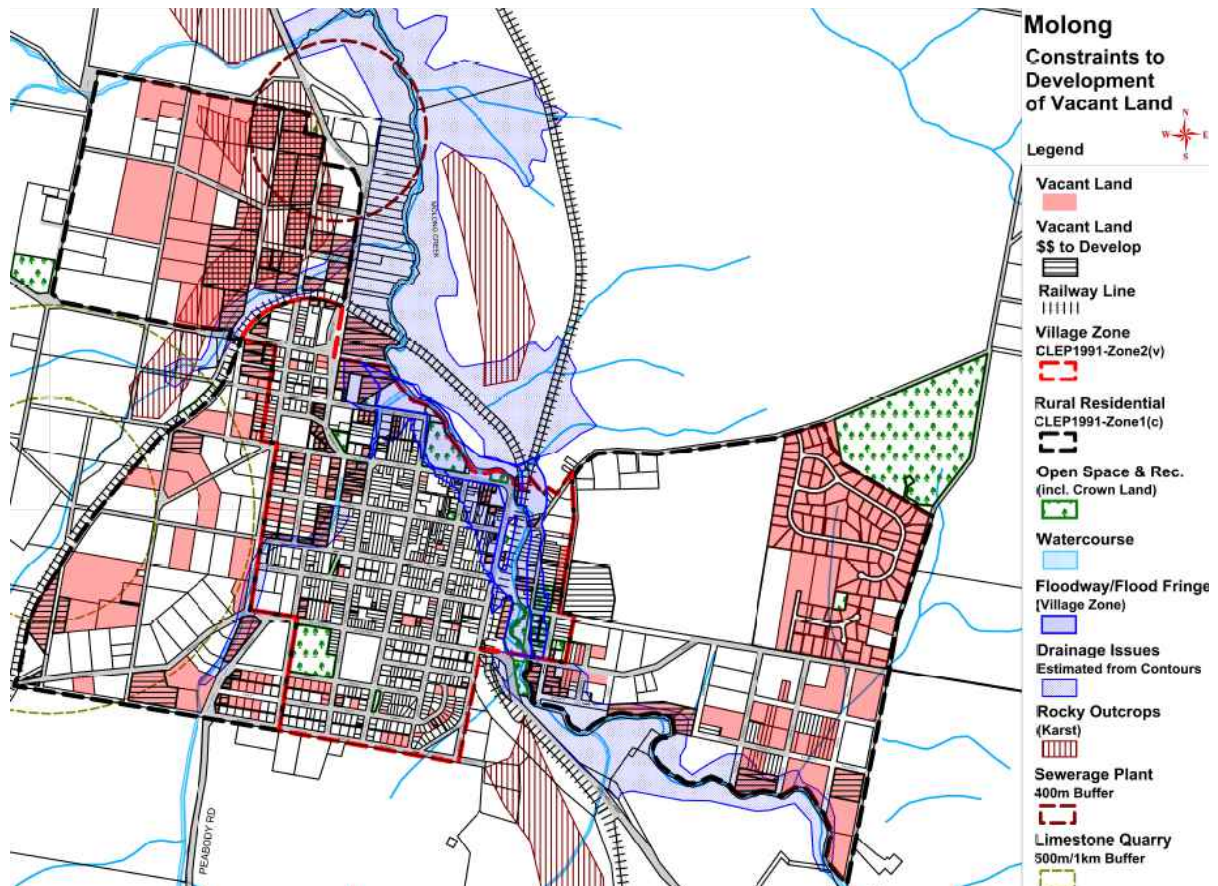


Figure 21: Vacant allotments (red) and those affected by constraints to development (black hatching) in Molong (as at December 2009)(Source: Council GIS 2010).

3.16.3. Constraints to Further Subdivision

Please note that any estimations of future subdivision potential of large lots are subject to detailed site studies and Council assessment of any subdivision proposal and cannot be relied upon by the Applicant/Community. It is an estimate for the purposes of this Strategy only.

Existing Controls

Under Clause 17 of CLEP1991 the minimum lot size ('MLS') for subdivision in the Village Zone is 500m² (for areas serviced by sewer – which includes all of Molong's existing Village Zone) and 2,000m² for those areas serviced by septic system).

Under Clause 16 of CLEP1991 the MLS for subdivision in Zone 1(c) (Rural Small Holdings) is 0.4 hectares (except for the West Molong Large Lot Residential Area where there is a moratorium on further subdivision at this time). Achieving the MLS is subject to other controls in those clauses and development consent.

Village Zone

There are approximately 20 lots in the Village Zone that are greater than 1,500m² in size and are likely to have the potential for subdivision down to a smaller size. This excludes the Crown land as issues such as native title and environmental hazards require further review.

Rural Small Holdings Zone (West Molong)

There are a number of constraints that would preclude any significant additional subdivision in the West Molong area including, but not limited to (see [Section 3.10.2 Limestone & Rocky Outcrops](#) for more detail):

- Limestone (rocky outcrops) that would make earthmoving and levelling a site expensive;

- Limestone (karst) that makes it difficult for sites to support a septic system;
- Karst underground systems that could be impacted by significant additional development;
- Proximity to the Limestone Quarry and blasting/vibration/dust;
- Council's current resolution that no further subdivision is permitted in this area.

Therefore, in the west large lot residential area Council is proposing to avoid further subdivision – except for the area east of McGroder Street that may be able to subdivide down to 4,000m² / 1 acre lots if the lots are connected to reticulated sewer (and preferably reticulated water). This would reduce the cumulative impacts on the karst system and the need for additional bores.

Rural Small Holdings Zone (North Molong)

There are a number of larger lots in North Molong. The current controls for the Rural Small Holdings Zone would prohibit subdivision below 4000m². Many of the existing lots that are unaffected by natural constraints are 2 to 8 hectares in size. However, due to constraints, limited road access, and the demand for larger lots it is estimated that the average size of future lots is likely to range from 0.4 - 1 hectare (say 0.8ha) in this area.

Rural Small Holdings Zone (East Molong)

There are already two approved subdivisions in the eastern section of East Molong that have been taken into account in the vacant land numbers. This leaves one large lot with an existing dwelling (78 hectares) and some medium size lots 1-2 hectares. It is assumed that there may be some future subdivision potential from the 78 hectare lot (subject to the owner's agreement) at an average lot size of 1 hectare / lot.

3.16.4. Likelihood of Development of Vacant Lots

It is important to note that the community often claims that some of these vacant small lots should not be counted for the purposes of infill development because the current owners are currently not interested in sale or further development of this land.

However, this Strategy is looking to review land supply over the next 30 years. Whilst some existing landholders may be currently reticent to make land available, over a 30 year period this position could change, particularly as land prices rise and people no longer need larger lots. Council can only make a 'guesstimate' of what percentage of lots may become available for sale or development over a 30 year period but this Strategy has made the following assumptions:

Historical Lots

Where there are unconstrained vacant small lots that have been present for 10 years or more, Council is proposing a very conservative estimate of 60% being available for purchase in the next 30 years as some lots may never be made available for development (see Table 16):

Area	Older Small Lots	% Likely to be Developed	Likely Lots to be Developed
Village Zone	58	60%	35
East Molong	26	60%	16
North Molong	15	60%	9
West Molong	10	60%	6
Sub-Total	109	--	66

Table 16: Estimated historical vacant small lots likely to be developed by 2036.

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Recently Created Lots

Where these vacant lots form part of a recent or proposed subdivision by a developer, Council generally assumes that 100% of these lots would be intended for sale (see Table 17):

Area	Recently Subdivided Lots	% Likely to be Developed	Likely Lots to be Developed
Village Zone	9	100%	9
East Molong	98	100%	98
Sub-Total	107	--	107

Table 17: Estimated recently created vacant lots likely to be developed by 2036.

Potential Future Subdivisions

Where there is potential for future subdivision then Council is assuming that only 50% of these subdivisions will ever occur and/or lots be made available (see Table 18):

Area	Potential Additional Future Lots	% Likely to be Developed	Likely Vacant Lots Created by 2036
Village Zone	~20	50%	~10
East Molong	~150	50%	~75
North Molong	~80	50%	~40
West Molong	~60	50%	~30
Sub-Total	310	--	155

Table 18: Estimated potential future lots created by subdivision likely to be developed by 2036.

Total Developable Lots by 2036

On this basis approximately 328 existing and future vacant lots could be potentially created and developed over the coming 30 years (assuming compliance with development controls).

Area	60% of Historically Subdivided Lots	100% of Recently Subdivided Lots	50% of Potential Future Subdivisions	Likely Lots / Detached Dwellings by 2036
Village Zone	35	9	10	54
East Molong	16	98	75	189
North Molong	9	--	40	49
West Molong	6	--	30	36
Total	66	107	155	328

Table 19: Estimated lots with potential to be developed for dwellings by 2036 in Molong (as at 2009).

Issues & Strategies

Infill Development Opportunities: There is reasonable opportunity for infill development within the existing Village Zone and the Rural Small Holdings Zone even after lots affected by natural constraints are discounted. In addition, Council has only assumed that certain percentages of these lots would ever be made available. Therefore, this is a conservative estimate of developable vacant lots. This estimate is heavily reliant on the majority of this growth occurring in East Molong as large lot residential development (189 lots). 54 lots will be taken up in the existing Village Zone. There is only limited future development potential in North and West Molong (19-20 lots each). It is assumed that the vast majority of these lots would be taken up for residential uses / dwellings. Vacant land for business and industrial uses is dealt with in more detail below.

3.17. Community Land Uses

Figure 20 shows the location of the key community land uses in the Molong. For the purposes of this Strategy, 'community uses' are defined as buildings, services, facilities and infrastructure that are not-for-profit and/or support the local community. As stated in [Chapter 2 – Cabonne Overview](#), community uses are permitted in a broad range of zones (including Village Zones) and, therefore, there is no need for a detailed analysis of supply and demand of land for these

uses. However, community uses are often a vital service for the community and provide employment, and social and economic support. A more detailed review of access to community services for all of Cabonne's settlements is provided in **Section 2.10 – Services & Facilities**.

3.18. Business Land Uses

Please note that services / facilities change regularly and this section and the following sections merely provide a 'snapshot' of key services / facilities in each settlement in 2010.

3.18.1. Existing Retail / Business (2010)

Business Locations

As Figure 22 shows, the majority of businesses in Molong's Village Zone are concentrated in the two blocks on either side of Bank Street between Gidley Street and Watson Street. Unfortunately, the majority of these two blocks are within the 1% Annual Recurrence Interval ('ARI') for flooding and are, therefore, flood prone.

There are also a number of businesses (and quasi industries) along the Mitchell Highway taking advantage of the highway frontage and passing traffic. There are only a limited number of local businesses that are not in either of these locations and some of these have industrial qualities that will be addressed in more detail in the next section.

The advantage of the compact nature of the 'business district' is that it clearly identifies a core business area that should be supported by future zoning. The aim will be to address the zoning needs of any businesses that are potentially outside any future business zone.

Post & Banking

Molong has a reasonable level of core postal and banking facilities considering its size. The aim would be to prevent any further loss of banking facilities. Current facilities include:

- Australia Post, 52 Bank Street;
- Commonwealth Bank, 68 Bank Street;
- A Redi/NAB ATM is available in Bank Street;
- Credit Union, Bank Street.

Essential Services & Groceries

Molong has a reasonable level of essential services and grocery shopping considering its size. The aim would be to supplement these with additional health related businesses and fresh food and grocery outlets. Current facilities include:

- SPAR Supermarket, Bank Street;
- The Molong Pharmacy, 43-45 Bank Street: prescriptions, agent for Diabetes Australia, photographic developing and printing, passport photos, Justice of the Peace;
- Trethowan's Molong Newsagency, 25 Bank Street;
- Molong Korner Store, 94 Edward Street - convenience store;
- BP Fuel and 100 Plus Video and Groceries, Cnr Hill and Gidley Streets;
- Molong Laundromat, Gidley Street;
- Butcher, Bank Street.

Rural, Landscape & Hardware Supplies

Molong acts partially as a rural and garden service centre for the surrounding catchment and has a reasonable level of existing services including:

- Minna Murra Home Hardware, Corner Bank Street/Mitchell Highway;
- CRT – Rural Centre, Watson Street/Mitchell Highway;
- Molong Garden Centre, 54 Hill Street.



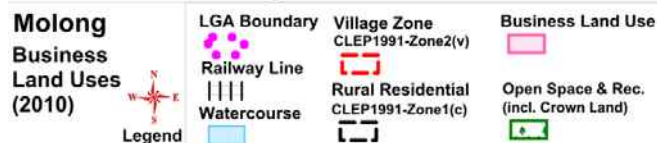


Figure 22: Location of existing business or business/industrial land uses in the Molong Village Zone (as at 2010).

Vehicle & Mechanical

Molong is able to meet some level of mechanical servicing including:

- Nelco Trading, 2 Watson Street (welding equipment and supplies);
- Molong Tyre & Mechanical, 7 Watson Street (Repco Authorised Services).

Clothes

Molong has a low level of local clothes shops including:

- Rolfeys Clothing, Bank Street;
- Splash, Bank Street;
- St Vincent de Paul Store, Bank Street.



Beauty/Hair

- Hair Studio, Cnr Gidley and Bank Streets;
- Hairdresser – Bank Street.

Other Professional Services

Molong has a limited range of specific commercial premises including:

- Yates Baker and McLean (accountants), Practical Business Assistance (financial & business services), Bank Street;
- Campbell Paton & Taylor (solicitors), Bank Street;
- Real Estate Professionals in Bank Street including: McCarron Cullinane; Ray White; Williams Machin First National; Landmark; and Harcourts; and
- Doctors, vets & health related services (see section above on Community Land Uses).

Issues & Strategies

- **Loss of Retail to Regional Centres:** Local shopping is significantly impacted by the proximity of Molong to Orange and access to higher level services in Orange. This may limit future potential for these services to be economically viable in Molong.
- **Boutique Shopping:** There appears to be a lower level of provision of clothes and boutique shopping in Molong compared to some other smaller towns (e.g. Canowindra). There is a query whether Molong could provide these services and avoid the need for shopping in Orange.

3.18.2. Tourism, Entertainment & Dining (2010)

Tourism and entertainment are important functions for a town of Molong's size and provide an alternative source of employment. The following businesses may service both locals and tourists to Molong:

Accommodation

Molong has a range of accommodation choices to meet a variety of needs and costs including:

- Molong Motor Inn, Gidley Street;
- Molong Caravan Park, Cnr Watson and Hill Streets;
- Villa Ash Serviced Apartments, Gidley Street;
- Platypus Hollow Bed & Breakfast (outside of Village Zone on Mitchell Highway).

Things to Do & See in Molong

- Molong Museum (awaiting restoration and reopening), Riddell Street;
- Jayes Art Gallery; Gidley Street;
- Yarn Market & Coach House, Bank Street;
- Art Space, Bank Street;
- Gelato Factory, Packham Drive (outside Village Zone);
- Cath's Place (Gym), Bank Street.

Pubs & Clubs

- Freemasons Hotel, Cnr Bank Street and Watson Street;
- Telegraph Hotel, Bank Street;
- Returned Services League, Riddell Street.

Café & Restaurant

- Jayes Café, Gidley Street;
- Barnsey's Cafe, 12 Bank Street;
- Molong Korner Store, 94 Edward Street;
- Molong Bakery, Bank Street;
- Molong RSL Club, Riddell Street;
- Wing Hang Chinese Restaurant, 18 Bank Street.

Issues & Strategies

- **Tourism Activities:** There is a limited range of tourist related activities in Molong that may warrant an extended stay. There may be opportunities to create additional activities associated with the heritage qualities of Molong or its history and to make existing activities more accessible.
- **Entertainment / Food Options:** There is a limited number of entertainment and food options in Molong, particularly at night-time and this may restrict access for tourists and passing traffic.

3.18.3. Existing Supply

Key Constraints

The key constraints to supply of land for businesses along Bank Street and Watson Street include flood prone land, heritage values and the heritage conservation area controls, and access constraints for larger vehicles and parking. The narrow allotments also limit some of the types of development that may be supported on these lots.

Infill Development

There are no vacant lots facing Bank Street that could support an additional business. However, a number of the existing businesses have surplus land that may allow some capacity for expansion, except where they are limited by heritage or access issues. For example, there is substantial area behind the SPAR supermarket and the hotel/pubs, but these may not be suitable for additional development.

Current Vacant Businesses

As at July 2010, there were six (6) vacant businesses in Bank Street including one (1) currently being refurbished. This includes the old Molong Café, the old picture theatre, the two buildings next to Barnsey's Café, the 3 shops adjacent to the Freemason's Hotel, and a small shop. Parts of the Western Stores are also potentially available for tenancy.

The majority of these are located close to Watson Street within the flood prone land area – but this would not be expected to impact on occupancy. A number of these are older buildings with heritage values that may be difficult or more expensive to refurbish and upgrade. However, it is assumed that small businesses that do not require substantial fit-out could inhabit these vacant premises if they are available on the market.

New Buildings

There have been very few new retail/commercial buildings constructed in the last ten years in Molong along Bank Street. This may partially be as a result of the heritage conservation area controls. However, it suggests that demand for additional floor space at this time is limited.

Change of Use and Adaptive Re-Use of Buildings

The dominant take up of new businesses appears to occur in existing building stock when other businesses close and there is a change of use. Some buildings have not changed their use over a long period. Others appear to have a change of use every few years. The work at 10 Bank Street is a good example of adaptive re-use of an existing building.

3.18.4. Potential Demand

It is difficult to say exactly what types of businesses may be attracted to Molong or which businesses may be economically viable considering the population and the propensity to shop in larger regional centres. An illustrative list of the kinds of smaller businesses that could theoretically be supported if the population were to show small but steady growth may include, but is not limited to:

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- Bakery
- Beautician
- Fruit & vegetables (Grocery store)
- Larger sports centre
- Takeaway / restaurants
- Clothing stores & shoe shops
- Additional service station/highway centre
- Associated health industry retail
- Amusement centre
- Internet / computer cafe

Most of these businesses (except for the sports centre, service station, or bakery) do not generally require large footprint buildings and should be able to take up space within existing vacant businesses or expanded business sites. Sports centres, service stations or bakeries may need larger sites or need to be located on key traffic routes.

3.18.5. Proposed Business Area(s)

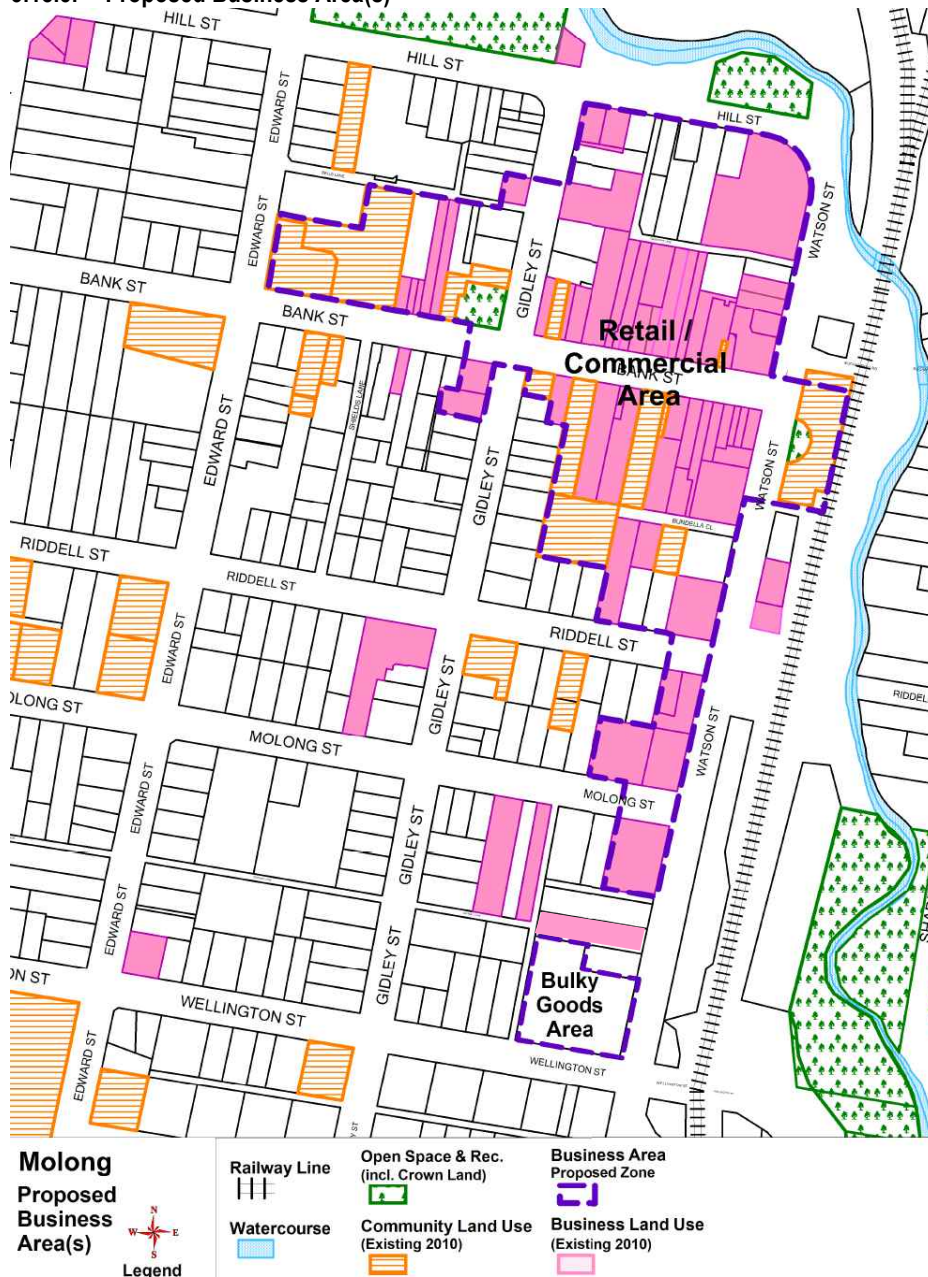


Figure 23: Proposed future retail/commercial area for Molong.

Retail/Commercial Businesses

Based on this review, it would appear that in the next 5-10 years the existing retail/commercial area could provide the necessary local retail and commercial services to meet a low but steady growth pattern for Molong. The proposed area for businesses (retail/commercial) is highlighted in Figure 23.

Bulky Goods Area

In south-east Molong, the lot that was previously occupied by Tri-Steel (corner Watson Street & Wellington Street) and previously operated as a light industrial and industrial retail activity with the production and sale of steel sheds. Sheds cover a significant percentage of the site.

The site sits at the southern gateway to Molong and a light industrial use may not be the highest and best use of that site both from an economic and a visual perspective. It is also surrounded by residential uses and the future re-use of the site for industrial purposes has a high likelihood of increasing land use conflicts (as suggested by some correspondence from the local community).

For these reasons, it is proposed that the future zoning for this site may be used for businesses that require larger footprints such as rural and garden centres, bulky goods premises, and wholesale supplies etc. The gateway site lends itself to a business use as it has excellent highway visibility. A business use is more likely to have an improved design and street character than an industrial premise.

This is a slightly different classification than the business use for the core retail/commercial area along Bank Street as a business development classification is not intended to support retail / commercial activities that would compete with the primary business centre along Bank Street. However, in order to retain flexibility it may also be necessary to permit light industries uses on the site where they address noise and operational issues.

3.18.6. Existing Businesses outside the Proposed Business Area

Council recognises that there are some existing businesses that are outside the proposed business (retail/commercial) area noted above. Some of these businesses are classified as industries and are likely to be included in proposed industrial areas (see the next section).

In addition, some other types of businesses (such as hotel/motels, neighbourhood shops and home businesses / home industries) may also be permissible in a residential zone so they may not require a business zone. However it is important to note that 'home businesses' and 'home industries' have restrictions as to their size, impacts and number of employees that may limit the growth of some activities.

Other businesses may need to rely on 'existing use rights' (see [Section 1.9.9 – Existing Use Rights](#) for more details). In summary, these businesses can continue to operate if they have a lawful approval, they can make alterations and additions, and there is some potential for limited expansion. Businesses that may fall in this category include the Molong RSL Club, Molong Garden Centre on Hill Street, the Rural Centre on Watson Street, and possibly Hydroilex Groundwater Geosciences on William Street. Land owners should get their own legal advice on their status when the new LEP is available for consultation.

3.18.7. Areas for Future Expansion

If the demand for land for business uses exceeds the predictions for the next 5-10 years then Council should commence identification and investigation of additional land that would satisfy the land requirements for this use.

The aim should be to build on and complement the existing core business area. However, any future business lands should be located, where possible, outside any flood prone land within the 1% AEP and should seek to minimise impact on heritage items and the conservation area.

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Figure 24 indicates the preferred area for future investigation of an extension of the core business area. This is located on Bank Street between Gidley Street and Edward Street. This area is outside the 1% Annual Exceedance Probability ('AEP') flood prone lands and immediately opposite some community and existing business uses, thereby reinforcing the 'main street' qualities of Bank Street.

Most of this investigation area is currently utilised by dwellings or dwellings that have been converted to businesses. Some of these dwellings may have some heritage value and should be preserved and adaptively re-used. Other dwellings may be suitable for demolition in the future should new building stock be required. However, in the interim, home based businesses may choose to utilise the existing building stock to minimise development costs.



Figure 24: Areas for future investigation for business uses in Molong's Village Zone.

3.19. Industrial Land Uses

3.19.1. Overview & Definition

The definition of 'industrial uses' is detailed in [Chapter 1 – Overview](#). In summary, industrial uses are distinguished from business uses in that there is an element of production, manufacturing, repairing, processing etc rather than just the sale of goods or services.

The Rural & Industrial Strategy breaks industrial land use types down into manufacturing, mining, value adding agricultural activities, and tourism. The focus of this chapter is on manufacturing with some limited review of mining. Agricultural activities are more likely to be provided in the rural zone and tourism is addressed as part of the business section above.

Issues & Strategies

Limitations to Industrial Review: This section will review the potential for local scale industrial land uses in and around Molong as an essential provider of employment and economic growth. This section focuses on manufacturing and ancillary uses to mining development but does not look in detail at rural or tourism industries. This section also excludes the majority of home industries that are small scale / low-impact and will generally be provided for in the residential areas.

3.19.2. Land Requirements

The land requirements and principles for industrial land uses are detailed in [Chapter 1 – Overview](#). Finding appropriate land for industrial uses is one of the key issues facing Molong. Key opportunities for Molong include proximity to the Mitchell Highway and Broken Hill Railway Line for transport of goods, a strong base population, access to high voltage electricity, centralised water and sewer, existing established industrial activities and future potential piped natural gas. Key challenges include lack of flat land that is not affected by karst, difficulty sourcing land for industrial uses due to potential land use conflicts, lack of secure water supply, lack of existing natural gas, and difficulty competing with more established industrial areas such as Orange, Parkes and Dubbo.

Clearly Identified Industrial Areas

The existing Village Zone permits a wide range of uses, including industrial uses (subject to consent). Therefore, industrial uses are theoretically permissible anywhere in the zone, subject to addressing key issues. This provides no certainty to someone investing in land for a sensitive land use (such as a dwelling) that an industrial land use is not placed adjacent or near to that use. Therefore, the development application process for industrial uses in a Village Zone is often more complicated, lengthy and expensive than is necessary if there were to be a clearly identified industrial area.

Molong has never had a defined industrial area (other than North Molong Industrial Area) and this has resulted in industrial premises being located in close proximity to dwellings and vice versa (Terra Consulting (2000) p.4). The aim of adopting an 'industrial zone' or area is to clearly identify to the community and Council where these uses are suitable and provide a suitable buffer zone.

Availability / Ownership

A key constraint is the ability to identify land that the land holders are willing to use or sell for industrial purposes. Whilst this Strategy can suggest sites that are environmentally suitable for industrial land uses, it is up to the individual land holders and the economics as to whether it will be made available. For this reason, it is often preferable to identify larger sites where there is only one or a limited number of land holders to minimise difficulties associated with amalgamating the land. It is also preferable to identify land that is available for sale/lease.

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Topography & Geology

Industrial land uses often need larger sites with limited slope/gradient to allow the practical and economical establishment of large buildings, plant and infrastructure without the need for extensive earthworks and site stabilisation (Terra Consulting, 2000). This is one of Molong's greatest challenges as it has a rolling terrain with significant rocky limestone outcrops that make it difficult or expensive to create flat sites for industrial buildings. In addition, there is a concern that heavier types of industry that could impact on sensitive karst systems through cut and fill, erosion and sedimentation, and potential for chemical and liquid waste release. The preference would be to identify sites outside the known karst systems or where surface karst is limited.

Infrastructure Issues in Molong

Industrial sites also need an appropriate level of infrastructure with road and/or rail access, larger supplies of water and sewerage capacity, and it would be advantageous for high energy consuming industries to have access to high voltage electricity and/or natural gas. Best planning practice would ensure that any industrial estate has the potential for access to these to address the needs of a variety of industrial operations.

Molong has a good location on the Mitchell Highway and the Broken Hill Railway Line with close proximity to Orange. However, there is no existing rail spur / transport interchange in Molong to allow the interchange of goods from road to rail (except the spur to Copper Hill).

Molong has potential access to high voltage electricity networks (Transgrid / Essential Energy) but this is not currently utilised. The high voltage easements run to the east and south of the town which would indicate possible locations for future industrial estate. Development to the west is likely to be limited to low voltage electricity lines.

There is no exiting piped natural gas supply to Molong which limits energy intensive industries – but there may be a proposal for a pipeline from Young to Wellington passing near Molong in the near future (subject to costs of local connection). So whilst energy is a potential point of difference for Molong in the future, the existing potential for access is limited.

Discussions with a number of existing local industrial owners indicates that the existing industrial demand may not require land with access to centralised water or sewer (on-site systems may be sufficient) and only low-voltage power may be required and no natural gas as these industries are low-level manufacturing and fabrication. Therefore, sites may not need to be immediately adjacent to the town service. However, if sites are identified without these utilities then they will not have the future potential to expand to contain larger-scale industries that could limit growth potential.

Land Use Conflicts/Integration

A key aim in identifying future industrial lands is to minimise land use conflicts, particularly by incorporating buffer zones to sensitive land uses (e.g. residential / community uses) to minimise impacts and avoid restrictions on expansion and operation.

History shows that there has been reticence in the Molong community to clearly identify industrial land and this may be due to the fact that any site would result in land use conflicts with adjacent land owners so it is difficult to get clear support. This is why any lot needs to be sufficiently large to be able to incorporate buffers to any adjacent existing sensitive land uses such as dwellings, schools, watercourses and other sensitive areas (see [Section 1.9.3 – Industrial Land Uses](#)) for recommended buffer distances to industries).

However, it is also important to attempt to locate industrial uses in reasonable proximity to existing settlements to improve access for employees and access to town amenities that can make employment more sustainable rather than identifying sites a significant distance from town. Due to the constraints in Molong the acceptable distance has been extended to 3-4km distance from the town centre.





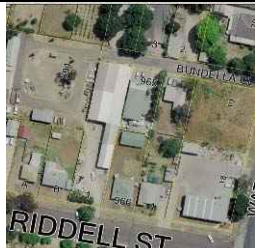


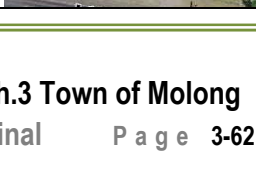
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3.19.3. Existing Industries (2010)


The following quasi-industrial or industrial activities are located within Molong (Table 20):

Village Zone

Name/Owner	Address/Title	Site Area	Activity	Photo
Mix of Businesses	Enterprise Place Lot 24 DP 1041772	~0.77ha	Steel fabrication Mix of light industries	
Bell River Homes	Enterprise Place Lot 275 DP750170	~0.88ha	Steel and dwelling fabrication	
Shed	Enterprise Place Lot 14 DP 849069	~0.12ha	Refrigeration construction	
International Measuring Equipment (IME)	Enterprise Place Lot 20 DP849069	~0.15ha	New location for IME – Surveying & measuring equipment distribution	
Davimac Pty Ltd	Lots 13-14 DP758693 (and covering Lots 15-16 rear)	~0.76ha on four lots (incl. dwelling)	Machinery & steel fabrication	
Ultra Steel Sheds & Garages	Lot 10 DP758693 16 Molong Street	~0.24ha (incl. dwelling)	Steel, Sheds & Garages fabrication	
Tri Steel (Note: This site is dealt with in the business section above)	Cnr Wellington & Watson Streets – Lot 70 DP747005	~0.71ha	Steel and shed fabrication (now closed/vacant)	
GrainCorp Silos	Lot 1 DP819896 Lot 2 DP819896	~0.63ha ~0.84ha	GrainCorp Silos Storage Area (Vacant)	
Centa-Pak Enterprises	6 Bundella Close Lot 1 DP996131	~0.18ha	Cardboard box manufacturing & printing	
Country Energy Depot	43 Watson Street Lot 18 DP758693	~0.2ha	Essential Energy electricity depot with storage & repairs	
Telstra Depot / Exchange	Lot 591 DP776796 Bundella Close	~0.33ha	Telstra Exchange & storage area	
Cabonne Council Depot	Lots 6-10 DP758693 Lot 1 DP256928 Riddell Street	~1 ha	Council depot with storage, repairs, fuel station and washing areas	
Caldwell	Lot 1 DP102052 Lot 1 DP772723 Lot 11 DP758693 Hill Street, Molong	~0.57 ha	Wreckers, junkyard, recycling yard	

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Name/Owner	Address/Title	Site Area	Activity	Photo
Molong Readymix Concrete	Bett Street	2 Lots – 0.38ha	Concrete mixing & distribution	
Total Area		~7.76ha		

Zone 1(c) (Rural Small Holdings) or Zone 1(a) (General Rural)






Name/Owner	Address/Title	Site Area	Activity	Photo
GIMA (Gelato Factory)	Lot 148 DP750170 Wellington Street	~0.53ha	Gelato production & distribution	
Printers	Lot 1 DP708867 Watson Street	~0.56ha	Printing facility (currently fire damaged and not operational as at Dec 2010)	
Molong Limestone Quarry	Lot 193 DP750133 Lot 11 DP1117298	17.64ha 9.69ha	Limestone Quarry (Active)	
Industrial Estate	172 Hill Street (Cnr Starlea Road & Hill St) Lot 1 DP725175	~4.98 ha (~2.5ha for industrial dev.)	Vacant land. Approved Subdivision for 7 lots ranging in size from 2380m ² to 6525 m ² (excl. Lot with creek).	
Packhams Concrete (Pac Crete)	231 Packham Drive Lot 1 DP750170	~1 ha of larger rural block	Concrete production and distribution facility	
Total Area		~31.92ha		

Table 20: Existing industrial uses in and around Molong (as at 2010).

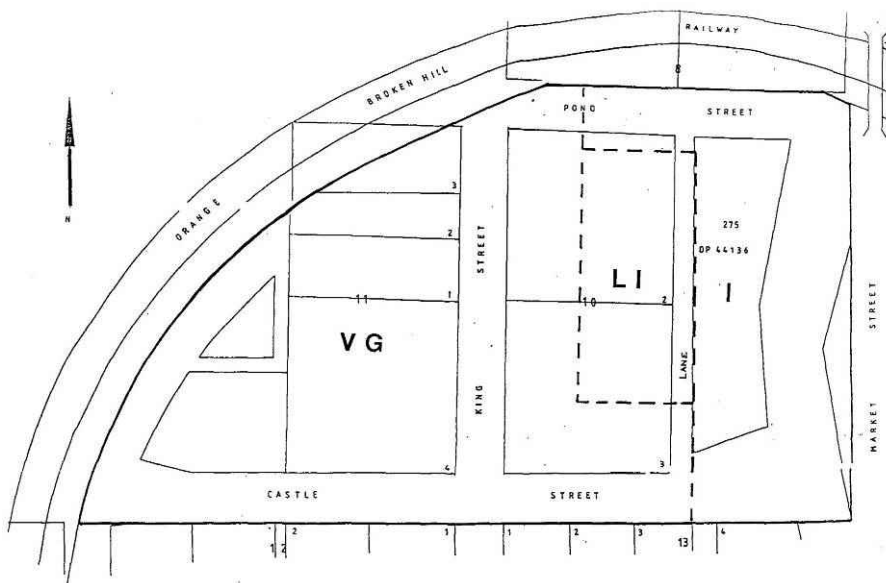
Issues & Strategies

Existing Industries: As at 2010, there is a range of existing industrial uses in and around Molong. There are several manufacturing industries associated with metal fabrication of sheds, homes, machinery etc, and some specialised manufacturing and printing facilities. These industries provide essential local employment and economic growth in Molong and need to be supported and sustained. Existing industries potentially indicate a demand for light manufacturing and specialist industries that do not necessarily require a highway frontage.

3.19.4. Zoned Industrial Areas

As Molong has a Village Zone under CLEP1991, industrial uses are permitted with consent throughout the Village Zone. In addition, industrial uses are permissible with consent in Zone 1(a) General Rural areas where a number of merit issues are addressed.

The only area in Molong that has formally being identified for industrial uses is in North Molong on Enterprise Lane in accordance with DCP No.8 – North Molong Industry (January 1995) (Figure 25). This area is identified in a DCP only and does not have the full protection of a 'zone' under the LEP.



NORTH MOLONG INDUSTRY DEVELOPMENT CONTROL PLAN No. 8

Figure 25: North Molong Industrial Area (Source: DCP No.8). (Please note that subdivision has changed the allotments. Pond Street no longer exists).

Figure 25 shows the area set aside for specific land uses as follows:

- 'I' - Industrial – Industrial uses encouraged (excluding offensive or hazardous industries). Residential use restricted to ancillary residences associated with industrial uses only;
- 'LI' - Light Industry – Industrial uses encouraged that do not interfere with the amenity of the neighbourhood;
- 'VG' – Village General – Village residential development. Industrial development only acceptable if associated with a residence on the land.

Issues & Strategies

North Molong Industrial Area: Whilst the concept of North Molong Industrial Area was appropriate this area has now been nearly fully developed and lacks further capacity for growth. The original concept was flawed in that it allowed the development of residential uses in close proximity to industrial uses which prevents further expansion of the existing industrial area and limits the types and impacts of industrial operations due to a lack of a buffer zone.

3.19.5. Existing Supply of Industrial Land

Overview

As shown in the sections above, the total area of existing industrial sites (excluding extractive industries and home industries) both inside and near to the Village Zone is approximately 11-12 hectares.

Vacant Sites

It is difficult to determine how much vacant industrial land is available because industrial uses are permitted with consent throughout the existing Village Zone and could potentially utilise a range of existing vacant sites. However, for the purpose of this Strategy it is assumed that new industrial activities would only occur in existing industrial dominated areas to minimise potential land use conflicts. The following vacant land is likely to be available for industrial expansion:

- **Jamnev Holdings** - Existing approved industrial sites to the west of the railway line and approximately 2.5 hectares of land broken up into 7 sites ranging in size from 2,380m² to 6,525m² (excl. land constrained by the watercourse);
- **North Molong Industrial Estate** – Lot 23 DP1090896 – Vacant lot at end of industrial estate with lot size of ~1,350m².

Therefore, there is only estimated to be approximately 2.5 hectares of vacant land currently available for industrial uses and this is made up of 8 sites, the majority of which are less than 3,000 m². These would be classified as 'small' industrial sites and would be best suited to smaller 'local' light industrial operations.

Expansion of Existing Facilities

Additional industrial growth can also occur through expansion of existing facilities on existing industrial sites. Unfortunately, in Molong there are very few existing industrial sites that could expand on the existing site. Either the shed areas are already taking up greater than 70% of the site area (e.g. North Molong Industrial Estate) or the existing storage areas take up all remaining undeveloped parts of the site (e.g. Caldwells). Therefore, for the purpose of this Strategy there is no potential for expansion of existing facilities. This is supported by verbal consultation with most major industrial operators.

Change in Use

There is some potential for existing industrial operations that are not using their sites to the maximum potential to undergo a change of use to more intensive industrial operations (e.g. Caldwells). However, this would require the identification of additional land to allow the existing operation to relocate. Since there are very few sites available, this does not significantly increase the overall supply of industrial land.

Issues & Strategies

Supply of Industrial Land: The entire supply of industrial land in Molong is as little as eight (8) small sites (<3,000m²) and there are no larger sites available in and around Molong to support industrial growth. Therefore, there is limited supply and it cannot meet future demand for a range of industrial types.

3.19.6. Existing Industrial Demand

It is important to note that this is not a comprehensive review of industrial demand in Molong as this would be a substantial study. This analysis seeks to summarise existing work and community perception and feedback to highlight obvious trends in industrial demand.

Regional Demand

The Rural & Industrial Strategy sets out the key competitive strengths in the sub-region for industrial development (**Issues Paper - Section 8.2.1 – General**) including a strong agricultural and viticultural base, developing mining sector, strong manufacturing sector, proximity to the Sydney region, good transport links, distribution hub for Central and Western NSW, Centre for

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Cabonne Settlement Strategy

government and private sector administration, and high quality community, cultural and recreational resources.

Molong may potentially be a suitable location to take advantage of many of these opportunities. However, it is important to recognise that it would also be competing with a number of regional centres including Orange, Parkes, Blayney, Dubbo and Wellington and these centres may have less constraints to industrial development, improved access to employable workforces, rail transport, higher level utilities, and existing complementary industrial uses in approved industrial zoned lands. These constraints to Molong are unlikely to change in the short to medium term (5-15 years) – so Molong needs to find niche areas where it is economically feasible to increase industrial uses.

It is important to note that manufacturing *"would be unlikely to be the engine for future growth in economic activity – and hence demand for industrial land – that it has been in the past. The potential uncertainties associated with the manufacturing sector highlight the importance of diversifying the economy of the Sub-Region to improve its overall economic sustainability"* (Local Profile, p.72 – summarising Leyshon (1999)). However, this is some potential for growth in value-adding agricultural activities and mining related industries. As suggested above, there is also a potential to expand existing industries in Molong.

Historical Review of Local Demand

Industrial demand in Molong has been reviewed in Terra Consulting (January 2000) *Strategic Planning Overview for Molong* (for more detail see [Section 3.22 – Previous Land Use Strategies](#)). This report stated that:

"The demand for industrial development at Molong is considered to be modest. A review of Council's development records indicates that approximately 18 industrial developments have occurred in or around Molong in the period 1980 to 1997. These indicate a need for approximately 1 industrial site per annum" (Terra Consulting (2000) p.8).

In addition, the Cabonne Council (2008) Sustainable Land Development Strategy & Action Plan (Draft) states that:

"On review there have been approximately 6 industrial development applications approved in the Molong postcode from 2003-2004. However, many of these were for extensions/additions to existing industrial purpose buildings ... This would indicate a need for approximately 1.5 industrial sites per annum" (Section 6.2)

However, this Strategy supports the statement that

"Given that Molong has never had a formal industrial estate (other than the North Molong Industrial area) it is difficult to present a true reflection of land needs and demands for industrial land. However, it is felt that the potential to attract new industries may be enhanced if there were suitable sites available for such development" (Section 6.2).

Expression of Interest

A perception of demand outstripping supply is supported by historical indicators that Council has been seeking to identify industrial land for quite some time. Council went as far as publicly requesting Expressions of Interest in 2007 for landholders interested in selling their land for industrial purposes. There were limited formal & informal submissions and these were investigated by Council but, for a range of reasons, these sites never proceeded.

A key aim of identifying potential industrial land is to avoid a reactive approach to identifying land when Council is approached by key industrial operators that can sometimes result in the identification of inappropriate sites or operators seeking sites that are not in the best interest of the community.

Consultation with Industrial Operators (2010)

Council has been speaking to a range of existing industrial operators in the preparation of this Strategy. There appears to be a clear and consistent message that there is insufficient supply

of industrial land in and around Molong and that existing local light industrial uses have either outgrown (or will shortly outgrow their sites).

This feedback is not just speculative. Several key industrial operators have clearly indicated that the market would support a substantial increase in the size of their operations and they are currently looking for land for this purpose as their current sites are built-out. The majority of these operators are looking for sites for warehousing, packaging, fabrication, and processing and do not necessarily need a major road frontage for retail sales. This may include fabrication of agricultural machinery, steel & shed structures, packaging and printing facilities etc.

Council has spoken to at least two operators who are looking for sites of sizes upwards of 5-10 hectares. Each operator may only require 2-3 hectares in the next 5 years but would like the opportunity to expand to 5-10 hectares as market opportunities arise. Based on the fact that 2-3 operators need 2-3 hectares in the short term and up to 5-8 hectares over 10 years – this results in a potential demand for 10 hectares in the short term with potential to expand to 25-30 hectares in the medium term.

If an industrial estate of this size could be created, then it would be expected that a minimum of an additional 2-4 new industries could be potentially attracted resulting in a combined demand of 15-20 hectares in the short to medium term and 40-50 hectares in the medium to longer term. The preference is that any site chosen would provide potential to expand within a limited distance of the initial site rather than sites spread around Molong to minimise potential for land use conflicts and allow for more efficient use of infrastructure.

Issues & Strategies

Demand for Light Industrial Land: Whilst historical demand has not been high, this may be as a result of limited supply to attract new opportunities. Based on expansion of existing industrial operations only, there is a perceived demand for an additional 5-10 hectares every 5-10 years in the Molong area. This does not take into account the attraction of any new businesses or related industrial areas for mining or value-added agriculture. Therefore, the immediate identification of a 10 hectare site would be advised with potential to grow this to a 20 or 30 hectare site if possible.

3.19.7. Sites for Small Scale Light Industry (Inside or Adjacent to Urban Zone)

This Strategy proposes that existing industrial areas are identified for future light industrial zones in Molong to ensure that industrial activities can continue to operate and expand on these sites. This includes the North Molong Industrial Estate (Enterprise Place); the new Industrial Estate (Starlea Road); the existing quasi-industrial area around the Council Depot & Davimac; and the existing GrainCorp sites around the silos between Watson Street and Molong Creek.

North Molong Industrial Estate (Enterprise Place)

The North Molong Industrial Estate is nearly completely built out except for one vacant site (of ~1,350m²) at the north-west corner adjacent to the railway line (Figure 26). It is appropriate that this area is zoned for light industrial uses in any future LEP as this area has been clearly identified in DCP No.8 for these uses.

The proposed light industrial area would have an area of ~2.4 hectares and has a suitable buffer to the north (the rail line) and the east (the highway) but there is encroachment from residential uses to the west and south that may limit what operations can utilise these facilities without impacting on residential amenity.



Figure 26: Proposed light industrial area on Enterprise Place (North Molong) (Source: Council GIS 2010).
South-West Molong (Council Depot / Davimac / Church Site / Gelato Factory)

There are also existing industrial sites in south-west Molong including the Council depot, Davimac, the Gelato factory. All of these sites would be suited to a light industrial zone in any new LEP. However, as the community is aware there is a strong need to identify suitable lands for employment generation and light industry with expansion potential in and around Molong. If only existing 'industrial' sites were to be included in a light industrial area then this would result in a 'fragmented' approach that did not allow for expansion of these facilities and the impacts from existing facilities would still potentially conflict with increased dwellings on under-utilised adjacent lots.

Therefore, the preferred approach is to recognise that the entire area may be suitable for industrial expansion even though a significant number of lots contain existing dwellings and are unlikely to change in the short to medium term. This area is also highly suitable because a number of adjacent lots between Riddell Street and Wellington Street are significantly under-utilised flat sites and may offer opportunities for future light industrial expansion (subject to flood / drainage issues). In addition, there are reasonable setbacks (50-100m) to adjacent dwellings in each direction providing a buffer to industrial operations. This area was nominated for industrial uses as early as 1990 (see [Section 3.22 – Previous Land Use Strategies](#)).

The total potential area for industrial uses includes Davimac (0.57ha), Orange Aboriginal Land Council (0.38ha), the church site (1.2ha), Council's depot (1.02ha), and the land with existing dwellings (3.83ha excluding the curtilage of the heritage item) – a total of 7 hectares.

The existing dwelling owners can rely on their 'existing use rights' to know that some residential expansion activity may be permitted and this zoning does not force them to sell or relocate. The nominated heritage dwelling facing Wellington Street would need to be protected and a heritage 'curtilage' around the immediate garden may be able to achieve this (subject to detailed heritage studies). The existing church use on George Street may also be a permissible use in a light industrial zone so it is not necessarily in conflict if it remains but the southern half of the site would be a good site for short term industrial consideration.

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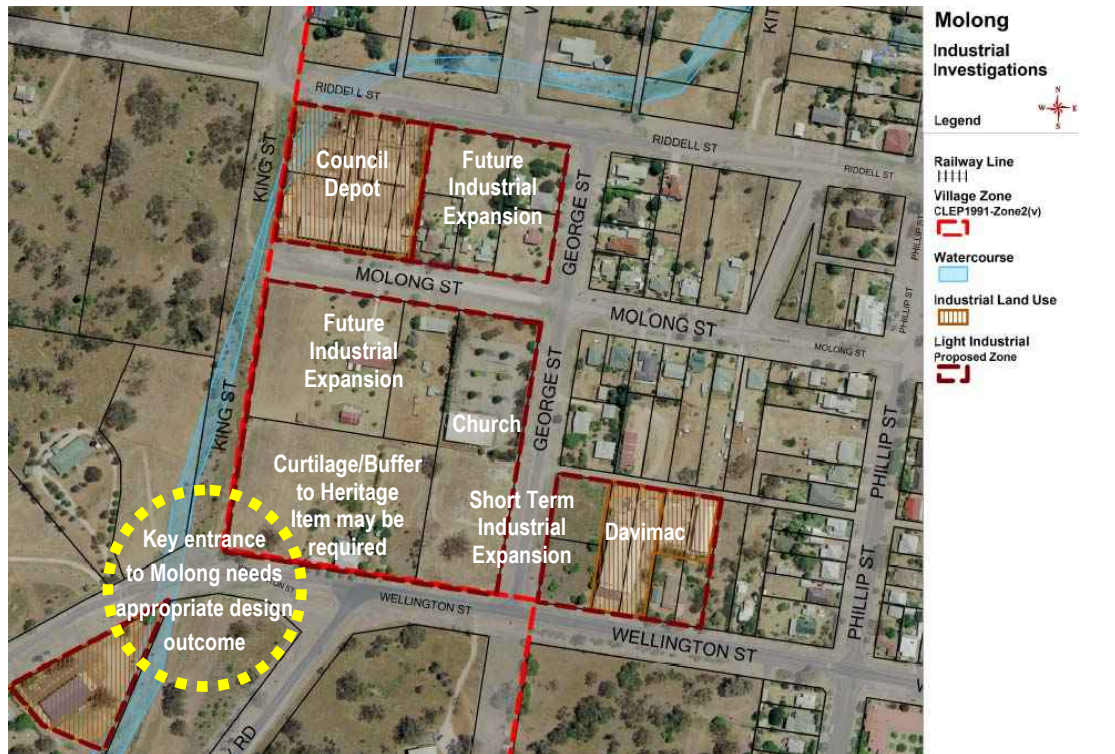


Figure 27: Proposed light industrial area and area for future investigation in south-west Molong near Wellington / George / Molong Streets (Source: Council GIS 2010).

West Molong (Starlea Road)

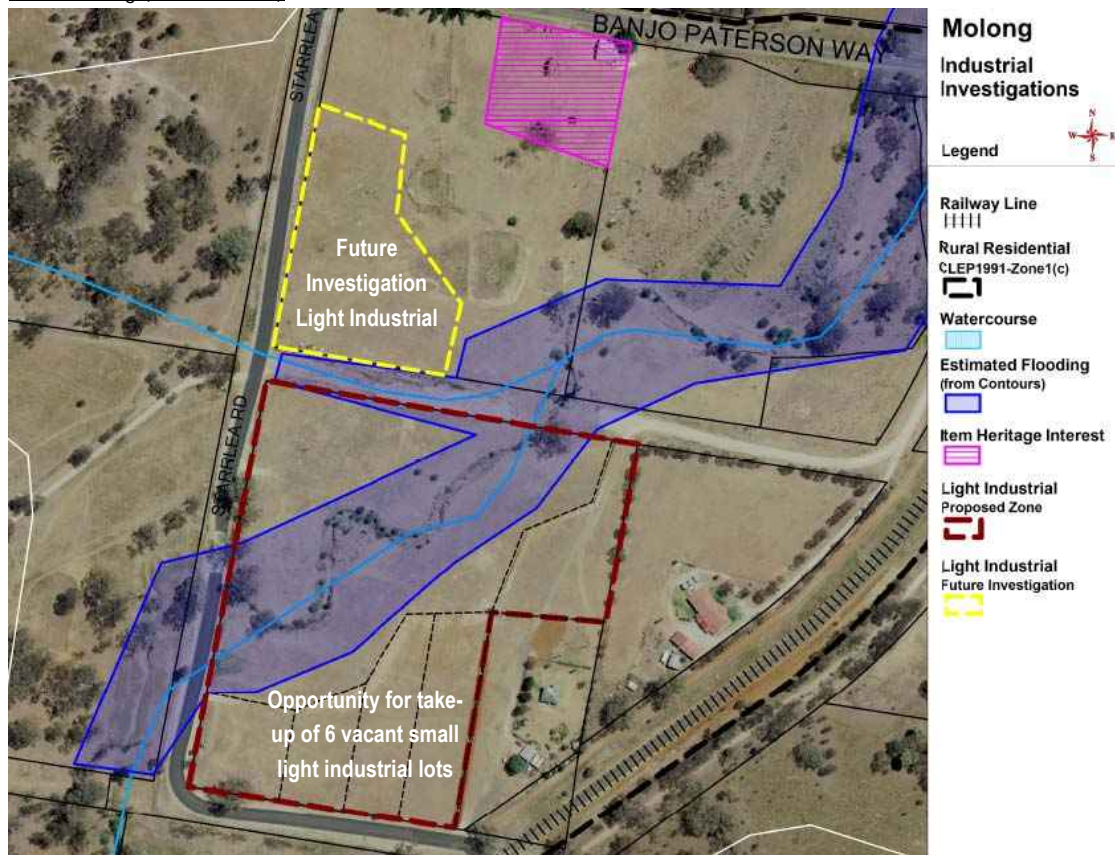


Figure 28: Proposed light industrial area and area for future investigation on Starlea Road (West Molong) (Source: Council GIS 2010).

To the north-west of Molong in the rural zone the approved subdivision of the Jamnev Industrial Estate to the west of Molong on Starlea Road will provide 6 industrial lots ranging from 2,380 m² to 4,580m² (Figure 28). These are currently vacant but are for sale. It is proposed that this area is zoned for light industrial uses since the sites are relatively small and in proximity to some dwellings.

There is also the potential to utilise the existing infrastructure (roads / electricity etc) for the existing industrial estate to extend into land to the north of Thistle Street / east of Starlea Road. The majority of this land is not suitable due to the steep gradient, old heritage dwelling, and drainage channels/dams. However, a 1 hectare piece of land in the south-west corner adjacent to Starlea Road/Thistle Street could be useful for light industrial uses in the future (subject to detailed studies).

Tri-Steel Site (Watson/Wellington Streets)

This site is dealt with in the business section above. Whilst the proposal is that this site would be in a business area as part of the new LEP, it would retain existing use rights for the approved use of the site if the existing activities recommence without a substantial break. The longer that this site remains vacant then the lower likelihood of an industrial use being permissible.

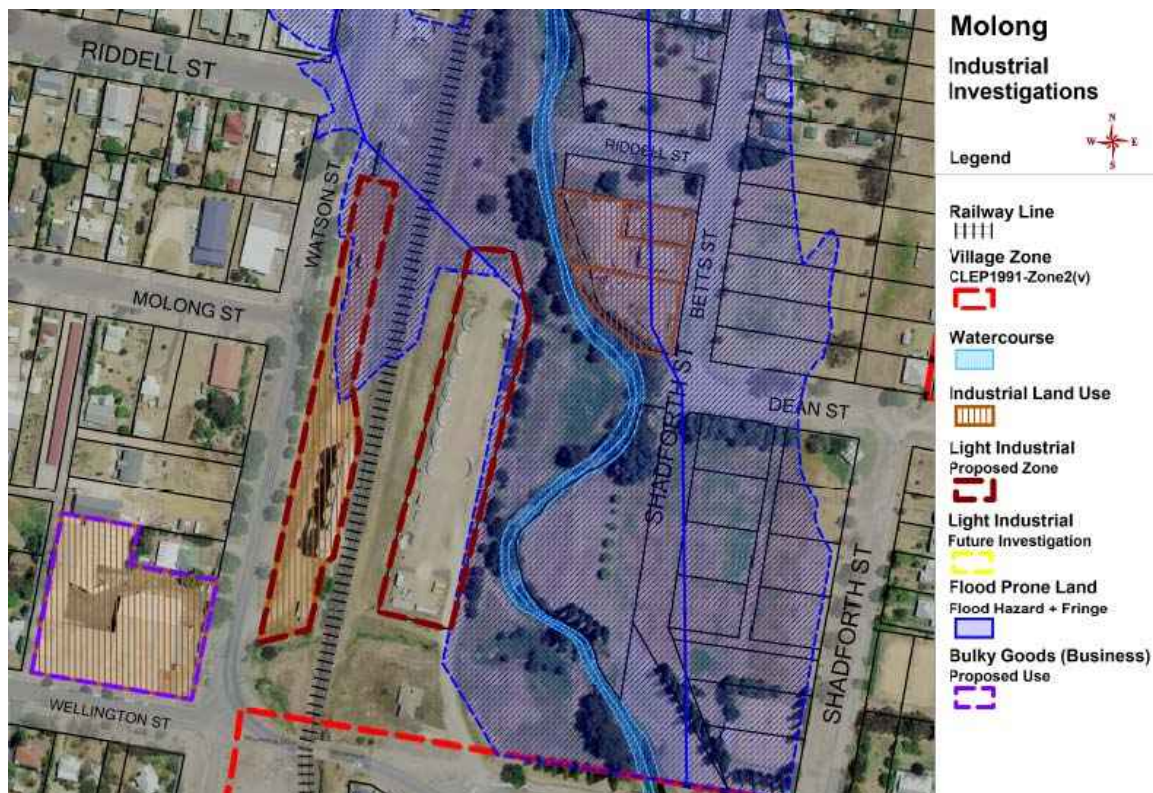


Figure 29: Tri-Steel site and GrainCorp sites near the Mitchell Highway (Source: Council GIS 2012).

GrainCorp Silos and Storage Area

GrainCorp owns the land immediately adjacent to Watson Street / Mitchell Highway (including the grain silos) as well as the flat raised storage area between the railway line and Molong Creek (Figure 29).

The grain silos are effectively an 'industrial type' facility and their operations should be protected to support primary production and rural industry so a light industrial zone is likely to be suitable. The site has an area of ~0.63 hectares. However, some of the northern part of the site may be affected by flooding. There is a low likelihood of any additional industrial development on this site.

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The storage site is an interesting vacant site in that it is isolated from the highway but it has access from the old highway route. This majority of this site appears to be outside the flood hazard and flood fringe zones so it could be developed. However, the adjacency to the rail line and the size of the site (~0.84 hectares) suggests this site is less suitable as a residential area and more suited to a future light industrial use (subject to GrainCorp no longer needing the site for storage).

North Molong Highway Entrance

To the north of the Molong Village Zone within the North Molong Rural Small Holdings area on the highway between Creosus Street and End Street there is a limited area of land that is relatively flat, has limited flooding and is just outside the core karst / rocky outcrop area. This area currently supports 4-5 dwellings on larger acreage. Due to proximity to the highway and the sewerage treatment plant this area is not suitable for a substantial increase in dwellings.

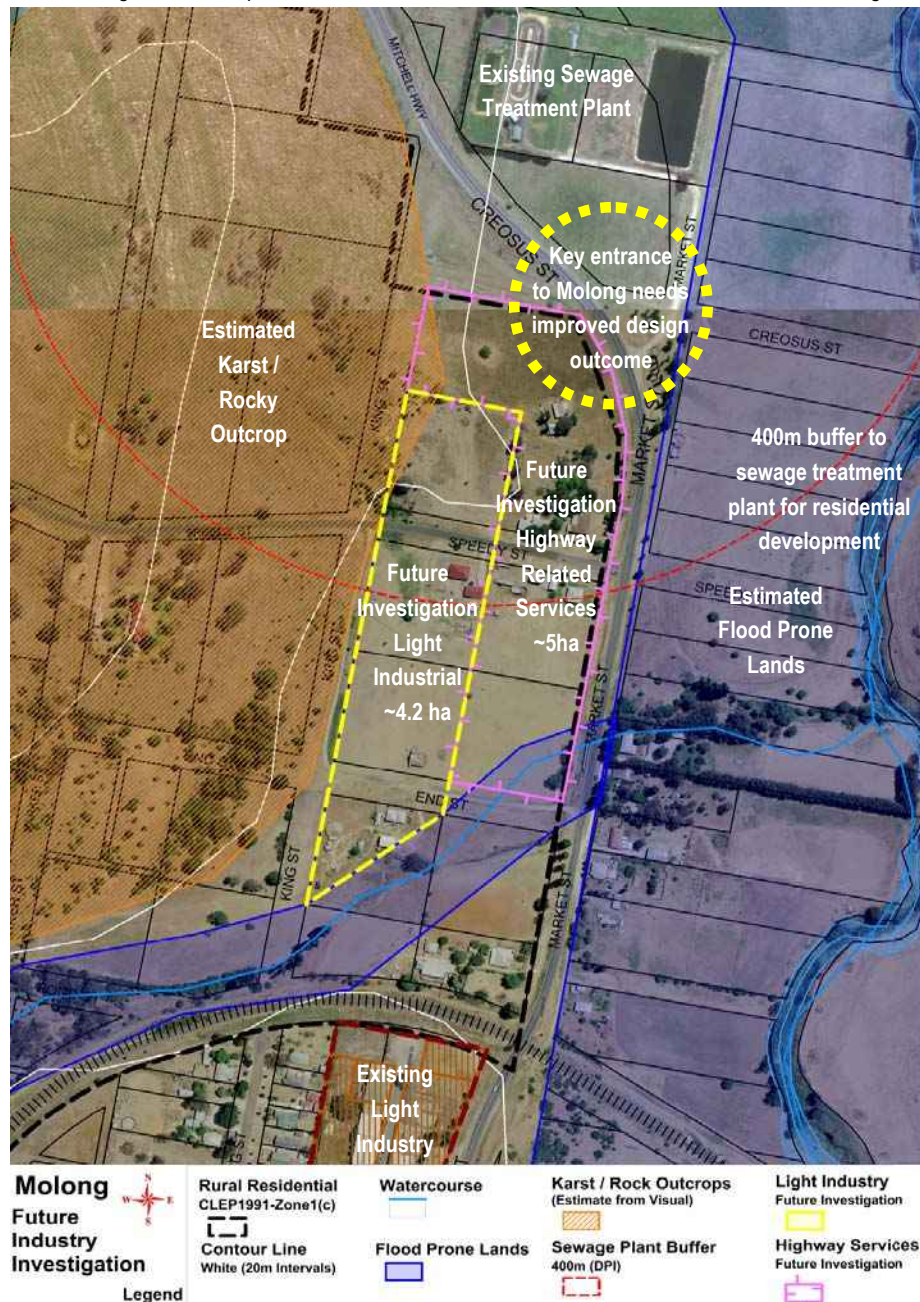


Figure 30: Future investigation area for light industry and highway-related services at the North Molong Highway Entrance (Source: Council GIS 2010).

This area was highlighted in the 2005 Draft Molong Strategy (see [Section 3.22 – Previous Land Use Strategies](#)) as an area that could support either light industrial or highway related services due to its highway presence. This Strategy supports the principle that there is a limited area of land that should be investigated to see if it could support services needing highway frontage but notes that this would require very careful design and consideration.

On one hand, Council recognises that the northern gateway to Molong has a highway frontage that is under-utilised and lacks a strong character and could be improved with development or landscaping. On the other hand, industrial or highway related uses do not always produce a high quality design outcome due to the need to service heavy vehicles with large car park areas and limited landscape and poorer quality built form.

However, due to a lack of appropriate sites in the Village Zone for such activities, the northern site should be investigated further to determine its potential for highway & light industrial uses (with industrial uses setback from the road frontage).

This area will require the consolidation of a number of individual lots and the removal of a limited number of dwellings. Any proposal would need to consolidate several lots to make it viable and improve design outcomes. ***Please note that no existing landowner would be forced to sell or relocate and the area is likely to remain in a large lot residential zone until the lots are available for purchase and consolidation and a rezoning proposal is satisfactory to Council.***

Any proposal for this area would need to be supported by a full master plan, building envelopes and landscape design. There are limited suitable alternatives for highway access and egress so a detailed traffic study with RTA input would also be required. There may be potential for some light industrial uses requiring a highway frontage to locate behind any highway related uses.

Tri-Steel Site and Molong Street

As will be shown in the business section of this chapter, it is intended to consider a business development zone for the existing Tri-Steel site to enable its re-use. However, following feedback during the public exhibition period it is clear that there are several businesses / light industries existing/proposed on the block and this area may warrant future investigation for either an extension of the business development zone or a light industrial zone.



Figure 31: Future investigation area for light industry and highway-related services including the Tri-Steel Site at the south-eastern gateway (Source: Council GIS 2010).

3.19.8. Proposed Copper Hill Mine

Copper Hill has had a long history of mining. It is located on the same geological belt that extends up from Cadia Ridgeway through Cargo to Molong and has the potential for significant gold and copper deposits.

The site has an exploration licence by Golden Cross Resources who have signed a Memorandum of Understanding with the Sinomach Group company, China National Automation Control System Corp (CACCS) to conduct a feasibility study at Copper Hill.

The 2010 estimate is that the mine should have a life of almost 20 years producing 335,000 tonnes of copper metal, over 1.1 million ounces of gold bullion and 3 million tonnes of sulphur (May 2010 Summary). Optimised pit modelling, at US\$2.70/lb for copper and US\$800/oz for gold, indicates that Copper Hill could deliver (after expending A\$420 million in capital costs) a cash flow of A\$360 million over a 20 year mine life (\$18 million per year).

There are a number of challenges to the mine becoming viable including, but not limited to, refining the quantities / concentrations / locations of minerals, the price of copper and gold, gaining suitable finance, sourcing water for the mine, addressing environmental and social impacts, and finding a cost-effective way to extract and recover the products. In this way, the mine proposal is still in its preliminary stages and nothing is certain at this stage.

It is intended that a Preliminary Feasibility Study is completed in 2011 followed by a Bankable Feasibility Study to be completed in 2012. In 2012 there is likely to be a clearer direction on whether the mine will be economically viable. Based on current copper and gold prices the exploration company believes that it has potential to become an operating mine.

A workforce of about 350 tradesmen, miners and plant operators is estimated for the initial construction and mining/processing, stabilising at about 250 positions over the life of the project.

If successful, this would have significant ramifications for Molong in provision of dwellings, services, entertainment & infrastructure. It is estimated by this Strategy that approximately 20-30% of these positions may require dwellings in the Molong area – potentially generating demand for 50-75 additional dwellings (the remaining employees are likely to live in Orange or surrounding areas). It could also potentially generate a demand for a range of engineering and mine-related industrial support requirements.

The mine has not yet sought water entitlements but management envisages using local aquifers and building a pipeline from Lake Burrendong, 50 kilometres to the northeast. It would also benefit the mine to be able to reactivate the railway spur that runs close to Copper Hill to transport the products for processing.

Mines generally take a minimum of 5-7 years from confirmation of financial viability before they actually commence construction and preliminary operations. The development process is likely to be handled as a major project by state government. Assuming that financial viability is achieved by 2012, it would be 2017-2019 before the mine commences operations.

This will provide sufficient time to investigate potential sites and address any rezoning required to provide land that is suited specifically to servicing any potential Copper Hill mine. However, due to the difficulties identifying new industrial (and residential land) for Molong it is important that this Strategy provides a way forward to commence investigations within the next few years.

Based on our current knowledge of the desired operations including the open cut mine, a crushing and grinding facility, facilities to transfer the materials to mass transport, and associated mine operation, support and ancillary facilities – a preliminary estimate (excluding the mine area) would be for an area of 40-50 hectares of industrial land.

Any heavy industrial processes such as crushing and grinding should be setback a minimum of 1km from any residences / urban area and a minimum of 300m from the Mitchell Highway with a landscape buffer to minimise visual impact. The proposal is to use the existing rail spur for transport of the ore but it may need to be extended to any loading areas.

Issues & Strategies

Demand for Mining Related Industrial Land: It is difficult to estimate demand for mine-related industrial land until the financial feasibility of the mine has progressed further and the operational needs assessed. However, preliminary estimates would suggest that a large scale site of 40-50 hectares (with additional potential for expansion) may be suitable to provide direct servicing of the mine site and transport / logistics / operational areas. Council needs to engage further with the mining company to refine the estimated land needs as the project moves toward potential feasibility.

3.19.9. Sites for Investigation (Outside Village Zone)

It is clear from the section above that there are no larger sites within the existing urban area of Molong that can support the needs of larger industrial sheds and future expansion. Therefore, the identification of larger sites necessitates a review of existing rural lands in close proximity to Molong.

Heavier Industrial Types

In terms of heavy industry, this has been addressed in the recommendations of the Rural & Industrial Strategy (see [Section 3.22 – Previous Land Use Strategies](#)) and the opportunities noted above in relation to Copper Hill. Therefore, this Strategy supports previous recommendations that heavier (and larger scale) industries (other than the mine) are not suited to the Molong area and should be located at Manildra.

Larger Sites for Manufacturing / Processing / Logistics

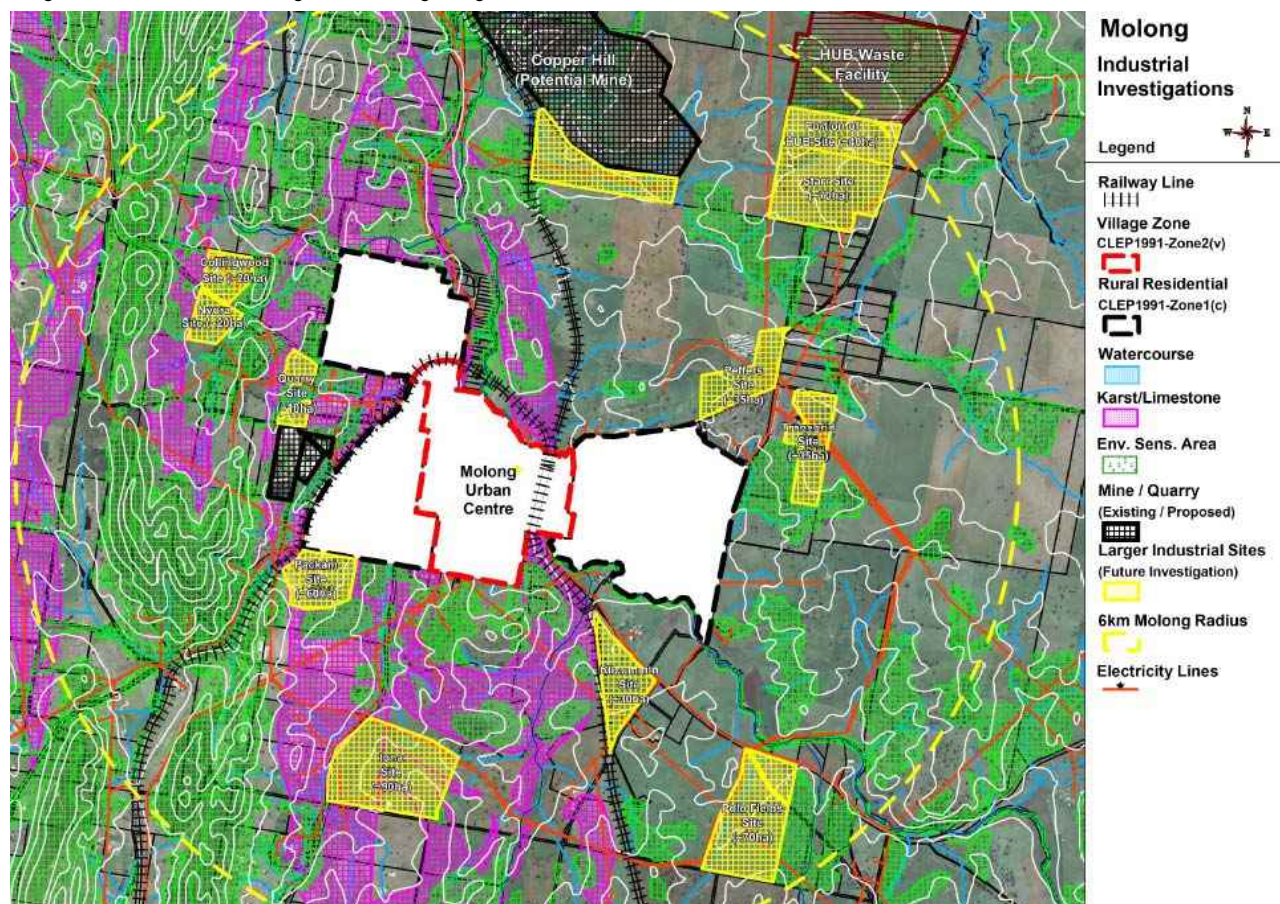


Figure 32: Preferred locations for future investigation for industrial land within 3-4km of Molong (Source: Council GIS 2010).

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As the section on demand notes above, there is a clear demand for larger industrial sites for local industries to relocate to and expand over coming years. The majority of these operators have specified that their operations do not require highway frontage as they are not looking to attract passing traffic. Instead, they need larger relatively flat sites where larger sheds can be installed and low-impact manufacturing, processing, fabrication, and logistics can take place.

As stated above, there is a direct local demand for 10 hectares immediately and 25-30 hectares in the next 5-15 years. Including potential new industries (separate from the Copper Hill proposal) there could be a demand for 15-20 hectares in the short term and 40-50 hectares in the medium to longer term.

The preference is for a single large site or adjacent sites to provide this industrial area and allow for expansion rather than individual 4-5 hectare sites spread around Molong. In addition, the preference is for sites within 3-4 kilometres of Molong so that these sites utilise Molong for supporting services and there is a higher level of amenity for employees.

However, there are very few larger lots of 40-50 hectares or greater within 5-6 kilometres of Molong. Without indicating whether these lots are suitable for industry (or supported by the existing landowners), the main lots where this size could be supported within 3-4 kilometres of Molong are shown on Figure 32 as follows:

- **SE / Mitchell Hwy:** Sites along the Mitchell Highway are not preferred due to visibility and impact on the town entrance character. There are also heritage issues with the Yuranigh grave site for the site to the south-east of Molong. However, with access to the highway and potential future access to the railway line this area may be justified if a large industrial operator could show the need for both of these benefits and the sites could be designed to address visual impact from the highway. However, it may affect the development of the concessional small lots that are immediately adjacent.
- **SW / Peabody Rd / Packham Dr:** Most of the sites to the west and south of Molong are in areas that may be affected by karst / limestone that may pose an additional constraint to benching sites and environmental impacts. Therefore, any investigation of these sites would require detailed information on the impacts on the karst system and heavy vehicle access to these lower order roads.
- **NE / Euchareena Rd:** The existing Peffers Poultry (intensive agriculture) site is located on Euchareena Road and is expected to remain with a 1,000m buffer (DPI recommendation) to any urban development. However, complementary industries could be located within the 1km buffer, particularly as the site is relatively flat. As stated above, sites on the rail spur are likely to be dependent on Copper Hill proceeding. The Transgrid site is under-utilised and would provide access to high voltage electricity for industries with higher energy consumption/ production. However sites on Euchareena Road are likely to have issues with truck movements impacting on residential areas and potential road blockages from extreme flooding events.
- **NW / Banjo Paterson Way:** There are a few sites off Banjo Paterson Way that could provide the necessary land and the majority sit outside the karst area. Smaller sites are located close to the limestone quarry and larger sites are located further west. The main issue is heavy vehicle crossing over the railway track. This area is currently being investigated by some of the local industrial operators for local industries not requiring a highway frontage.

3.19.10. Way Forward for Industrial Land

It is not possible for this Strategy to select the final site that will be utilised for an industrial estate outside the Molong urban zone. However, this Strategy has suggested potential sites and provided a brief overview of some of the opportunities and challenges necessary to seek approval from Council to set up additional industrial sites.

Council would prefer that individual industrial operators did not make applications to set up sites that will only service their own needs and have no potential for expansion and release of land for other industrial uses. Therefore, it has identified larger sites that it may support for this purpose. Applicants / land holders should approach Council once a site /use has been identified and determine what will be necessary to approve industrial uses for that site. In the future, this may require rezoning of land to achieve the intended purpose. Any rezoning(s)/application(s) should take into account the recommendations of this Strategy.

3.20. Residential Land Uses (Village Zone)

3.20.1. Existing Residential Character

Number of Dwellings / Occupancy Rate

As of December 2009, there were 612 lots used for dwellings in Molong according to a count from aerial photo and street analysis in the Village Zone with an estimate of 588 dwellings (excluding individual aged care units). This is 65.5% of the total lots in the Village Zone. The ABS 2006 Census (Quickstats) recorded 694 private dwellings in Molong (which includes the area of West Molong) with an occupancy rate of 2.5 people per household and 91 vacant dwellings (13.1% of total private dwellings).

Dwelling Types

Whilst there are some examples of dwellings from the late 1800s, most of the existing housing stock is from the mid to late 1900s. Newer housing is interspersed with some of the older housing stock. Some housing is reaching the end of its life and will need to be replaced where it is not nominated as a heritage item.

The dominant dwelling type in Molong is the detached or separate dwelling (92.5%). Molong also has a limited number of flats, units or apartments (16 – 2.7%); semi-detached housing (10 – 1.7%), and other dwelling types (19 – 3.2%). The majority of medium density housing types are aged care retirement facilities, through there are attached townhouses in Edward Street.

Lot Sizes

As stated in [Section 3.5.4 – Lot Sizes](#), the historical plans show that the original lots in Molong used to be fairly regular in size and dimension (approximately 40m by 50m, area = ~2,000m²). However, over time there have been subdivisions and amalgamations which have increased the irregularity of lots with a range of lot sizes from as little as 450m² to 2,000m², with a general average of 1,000m².

For lots of size greater than 1,000m² the lot depth and width is generally sufficient to allow the placement of a dwelling with good side setbacks and a good rear yard. For lots less than 800m² there may be need for clear controls to guide setbacks and ensure good house and building design on these narrower lots. This will be guided by current state government initiatives to allow complying development within residential zones on smaller lots. There may be some opportunities for consolidation and subdivision to provide for medium density in close proximity to the town centre in the future.

Dwelling Densities

The density of most of the older sections of Molong ranges from 7 to 11 dwellings/ hectare (excluding roads). This is a relatively low density of housing, particularly in close proximity to the centre of town. As a result, there is generally a large yard attached to each dwelling with a 'rural village' character. Where there is medium density housing the density may increase up to 30-35 dwellings / hectare (excluding roads). With reductions in standard lots down to 500m² there will be increases in density at the cost of reduced private open space areas / backyards.

Rental Rates

Out of 603 occupied dwellings in Molong, 137 dwellings are rental properties (22.7% of occupied dwellings) (Source ABS 2006). Molong has a reasonably high rate of rental properties but supply does not always equal demand. This is exacerbated by demand from



itinerant workers including people associated with mining and the higher number of younger people in Molong that may not be able to afford to or want to buy a house.

Issues & Strategies

- **Density / Character:** A combination of larger lot sizes and a dominance of detached dwellings means that the dwelling densities in Molong are relatively low. This produces a very suburban character for most dwellings with low scale and large yards. However, increased densities may offer an alternative to consumption of more land for growth and improved sustainability.
- **Housing Types:** The majority of dwellings in Molong are detached and there are limited medium density housing types (~26 row houses or flats). The existing attraction of living in Molong is rarely to live in higher density dwellings. However, with a larger older population there may be a future demand for small or more compact housing that is lower in maintenance on smaller lots. There is currently low choice of housing types in Molong to meet this future need (other than aged care housing).
- **Rental Supply:** There may be an issue with the provision of rental properties and affordable housing in Molong to meet the needs of lower socio-economic groups and itinerant workers.
- **Development Controls:** There are no major issues with the character and design of dwellings in Molong but there may need to be some controls to ensure that the character of Molong is preserved. This may involve restrictions on the use of transportable/relocatable houses and shed-style homes to ensure that they are in keeping with the existing housing stock materials and sympathetic to heritage items.

3.20.2. Projected Dwelling Demand for the Village Zone

Dwelling Occupancy Rate

The occupancy rate is the number of people that will live in each house. The Rural & Industrial Strategy - [Local Profile Paper – Table 2.12](#), notes that for Cabonne the average household size has decreased from 2.9 (1991), to 2.8 (1996), to 2.7 (2001), to 2.6 (2006) and this is also occurring in neighbouring rural shires.

The occupancy rate for Molong (ABS data) is also expected to also decrease over the next 10-30 years, especially if there are increases in aged care housing (senior citizens living alone); families having less children (smaller family sizes); and greater variety of housing types which attracts younger people to live independently.

On this basis it is assumed that the estimated occupancy rate in Molong in the year 2036 will be approximately 2.3 people per dwelling (down from 2.5 in 2006). This is consistent with the Rural & Industrial Strategy which projects an occupancy rate in Cabonne Part C (including Molong) of 2.3 people per dwelling ([Local Profile Paper – Table 8.16](#)).

Dwelling Demand from Projected Population Growth

As stated in [Section 3.8 – Projected Future Population](#), the projected annual population growth rate for Molong ranges from +0.3%/year (minimum) to +1.0%/year (maximum) with an average of +0.7%/year. As this Strategy needs to cater for the greatest potential land demands, dwelling demand will be based on a **maximum** annual population growth rate of +1.0%/year, even if this rate is never achieved.

Based on a 2006 population in the Village Zone and West Molong (the ABS Census District) of 1,569 people, the projected population of this area by the year 2036 is 2,115 people, an additional 546 people over the 2006 Census figure. A projected rate of 2.3 people per dwelling in 2036 results in a requirement for the following number of dwellings (Table 21).

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Method	Calculation	Projected Demand for New Dwellings by 2036
Dwellings required by Additional Population	546 / 2.3 per dwelling	237
Dwellings required by Total Population minus Total Dwellings	2,115 / 2.3 per dwelling (682) minus existing total dwellings (694 ABS)	226
Dwellings required by Total Population minus Occupied Dwellings	2,115 / 2.3 per dwelling (682) minus existing occupied dwellings (603 ABS)	317
Average Dwelling Demand to 2036	237 + 226 + 317 = 780 / 3	260

Table 21: Calculation of projected dwelling demand from estimated population growth to 2036 (based on population of Molong's ABS Census District which only includes Village Zone and West Molong Rural Residential Area).

Dwelling Demand Projected from Development Applications

An alternative method to estimate dwelling demand is based on the historical number of dwelling applications approved each year by Council for new dwellings (Table 22). Please note that this has limited accuracy as development approval does not necessarily ensure that these new dwellings were built. On this basis it could be projected that there could be demand for approximately 150 dwellings over 30 years in the Village Zone plus an additional 11 dwellings in Molong West – a total of 161 dwellings within the ABS Census District for Molong (based on a continuation of current approval rates).

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	Av.
VZ	4	5	4	4	5	5	6	6	4	5	7	55	5 dwellings/yr
West	1				1		1	1				4	0.37 dwellings/yr

Table 22: Total number of dwelling applications approved 1999-2010 (financial years) in Molong's Census District (Source: Council records - Fujitsu Database).

Dwelling Demand Projected from Historical Growth in Dwellings

An alternative method to estimate dwelling demand is to project from historical growth of dwellings based on ABS Census data (Table 23). Census information provides the number of total private dwellings and number of occupied dwellings in the Village Zone (+West Molong) since 1976.

It can be seen over a variety of periods the rate of growth of both total and occupied dwellings averages at approximately 1%/year. Based on this rate of growth continuing for the next 30 years, in 2036 there is estimated to be 935 total dwellings (an increase of 241 dwellings) and 813 occupied dwellings (an increase of 210 dwellings). Therefore, an average of an additional 226 dwellings is estimated by 2036.

ABS Census	Total Dwellings			Occupied Dwellings			Unoccupied Dwellings	% Unocc. Dwellings
1976	509			474			35	6.9%
1981	546			485			61	11.2%
1986	562			500			62	11.0%
1991	603			567			36	6.0%
2001	663			598			65	9.8%
2006	694			603			91	13.1%
Average	△	%△	Av. Ann. %△	△	%△	Av. Ann. %△		
1976-2006	185	36.4%	1.2%	129	27.2%	0.9%		
1986-2006	132	23.5%	1.2%	103	20.6%	1.0%		
2001-2006	31	4.7%	0.9%	5	0.8%	0.2%		

Table 23: Change in occupied and total private dwellings 1976-2006 (Source: ABS Census).

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Dwelling Demand - Summary Table for Village Zone

Table 24 summarises the finding above to suggest that approximately 182 additional (new) dwellings will be required by 2036 (30 years) compared to the 2006 figure for the Village Zone.

Projected No. of Dwellings Required by 2036 based on following calculation method	Increased No. of Dwellings 2006 to 2036
Projected Population Growth (Max. 1%/year)	260
Projected Development Applications	161
Projected Historical Dwelling Growth (Max. 1%/year)	226
Average $260 + 161 + 226 = 647 / 3$	216 Additional Dwellings

Table 24: Projected additional dwellings needed by 2036 based on a variety of projection methods.

Dwelling Demand – Copper Hill Mine

Please note that the above estimates only partially take into account an additional demand for dwellings if Copper Hill were to proceed (as it is based upon projections of historical demand). For the purpose of construction it is expected that a temporary mining camp would be created to provide temporary accommodation.

The mine has estimated that around 250 employees are likely to be required for the operations of the mine after construction. Based on knowledge of residences of other mines in the area, approximately 50% would be expected to live in regional cities (Orange) and the remainder would live in surrounding villages or rural residential areas. This Strategy assumes that only 20-30% of these employees would live in and around Molong.

Therefore, there may be demand for an additional 50-75 dwellings to support the mine. However, as noted above, the mine is expected to take 5-7 years to be operational once it is confirmed as financially viable and there is sufficient time to review land supply to meet these needs and to investigate additional supply (if required).

3.20.3. Estimated Vacant Lots Likely to be Developed

As shown in [Section 3.16 – Vacant Land](#), there are 44 lots in the Village Zone and 20 Lots in West Molong that are likely to be developed over the next 30 years – a total of 64 lots. However, as will be addressed in the next section, there is capacity to pick up some of this additional demand in the rural residential areas (East Molong and North Molong) assuming that larger lots are still in demand. Table 25 shows that 272 lots could be developed by 2036.

Area	60% of Historically Subdivided Lots	100% of Recently Subdivided Lots	50% of Potential Future Subdivisions	Likely Lots / Detached Dwellings by 2036
Village Zone	35	9	10	54
East Molong	16	98	75	189
North Molong	9	--	40	49
West Molong	6	--	30	36
Total	66	107	155	328

Table 25: Estimated lots likely to be developed by 2036 in Molong's urban zones (as at December 2009).

3.20.4. Comparison of Supply & Demand for Dwellings

A comparison of supply and demand can be summarised as follows (Table 26):

Supply/Demand to 2036	Estimated Supply	Projected Demand	% Supply/Demand	Years
Village Zone	54 Lots/Dwellings	216 Dwellings	25%	~7.5 years
Large Lot Residential	274 Lots/Dwellings	150 Dwellings	183%	~55 years

Table 26: Summary of supply and demand for dwellings in Molong to 2036.

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Therefore, there is a distinct under-supply of smaller urban residential lots in close proximity to the town centre and an over-supply of large lot ('rural') residential blocks. This Strategy recommends that there is some immediate expansion of the Village Zone to partly address this issue combined with investigation for a future expansion of the urban residential area to meet this demand.

Issues & Strategies

- **Need for Rezoning in Next LEP:** There is a need to identify some additional land (approximately 18-20 lots) for Village Zone residential lots to ensure sufficient demand for the next 10 years based on the projected growth rates.
- **Future Need for Additional Urban Residential Supply:** There is also a need to identify new future investigation areas for larger scale expansion of the Village Zone (approximately 140-150 lots) in the next 5-10 years. There are several ways by which this supply could be increased / last longer including:
 - **Reduced Growth:** Molong not achieving the maximum population growth rate or dwelling demand rates used in the calculations above which would result in reduced demand (to be monitored over next couple of years);
 - **Higher Densities:** The adoption of higher density dwelling types (than single detached dwellings on large lots) within the Village Zone to provide increased dwelling demand with lower land consumption;
 - **Large Lot Residential Supply:** The provision of additional dwelling supply through large lot residential development in North and East Molong (assuming this can replace urban residential demand);
 - **Infill Development of Crown Land / Large Lots:** There are limited large lots (some in Crown ownership) that should be considered for reclassification and infill development (subject to a number of constraints);
 - **Rezoning of Additional Urban Residential Land:** The rezoning of additional land for urban residential uses outside the existing Village Zone (+ West Molong).

These options are assessed in more detail below.

3.20.5. Urban Zone Extensions

Extension of the Village Zone

In the short term the easiest way to produce more land supply is to increase the area of the Village Zone (in appropriate areas) to allow for more subdivision. As there is an over-supply of large lot residential blocks but an under-supply of village lots – one potential solution is to rezone existing large lot residential land into the Village Zone.

South West Molong (South Street & Park Street)

In south-west Molong in the existing Zone 1(c) (Rural Small Holdings) area to the east of Peabody Road (between South Street and Smith Street) there is an area with a historical subdivision pattern with lots of up to 2,000m² in size (Figure 33).

Under Clause 18 of CLEP1991 there is a requirement in Zone 1(c) for a minimum lot size of 4,000m² to support a dwelling. A key reason why this area has remained in Zone 1(c) is that the entire area is affected by karst/limestone and the rocky outcrops make it significantly more expensive to level sites for a dwelling. In addition, as the land slopes to the west it would require pumping for sewerage back up to existing lines at George Street.

There is already a water supply line that could service all of the north side of South Street and a line that comes to the George Street end of Park Street – so it would not be difficult to connect additional dwellings to centralised water. Due to the karst/limestone it will be difficult to support standard septic systems on lots of less than 2,000m². Therefore, it is recommended that any new lots are connected to the centralised sewerage system (a connection is present at the

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George Street end of Park Street) or alternative systems are considered. This will require a low pressure pumping system but this is an expense that is unlikely to prevent further development.

Whilst this area is in no way ideal land for residential development, there are a range of other sites in Molong with similar development challenges – so assuming that it is economically viable to develop this land it may have the potential to yield an additional 7-8 dwellings along South and Park Streets. This may release land in the short term that can address demand issues until larger supplies can be provided. The extension of the urban residential zone in this location is unlikely to require a detailed environmental study as these are historical lots and many are already developed.

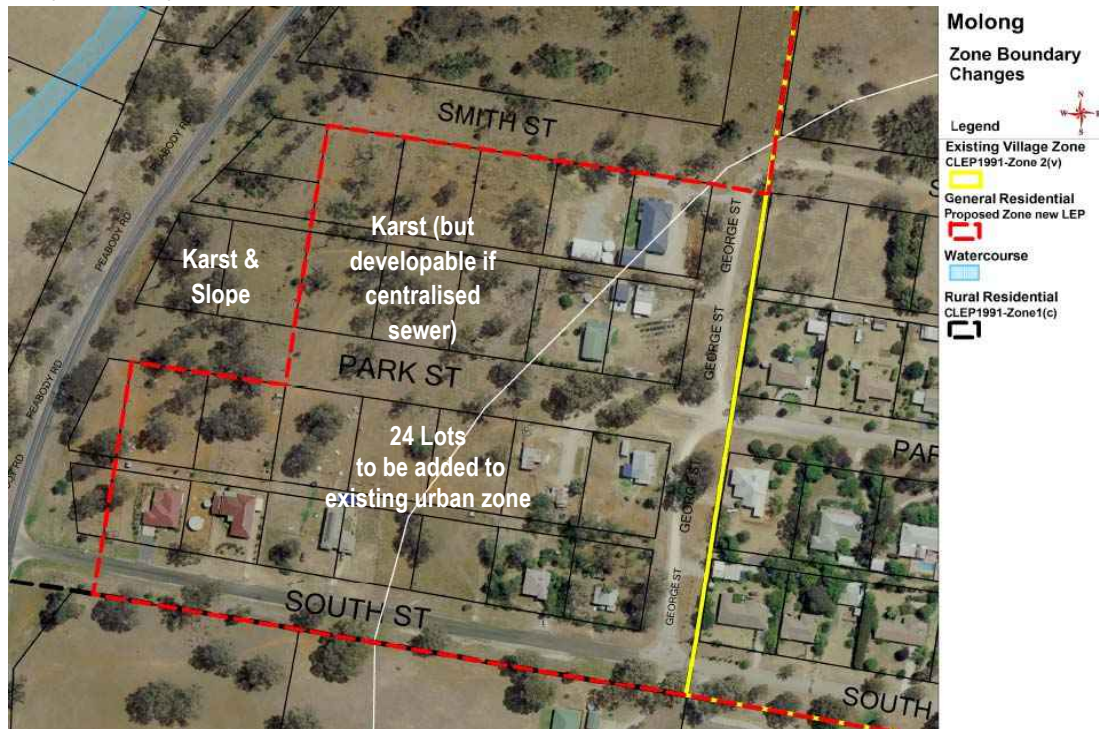


Figure 33: Potential expansion of the urban residential area in south-west Molong along Park and South Streets (Source: Council GIS 2010).

North West Molong (West of King Street)

In the area north-west of Molong (west of King Street and north of Hill Street) there is potential for some amendments to the urban boundary (Figure 34).

The two (2) lots north of Castle Street and adjacent to the railway are Crown land but are severely affected by karst/rocky outcrops and not suitable for any significant development. Therefore, their removal from the urban zone is unlikely to have any impact.

The existing Village Zone boundary between Castle Street and Hill Street currently cuts through a number of properties creating a 'split zoning' (2 different zones across one property) which is not preferred by Council. All of the lots which are partially in the Village Zone should have the entire lot included in any future urban zone. The western section of these lots back onto a rear lane that may make them suitable for redevelopment and there is not a lot of surface rocky outcrops to restrict development.

Centralised sewerage and water has been extended down Thistle Street (to the west of King Street) to service the industrial estate to the west of the railway line. This opens up the potential for additional lots in proximity to Thistle Street to be serviced and makes development for dwellings more viable in this area, particularly since centralised sewerage will preclude the need for septic systems and allow for smaller (urban style) lots to be developed.

Three (3) existing dwelling sites will be included in the proposed new urban zone (some of these as small as 0.17ha. This will create a more appropriate zoning and zone objectives to guide development on these existing lots.

It is proposed to include a couple of vacant State of NSW / Crown lots on both sides of Thistle Street within the Village Zone. Whilst the presence of rocky outcrops may make development more expensive, the frontage to a formed/sealed road and access to services should make development more feasible. The only barrier would be any Aboriginal land claim that may affect Crown land.

In addition it is proposed to include two (2) new large lots owned by KA and JA Packham extending to Hill Street. These large lots have relatively little surface rocky outcrops, have a gentle slope and only a single dwelling. There is significant dwelling potential from these lands if they have centralised sewerage/water which would drain down Parker Street to the new services on Thistle Street.



Figure 34: Potential urban boundary change for north-west Molong (Source: Council GIS 2010).

As a result the additional land that is proposed to be included in an urban zoning is approximately 3.3 hectares. Four (4) lots have existing dwellings on lots below 2,000m² (total 0.7ha) and are unlikely to have significant additional dwelling development. Therefore, approximately 3.2 hectares could be developed for urban residential purposes.

It is most likely that the rear lane between Hill and Thistle Streets would need to be expanded and this would offer a dual lot road frontage for least cost (Parker Street is unlikely to be developed). Therefore, at approximately 2,000m² per lot this would result in a dwelling potential estimated at 12-15 additional dwellings.

Alternatively, Council may wish to consider a slightly higher density develop due to the proximity to the hospital and the potential for aged care services. However, this would require further investigation.

Issues & Strategies

Expanded Urban Boundary: This Strategy proposes to include two new areas within the urban boundary including lands to the west of George Street (Smith to South Street) and lands to the west of King Street (Castle to Hill Street). These lands have a historical subdivision pattern and potential access to utilities that warrants their consideration for urban residential even though they are affected by karst/limestone. The additional dwelling potential from these two areas of land is estimated at 20-25 additional dwellings.

3.20.6. Urban Zone Reductions

The area in north-east Molong to the north of Thistle Street and east of Market Street is an area that has been shown to be affected by flood water including the floodway and flood fringe (Source: *Molong Floodplain Management Study* 1997). In addition, those vacant lots that are only partially flood affected have issues with getting access to the Mitchell Highway.

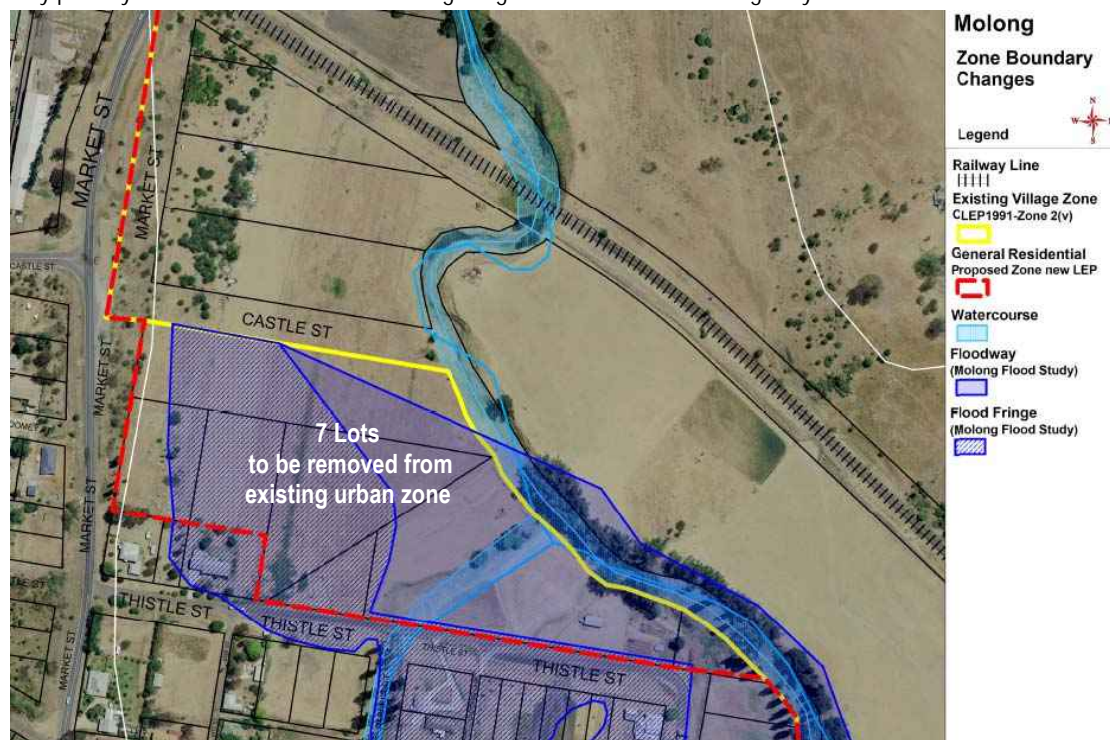


Figure 35: Proposed reduction in urban zone due to flood prone lands in north-east Molong (Source: Council GIS 2010).

This area is made up of 7 lots of which 1 has an existing dwelling (on the area still included in an urban zone) and the rest are either vacant or used for agricultural purposes (2 are Crown land).

This Strategy proposes that due to the flood potential on these lands that all of the vacant lands should be removed from the urban zones to avoid any expectation that they would be suitable for development (Figure 35). This ensures that any existing dwellings are retained in an urban zone. The affected lots will require either a rural or environmental zoning to support low-scale future activities.

Issues & Strategies

Reduced Urban Boundary: This Strategy proposes that due to the flood potential on seven (7) lots in the north-east of Molong that all of the vacant lands should be removed from the urban zones to avoid any expectation that they would be suitable for any significant urban development.

3.20.7. Medium Density Housing

Demand for Smaller Housing

The calculations above for dwelling supply and demand are premised on existing land supply being utilised for single detached dwellings on lots of 500-1000m². However, it is important to consider that Molong is a sufficiently 'mature' town that is likely to have increasing demand for smaller housing types and an increased range of housing types/sizes.

Increased housing choice is more likely to meet the growing demographic demands for younger couples, older lone person households, and lower socio-economic groups. An increase in medium density development would also provide a higher number of houses with a lower supply of land. This could potentially meet any shortfall in dwelling demand.

Indicative Requirements for Medium Density Housing

There are a number of factors that would generally favour the identification of a site for medium density including, but not limited to:

- Access to public transport (to reduce reliance on private cars and the need for car parking);
- Access to key retail & community services (to promote equity & reduce need for cars);
- Minimise impact on existing heritage streetscapes & items;
- Avoid sloping land where it would be more expensive/difficult for flat sites, accessible floor-plans, and ageing-in-place;
- Avoid land that is affected by natural constraints such as flooding or bushfire that may create a higher risk of loss to life or property;
- Ensure that increased traffic densities can be supported by the local road network;
- Maximise amenity for users of the medium density dwellings by separation from major roads, industry and other sources of noise/dust/odour etc;
- Minimise impacts on amenity of neighbouring properties through loss of privacy, views, significant vegetation etc.

In addition, it must be recognised that medium density is more likely to be viable where it can minimise the number of lots that need to be purchased to create a sufficiently large lot to support medium density without resulting in poor design outcomes.

Proposed Medium Density Area

Figure 36 shows possible locations for future investigation for medium density housing based on these factors. This would generally include existing residential land east of Phillip Street, outside the flood prone land area, and north or adjacent to Molong Street. Where possible, consolidation of allotments may allow new developments with increased densities such as townhouses and dual occupancies (with a limited number of apartment buildings). Please note that dual occupancies will generally be permitted outside this medium density area in any future LEP (state government requirement).

Proposed Densities & Dwelling Supply

Current dwelling densities in the areas shown are as low as 7-10 dwellings per hectare (nett – excluding roads). The aim of a medium density zone would be to perhaps double or triple this density up to approximately 25-30 dwellings per hectare (nett) without impacting significantly on amenity, heritage or streetscape values and better utilise the existing land resources.

The area for proposed new medium density is approximately 20 hectares. This Strategy assumes that over 30 years a maximum of 30% of this area would ever take up medium density (~6ha). 6 hectares could potentially support approximately 180 dwellings (at 25 dwellings / hectare). There are approximately 155 existing dwellings in the entire medium density area. Assuming that only 30% of the area was taken up for medium density then up to 47 dwellings would be replaced.

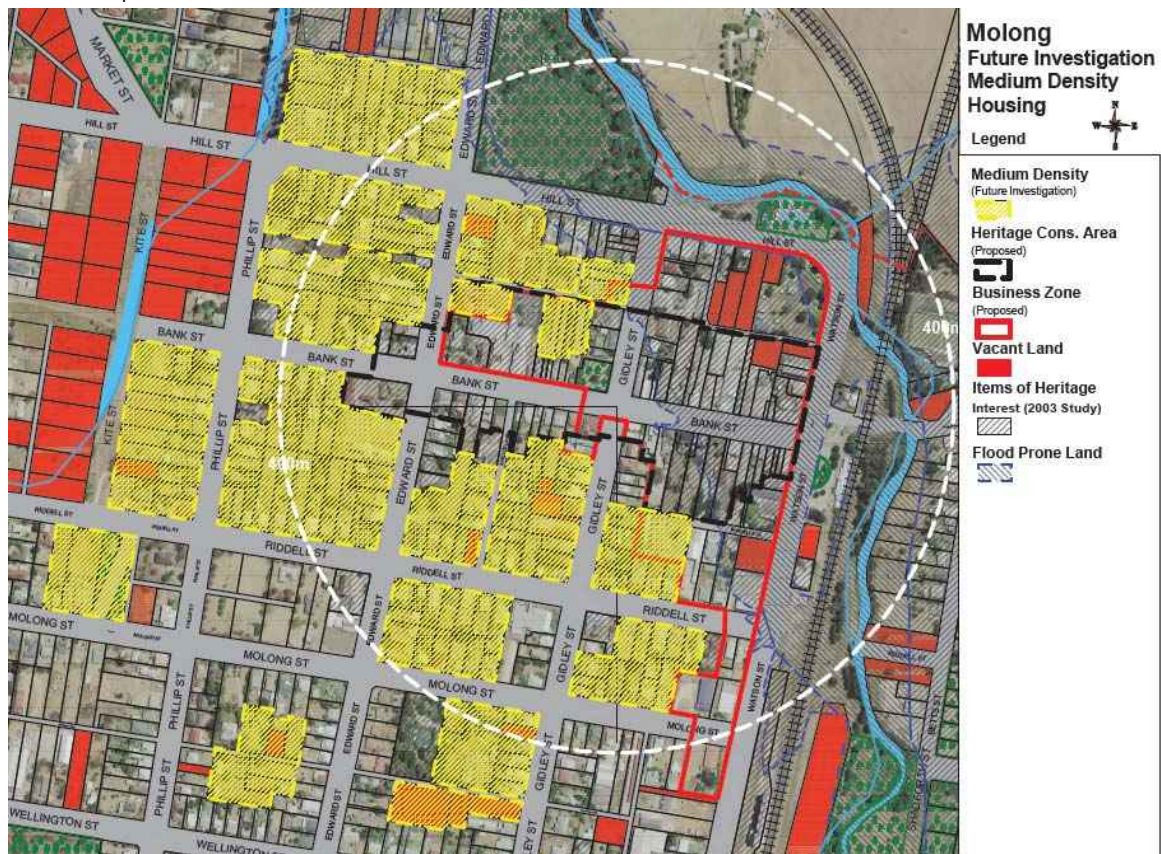


Figure 36: Proposed areas for future investigation for medium density and smaller lot sizes in Molong (Source: Council GIS 2010).

With 180 new dwellings replacing 47 existing dwellings, this results in a potential net gain of 133 dwellings. Combined with existing vacant lots (64) this would produce approximately 200 dwelling opportunities and extend the residential supply from 7.5 to nearly 30 years without extending the urban zoned areas of the town.

In the next few years there may be limited 'perceived' demand for medium density housing. However, as the ageing of the population increases, demand is expected to drive increased housing choice and medium density may provide some of the solutions in the medium to long term. Therefore, this is a medium to long-term strategy.

Issues & Strategies

Proposed Medium Density Area: Council should consider designating an area for intended future growth of medium density housing where this housing would have minimal impact on existing character and streetscape whilst maximising access to services and transport. Medium density is likely to increase in demand and may be part of the solution for future

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residential growth in Molong as the town 'matures' and develops a demand for a range of housing choices. Council needs to decide if the proposed areas for medium density are further investigated or enforced through any new Development Control Plan for Molong.

3.20.8. Future Investigation Areas (South or East Molong)

Please note that any estimates of dwelling potential in this section are indicative only and cannot be relied upon by any Applicant without further supporting studies and are subject to consent by Council.

Investigation Areas for Urban Residential Extension

Throughout the previous strategic studies for Molong it is clear that expansion of the urban residential areas to the north and west are not possible due to a variety of constraints. As a result, there are two consistent areas that have been proposed for any future extension of the urban zone of Molong that would predominantly be used for urban residential development. These two locations are:

- **East Molong:** Lot A DP961931 (Total Area ~77.8ha) which is in the existing Zone 1(c) Rural Small Holdings area in East Molong; and
- **South Molong:** Lot 4 DP838725 known as 'Hacienda' (Total Area ~110ha) which is in the existing Zone 1(a) General Rural area to the south of Molong.

These are reviewed in detail below.

South Molong Potential Extension

The area to the south of South Street, Molong (Figure 37) has been identified in most strategic land use planning documents in the last decade as an area for potential expansion of urban residential uses (See [Section 3.22 - Previous Land Use Strategies](#)).

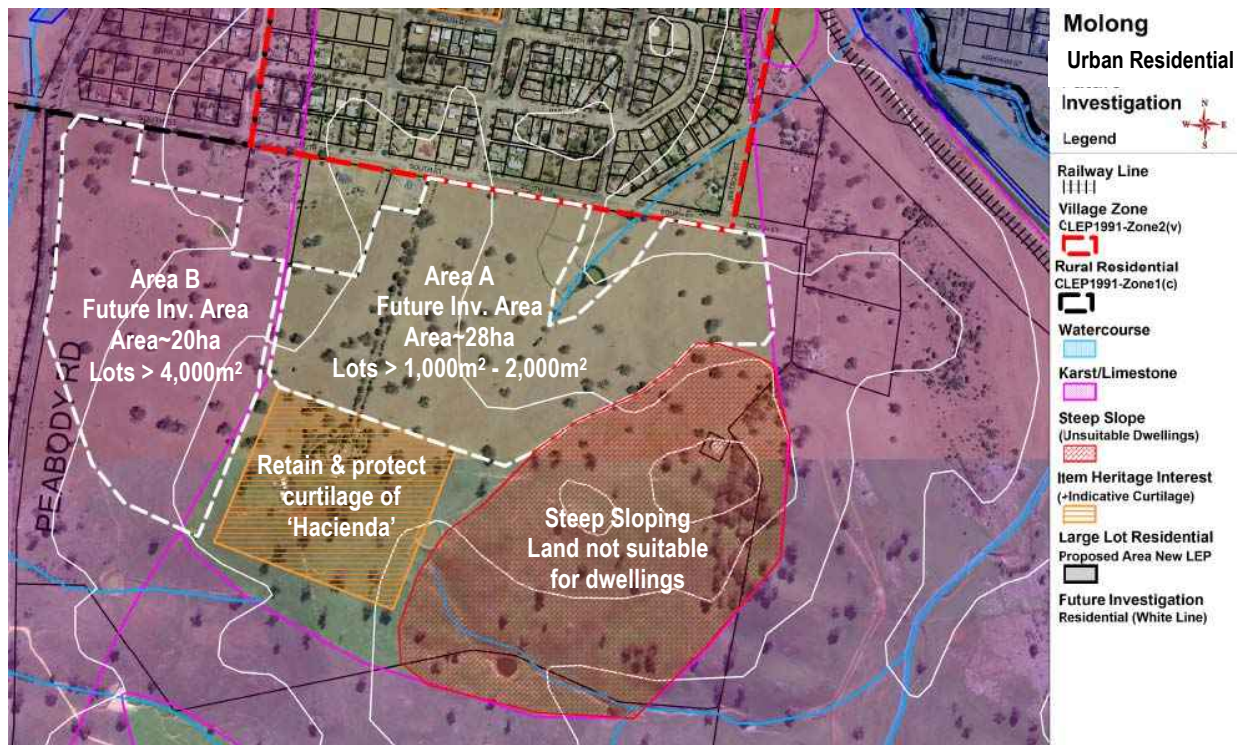


Figure 37: Future investigation areas for residential land uses to the south of Molong (Source: Council GIS 2010).

There are two significant advantages of this land:

- **Village Zone:** The lot is immediately adjacent to the Village Zone and only 1.15km from Bank Street and the town centre. It is also fronted by South Street providing improved road access and less need for expensive road extensions / upgrades;
- **Limestone:** The majority of the lot is outside the area known to be affected by karst / limestone – making it easier and less expensive to develop and reducing the impact of any development on the karst system (underground);
- **Utilities:** A significant area of this land could be easily serviced for water and sewer without substantial additional pumping requirements, making it easier and cheaper to develop.

There are several key challenges to developing this land:

- **Heritage / Scenic Values:** The land is a historic property called 'Hacienda' that warrants a degree of recognition and protection and provides landscape and scenic benefits to Molong;
- **Topography / Slope / Drainage:** The majority of the land is sloping and some parts of the land are relatively steep. This will increase costs of development due to the need to cut and fill sites to get a flat house site and require larger lot sizes than urban areas. There are also drainage issues with existing watercourses.

As a result the following dwelling **estimate** could be achieved from this site:

- **Area A:** The area outside the karst system and with rolling slopes is more likely to support lots of 1,000m² to 2,000m². Of the ~28 hectares available, about 17 hectares is estimated to be utilised for dwellings. Therefore, this investigation area could potentially support between 85-170 additional dwellings;
- **Area B:** The area within the karst system is only likely to support lots greater than 4,000m². Therefore, this area is of a large lot residential character rather than an urban residential (small lot) character. Of the ~20 hectares available, about 14 hectares is estimated to be utilised for dwellings. Therefore, this investigation area could potentially support between 20-35 dwellings.

Therefore, in total an additional 105 to 205 dwellings could be provided by development of this lot with the retention of the original homestead of 'Hacienda'. This could alleviate some of the demand for residential dwellings for an additional 10-20 years.

Council has been discussing release of this land with the owner's family for several years and has even been approached with a preliminary subdivision plan. However, as at 2010 the owner's were not interested in making any of the land available for purchase / development. If this situation were to continue past 2013/2014 then Council would need to review alternative potential for additional dwellings in East Molong (see below).

East Molong Potential Extension

Within the existing Zone 1(c) (Rural Small Holdings) area to the east of Molong's Village Zone there is a large lot in a single ownership that requires further consideration for future residential development (Figure 38). This area has only ever been considered for large lot /rural residential in previous strategies.

There are two significant advantages of this land:

- **Village Zone:** The lot is immediately adjacent to the Village Zone and only 0.5-1km from Bank Street and the town centre. It is also fronted by Euchareena Road and Marsden Street (in part) providing improved access;
- **Limestone:** All of the lot is outside the area known to be affected by karst / limestone – making it easier and less expensive to develop and reducing the impact of any development on the karst system (underground);

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- **Topography / Slope:** The majority of the land to the east of the site has a very moderate slope that would be easier and cheaper to develop and allow for smaller lot sizes.

There are several key challenges to developing this land:

- **Heritage / Vegetation / Scenic Values:** The subject land is a historic property that warrants a degree of recognition and protection and provides landscape and scenic benefits to Molong, particularly the western sloping area which are partially vegetated as a landscape backdrop to the Town of Molong. The existing significant native vegetation should be protected, where possible. There is also a bushfire risk associated with the existing pine forest plantation;
- **Topography / Slope / Vegetation:** The majority of the land closest to the town centre is sloping and this will increase costs of development due to the need to cut and fill sites to get a flat house site and require larger lot sizes;
- **Utilities:** Whilst water and sewer utilities are in proximity to the site, most of the site would require significant additional infrastructure / pumping to service the site adding cost to the development;
- **Flooding:** Whilst the site itself is not flood prone (but may have some areas requiring setbacks for drainage) – the eastern area of Molong can become cut-off from the town centre in extreme flood events. This is rare – but may affect its suitability for 'village' type development and development for aged care etc.

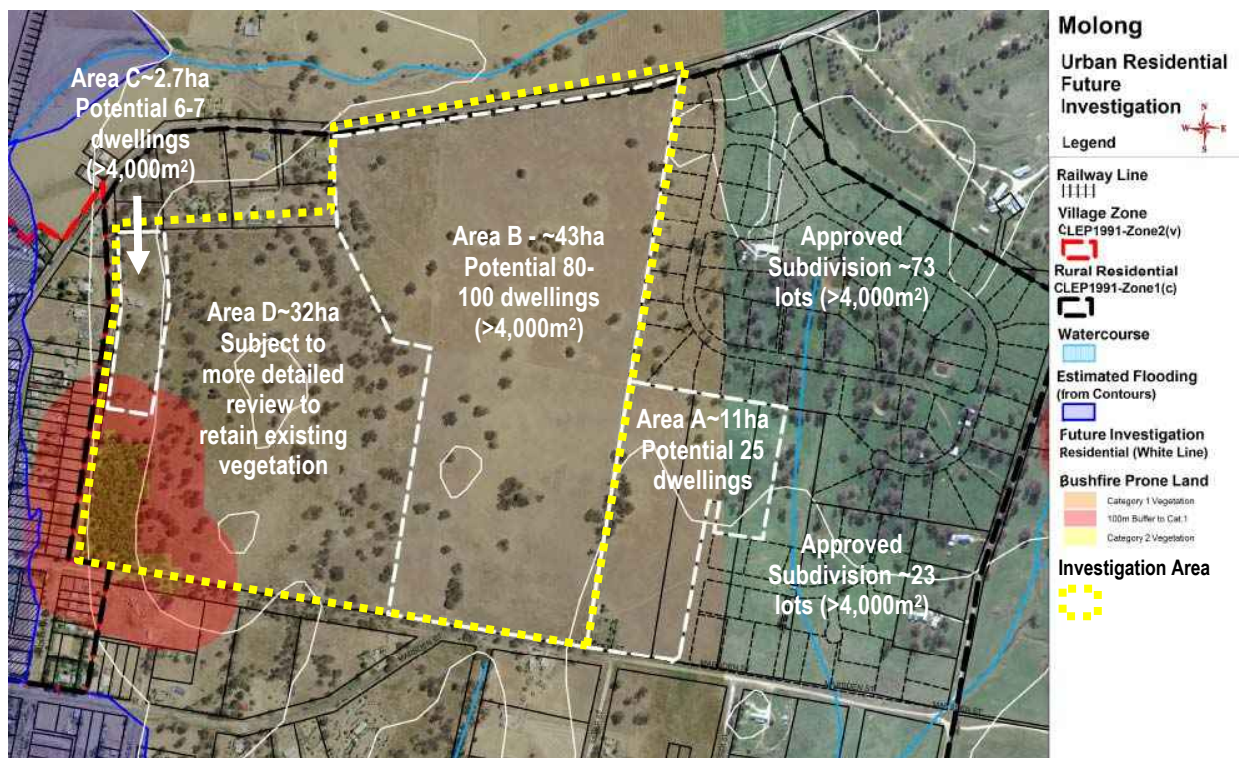


Figure 38: Investigation area for additional residential development to the east of Molong (Source: Council GIS 2010).

As a result the following dwelling **estimate** could be achieved from this site:

- **Area B:** This is the flattest area of the site with the least existing significant vegetation so it is capable of supporting the greatest number of dwellings. However, this Strategy recommends that as it is separated from the Molong Village Zone it is less suited to higher density urban residential development (lots <2,000m²). Instead, this area should remain as large lot residential (lots >4,000m²) in which case it may be able to support

approximately 100 dwellings. There is some potential to consider lots sizes ranging from 2,000m² to 4,000m² but this would depend on further site studies and review;

- **Area C:** This is a small strip of land on the lower slopes adjacent to the existing Village Zone with a dirt track frontage. The slope of this land and preservation of the existing significant vegetation does not make it suitable for small urban residential lots. This Strategy recommends that it remains as large lot residential (lots > 4,000m²) in which case it may be able to support approximately 6-7 additional dwellings. The advantage of this development is that upgrading of the existing dirt track would release lots on the other side of the road (in the existing Village Zone);
- **Area D:** This area is made up of variable topography on the upper slopes of the hill with some significant native vegetation that provides benefits for both biodiversity and also as a scenic backdrop to the Molong urban area. Any future use for this site should seek to protect and enhance the existing vegetation because it is an essential landscape backdrop to the Town of Molong. This may require larger lots where existing trees are retained and/or the dwellings would have minimal visibility in the landscape setting – resulting in potential for 15-20 dwellings. If it were to form part of an urban residential extension then the density would increase to 60-70 lots but this requires further review.
- **Area A:** This is outside the area held by the primary landholder but could potentially support an additional 20-25 dwellings of a large lot residential type (>4,000m²). It is most likely to be developed as it is adjacent to an existing subdivision and the land owners are likely to support its development if the market allows.

Therefore, in total an additional 130 to 150 dwellings (excluding Area D) could be provided by development of this lot plus some adjacent rural residential land. This could alleviate some of the demand for residential dwellings for an additional 10-20 years.

Council has been discussing release of this land with the owner's family for several years. However, as at 2010 the owner's were not interested in making any of the land available for purchase / development. If this situation were to continue past 2013/2014 then Council would need to review alternative potential for additional dwellings in South Molong (see above).

Issues & Strategies

- **Future Urban Residential Extension:** On the basis of the discussion above, this Strategy concludes that any extension of an urban residential area (lots <2,000m²) is probably best supported to the south of Molong where services should be able to support it (even if the topography is more complex and less total lots are produced). However, this is only estimated to occur in the medium to long term (10-15 years).
- **Future Large Lot Residential Extension:** Therefore, in terms of meeting short to medium term demand for housing (which is more likely to be supported by large lot residential development) then the areas in East Molong should be supported to get dwellings on the market as soon as possible to meet existing demands. This involves getting the approved 96 lot subdivision on the market. The low density recommendations for Area D separate Area B from the existing Village Zone and make it less suitable for urban residential lots. However, Council will still need to work with the existing land owner to investigate partial release of the large lot that remains undeveloped.

3.20.9. Future Investigation Areas (Crown Land / Large Lot)

Crown Land

There is a large block of Crown land (Lot 7323 DP1152548) located between Wellington, Phillip and Smith Streets (and unformed George Street) that is already within the existing Village Zone (Figure 39). The lot has an approximate area of 4.63 hectares and is immediately adjacent to the school on Phillip Street. Except for 7 dwelling lots in the north-east corner and the Council pound, the block is undeveloped.

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Figure 39: Aerial photo of large Crown lot adjacent to Wellington Street and large private lot adjacent to Peabody Road (Source: Council GIS 2012).

The lot falls from the south to the north and has some slopes that would be difficult to develop. It also has a drainage corridor that extends from the south-eastern corner down to the northern side and some significant vegetation that would make development less suitable for most of the central area. However, there is some land around the perimeter of the block that could be investigated for future release with the Crown.

The first issue is the need to identify what the Crown intends to utilise this land for and what role it plays in the community's open space and recreation needs. However, a preliminary investigation suggests that this land is not heavily used for this purpose and is relatively inaccessible.

One key constraint is road access. Development along Wellington Street is also likely to require RTA agreement due to access to a major regional road. Development along George Street would require the formation of that road which is expensive and may only be justified if there is additional development on the lot to the west. Development along Smith Street would require the upgrade of that road but this would also serve the lots to the south of Smith Street.

Assuming that the Crown may be willing to discuss release of some of this land for residential purposes then another major constraint is that many Crown lands in Molong and the region are subject to a native title claim. This claim would need to be resolved before this land could be considered for urban infill development. History suggests that claims may take 5-10 years to be heard by the courts so this proposal is a medium to long term investigation area. However, discussions with the Crown should commence in the interim period.

Large Private Lot

There is also a large private lot (Lot 2 DP833003) bounded by Wellington Street and Peabody Road (and George and Smith Streets – unformed) that currently sits in Zone 1(c) (Rural Small Holdings) and is likely to remain in the large lot residential area in the next LEP. This lot has an area of 3.64 hectares and only contains one (1) dwelling (Figure 39). There is a subdivision approval (DA2007/235) to create three (3) dwelling lots at this location that is yet to be activated.

Positives for development of this site include:

- The large size of the lot and its lack of development;
- The location adjacent to the existing Village Zone;
- The relatively low gradient / slope of the land suggesting that larger block sized may be supported with relatively little cut and fill;

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- Road frontage to Peabody Road and Wellington Street;
- The potential to form George Street and Smith Street (in collaboration with development on the adjacent Crown land noted above);
- Its location outside the recommended 1 kilometre buffer from the Molong Limestone Quarry to avoid impacts from blasting and vibration;
- Only a limited amount of rocky limestone outcrop present at the surface of the land (without any on-site investigations).

Issues that require further investigation to determine how they constrain the land include:

- The presence of karst and rocky limestone outcrops may make it more expensive to develop and require larger lots;
- There may be issues with getting road access off Peabody Road and a limited frontage to Wellington Street so it is likely that George Street and Smith Street would need to be formed;
- Potential issues with getting centralised water and sewer to the site;
- The land-holder has not yet been approached to discuss their intentions for the land.

This lot should be considered for further investigation before any rezoning occurs for smaller lots.

3.21. Residential Land Uses (Rural Small Holdings)

3.21.1. Land Requirements for Large Lot Residential

Please see [Chapter 1 - Overview](#) for the key land principles for large lot residential uses. In addition, some key principles can be found in the adopted Rural & Industrial Strategy. In relation to Molong there are particular issues associated with sustainable large lot residential development including water supply, sewage treatment, environment protection and improved residential amenity through appropriate site planning and design.

3.21.2. Estimated Supply & Demand

Vacant lots in the Village Zone and West Molong are addressed in the section above. As shown in [Section 3.16 – Vacant Land](#), there are 189 likely lots/detached dwellings in East Molong and 19 in North Molong.

It has been determined by numerous studies (e.g. Terra Consulting / Abacus Planning (2000)) that in terms of large lot residential development there is an oversupply of large lot residential land around Molong. However, as this land may be needed to take up additional demand that cannot be met by the current Village Zone there is no proposal to make substantial alterations to the large lot residential boundaries.

3.21.3. North Molong

Figure 40 shows the existing Zone 1(c) (Rural Small Holdings Area) (yellow line), the existing vacant lots (red) and the proposed new large lot residential zone boundary (black hatching).

The key constraint on development of land in North Molong is the karst / limestone system and rocky outcrops which affect over 60% of the land, particularly the eastern section. This may make some further subdivision and development expensive. There are also corresponding issues with increased reliance on septic systems and improved access if this area has increased development.

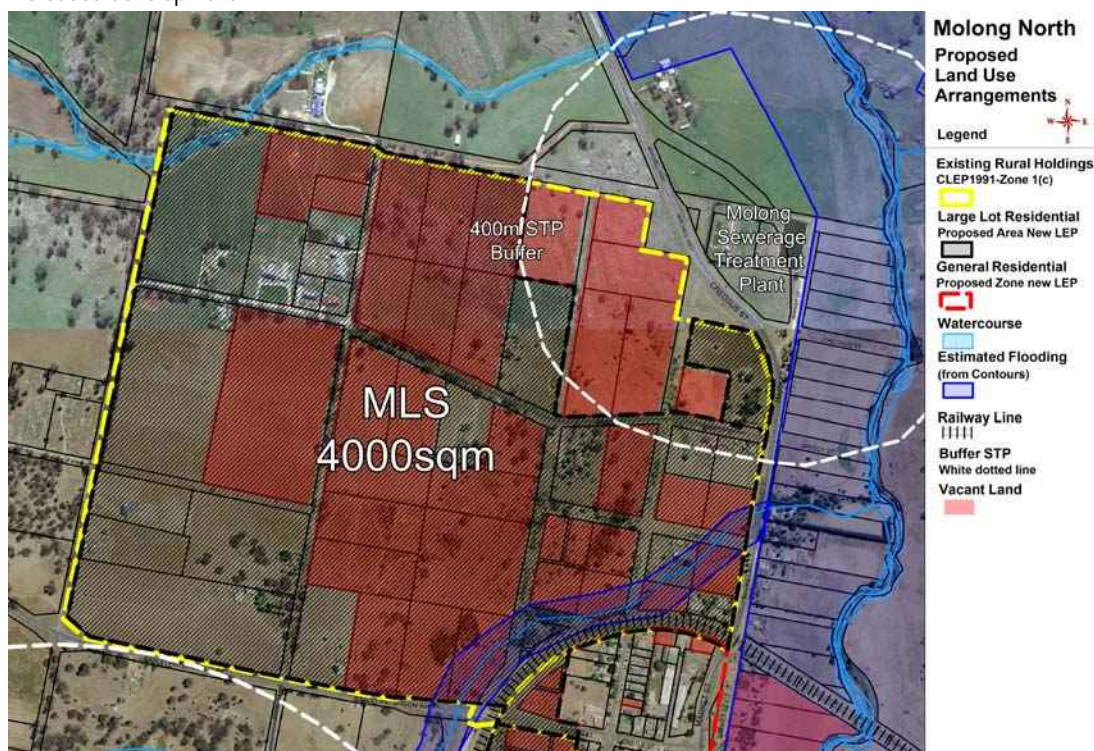


Figure 40: North Molong rural residential area showing existing vacant lots (red) and existing (yellow line) and proposed (black hatching) zoned areas for rural residential uses (Source: Council GIS 2010).

Draft guidelines from OEH also require a 200-400m setback for new residential properties to the Molong Sewage Treatment Plant due to potential odour issues. The majority of these lots are heavily affected by karst so this Strategy recommends that they are either removed from the future large lot residential zone or only limited development is permitted (subject to odour studies).

The greatest potential for further subdivision is in the western portion of this area along Cemetery Road and Starlea Road (and lots fronting Speedy Street) where the land is flattest, there are less limestone outcrops and there is good road frontage / access. There is also some potential for investigation of the area along the Mitchell Highway frontage for highway related uses and potential light industrial uses (see Sections above).

Further work needs to be conducted to test the development potential of this area. However, preliminary estimates suggest that the North Molong area (particularly the western section) would ideally suit a range of lot sizes from 0.5 ha to 2 ha in size (with an average of 1 ha / lot). This may support up to 80-90 new dwelling lots and assuming that only 50% of these are ever developed this is an additional 40-50 new dwellings (Section 3.20 has assumed 49 dwellings). This is subject to addressing water and effluent management issues and, if possible, avoiding reliance on groundwater / bores to provide additional water supplies.

3.21.4. East Molong

East Molong is addressed in more detail in Section 3.20.6 – Potential Urban Residential Extensions (South or East Molong). As discussed, protection of the landscape qualities of the western sloping area of land may necessitate larger lot sizes or a very carefully designed development. However, its location adjacent to the existing Village Zone and the ability to drain into existing reticulated sewerage lines requires more consideration as to whether this area can support an urban residential zoning / development.

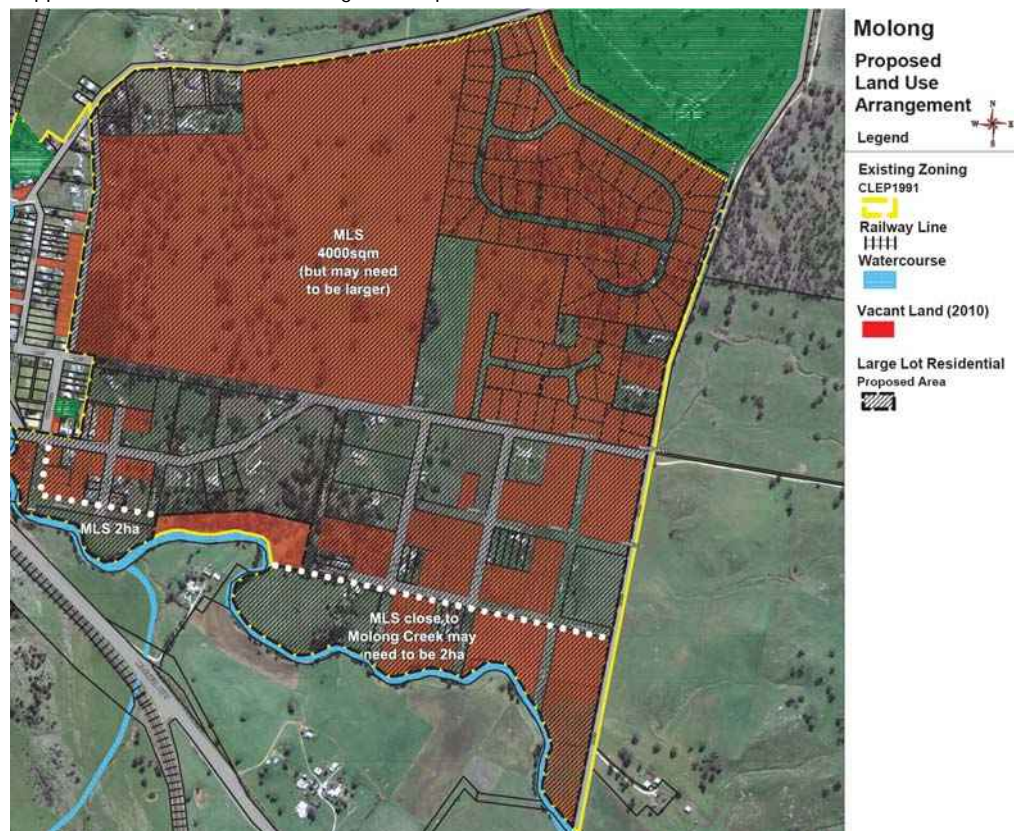


Figure 41: East Molong area showing vacant lots (red), existing zoning boundary (yellow line) and proposed large lot residential area (black hatching) (Source: Council GIS 2010).

The majority of larger lot residential development is likely to occur on the flatter / less constrained lands in the east and central portions of this area. There are some areas in the south along Molong Creek that are potentially flood prone and would not be suitable for substantial additional development.

The conclusion of this section is that the majority of the East Molong area should remain as an area for large lot residential purposes rather than for smaller lot urban residential uses (Figure 41) though it may be necessary to consider urban residential adjacent to the existing Village Zone if other alternative growth areas are not available.

Further work needs to be conducted to test the development potential of this area. However, preliminary estimates suggest that the East Molong area would ideally suit a range of lot sizes from 0.5 ha to 2 ha in size (with an average of 1 ha / lot). This may support up to 150 new dwelling lots (of which only 50% (75) are expected to be developed) in addition to the approximately 100 existing approved lots (Section 3.20 has assumed 189 dwellings).

This is subject to addressing water and effluent management issues and, if possible, avoiding reliance on groundwater / bores to provide additional water supplies. One issue is the provision of centralised water to avoid the need for a large number of individual bores that place pressure on groundwater systems. There have been discussions about connecting future development to raw water from Borenore Dam to provide garden and toilet water. However, as this Chapter states, there are issues with secure water yield supply to Molong that would take precedence over supply to large lot residential areas.

There are also ongoing discussions about connection of properties to centralised sewerage systems to minimise the cumulative impacts of multiple septic systems. However, the cost for additional pumping stations and upgrades to the system would need to be borne by any developer and may decrease the financial viability of any proposal.

The development of East Molong is subject to agreement of a key landholder and release of land. There is potential for some limited further development without involvement of this landholder, however, any significant development will require release of the core piece of land at some time in the future.

3.21.5. South-East Molong

There are six lots east of Watson Street and south of the railway line that currently sit in the Zone 1(a) (General Rural) zone under CLEP1991. There are four dwellings on these lots that have the quality of large lot residential dwellings and, therefore, it is proposed to include them in the large lot residential area for the new LEP (Figure 41). However, it is not intended to provide any additional subdivision potential to these lots at this time. Therefore, it is proposed to use a minimum lot size ('MLS') for subdivision of 2 hectares to achieve this.

3.21.6. West Molong

As stated earlier in this chapter, the key constraints for the West Molong large lot residential area includes, but is not limited to:

- **Quarry:** The proximity to the Molong Limestone Quarry and indicative buffers required to minimise additional residential development that could be affected by blasting and vibration as well as dust, noise etc. Whilst indicative buffers have indicated a 1 kilometre exclusion zone should be used, this Strategy recommends a reduction to 500 metres which effectively runs along McGroder Street.
- **Karst/Limestone:** The underlying geology of karst/limestone creates a number of issues including porosity for leakage of on-site effluent and chemicals into the karst and underground water systems (and bore water), the possibility of subsidence affecting buildings, and the prevalence of rocky outcrops adding additional cost to achieving flat

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sites for development and affecting the operation of effluent systems. The aim is to minimise the cumulative impact of increased subdivision and development by requiring larger lot sizes.

- **Rail Corridor:** The aim would be to minimise intensification of development in close proximity to the rail corridor to minimise impacts from noise and vibration and protect the operations of this essential transport corridor in accordance with state guidelines.



Figure 42: Map of West and South Molong showing the proposed large lot residential areas, vacant lots (red) and proximity to the Molong Limestone Quarry and karst/limestone areas (Source: Council GIS 2010).

As a result of these constraints there is a current moratorium / restriction by Council resolution on any further subdivision of land in West Molong LLR. In accordance with the Council resolution of April 2009, the new LEP provides an opportunity to review this Council policy.

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This Strategy recommends maintaining a policy of preventing further subdivision west of McGroder Street (where the combination of impacts from the quarry, karst and rail are high) but allowing applications for dwellings on existing vacant lots (subject to consent) to provide equity to those land owners.

This will allow a suitable buffer (at least 500 metres) to the quarry operations (including blasting) whilst minimising new development over the karst areas. Therefore, the MLS for subdivision in this area should be at least 5 hectares to preclude further subdivision.

To the east of McGroder Street further subdivision should also be prevented by a minimum MLS of 5 hectares unless the new lots can be connected to reticulated sewer and water when a reduced MLS of 4,000m² would apply. This would allow further subdivision where it addresses many of the issues associated with intensification of development on the karst areas by avoiding use of on-site effluent management systems and the need for additional bores. However, the investigation and extension of the sewer and water networks is subject to funding and contributions. As noted above, applications will continue to be accepted for dwellings on existing vacant lots (subject to consent).

Note that for all development applications within 1 kilometre of the quarry Council may need to send the application to the relevant state government department responsible for mining to seek their advice whether there is any risk of impeding the future use of the Molong Limestone Quarry or to the transport authority where it may impact on the use of the rail corridor and this may affect any consent.

In addition, as discussed in the urban residential section above, there are proposals to remove some limited areas from the existing large lot residential area and place these into the urban residential zone that would permit smaller lot subdivisions and higher densities. This would occur as an extension between Thistle and Hill Streets and along Smith, Park and South Streets to provide some additional urban residential supply in the short to medium term.

3.21.7. South Molong

There are three dwellings allotments south of South Street that currently sit in the Zone 1(a) (General Rural) zone under CLEP1991. These sites have the quality of large lot residential dwellings and, therefore, it is proposed to include them in the large lot residential area for the new LEP (Figure 42). However, it is not intended to provide any additional subdivision potential to these lots at this time. Therefore, it is proposed to use an MLS of 2 hectares to achieve this. The zoning and MLS may be revisited if and when the potential expansion of Molong south of South Street occurs as part of an integrated master plan for this area.

3.22. Previous Land Use Strategies

3.22.1. Previous Studies

It is important to conduct a review of all relevant previous studies as they can provide valuable information on key opportunities and constraints as well as key recommendations that have been put to the community. Where possible, this Strategy should be consistent with those recommendations (unless there are clear reasons to change recommendations).

Key studies relevant to the land uses of Molong include:

- 1990 - Molong Village & Environs – Proposal to Prepare a Development Control Plan (Shire Planner – G. Barry)
- Terra Consulting (NSW) Pty Ltd (Jan 2000) *Strategic Planning Overview for Molong*,
- Abacus Planning (Nov 2000) *Draft – Molong Strategic Study – Residential and Industrial Expansion*,

3.22.2. Molong Village & Environs – Proposal to Prepare a Development Control Plan (1990)('1990 Draft DCP')

The 1990 Draft DCP set out objectives, preliminary controls, and a set of sub-zones for the Village Zone. Key objectives include reducing land use conflicts, provision of land for urban / industrial / commercial development, efficient use of infrastructure, heritage and landscape conservation, and avoidance of environmentally constrained lands. Figure 43 shows preferred areas for commercial and business/industrial development within the Village Zone.

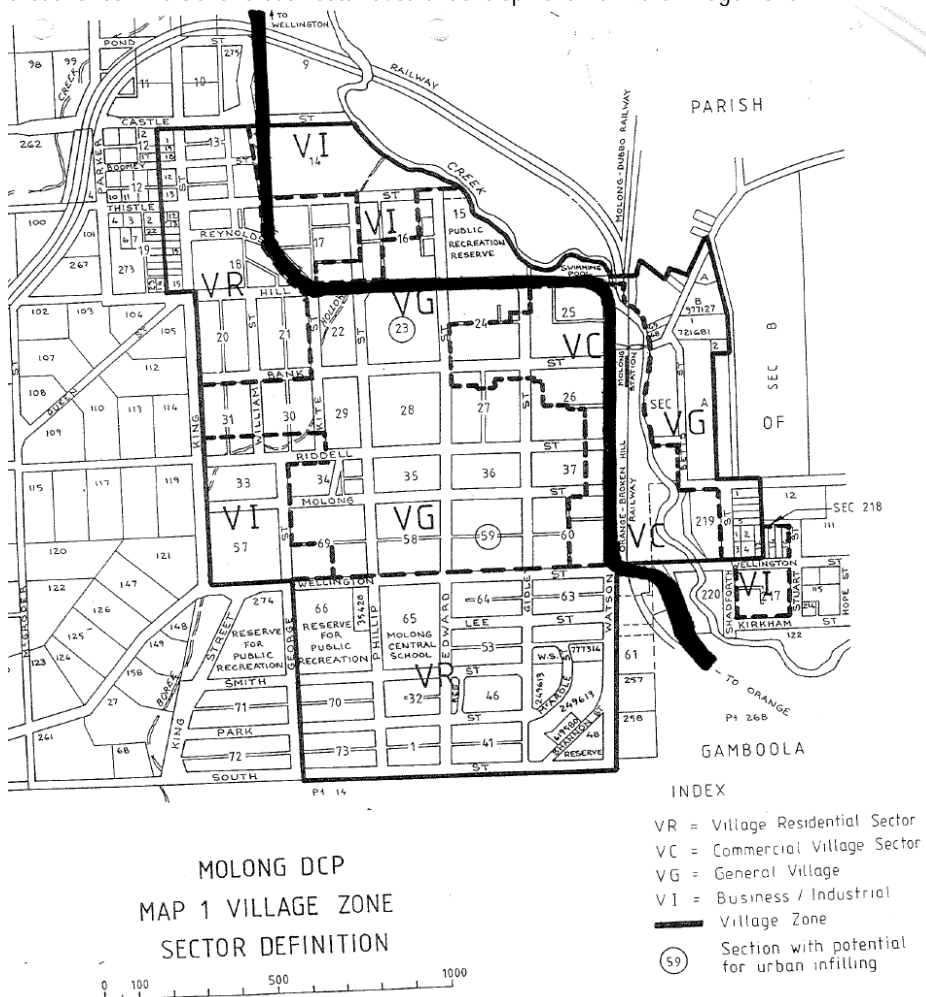


Figure 43: Proposed sub-zones for Molong (Source: 1990 Draft DCP).

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Issues & Strategies

This Strategy agrees with the objectives set out in the 1990 Draft DCP and agrees with the principle of the need for sub-zones within the existing Village Zone. In particular, it is clear that the creation of zones for dominant land uses has been a desired outcome for over 20 years. However, the original sub-zones are not all supportable at this time because land uses have changed considerably over time. In particular, growth of residential uses prevents some areas being designated for industrial or business uses. However, this Strategy agrees with some the proposed industrial and business areas proposed in the 1990 Draft DCP.

3.22.3. Strategic Planning Overview for Molong ('January 2000 Study')

The Strategic Planning Overview for Molong ('January 2000 Study') sought to review the future land needs for the Town of Molong, particularly in regard to residential, rural small holdings, and industrial development. Opportunities and constraints from this Study have been incorporated into this Strategy. The recommendations of the Study are illustrated in Figure 44.

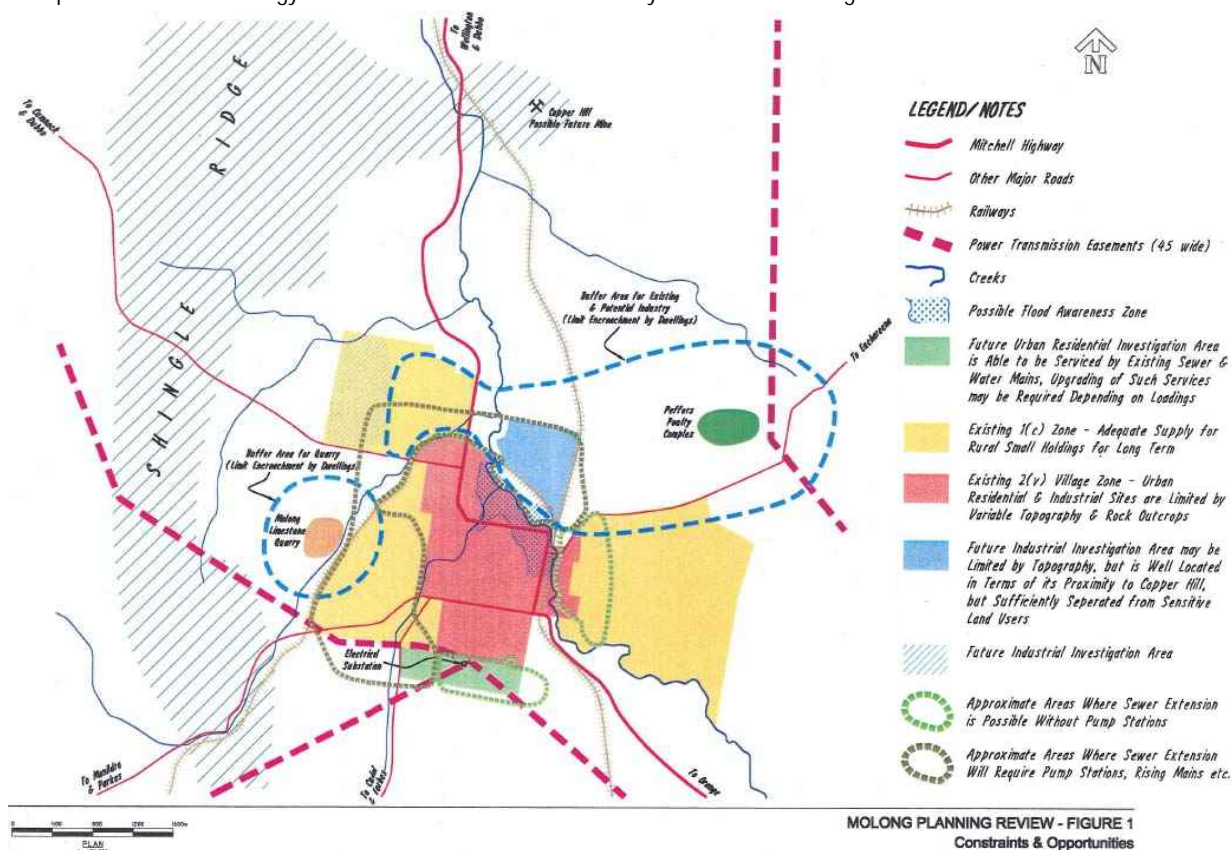


Figure 44: Recommendations for future land uses in Molong by the January 2000 Study (Source: Terra Consulting Pty Ltd (2000) Strategic Planning Overview for Molong – Figure. 1).

January 2000 Study Recommendations	Response of this Strategy
Urban Investigations: That the area to the south of South Street be identified as a candidate area for future urban residential investigations.	Agreed and refined by this Strategy.
Rural Residential: That no additional Zone 1(c) Rural Small Holdings areas be identified around Molong given the ample existing supply of suitable land and the modest take up rates for such land.	Agreed and refined by this Strategy.
Buffer to Industrial Uses: That appropriate planning controls be investigated to limit encroachment by dwellings upon existing industrial enterprises such as the Molong Limestone Quarry and the Peffers poultry complex. This may involve de zoning of some Zone 1(c) areas, or introduction of larger lot sizes in certain areas to reduce dwelling density.	Agreed and refined by this Strategy.

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January 2000 Study Recommendations	Response of this Strategy
Industrial Investigations: That the area north of Molong and the area east of the cemetery be identified as areas for future industrial investigations and that this be undertaken in conjunction with a review of the industrial uses that are currently permitted in the Village Zone.	This Strategy does not agree with these proposed areas at this time but they should be reconsidered as part of any detailed industrial strategy for Molong.

The Cabonne Settlement Strategy believes that the opportunities and constraints analysis in the January 2000 Study is robust and this Strategy broadly supports these recommendations, subject to the detail provided in the rest of this Chapter.

3.22.4. Molong Strategic Study – Residential and Industrial Expansion ('November 2000 Study')

The November 2000 Study had a brief to review opportunities for residential and industrial expansion of the Town of Molong to ensure sufficient / appropriate land supply and to minimise future land use conflicts. A key aim was to identify appropriate locations for industrial land uses and provide appropriate buffers. The recommendations of the November 2000 Strategy are addressed as follows (Figure 45):

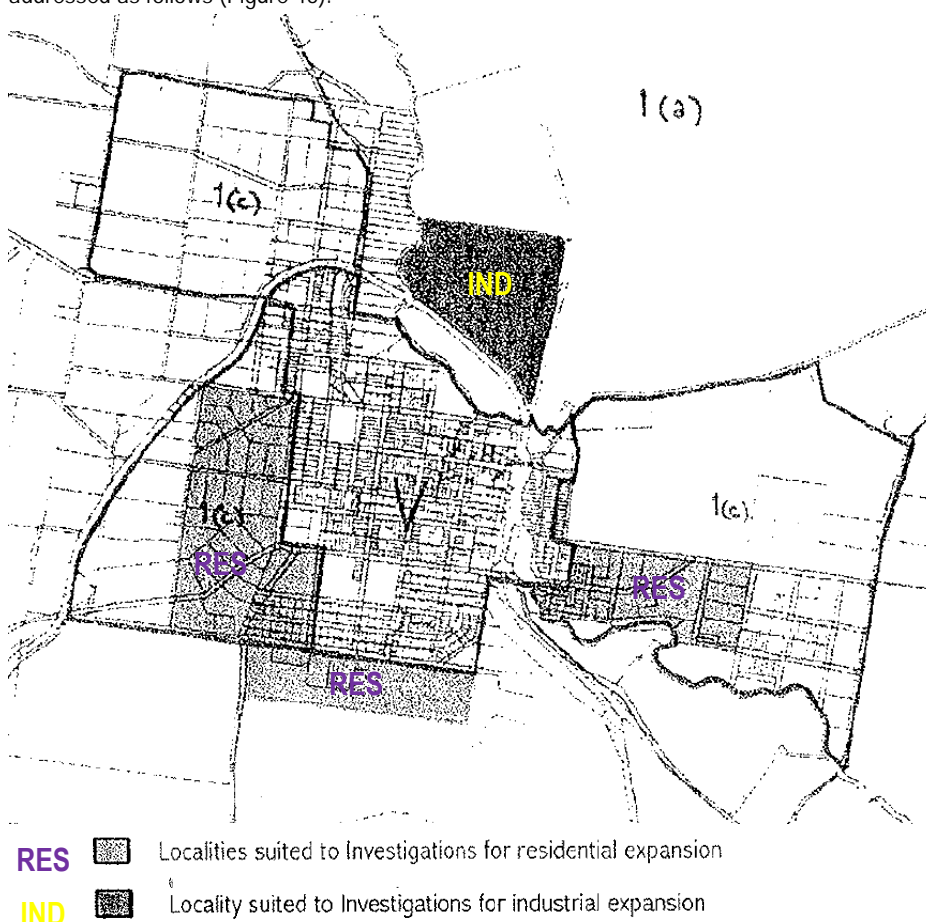


Figure 45: Recommended areas for residential & industrial expansion (Source: Abacus Planning (2000) Molong Strategic Study – Residential & Industrial Expansion – Diagram No.11).

November 2000 Study Recommendations	Response of this Strategy
Urban Residential: In the immediate future Council should focus on the area South of Molong generally (South of South Street) for potential residential development expansions (subject to confirming sufficient water supply).	Agreed and refined by this Strategy.
Residential Expansion: Proposed expansion west of George Street to McGroder Street.	Strategy accepts there will be some take up of <u>existing</u> lots in West Molong for additional dwellings (large lot residential only)

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November 2000 Study Recommendations	Response of this Strategy
	but does not support any additional subdivision. This Strategy allows for removal of the moratorium on subdivision to allow 4,000m ² lots (subject to connection to reticulated water and sewer).
Residential Expansion: Proposed expansion east of Molong, south of Molong Street east and west of Silver Street.	Strategy accepts that there will be some take up of <u>existing</u> lots in South East Molong for additional dwellings (large lot residential only - 4,000m ² lots).
Industrial: That Council focus investigations for future Industrial developments to the North-Eastern Sector of Molong where apart from possible natural constraints potential for land use conflict is reduced;	Strategy supports industrial development in the north-east only to be considered if Copper Hill Mine is approved – but the actual location needs further review and alternative sites are put forward in this Strategy.
Utilities: That Council undertake as a matter of priority an assessment of the adequacy of sewer and water infrastructure and requirements for necessary upgrading to allow for the future expansion of Molong.	Agreed and refined by this Strategy.

In effect the recommendations of the November 2000 Study are very similar to those of the Jan2000 Study except for the addition of investigation for future village land in West Molong Zone 1(c) and in East Molong Zone 1(c) and the removal of an area of investigation for future industrial land in the North Molong Zone 1(c) area.

3.22.5. Draft Molong Village Strategy (2005) ('2005 Strategy')

Draft 2005 Molong Strategy	Draft 2011 Settlement Strategy Response
Commercial: <i>Bank Street to be the preferred core commercial activity area.</i>	This is agreed. However, this Strategy also recognises existing businesses along Watson Street, the Tri-Steel Site and the potential to expand the business area along Bank Street (west) in the future.
Urban Residential: <i>The 2(v) zone to be extended onto the southern side of South Street between Watson and King Streets, including the rezoning of existing 1(c) zoned land between King and George Streets. Longer term residential expansion should continue in this direction as demand dictates.</i>	An extension of Molong's urban residential area to the south of South Street is agreed as a future investigation area (subject to more detailed studies). However, the area for this expansion has been refined by this Strategy.
Large Lot Residential: <i>Future 1(c) zoned land to be provided along the western side of the Broken Hill to Orange railway line (from Watson Street) and potentially south of the existing 1(c) zoned land on the western side of Molong. Additional 1(c) zoned land should only be provided when supply of existing land has been reduced.</i>	This Strategy argues that there is an over-supply of rural residential land so there is no need to identify any additional expansion of this type of land supply. Some existing large lot residential dwellings have been included in the proposed large lot residential area but limited additional subdivision would be permitted.
Industrial/Highway Uses: <i>The 2(v) zone to be extended to the north of Molong to Croesus Street and preferred for industrial land uses and highway business type land uses along the Mitchell Highway. The existing DCP No. 8 to be reviewed and extended to match the new zone boundary. Land to the east of the Mitchell Highway in this new area needs to be investigated for flooding to locate the proposed zone boundary.</i>	This Strategy agrees that these areas should be considered for future investigation for the purposes of light industrial and highway related services. It is not proposed to rezone these areas in the new LEP until satisfactory local environmental studies have addressed existing site constraints.
Heritage: <i>The heritage character of the village to be protected and perpetuated."</i>	The Draft Community Heritage Study will recommend additional items to be placed on the Schedule of Heritage Items in the new LEP. This Strategy suggests minor changes to the existing heritage conservation area.

The recommendations of the 2005 Strategy are addressed as follows (see also Figure 46):

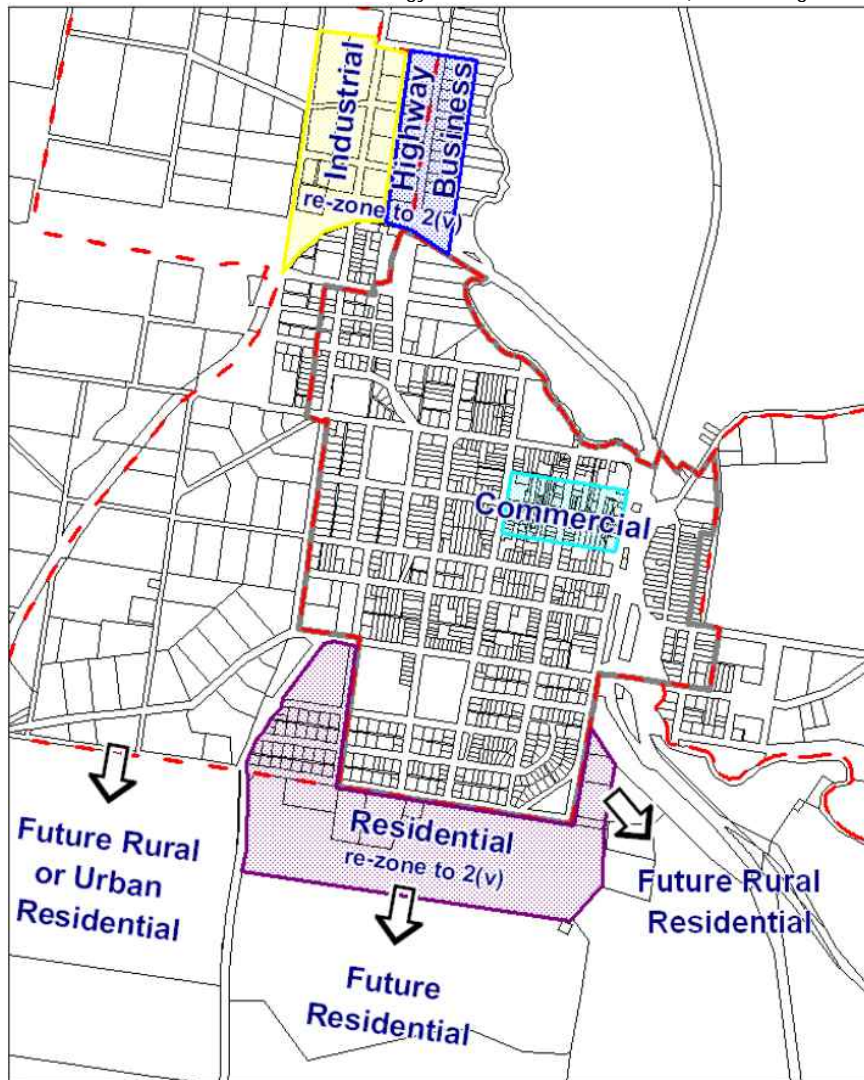


Figure 46: Proposal for growth in the Draft Molong Village Strategy (2005).

3.22.6. Draft Subregional Rural and Industrial Strategy (2008) ('R&I Strategy')

There were no outcomes from the R&I Strategy that were particularly applicable to Molong in anything other than general terms, as follows:

- **Large Lot Residential:** Molong was not identified for any further large lot residential expansion and this is agreed and supported by this Strategy.
- **Industrial:** The R&I Strategy only identified larger format and heavier industrial lands around Manildra of sub-regional importance in Cabonne. Therefore, it did not look at industry at the settlement level. This Strategy seeks to supplement the R&I Strategy with a local industrial strategy for Molong.

Issues & Strategies

Rural & Industrial Strategy: The R&I Strategy did not specifically address land uses in the urban areas of Molong other than to broadly make recommendations that no additional stand-alone large lot residential areas are required and no large-scale industrial areas would be recommended. Therefore, this strategy has conducted a local study of the existing large lot residential and industrial demand / supply for Molong.

3.22.7. Overview of Existing Planning Controls

A summary of the key controls currently applicable in Molong as follows:

- **CLEP1991:** The LEP provides the key controls relating to subdivision, dwelling potential, lot size and key environmental considerations. In the Village Zones the minimum lot size is 500m² (where serviced by centralised sewer) and 2000m² (for others). There are also controls for flood prone lands, heritage items, heritage conservation area, dual occupancy in the village zone, advertising structures, and specific controls for development north of Castle Street.
- **DCP:** The only DCPs that apply to Molong's village zone are:
 - DCP No.8 – North Molong Industry;
 - DCP No.10 – Flood Prone Land;
 - DCP No.13 – Advertising Signage in Conservation Areas (Molong & Canowindra);
 - DCP No.15 – Relocatable & Transportable Homes.
- **Other:** Otherwise, the only other controls are located in Council Policies or the general application of Section 79C of the EP&A Act.

Issues & Strategies

Existing Controls: The primary development controls applicable in Molong's village zone are CLEP1991, a range of Council Policies, and the general application of Section 79C of the EP&A Act. Within the Village Zone there are no DCP controls for development outside the heritage conservation area (advertising signage) or North Molong Industrial estate except for relocatable/transportable homes (DCP 15) and flood prone lands (DCP 10). DCP No.6 – Rural Small Holdings applies to the Zone 1(c) land surrounding Molong. Therefore, there is a need for expansion of DCP controls to govern other land use types in the Molong urban area.

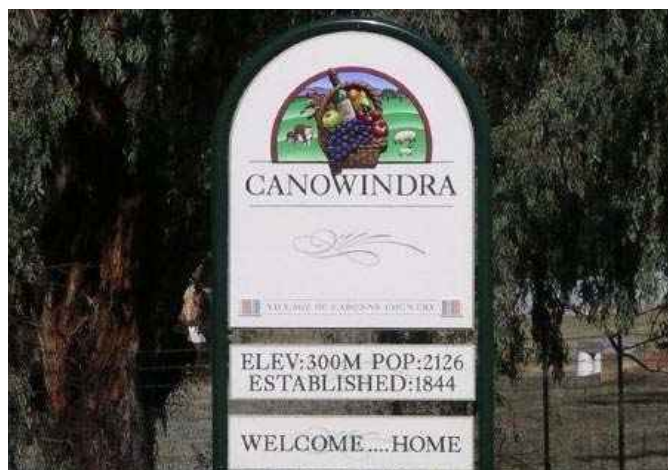


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Document Control

Version	Date	Author	Summary	Reviewed
A	March 2011	A.Napier	Draft	Internal Review
B	May 2011		Draft for Councillors	DES
C	August 2011		Amended Draft	AN
D	December 2011		Draft Final	DES
E	March 2012		Final for Public Exhibition	KB
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Final	August 2012		Amendments Incorporated	AN

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4. Town of Canowindra

Please note that **Chapter 4 – Town of Canowindra** should be read with **Chapter 2 – Cabonne Overview** as some of the Issues and Strategies applicable to all settlements are not reproduced in this chapter.

4.1. Executive Summary & Proposed Land Use Arrangements

4.1.1. Historical population growth

Urban Population

The ABS Census District for the Town of Canowindra includes the Village Zone and only small portions of Zone 1(c) (Rural Small Holdings) lands to the north. Therefore, it does not include the majority of Zone 1(c) lands in the West, North and East of Canowindra. At the 2006 Census, Canowindra's Census District had a population of 1,499 people. These excluded areas have an estimated population of approximately 283 additional people resulting in a total population of approximately 1,782 people in the urban zones of Canowindra in 2006.

Village Zone

As Table 1 shows, the population in the Canowindra Census District (Village Zone only) has been steadily falling from a high of 1,743 people in 1976 (the earliest ABS records) to a low in 2006 of 1,499 – a loss of 244 people over 30 years (negative 14% or 0.47%/year).

Year	1976	1981	1986	1991	1996	2001	2006
Population	1,743	1,720	1,717	1,715	1,656	1,516	1,499
Av. Ann. Δ	N/A	-0.26%	-0.03%	0.02%	-0.69%	-1.69%	-0.22%
Δ over time	Δ in pop.		Total % Δ		Average Annual Δ		
1976-2006	-244		-14.00%		-0.47%		
1986-2006	- 218		- 12.70%		- 0.63%		
1996-2006	-157		- 9.48%		- 0.95%		

Table 1: Census population and population change for Canowindra's Census Collection District from 1976-2006 (predominantly Village Zone only) (Source: ABS www.abs.gov.au).

Large Lot Residential Areas

Whilst there are no ABS figures specifically for each of the Zone 1(c) (Rural Small Holdings) areas around Canowindra, it is use the ABS Census Districts surrounding each area to estimate existing populations and growth rates (Table 2). There appears to have been significant population growth in the northern and western large lot residential areas and reasonable growth in the east (Moorbel) area. Therefore, whilst the Canowindra Village Zone population may have been decreasing most of the growth has been occurring in the surrounding large lot residential areas in recent times.

Large Lot Res. Area	Existing Dwellings	Est. Pop. @ 2.3p/dwelling	Historical Growth Rate	Est. Pop. by 2036	Δ in Pop. by 2036
West LLR	9 dwellings	21 people	4.42%	65 people	44 people
North LLR	24 dwellings	55 people	4.42%	169 people	114 people
East LLR (Moorbel)	90 dwellings	207 people	0.7%	248 people	41 people
Total	123 dwellings	283 people	N/A	482 people	199 people

Table 2: Estimate of population and population growth for the large lot residential areas around Canowindra (Source: Council research 2010 & www.abs.gov.au).

4.1.2. Key Factors Influencing Population/Economic Growth

Canowindra has a number of positive influences that could potentially result in positive population and economic growth including, but not limited to: a strong core population of ~1,782 which supports a range of local services and facilities, location on the key road route to Cowra, a strong agricultural base, a dedicated industrial area for future development, a local hospital and aged care services, both primary and secondary schools and a range of community facilities, access to reticulated water and sewer, heritage assets and infrastructure that make it attractive for tourism, and a strong community spirit and attractive place to live.

However, there are a number of potential negative influences that could hamper population and economic growth including, but not limited to: a steadily decreasing population in the core of the town, loss of an active railway line, difficulty attracting new industries, limited employment options, loss of services and 'escape expenditure' to regional centres, flood prone lands, and an ageing population. See [Section 4.7 – Summary of Opportunities & Constraints](#) for more details.

4.1.3. Projected Population Growth

Based on the opportunities and constraints, Canowindra's urban population (both Village Zone and Rural Small Holdings) is expected to grow at a projected annual rate ranging from +0.3%/year (minimum) through to +0.7%/year (maximum) with an average of +0.5%/year. *(Please note that growth rates will change over time and this is an estimated average growth rate over the 30 year period).*

Based on the **maximum** growth rate of +0.7%/year Canowindra's urban population will grow to 2,197 people by 2036 - an increase of 415 people over the estimated 2006 population. This growth will create additional demand for residential, business, industrial, community and open space/recreation land uses that will need to be provided in Canowindra and the region.

4.1.4. Proposed Land Use Zone(s)

Good planning practice suggests that settlements above 1,000 in population should consider adopting specific zoning for each land use ('complex zoning'). The aim of this requirement is for 'mature' towns to restrict certain land uses to specific areas to minimise potential land use conflicts and recognise the need to plan for and consolidate key land uses.

As the estimated 2006 population of Canowindra's urban population is approximately 1,782 people (~1,499 in the Village Zone only), this Strategy recommends that Canowindra adopt 'complex zoning' in the new LEP. This would result in the replacement of the existing Village Zone with a range of zones including, but not limited to areas for land uses for business, industry, recreation, and residential uses. The existing Zone 1(c) (Rural Small Holdings Zone) will be replaced with a similar zone for large lot residential uses.

4.1.5. Summary of Proposed Changes

There are changes proposed to both the 'zoned' areas and the subdivision potential of some lands in this Settlement. See the detailed land use sections of this chapter for more details.

Figure 1 summarises the proposed land use arrangements recommended by this Strategy:

a) Business Area(s)

This Strategy proposes to introduce three (3) new business areas each with a distinct 'character' / land use preference:

- **Primary Retail/Commercial Area:** The majority of this area is located along Gaskill and Ryall Streets and incorporates the majority of existing retail/commercial businesses. The aim is to create an area where retail/commercial businesses are supported and have the capacity to develop and expand whilst minimising impacts on residential properties. There

is significant opportunity for infill development of existing vacant buildings in this area that will provide a minimum of 5-10 years growth for these land uses;

- **Tourism/Highway Area:** The existing businesses at the intersections of Ferguson, Tilga and Rodd Streets are predominantly aimed at highway related uses and tourism purposes. This area should be designated for these uses with only low-scale retail/commercial that does not unduly compete with the Primary Retail/Commercial Area. There is some limited opportunity for infill development of existing vacant buildings and under-utilised land in this area that will provide a minimum of 5-10 years growth for these land uses;
- **Rural Services Area:** The existing businesses along Mill Street, west of the railway line are predominantly aimed at providing rural services. This area should be designated for larger format buildings outside the heritage conservation area that have a quasi-industrial nature with machinery and vehicle repairs. There is some capacity for intensification of uses on under-utilised land that will provide a minimum of 5-10 years growth for these land uses. One amendment to the existing Village Zone boundary would be the addition of two lots between Nangar Road and Bowds Lane (Lots 10 & 15 DP 32505) that are natural extensions of existing businesses that could be used for expansion of rural services.

b) Industrial Area

This Strategy proposes to reinforce the existing industrial area that incorporates existing industrial land uses in Canowindra Industrial Estate and adjacent Canowindra Produce lands on both sides of the railway line. This Industrial area will support existing industrial land uses and allow for some expansion on vacant and under-utilised land, allowing for a minimum of 10 years growth for these land uses. However, in order to protect the industrial uses from residential encroachment there would need to be a 60-100m buffer around the industrial area that would exclude dwellings;

c) Recreation Area(s)

The key major outdoor sports facilities are the Showground and Sportsground. This Strategy designates these areas for public recreation to allow a range of ancillary recreation uses and supporting structures to facilitate their ongoing use. The remaining open spaces can generally sit within the other 'background' zones as they will only require low level infrastructure. There is no need for identification of new open space areas at this time;

d) Urban Residential (General) Area

The remainder of the original Village Zone that is not included in the proposed business, industrial or recreation areas is proposed for urban residential (general) uses. This is likely to allow for a range of residential types and densities as well as some low-scale businesses uses such as neighbourhood shops, home businesses etc. However, it will not support larger scale business (retail/commercial) or industrial uses other than those existing uses.

The Strategy proposes to retain the minimum lot size ('MLS') for subdivision under Clause 17 of CLEP1991 in the Village Zone of 500m² (for areas serviced by sewer – which includes all of Canowindra's existing Village Zone) and 2,000m² for those areas serviced by septic system).

This Strategy has determined that there is sufficient vacant or under-utilised land within the existing Village Zone boundary to allow for a minimum of 10 years dwelling growth. Therefore, it is not proposed to expand the urban zone of Canowindra in the next LEP. One minor amendments to the outer boundary of the existing Village Zone is the removal of a part lot to the south of Bowds Lane (Lot 3 DP999095) that used to be the old Effluent Disposal Area (now vacant) and sits across both the Village Zone and Rural Zone but is within the floodway/floodplain and is not suitable for future development;

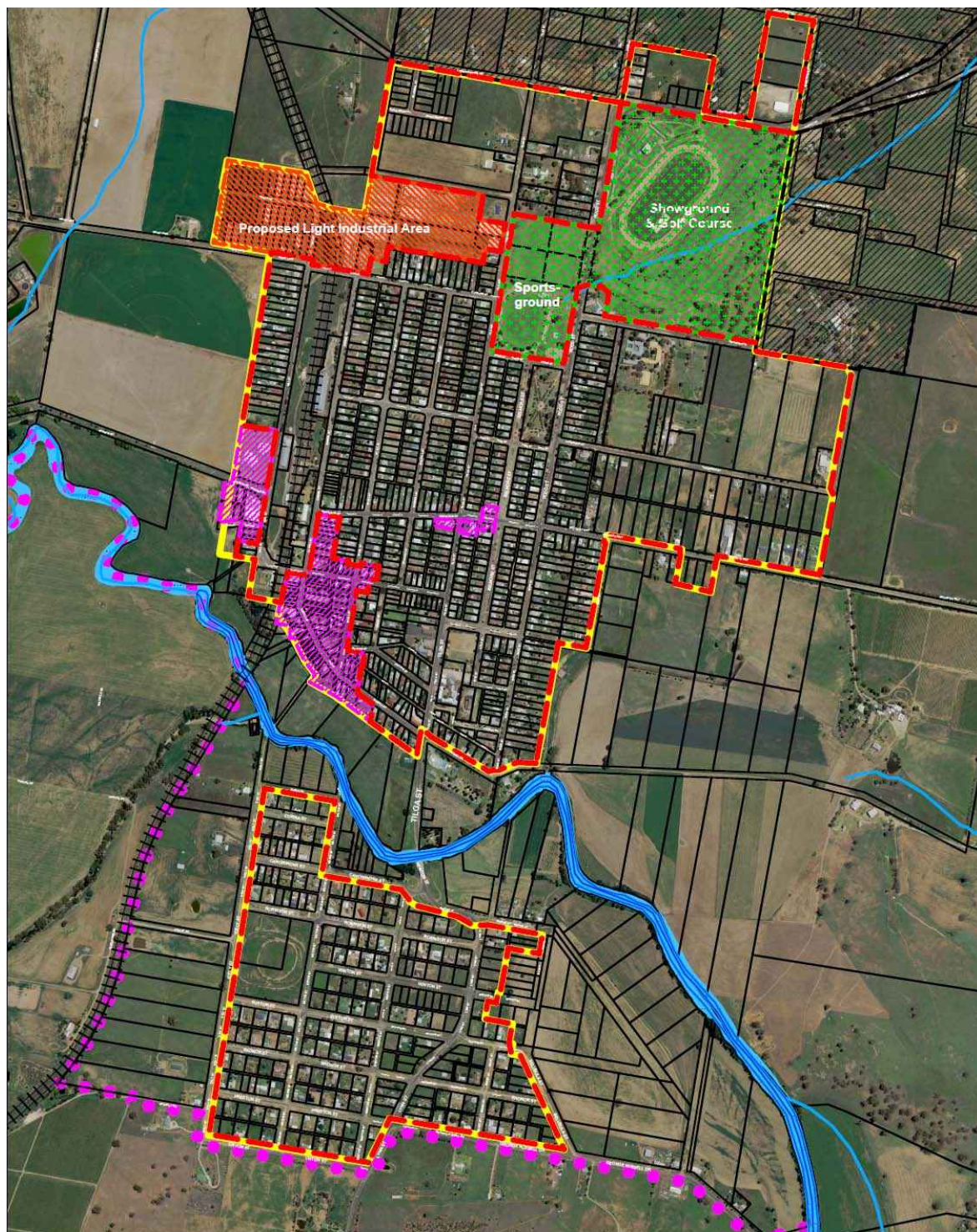


Figure 1: Summary of proposed land use arrangements for the existing Village Zone of Canowindra
(Source: Council GIS 2011).

e) Large Lot Residential Areas

Overview

This Strategy recommends that in accordance with the Standard LEP Instrument the existing Zone 1(c) (Rural Small Holdings) is replaced with an area that supports large lot residential ('LLR') uses that will not affect the 'character' of these areas but there may be some amendments to the permissibility of non-residential uses.

This Strategy has identified that there is a significant over-supply of large lot residential lands around Canowindra (total of 763 hectares or 717ha developable). Due to the spread of dwellings throughout the three (3) areas only limited areas have been removed from the large lot residential boundary and placed in the rural zone (western area only). However, the main tool recommended to manage the over-supply is an increase in the minimum lot size ('MLS') for subdivision.

Under Clause 16 of CLEP1991 the Minimum Lot Size ('MLS') for subdivision in Zone 1(c) (Rural Small Holdings) around Canowindra is 0.4 hectares (1 acre), subject to development consent. This Strategy proposes to increase the MLS in all three (3) areas to between 1-2 hectares depending on local factors detailed below.

The amendments to the three (3) large lot residential ('LLR') areas can be summarised as follows:

North Canowindra Large Lot Residential Area

As shown by Figure 2, no change is proposed to the existing large lot residential boundary in the northern area as there are dwellings spread throughout most of this area. Instead the major changes are the increased MLS for subdivision from the existing 0.4 hectares/lot to either 1 hectare to the west or 2 hectares to the east.

The 2 hectare area to the east has a higher MLS due to a number of factors including, but not limited to, the steeper slope of this land, the potential visual impact of development facing Cargo Road as the key northern entrance to Canowindra, the greater difficulty/cost associated with developing this land, and the fact that there is a lower density of dwellings in this area and more viable agricultural uses.



Figure 2: Proposed land use arrangement and minimum lot size for subdivision of the North Canowindra LLR (Source: Council GIS 2011).

East Canowindra ('Moorbel') Large Lot Residential Area

As shown by Figure 3, no change is proposed to the existing large lot residential boundary to the east as there are dwellings spread throughout most of this area. Instead the major changes are the increased MLS for subdivision from the existing 0.4 hectares/lot to either 1 hectare in the west or 2 hectares in the east.

The 2 hectare area to the east has a higher MLS due to a number of factors including, but not limited to, the distance of this area from Canowindra's town centre, the larger lot sizes and dominance of agricultural pursuits in this area, adjacency to both extensive and intensive agricultural practices, proximity to a potential mineral area to the south-east, and the greater difficulty/cost associated with developing this land.

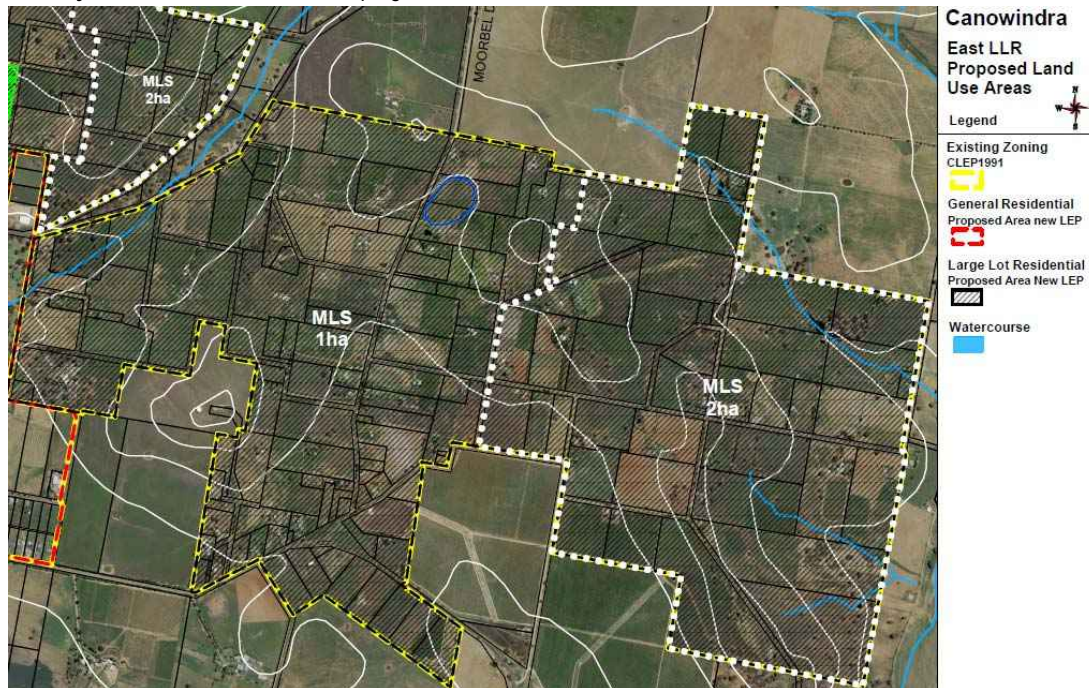


Figure 3: Proposed land use arrangement and minimum lot size for subdivision of the East Canowindra (Moorbel) LLR (Source: Council GIS 2011).

West Canowindra Large Lot Residential Area

As shown by Figure 4, it is proposed to remove three (3) large lots from the north-western quadrant of the existing Zone 1(c) area (Lots 1-3 DP260069, Pauls Road) as there is an over-supply of large lot residential lands to meet projected demand and these lots are predominantly used for agricultural purposes. Therefore, the minimum lot size for subdivision or a dwelling in this area will be 100 hectares. The one (1) affected land holder owns a large lot within the proposed large lot residential area so this owner has significant remaining development potential that alleviates the impacts of this amendment.

In addition, it is proposed to increase the MLS for subdivision in the West LLR area from the existing 0.4 hectares/lot to 1 hectare per lot/dwelling. In general, the desired lot size in this area is not less than 1 hectare, it will address the potential over-supply of land, and it will allow for larger dwelling setbacks from adjacent rural areas, the sewage treatment plant, and other dwellings.

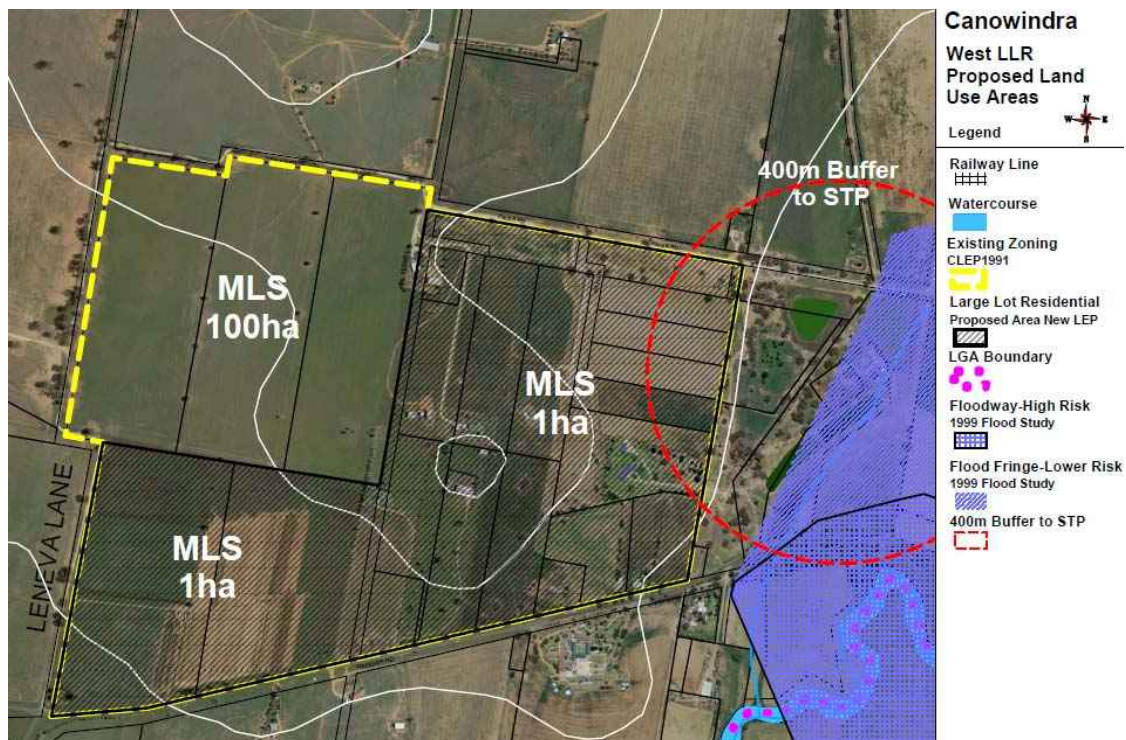


Figure 4: Proposed land use arrangement and minimum lot size for subdivision of the West Canowindra LLR (Source: Council GIS 2011).

4.1.6. Summary of Land Supply & Demand

Based on the proposed land use arrangements above and estimates of demand for land supply in this chapter, a summary of land supply and demand for each land use is as follows:

Open Spaces / Recreational Land Uses

There is no perceived need for additional land for public recreation and open space within the Canowindra urban area for the foreseeable future (subject to a more detail shire-wise study). Instead, a number of Crown Lands in the South Canowindra area may be under-utilised and could be rationalised to provide improved recreation facilities on part of this land whilst freeing up surplus land for additional residential development (subject to agreement with the Crown and addressing any native title claims).

Community Land Uses

There is no perceived need for additional land for community uses within the Canowindra urban area for the short to medium term. If expansion is required this can generally be accommodated on existing community use sites or on vacant land in the urban area without substantial impact on residential amenity. No specific areas need to be designated for these uses but the aim would be that they are located in proximity to other community or business uses towards the core of the town to minimise impacts on residential areas where relevant.

Industrial Land Uses

The proposed area for light industrial uses is approximately 14 hectares. However, only 19 lots are used with 24 vacant lots (6.76 hectares) and a number of larger lots that are under-utilised. This Strategy estimates that there is a demand for 4-6 additional small to medium sites (each of 2,000-4,000m²) and 1-2 larger sites (1 hectare each) resulting in a total estimated demand in the next 5-10 years of 2-3 hectares of land. This can be accommodated on existing vacant land in the proposed industrial area. Other than home industries which are broadly permissible, there are no existing industrial uses outside the proposed industrial area that would be affected by this proposal.

Business Land Uses

There are three (3) proposed business areas made up of:

- Area (1): Primary retail/commercial area (~8.12 hectares);
- Area (2): Tourism/highway uses area (~0.68 hectares); and
- Area (3): Rural services area (~3.3 hectares).

In Area (1) along Gaskill & Ryall Streets there is estimated to be approximately 10,000-12,000m² of existing utilised floor space and an additional 6,000-8,000m² of floor space that is vacant or under-utilised. Therefore, a key aim of this Strategy is to promote adaptive re-use of existing vacant premises in the main street to reinforce this retail/commercial area over the next 10-15 years.

There is sufficient vacant or under-utilised land in Areas 2 & 3 to allow for minor expansion of their respective uses but demand is not expected to be great in the next 5-10 years. If demand exceeds the supply of land then future investigation areas have been proposed in this Strategy for new highway related uses.

There are a limited number of existing businesses outside the three (3) proposed business areas. Some of these would be permissible in a residential zone because they are low impact. The remainder have existing use rights but have a low potential to need additional land to expand in the foreseeable future – so these business owners are less likely to be affected by not being within the business zone.

Urban Residential Land Uses

Based on historical and projected growth rates of population and dwellings it is estimated that there is demand for approximately 134 additional dwellings in Canowindra's urban area (excluding large lot residential areas) over the next 30 years to 2036.

There are approximately 227 vacant lots within the existing Village Zone. However, 63 of these lots have a significant constraint that would make development more expensive or difficult. Therefore, there are 164 vacant lots (small and large) that could support redevelopment – primarily for additional dwellings.

A further review of subdivision potential of both vacant land (164 lots) and larger residential blocks with surplus land (22 lots) suggests that there are up to 351 potential lots that could be created from existing land supply. Council assumes that only 60% of these would ever be released over a 30 year period resulting in a lot/dwelling potential of 211 dwellings.

This would suggest the estimated potential supply of urban land (211) exceeds the projected demand (134) for the next 30 years. Therefore, there is no need to rezone any additional lands for urban residential use in the next local environmental plan ('LEP').

Large Lot Residential Land Uses

The existing and potential supply and demand for proposed large lot residential areas can be summarised as follows (Table 3) (as at December 2010):

Area	<u>Existing</u> Developable Area (ha)	Pot. New Dwellings @ 0.4ha/lot	<u>Proposed</u> Developable Area (ha)	Potential New Dwellings @ new Zone / MLS	Likely New Dwellings (50% Pot.)	Estimated Demand by 2036
North LLR	140	326	140	(@1-2ha/lot) 78	39	50
East LLR	457	1,053	457	(@1-2ha/lot) 212	106	18
West LLR	122	291	82	(@1ha/lot) 71	36	20
Total	719ha	1,670	679ha	361	181	88

Table 3: Summary of existing and potential supply & demand for the three (3) large lot residential areas in Canowindra.

It is important to note that the proposed land use arrangements (new zoning & MLS) will provide an estimated supply that is over 400% of the estimated demand for the next 30 years. Even assuming that only 50% of the lots/dwellings eventuate then there is still 200% of projected demand for the next 30 years with the northern area likely to be taken up first. The arrangements also ensure that every landowner is able to build a dwelling on their holdings so no landowner is unduly restricted to the point where their land would lose significant value from the proposed changes and every landowner is given a reasonable potential for development.

4.1.7. Heritage Conservation Area

Canowindra is one of two key settlements (also Molong) that has a Heritage Conservation Area ('HCA') under CLEP1991. This HCA is primarily located along Gaskill Street, extending from just north of Blatchford Street down to just east of Ryall Street. Previously, the National Trust nominated a significantly larger conservation area that extends along Gaskill Street to Rodd Street to include the pool and camping ground and the properties to the north of Gaskill Street (Figure 19). This Strategy recognises that whilst the highest density of heritage items are present in the main retail area of Gaskill Street, there should be a clear strategy to take heritage streetscape character into account right along Gaskill Street as far as Rodd Street. In addition, minor amendments are made to align the HCA with the new lot boundaries.

4.1.8. Future Growth Directions

If the growth rates of Canowindra were to increase beyond the projections in this Strategy then there may be future potential to amend the zoning to allow the settlement to grow. Future investment areas for growth are considered in more detail in the sections below.

4.2. Regional Location

The Town of Canowindra is located in the southern area of Cabonne on the local government boundary with Cowra local government area (Figure 5). It is one of the larger centres in Cabonne.

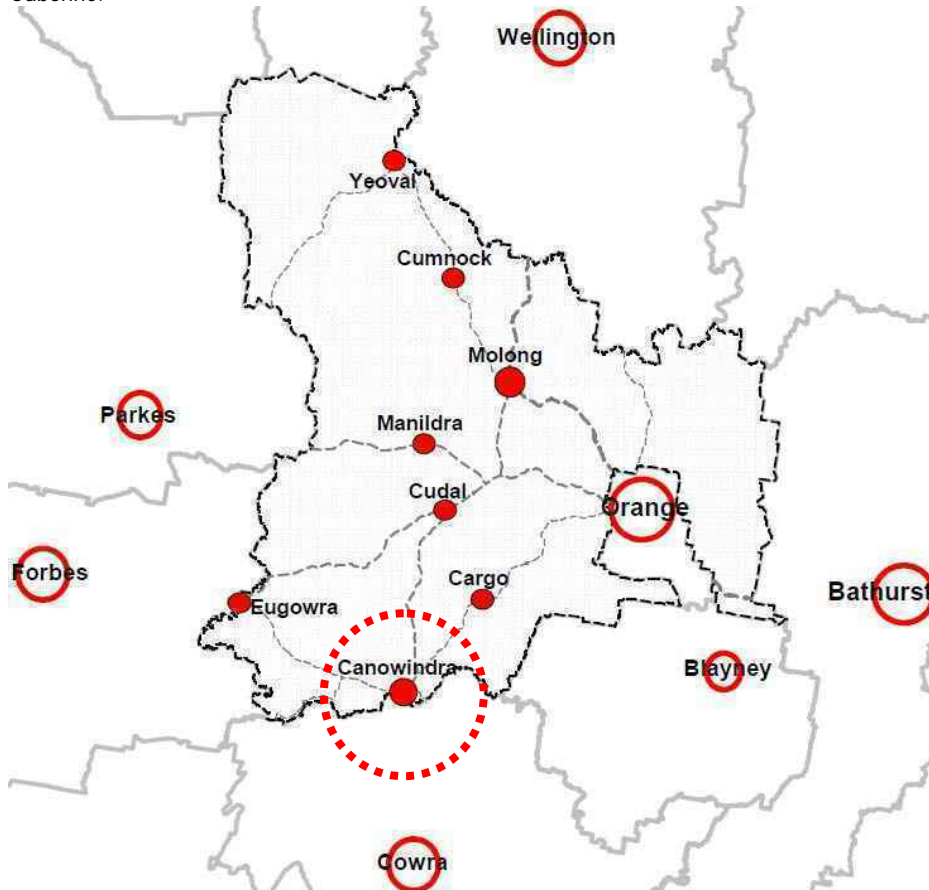


Figure 5: Location of Canowindra and proximity to key regional centres and settlements (Source: Council GIS 2010).

Canowindra is located approximately:

- 22km (20-25 minutes drive) from Cargo via Cargo Road;
- 32km (25-30 minutes drive) from Cowra via Canowindra Road;
- 34km (25-30 minutes drive) from Eugowra via Pye Street;
- 35km (25-30 minutes drive) from Cudal via Canowindra Road;
- 60km (50-55 minutes drive) from Orange via the Cargo Road;
- 64km (55-60 minutes drive) from Molong via Canowindra Road, The Escort Way, and Peabody Road.

Issues & Strategies







- **Proximity to Cabonne Settlements:** Canowindra is at the southern end of Cabonne and is, therefore, closest to the other settlements of Eugowra, Cargo and Cudal. Canowindra may act as a rural / service centre for the southern area of Cabonne.
- **Proximity to Major Centres:** Canowindra is located on a key transport route between Orange and Cowra. Canowindra is located on the edge of the 'commuter zone' (25-30 minutes drive) of the Town of Cowra (the next major settlement), and therefore, Cowra is likely to be nearest major centre that can provide a higher level of services and retail to meet the needs of Canowindra. Orange is a more distant centre but has a higher level of services than Cowra.

4.3. Existing Zoning

Figure 6 shows the existing zoning in and around Canowindra under CLEP1991 including:

- **Zone 2(v) (Village Zone)** - The core urban area of the Town of Canowindra (Pink on Map) (Total area of approximately 319.6ha including roads, open spaces & Crown lands (255.2ha to north of Belubula River and 64.4ha to south of river));
- **Zone 1(c) (Rural Small Holdings)** (Orange on map) Large lot residential uses (Total area ~ 763ha including roads or ~717ha developable) made up of:
 - North Canowindra ~155ha (~140ha developable);
 - West Canowindra ~122ha (~120ha developable); and
 - East Canowindra (Moorbel) ~486ha (~457ha developable).
- **Zone 1(a) (General Rural)** for all surrounding areas (Red on map).

Cowra is the local government area ('LGA') to the south of Canowindra (white on map). In general the area adjacent to Canowindra in Cowra LGA is in a general rural zone but this may change in the future Cowra Local Environmental Plan.

Zone (CLEP1991)	
	1a General Rural
	1c Rural Small Holdings
	1f Forestry
	2v Village
	7c Environment
	8 National Park

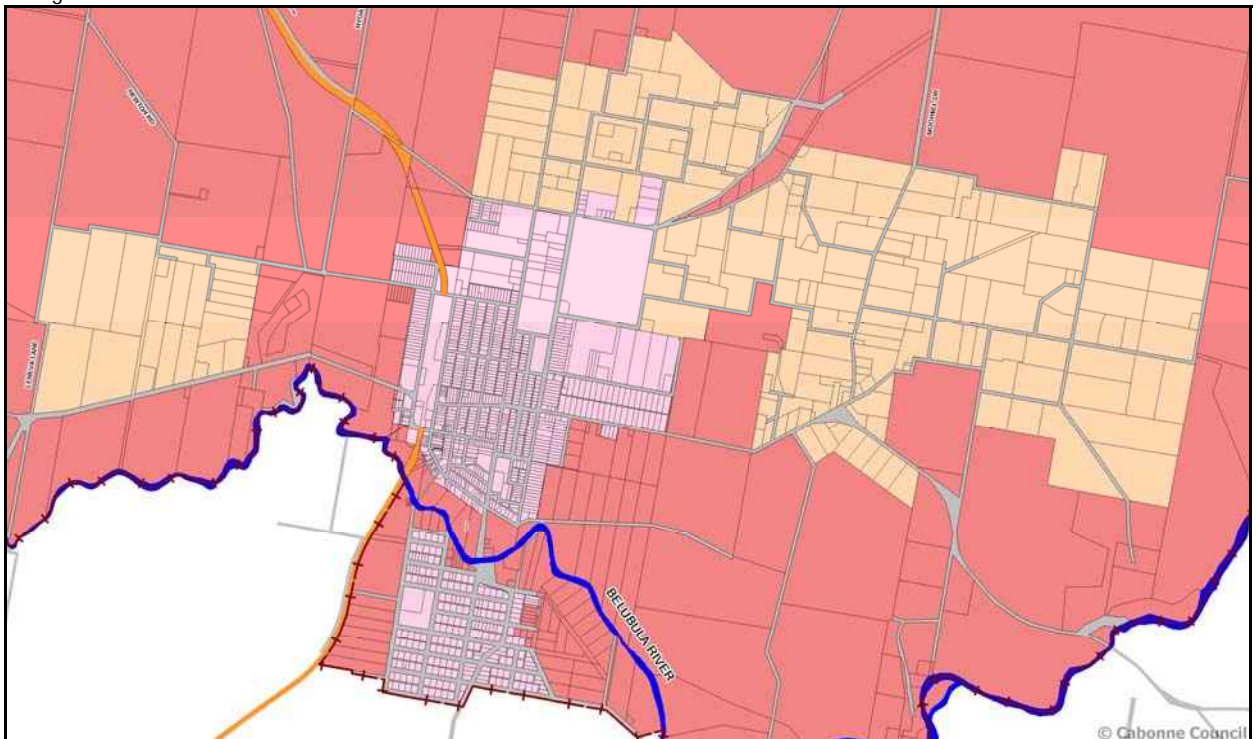


Figure 6: Existing zoning for Canowindra and surrounds (Source: CLEP1991 / Council GIS 2011).

The 'urban' boundary of Canowindra has expanded and contracted over time as the population has varied. Whilst it is difficult to pin-point dates when boundaries have changed, it would appear that the town boundary for the area south of Belubula River has not changed significantly since the mid 1900s but there has been an expansion of the town boundary for the village area north of the Belubula River over the last 40 years.

By the 1980s the village zone extended to the west just past Mill Street, to the east along East Street and to the north near Clyburn Street and Long Corner Road. This has subsequently been expanded to include the North Street area to the north-west, Longs Corner Road in the north, and to the end of Thompson Street in the east.

It is assumed that the Rural Small Holdings areas to the north and east (Moorbel) of Canowindra were formalised in the late 1970s / early 1980s. In 1986 *Cabonne Local Environmental Plan No.9* added the land between Nangar Road, Leneva Lane and Pauls Road in Zone 1(c) (Rural Small Holdings). All of these lands were included in CLEP1991.

Amendment No. 1 (1992) to CLEP1991 introduced four additional lots to the south of Mandurama Road / the Belubula Way in to the Village Zone and these have not yet been developed.

Issues & Strategies

Review of Zoning Boundaries: It is the role of this Strategy to define appropriate areas for each land use within the urban areas of each settlement to ensure sufficient supply of land for the next 5-10 years. This will then inform the preparation of new zoning boundaries under the proposed new Cabonne Local Environment Plan. It is important to note that Canowindra has historically had a very large Rural Small Holdings Zone and a large percentage of this remain under-developed. Canowindra is also constrained to the south by the Cowra LGA boundary but this may be resolved in consultation with Cowra Council. Any expansion of the urban area of a settlement into the surrounding rural lands needs to be justified as it may take up important agricultural land that is important to the Cabonne economy.

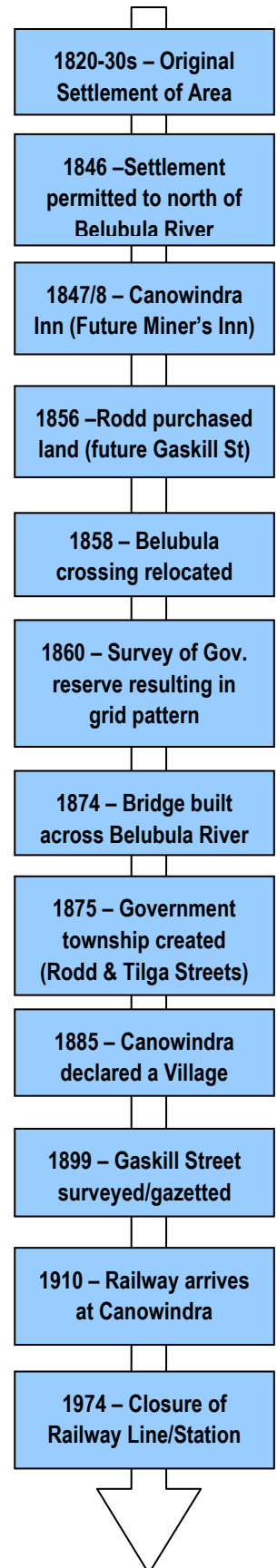
4.4. Settlement History

History is important because it explains why a settlement is located in its present location and how the settlement has changed over time. 'Canowindra' is reputedly the aboriginal word for "camp" or "camping place" through there are other interpretations suggesting the name is aboriginal for 'twisting snake' referring to the Belubula River.

"Canowindra is one of the few successful historical 'private' towns in NSW. Like most other such towns it survived in spite of government discouragement and direct competition. The continuing struggle between private initiative and official town planning is one of the themes evident in Gaskill Street's unusual evolution" (Perumal, Wrathall & Murphy Pty Ltd (1987) *Heritage Study of Gaskill Street, Canowindra* – page.8).

Much of the following information is attributed to the *Heritage Study of Gaskill Street Canowindra* and Wright, Wythes, Balcomb (1988) *Canowindra and District Churches – A Pictorial History*. Some key dates influencing the formation of the town are as follows:

- **1815** - Evans was the first white explorer to visit the area.
- **1829-34** - Governor Darling set limits of location for the County of Bathurst south of the Belubula River to its junction with the Lachlan River. It was only legally permissible to settle south of the river. First land grant to James Collits (640 acres on south side of river).
- **1840** - Village Reserve set aside on south side of river to east of Collits land.
- **1846** - After 1846, land regulations allowed more permanent settlement beyond the boundaries of the Nineteen Counties and north of the Belubula River. The Travellers Rest Hotel established on Icely's land near the first river crossing.
- **1847/8** - Post Office & Inn established on north side of river. Inn was known as Canowindra Inn and then became Miner's Arms in early 1870s.
- **1850s** - Canowindra grew as increasing road traffic between Bathurst and the lower Lachlan River crossed the Belubula there.
- **1852** - William 'Major' Robinson arrived with family and became the licensee of the Travellers Rest on land owned by Thomas Icely (monument in South Canowindra marks the site of the inn).
- **1856** - John Savery Rodd purchased site on north side of river that became the Gaskill Street commercial centre.
- **1858** - Original Belubula River crossing became impassable to drays and moved about 100m upstream.
- **1858** - Canowindra residents applied to have JS Rodd's pre-emptive purchase reserved as an official town site but the government let the sale go through.



- **1860** - March – Government village reserve was surveyed into town and suburban lots (grid pattern) and they were offered for sale at Carcoar in November. William Robinson died. No major lots were sold until the early 1900s.
- **1860s** - Gold rushes at Grenfell and Forbes caused new traffic routes to open up to those towns and Canowindra lost some growth potential.
- **1862** - Road from Canowindra to Eugowra was proclaimed. However mail was re-routed from Bathurst through Orange to Eugowra and Forbes and Canowindra did not grow as a result.
- **1863** - Bushranger raids by Gilbert, O'Meally, Hall, Burke and Vane at Canowindra Inn and Miner's Arms.
- **1870s** - Closer settlement laws opened the way for selectors to clear and farm land and to build homes for more permanent settlement. Canowindra attracted a majority of Irish Catholic settlers.
- **1874** - Bridge built across the Belubula River.
- **1875** - Government held narrow strip of land originally set aside as a water reserve (between Tilga and Rodd Streets). This was surveyed in 1875 for subdivision. This area was known as the government township and became the location for most of the town's major public and institutional buildings including the police, public school, and Church of England, recreational grounds and parkland. Provisional (Government) School application accepted. School opened by 1877. Catholic Church erected on the outskirts of Canowindra on the Eugowra Road (St Edward's).
- **1878** - Church of England - All Saints Anglican Wooden Church erected on highest point of town between Rodd and Tilga Streets (1891 destroyed by fire).
- **1885** - Canowindra declared a village and residential subdivision began on government land.
- **1892** - New Stone Church at Rodd and Tilga Streets (dedicated on 31 July 1892)
- **1899** - Line of Gaskill Street was officially surveyed and gazetted. Prior to this buildings were unevenly setback and allotments were large. When new and smaller allotments were eventually created they generally followed the lines established by existing buildings. This created many odd-shaped buildings and allotments. Therefore, the government initiative in realigning the road was the single most significant determinant of the present streetscape character.
- **1910** – September- Arrival of the railway at Canowindra had a major impact on the town and coincided with a local rural boom with the pioneering development of lucerne crops and the growing of wheat. It also encouraged businesses to build in the floodplain close to the railway.
- **1910s** - A number of major buildings opened including Tee's flour mill (1910), Finns Buildings (1910) and Cobley's Building (1913)., Royal Hotel (1911), Bank of NSW and CBD Bank (1915), Union Bank (1915). Banks formed 2.5 acre town 'square'.
- **1920s-30s** - New commercial buildings erected and older buildings given new fronts with characteristic 'parapet and awning' form which contributes strongly to the consistency of the streetscape.
- **1940s onwards** - Stable population. Very limited development of new buildings.
- **1974** – August – Closure of Eugowra branch railway line and Canowindra station.

The peak periods of growth in the Canowindra area were from the mid 1800s through to the mid 1900s. With the loss of rail and growth of other areas in the later part of the 1900s there has been reduced growth in Canowindra. The main streets in Canowindra are reasonably well preserved due to limited growth and redevelopment since the mid 1900s and this has contributed to significant tourism potential for the town.

Issues & Strategies

Understanding the History: The history of Canowindra and its surrounds is an important factor both in understanding the location of the settlement, how it grew, key opportunities and constraints to its growth, and as a fundamental building block for tourism and community spirit. Canowindra should develop and build on its existing history and protect and enhance the key heritage items and character. See [Section 4.13 – Heritage](#) for the proposed strategies for heritage items.

4.5. Settlement Pattern

4.5.1. Historical Subdivision Pattern

It is important to recognise that in most circumstances Council and the community are dealing with an historical subdivision pattern for many settlements that has often been in existence for over 100 years.

Without conducting a detailed historical study it has not been possible to pinpoint exactly when the current subdivision pattern came into being but it is likely to have occurred in the late 1800s and early 1900s. Council mapping suggests that there have been relatively small amounts of additional subdivision in Canowindra's Village Zone since the mid 1900s except for minor extensions of the village boundary to the south and east.

The vast majority of the historic subdivision patterns in settlements in Cabonne were based on a grid pattern with perpendicular streets and regular block sizes. In Canowindra, the blocks are generally oriented with the streets running roughly north/south and east/west with grid only slightly to the east of north.

It is important to note that at the time of these subdivisions a rear lane was incorporated through the middle of the larger blocks to allow the collection of sewage from the toilets at the backs of the blocks and many of these remain on the titles today. In general there has been a high degree of preservation of rear lanes in Canowindra (particularly to the north of the river) and they have rarely been incorporated into the adjacent allotments.

Issues & Strategies

- **Subdivision Pattern:** Future road and subdivision patterns should integrate with the historical grid pattern (where possible) and seek to improve connectivity whilst responding to the topography.
- **Rear Lanes:** Council and the Crown need to conduct an assessment of all of the public mid-block rear lanes and determine whether anything will be done to protect their public nature and whether they will be preserved or released for sale to the adjacent land owners.

4.5.2. Street Dimensions

Most of the local streets in Canowindra are approximately 20 metres in width, except for parts of the grand boulevards such as Tilga, Belmore and Rodd Streets that are 30m wide. A 20 metre road width allows for a road with a lane in each direction and substantial on-road parking areas and kerb/pedestrian areas. A 30 metre road width allows the potential for incorporation of street trees in the road corridor with minimal impact on parking / pedestrian areas.

4.5.3. Block Sizes

Figure 7 shows some of the indicative block areas, lengths and widths in Canowindra. Generally, for the Village Zone north of the river the blocks are 100-120 metres wide in an east-west direction (the short side of the block) and range from 150m to 330m in a north-south direction. For the Village Zone south of the river the blocks are longer in the east-west direction (average of 200 metres) and shorter in the north-south direction (average of 100-106 metres with rear lane).

4. Town of Canowindra Cabonne Settlement Strategy

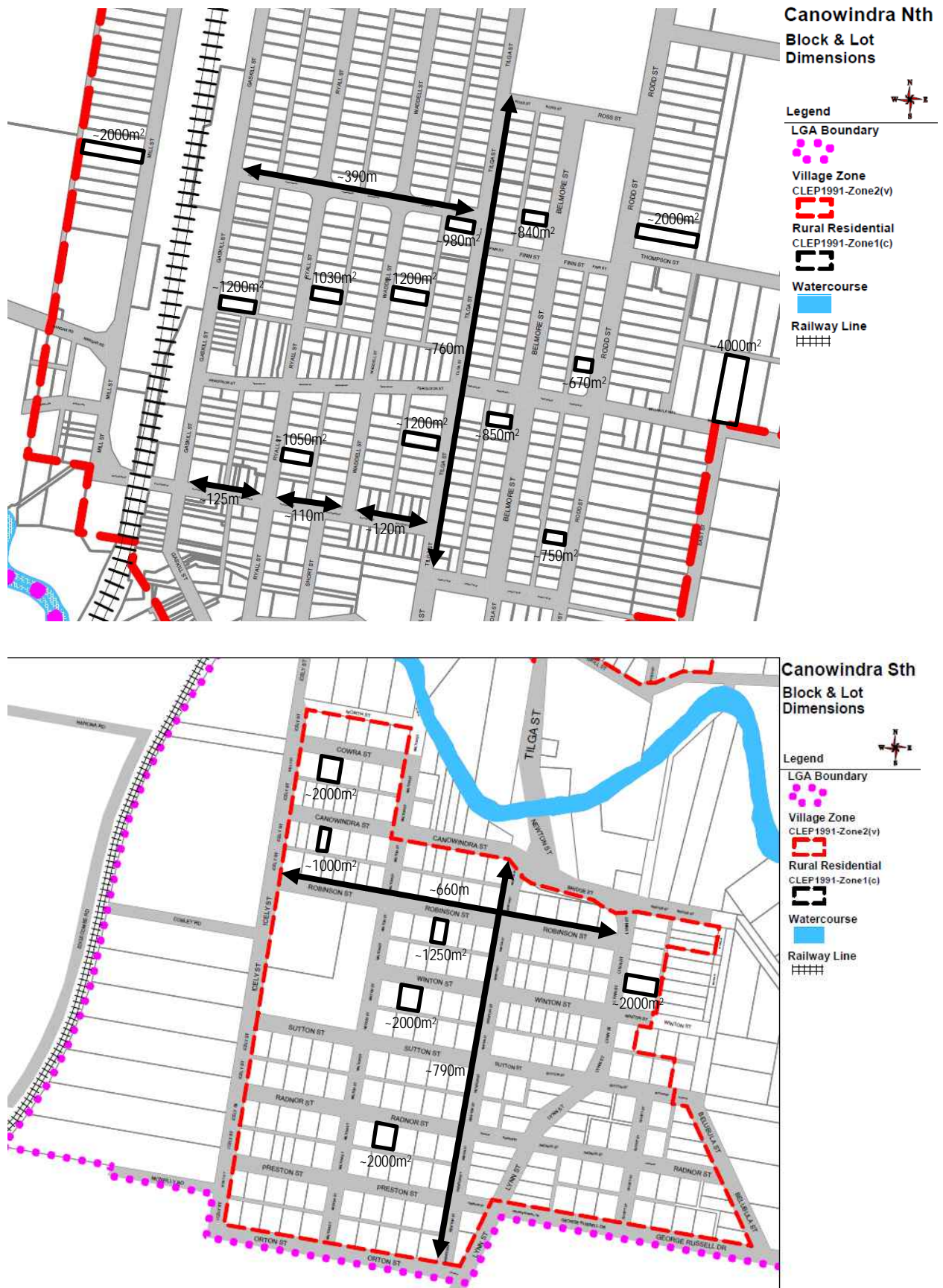


Figure 7: Areas, lengths & widths for some of the standard blocks and lots in Canowindra (north and south of the Belubula River) (Source: Council GIS 2010).

Issues & Strategies

Connections: Where there is a grid road/subdivision layout there is generally good permeability and ease-of-navigation with relatively short walking distances. However, some of the larger dimension blocks may result in longer walking distances to traverse the town and some urban lots are located up to 1km from the town centre.

4.5.4. Lot Sizes

As historical plans show, other than in proximity to the river, the majority of lots are fairly regular in size and dimension. To the north of the river the standard lot size and dimension is generally a tighter subdivision pattern with road frontages of 15 to 20m and depths ranging from 40 to 60 metres. In general, lot areas range from as small as 600m² to 800m² and then up to 1,200m².

To the south of the river the standard lot size and dimension (for dwelling lots) is generally 40m by 50m, area = approximately 2,000m² but some subdivisions have halved these lots into 25m by 50m, area = approximately 1,000m². Dwellings on lots less than 800m² are less likely to be sympathetic to the low density character of this area and more likely to raise amenity issues for neighbours.

The existing lot depths and widths are sufficient to allow the placement of a dwelling with good side setbacks and a good rear yard (though this gets more difficult with road frontages down to 15m). If lots were to be subdivided to the smallest permissible size (500m²) then there is a higher likelihood of impacts on neighbouring amenity. As the Village Zone is sewered there is no need to address the need for septic systems in determining lot size.

Issues & Strategies

- **Smaller Lots:** For lots less than 800m² there may be need for clear controls to guide setbacks and ensure good house and building design on these narrower lots. As Canowindra is sewered and has centralised water supply then there is potential for an increase in smaller lot sizes down to 500m² where this can be shown to protect the desired streetscape and heritage character as well as neighbouring amenity.
- **Subdivision:** To the north of the river subdivision will primarily be determined by access to the rear half of the lots. Council should aim to prevent a larger number of 'battleaxe' blocks so subdivision should generally only be promoted where there is a wide enough rear lane for vehicle access or there is consolidation and redevelopment of multiple lots. To the south of the river subdivision of the 2000m² lots will be relatively easy into 1,000m² lots access and building siting will be key issues below this lot size. Subdivision below 800m² is not desirable south of the river at this time.

4.6. Historic Population

4.6.1. Census Area

The Australian Bureau of Statistics (ABS) Census Collection District ('CD') is the area that ABS uses to calculate the population and demographics for an area. As Figure 8 shows, three census districts (yellow lines) enclose all of the existing Village Zone (red line). However, the Rural Small Holdings to the north and west are incorporated into the Toogong CD and the Rural Small Holdings to the east are incorporated into the Moorbel CD. Therefore, it is possible to get a reasonably accurate population count for the Village Zone but the population in the Rural Small Holding Zones must be estimated as a portion of the larger CDs.

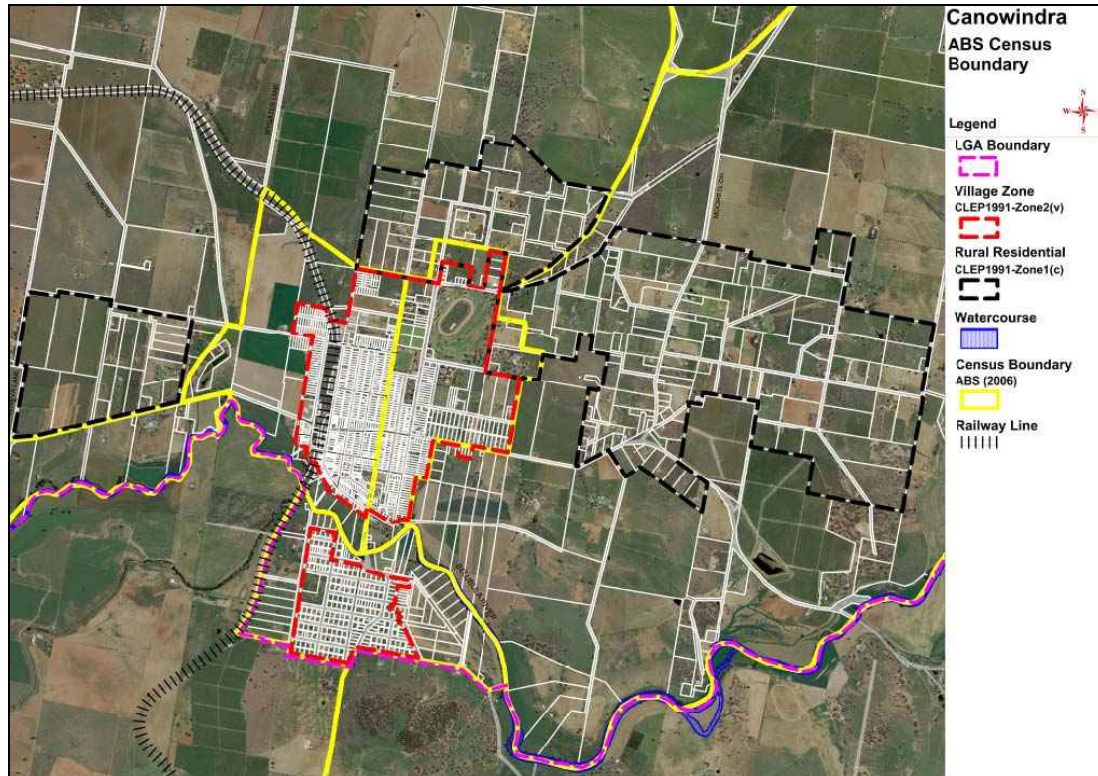


Figure 8: Alignment of the Australian Bureau of Statistics Census Collection Districts in relation to Canowindra's urban zones (Source: Council GIS 2010 using ABS CD boundaries www.abs.gov.au).

Issues & Strategies

Measuring the Catchment: The Canowindra Collection District ('CD') includes all of the Village Zone but does not include all of the Rural Small Holdings Zones around Canowindra. Therefore, it is not a totally accurate reflection of the 'urban' population that resides in and around Canowindra. The population of the rural residential area has been estimated for the purposes of this Strategy to determine a population for all urban areas in Canowindra. However, this estimate does not take into account the surrounding rural catchment that utilises Canowindra as its primary service centre.

4.6.2. ABS Census Population of Canowindra Village

Table 4 shows that the historical ABS population for the Canowindra ABS CDs (Village Zone) has been falling since a high of 1,717 people in 1986 down to a low of 1,499 people in 2006. Over the 20 years of the Census there has been an average annual decrease in population of negative 0.63% in contrast to the average annual growth of Cabonne of 0.45% per year for the same period.

4. Town of Canowindra

Cabonne Settlement Strategy

Year	1976	1981	1986	1991	1996	2001	2006
Population	1,743	1,720	1,717	1,715	1,656	1,516	1,499
Av. Ann. Δ	N/A	-0.26%	-0.03%	-0.02%	-0.69%	-1.69%	-0.22%
Δ over time	Δ in pop.		Total % Δ		Average Annual Δ		
1976-2006	-244		-14.00%		-0.47%		
1986-2006	-218		-12.70%		-0.63%		
1996-2006	-157		-9.48%		-0.95%		

Table 4: Census population and population change for Canowindra's urban census collection districts (predominantly Village Zone only) (Source: ABS www.abs.gov.au).

Issues & Strategies

Decreasing Village Zone Population: The population of Canowindra's Village Zone over the last 30 years of the Census has been steadily decreasing at an average rate of 0.47% per year and this rate has been increasing over time. This raises issues about why there is population loss in the Village Zone which may be answered by population increases in the rural residential areas surrounding Canowindra (see below).

4.6.3. ABS Census Population of Large Lot Residential Areas

As stated above, the ABS Census for Canowindra predominantly includes the Village Zone. The large lot residential areas to the north and west are incorporated into the Toogong CD and the large lot residential areas to the east are incorporated into the Moorbel CD.

Estimated Population Growth

Table 5 shows the recent rates of population growth in the two CDs covering the large lot residential areas and this can be used as an estimate of the growth in the large lot residential areas within these CDs. It can be seen that both areas have quite high positive population growth rates in the 2001-2006 period, especially the Toogong CD – though this may not be sustainable in the long term.

ABS Census (Quickstats)	2001 Pop.	2006 Pop.	Δ	% Δ Prior Census	Average Annual % Δ
Moorbel (incl. East Rural Residential) CD1140212	227	235	+8	+3.52%	+0.7%
Toogong (incl. North & West Rural Res.) CD1140204	303	370	+67	+22.11%	+4.42%
Total	530	605	+75	+14.15%	+2.83%

Table 5: Census population and population change for the Collection Districts that include the Rural Small Holdings Zones around Canowindra (Source: ABS www.abs.gov.au).

Estimated Population in Rural Small Holdings

The only way to estimate the population in each of the large lot residential areas is from existing dwellings. Table 6 estimates that there are approximately 283 people in the three large lot residential areas based on existing dwelling and occupation rates.

Area	Existing Dwellings	Est. Pop. @ 2.3p/dwelling	Historical Growth Rate	Est. Pop. by 2036	Δ in Pop. by 2036	Est. Need for New Dwellings by 2036 @2.3/dwelling
West LLR	9 dwellings	21 people	4.42%	65 people	44 people	20 dwellings
North LLR	24 dwellings	55 people	4.42%	169 people	114 people	50 dwellings
West LLR	90 dwellings	207 people	0.7%	248 people	41 people	18 dwellings
Total	123 dwellings	283 people	N/A	482 people	199 people	88 dwellings

Table 6: Estimated existing and projected populations and dwellings for each rural residential area up to 2036 (Source: Dwelling counts from aerial photos 2009).

Using the growth rates above there is an estimation of the change in population and dwelling demand in each area up to 2036. This does not take into account if existing dwellings are vacant.

Issues & Strategies

Increasing Rural Residential Population: It is difficult to obtain accurate population growth data for the large lot residential areas. The population of Canowindra's Rural Small Holdings Zone has increased from 2001-2006 by an average of 2.83% per year (high). This may explain some of the historical loss of population in the Village Zone as people in more recent time may have a preference for rural 'lifestyle' blocks rather than smaller blocks whilst still having access to the services in the town in reasonable proximity. This would suggest an overall positive growth for Canowindra taking into account both residential zones.

4.6.4. Estimated Population of Canowindra in all Urban Zones (Zone 2(v) + Zone 1(c))

The total estimated population of Canowindra in all urban zones (Village Zone and the Rural Small Holdings Zone) in 2006-2009 is set out as follows:

Village Zone (2006 Census)	West LLR (Est. from Dwelling Nos - 2009)	North LLR (Est. from Dwelling Nos - 2009)	East LLR (Est. from Dwelling Nos - 2009)	Total
1,499	21	55	207	1,782

Table 7: Total estimated population of Canowindra in all urban zones in 2006-2009 (Average).

Issues & Strategies

Estimated 2006-2009 Population: The current estimated population for the urban areas of Canowindra (both Village Zone and adjacent large lot residential areas) is 1,782 people. At this size, Canowindra is a significant centre for the Shire and a small town for the region subject to regional changes in economic growth, opportunity and employment.

4.6.5. Historical Population

Council only has anecdotal records of the population of Canowindra prior to the 1976 ABS Census. Some records suggest the following historical populations (Table 8). This suggests that, in general, Canowindra's Village population (not including large lot residential areas or the rural catchment) has not changed substantially since the early 1900s and has always been between 1,500 and 1,800 people.

Year	Population	Source
1890s	~400	Unknown source
1911	~1,500	Unknown source
1961	1,747	Toon, J. (1975/76) <i>Boree Planning Study</i> believed to be based on ABS data
1966	1,717	Toon, J. (1975/76) <i>Boree Planning Study</i> believed to be based on ABS data
1971	1,679	Toon, J. (1975/76) <i>Boree Planning Study</i> believed to be based on ABS data

Table 8: Historical population estimates for Canowindra (variety of sources noted above).

Issues & Strategies

Population Growth: This shows that the majority of Canowindra's population growth was prior to 1911 and since that date the population has been relatively steady at around 1,500 to 1,800 people.

4.7. Summary of Opportunities & Constraints

It is important to try and summarise the potential for Canowindra's population and economic growth in the future. Please note that more detail is provided on each of these issues in the subsequent sections of this Chapter.

4.7.1. Positive Factors

The key **POSITIVE** influences that may assist growth include:

- **Population:** The current estimated population of 1,782 (1,499 people in the Village Zone in 2006 and an estimated additional 283 people in the Rural Small Holdings Zones) makes Canowindra a core settlement for Cabonne and large enough to support a range of local services and facilities;
- **Proximity to Cowra:** The proximity of Canowindra to the Town of Cowra and its location on the connection between the regional centre of Orange and Cowra does provide some limited opportunities for economic growth resulting from passing trade and tourism;
- **Tourism:** Significant potential for increased tourism due to the retention of a strong heritage character and historical links, a range of accommodation options and cultural facilities (including the Age of Fishes Museum), a range of things to do and see (including ballooning, wineries, food etc), and the town's community spirit;
- **Rural Character:** Attraction of the rural character, landscape and village lifestyle with proximity to Cowra and Orange and other key settlements / industries for employment;
- **Rural Employment:** The region around Canowindra has a strong agricultural base of lucerne, wheat, wool and fat lamb production with growth in new areas of viticulture and canola. It is a very rich agricultural area;
- **Dedicated Industrial Area:** Unlike most other settlements in Cabonne, there is a dedicated industrial area with a range of good flat sites to attract potential future industry and limited constraints on development. There is some provision of light industry including agricultural produce industry and some manufacturing that diversifies employment;
- **Affordability:** Attraction of a reasonable supply of relatively affordable land;
- **Health:** Provision of a local hospital with limited emergency services with local doctors, pharmacists and nurses which is an attraction for the whole community, but particularly for retaining older citizens in the community;
- **Aged Care:** Provision of a range of aged care facilities and support services that can meet the needs of a growing aged population and allow this section of the population to 'age-in-place' and contribute to the community;
- **Water:** Access to a secure water supply through the Central Tablelands Water network (from Lake Rowlands) with provision of potable water throughout the Village Zone and no major constraints on quality or minor growth in the future;
- **Sewer:** Provision of a centralised sewerage system which would support smaller lot sizes and some additional subdivision whilst maintaining environmental outcomes and residential amenity;
- **Education:** Access to both local primary and secondary schools which makes it attractive for families with children and attracts children from across Cabonne;
- **Recreation:** Access to a good range of recreation facilities including both passive and active recreation areas and sporting facilities, particularly with school sports;
- **Rural Service Centre:** The higher level of rural services meets the needs of a larger catchment that extends throughout most of the southern part of Cabonne. This larger rural catchment supports Canowindra;
- **Community Spirit:** Good community associations that can foster community spirit and local solutions to community needs.

4.7.2. Negative Factors

The potential **NEGATIVE** influences on growth include:

- **Ageing Population:** Like many centres, Canowindra will need to address the opportunities and challenges faced by an ageing population and attraction of youth to other regional centres. The higher proportion of citizens aged > 50 years old may be a negative growth factor if health and care requirements result in relocation of these citizens to other centres or new younger families cannot be attracted to balance the loss of older people over time. This could exacerbate population decline over time;
- **Flooding:** The area along the Belubula River is significantly affected by the potential for flooding and drainage issues. This includes a part of the core business district and there is a major economic cost and risk associated with regular floods. It also severely limits additional development in some areas and can cut the route between the north and south of the town;
- **Proximity to Regional Centres:** The proximity to Cowra may have the negative effect of 'escape expenditure' limiting Canowindra's growth in services, shopping, employment and industry and people investing less in their local businesses;
- **Transport:** The lack of a passenger service or freight rail interchange limits the benefit of the now unused rail system. Canowindra is also not located in proximity to any major highways for passing traffic and support for key business and industrial land uses;
- **Employment:** There is a heavy reliance on a limited number of key employers including local government, schools, the hospital and the rural sector. This may not be robust enough to weather economic, social and political change which could have a significant impact on economic growth and the population;
- **Industry:** Whilst Canowindra has a dedicated industrial area it has not managed to attract any major industries and may be affected by competition from Cowra, Orange and Parkes that may limit economic growth in this sector. It may be limited to either local services or rural industries;
- **Retail & Entertainment:** Limited local retail services / entertainment and range of opportunities, particularly after-hours that may affect tourism and attraction for youth and young families to the area.

Issues & Strategies

Population Growth: In conclusion, the positives for the Town of Canowindra tend to outweigh the negatives and suggest that Canowindra has the potential to exhibit low to medium population growth over the next 10 to 30 years within some limited increasing demand for land and/or services. However, there are a number of challenges to growth and land supply that will need to be addressed.

4.8. Projected Future Population

Warning: The estimated population in 2036 is only an estimate based on the factors considered in this chapter and it may be affected by future changes in growth potential.

For all of the above reasons, it is estimated that the projected growth rate for Canowindra is likely to be in the range of 0.3% to 0.7% with an average annual growth of 0.5%. Table 9 below shows how the existing and projected rates of growth for Canowindra fit with other growth rates in the area and the resulting population projections (based on an estimated 2006 population of 1,782 for both the Village Zone and Rural Small Holdings Zones).

Range of Potential Average Annual Population Growth Rates	Av. Ann. Growth Rate	Projected Population						
		2011	2016	2021	2026	2031	2036	Δ in pop. 2006-2036
MINOR NEG. GROWTH Proj. Growth Cabonne Pt.C	-0.10%	1773	1764	1755	1747	1738	1729	-53
LOW GROWTH	+0.10%	1791	1800	1809	1818	1827	1836	54
LOW-MEDIUM GROWTH Projected Growth Rate Min.	+0.30%	1809	1836	1864	1892	1921	1950	168 Minimum
MEDIUM GROWTH Projected Growth Average ABS 1986-1996 Cabonne	+0.50%	1827	1873	1920	1969	2019	2070	288 Average
MEDIUM-HIGH GROWTH Projected Growth Rate Max. ABS 1996-2001 Cabonne	+0.70%	1845	1911	1979	2049	2122	2197	415 Maximum
HIGH GROWTH	+1.00%	1873	1968	2069	2174	2285	2402	620
VERY HIGH GROWTH	+1.50%	1920	2068	2228	2400	2586	2785	1003

Table 9: Projected population growth for Canowindra based on different growth scenarios.

Issues & Strategies

- **Regular Review:** The growth rate for Canowindra should be reviewed every census period (5 years) to see whether it accords with the estimated rates of growth and, if not, then growth projections and the supply of land may need to be modified to take into account the new estimated growth rate.
- **Negative Growth:** There is a low but real possibility that Canowindra may experience a slight negative growth over the next 30 years (particularly in the existing Village Zone) and this would have a substantial impact on the sustainability of the town. However, this has been discounted at this time due to the number of positive growth factors present and the offset of the growth of the surrounding rural residential areas.
- **Average Growth:** Assuming an average projected population growth rate for Canowindra at the median rate of 0.5%/year to 2036 there will be an increase in population of an additional 288 people, resulting in a total population of 2,070 people.
- **Maximum Growth:** Assuming a maximum projected population growth for Canowindra in the medium-high range of 0.7%/year there will be an increase in population by 2036 of an additional 415 people, resulting in a total population of 2,197 people.
- **Unsustainable Growth:** If Canowindra were to grow at a very high growth rate above 1.5%/year then this would place great pressures on housing, employment, services, utilities, transport and facilities and is likely to be unsustainable under existing conditions.
- **Supply & Demand:** The increase in population will result in an increase in demand for additional housing, employment, services, and facilities. The greatest demand (in area) will be for residential land.

4.9. Demographics

Warning: The demographic information in this chapter is only valid on the Census night in 2006 and due to the small census population it is subject to significant change over time.

The following provides a short summary of the demographics for Canowindra's Village Zone Collection District in 2006 that are relevant to this Strategy. Please see [Section 2.6 – Demographics](#) for a comparison of all of the settlements and Cabonne.

- **Age:** 22.2% of Canowindra's population were over the age of 65 years of age and 35.5% of the population was over the age of 55 years of age. The median age of Canowindra was 44 years compared with 41 for Cabonne and 37 years for Australia.
- **Labour Force:** 5.8% of the labour force in Canowindra (36 people) were unemployed compared to 3.7% for Cabonne and 5.2% for Australia. 558 people over the age of 15 were not in the labour force.
- **Occupation:** 19.8% of employed people were labourers; 14.5% managers; 13.7% technicians and trades workers; 13.5% professionals; 10.6% community and personal service workers; 10.4% sales workers; 7.5% clerical and administrative workers; and 6.0% machinery operators and drivers.
- **Employers:** 6.5% in sheep, beef cattle and grain farming; 6.2% in school education; 4.6% in hospitals; 4.4% in residential care; and 3.9% in supermarket and grocery stores.
- **Income:** The median individual income (\$320), median household income (\$594), and median family income (\$747) were significantly less than the Australian averages (\$466, \$1,027, \$1,171 respectively).
- **Family Characteristics:** 34.6% were couple families with children (C=45.2%; A=45.3%); 44.9% are couple families without children (C=43.2%; A=37.2%); and 17.9% are one parent families (C=10.6%; A=15.8%).
- **Dwelling Characteristics:** There were 709 private dwellings (of which 637 were occupied) on the night of the census. 90.7% were separate houses; 4.2% flat, unit or apartment; 4.4% other dwellings; and 0.6% semi-detached/terrace houses. The average household size was 2.2 people/dwelling compared to 2.6 in Cabonne and Australia.
- **Household Composition:** 63.9% were family households (C=73.4%; A=67.4%); 33% were lone person households (C=22.3%; A=22.9%); and 2% were group households (C=1.5%; A=3.7%).

Issues & Strategies

- **Age:** With such a high percentage of older citizens and a higher median age than Australia there will be significant increased pressure and demand for aged care and health services and a corresponding lack of younger / employment aged people to provide economic growth in Canowindra. Canowindra is fortunate to already have health infrastructure and services to support this group but it will need to be maintained and grow to support a growing aged population or there could be a significant loss of older people away from Canowindra over time.
- **Employment:** There is a reasonable mix of employment types in Canowindra but there is a heavy reliance on the rural sector, health and education for local employment. There is not as much manufacturing as present in Molong. If there were to be economic, social or political circumstances that resulted in the reduction or loss of any of these employers then it would have a significant impact on Canowindra.
- **Income:** Canowindra has a significantly lower median income than the Australian average which may affect economic growth and the options available to the community.
- **Family Characteristics:** A reduction in families with children and increase in families without children may result in less support for the local schools. A slightly higher percentage of one parent families also require additional assistance and services.

- **Dwelling Characteristics:** The dominance of detached housing combined with an ageing population may indicate a need for greater housing choice in the future.
- **Household Composition:** The high percentage of lone person households (33%) may reflect the older age but also supports demand for smaller houses in the future.

4.10. Environment & Natural Hazards

4.10.1. Topography & Views

The urban area of Canowindra lies between approximately 300 metres and 380 metres above sea level (Figure 9). The topography rises to the west, north, south and east of the Village Zone and falls towards the Belubula River that runs through the centre of town.

These hills provide an important landscape backdrop to the denser development in Canowindra and are an important part of the settlement's character. However, there are few steeply sloping areas so there are no major constraints on development from topography except in close proximity to the Belubula River.

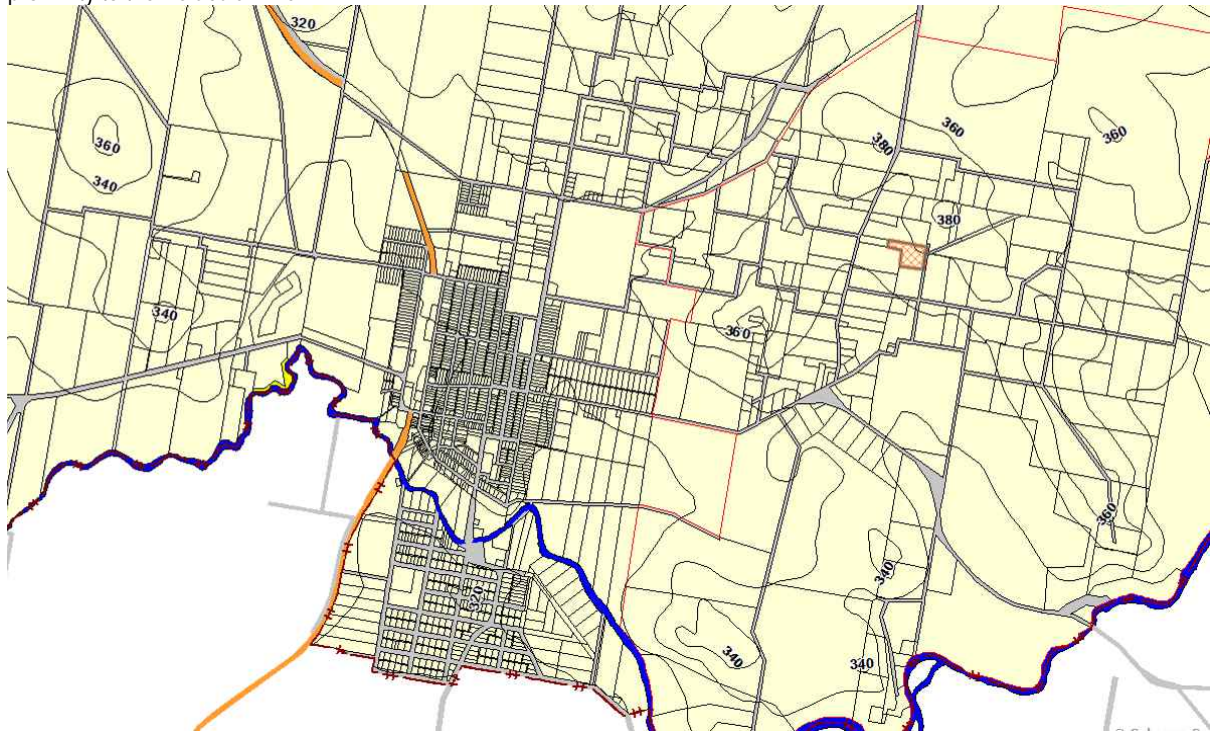


Figure 9: Topography of Canowindra showing contour lines and relative levels at 10 metre intervals (Source: LPI contour data / Council GIS 2010).

Issues & Strategies

- **Cut and Fill:** Where possible, land uses should be located so as to minimise the need for cut and/or fill of land to create a suitable construction site. Sites with any significant slope should be avoided or require larger lot sizes for a wider choice of dwelling/building locations. This may restrict growth of the Village Zone in close proximity to the river.
- **Visual Importance:** The undulating topography and surrounding hills creates a visual landscape backdrop to development and character for Canowindra and are worthy of protection. This may affect appropriate locations for settlement growth, certain land uses, or the use of key development controls including 'scenic protection' areas. This includes development in the adjacent Cowra Shire on the slopes of the hills facing Canowindra.

4.10.2. Contamination

The only registered contaminated site in Canowindra's urban area is the BP Service Station at 73 Rodd Street (OEH/DECCW website checked 7/3/2011). This site is an active service station. A Section 60 form has been received by OEH/DECCW and the initial assessment is in progress. As it is classified as site management class B it requires further information before a full assessment can be completed.

There is also an old effluent disposal area located on Lot 3 DP32505 between Bowds Lane and Belubula River owned by Cabonne Council. Further review of this site is required. However, as this is likely to also be a flood prone area it is not recommended that development be located in this area.

This section may not highlight all potential contaminated sites. On sites with any historic uses that may have resulted in contamination, there would need to be a preliminary review under *SEPP 55 – Remediation of Land* to determine if the site was contaminated. However, there are no major sites that would constrain growth or development in Canowindra known at this time other than those listed.

4.10.3. Geology & Mineral Potential

The former Department of Industry & Investment (now DTIRIS) has provided Council with a Mineral Resource Audit of Cabonne Shire dated February 2010 (Figure 10). Please note that this is based on existing information and there may be additional mineral resources not identified on this map as there are exploration licences across a significant percentage of Cabonne.

The Mineral Resource Audit shows that there is one existing identified mineral resource known as The Falls Pit to the east of the urban area and along the Belubula River. The buffer zone for this area extends into the Canowindra East (Moorbel) Rural Small Holdings. This may suggest that increased intensification of subdivision / land uses in this area would not be supported by the Department of Primary Industries and Council.



Figure 10: Excerpt of Mineral Resource Audit of Cabonne Shire (Source: Department of Primary Industries, February 2010).

Issues & Strategies

Mineral Potential: There may be some limitations to further intensification of development and growth of Canowindra to the east towards the Falls Pit where an existing mineral resource is located. This resource may offer future economic growth and employment potential.

4.10.4. Groundwater

Figure 11 shows the areas with moderately high or high groundwater vulnerability that are focussed primarily along and within 500m of the Belubula River.

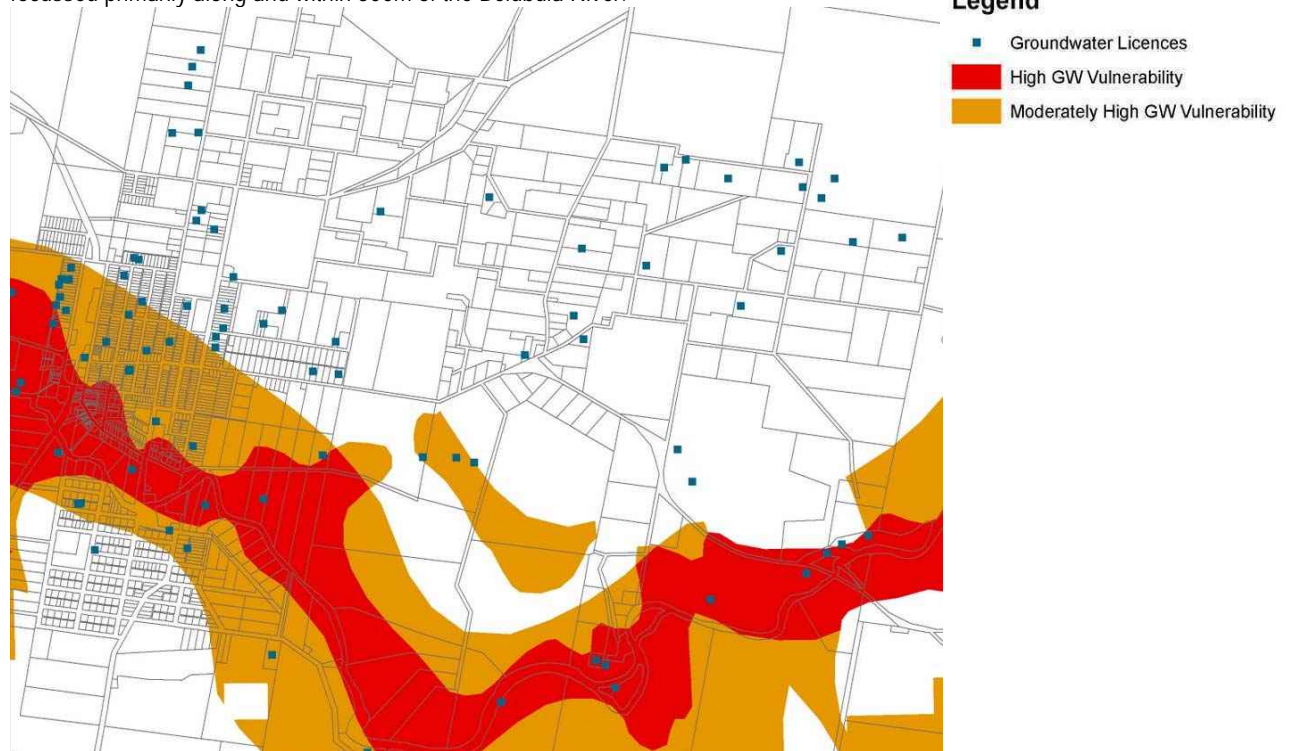


Figure 11: Groundwater vulnerability & licences (Source: NSW Office of Water 2011).

Issues & Strategies

Groundwater Vulnerability: There is either a high or moderately high groundwater vulnerability affecting most of the areas within 200-500m of the Belubula River. These areas would not be suitable for land uses with potential for significant contamination of groundwater sources (potentially including heavier industries or intensive animal agriculture). In general the existing industrial area is just outside the sensitive area so industrial uses are less likely to be an issue.

4.10.5. Watercourses & Flooding

Watercourses

Water management is an important aspect of land use planning. The general aim is to minimise impacts on natural water systems from development and manage local drainage and flooding issues. Biodiversity is addressed in more detail below. The Belubula river floodplain has the greatest influence on the urban character of Canowindra in terms of a natural hazard.

Flood Studies

There have been several studies of flood issues in Canowindra including:

- SMEC (2004) *Canowindra Flood Study* ('2004 Study');
- Lyall & Associates (2007) *Canowindra Flood and Floodplain Risk Management Study and Plan* – Adopted by the Floodplain Risk Management Committee in October 2008 and by Council in November 2008 ('2008 Study').

These flood studies relate primarily to the Village Zone and, therefore, there is limited information for the Zone 1(c) Rural Small Holdings Areas. Estimated flooding areas have been shown in Figure 12 for these areas based on the 2007 flood study.

Warning: Please note that this Strategy provides only a broad overview of potential flood prone lands based on existing studies and estimations. However, this Strategy should not be relied upon in determining flood impacts on any particular property. Please refer to the original studies for more detailed information.

Flood History

The 2008 Study highlights that there has been a history of flood events along the Belubula River that have affected Canowindra. Of the most recent floods, the August 1990 flood reached a peak of 6.24 metres on the Canowindra River Gauge at John Grant Bridge and was estimated to lie between a 5% (1 in 20 year) and 2% (1 in 50 year) AEP design flood under present day conditions on the floodplain.

Flood Prone Lands

The 2008 Study notes that the Canowindra floodplain is capable of conveying major flood events without excessive inundation of property. There is an effective warning time for flooding as Canowindra is not located in the upper reaches of the catchment. Floods tend to rise to a peak over a 24 hour period which would allow time to respond and/or evacuate. Access between the northern and southern portions of Canowindra is cut during major floods due to overtopping of the Belubula River crossing at John Grant Bridge but there are no islands formed on the floodplain by rising floodwaters.

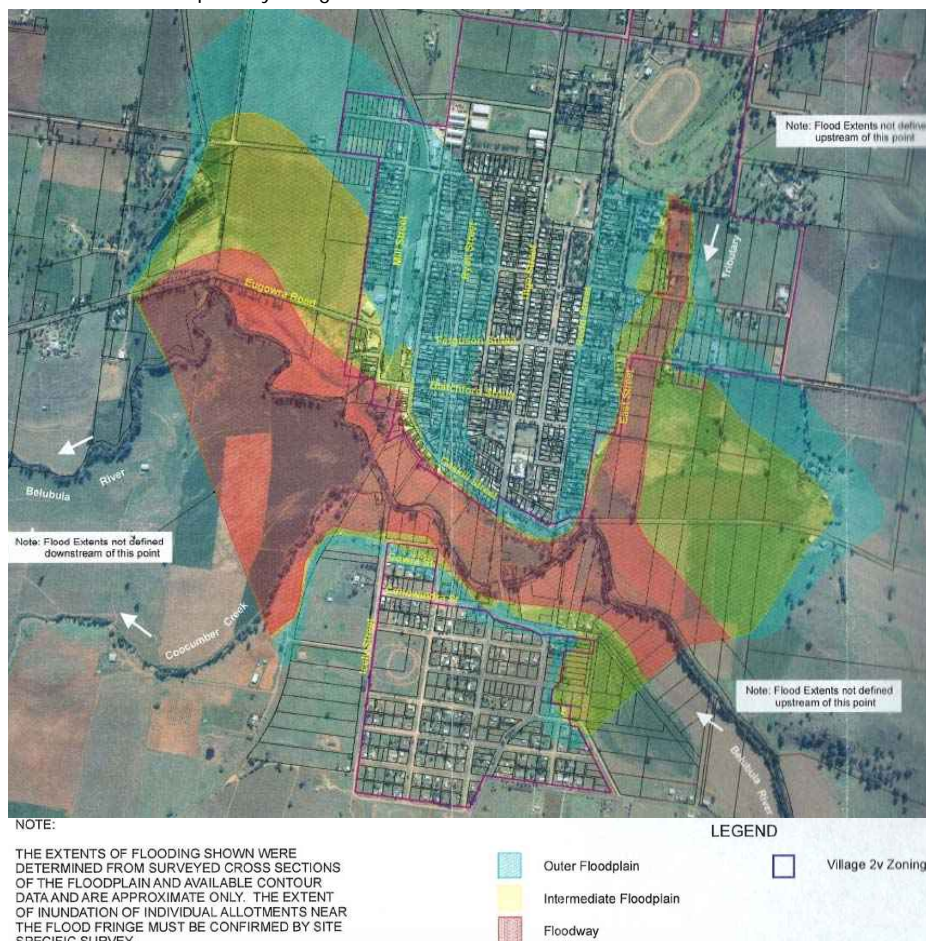


Figure 12: Flood risk precincts from Canowindra (Source: Figure 5.2 – Canowindra Floodplain Risk Management Study and Plan (2008)).

The 2004 Study separates flood risk areas into 'high hazard', 'low hazard' and 'flood storage' areas depending on the depth of inundation and flow velocity. 'Low hazard' conditions include flood depths as high as 0.8m in the absence of any significant flow velocity as well as flow

velocities up to 2.0m/s but with minimal flood depth. The 2008 Study has defined the high hazard area as the 'floodway', the low hazard area as the intermediate floodplain (including the flood storage area) and the area out to the probable maximum flood as the 'outer floodplain'.

Figure 5.2 in the 2008 Study (replicated in Figure 12 below) shows that the majority of the town is located above the intermediate floodplain but a significant proportion could be affected in a probable maximum flood (outer floodplain) which has a low chance of occurrence.

Lots on the southern side of Gaskill Street, in Mill Street and on the eastern side of East Street may have their rear sections located in the floodway. The majority of properties to the south and western side of Gaskill Street are in the intermediate floodplain. However, significant flood affectation involving above-floor inundation would only commence for design flood events of 0.5% AEP (1 in 200 years) which has a relatively low chance of occurrence.

Clause 22 of CLEP1991 requires development in flood affected land to demonstrate it is not likely to impede the flood waters, imperil the safety of persons, aggravate the consequences of flood waters, or have an impact on the water table. For this reason it is preferable to exclude all flood liable land when identifying infill development sites or areas for future development.

Issues & Strategies

- **Flood Prone Lands:** There is a potential for flooding along the low-lying areas close to the Belubula River and some natural drainage corridors near the town. However, there is a low risk of inundation above floor levels for the majority of flood affected properties.
- **Additional Information:** 1% AEP flood line is only known within or close to the Village Zone and does not extend far along the river on either side. Any development applications in proximity to the Belubula River may require a flood study before development can be approved in these areas.
- **Development Control Plan:** The 2008 Study recommends that Council prepare and implement a Flood Policy DCP for Canowindra. It is intended that these controls would be created as part of a comprehensive DCP for Cabonne.
- **Constraints to Growth:** Significant additional development within either the floodway or intermediate floodplain including to the east of properties along Mill Street and east of East Street extending up to the showground as development in these areas would have a higher flood risk and increased development costs to address this risk satisfactorily. Therefore, the growth of Canowindra is limited to the west and east and towards the Belubula River.

4.10.6. Biodiversity & Vegetation

As Figure 13 shows, there are limited areas within the existing urban zones of Canowindra (except in the northern large lot residential area) that have been identified as having sites of medium or high biodiversity sensitivity. This is in part due to the historical clearing of native vegetation and lack of many significant stands of vegetation at this time.

DECCW (2008) mapping suggests that those high sensitivity areas are predominantly vegetation on over-cleared landscapes and areas where there may be less than 30% of a particular community remaining. Existing vegetation stands should be protected from intensification of development and ecological corridors should be enhanced, particularly along the Belubula River.

A list of threatened, endangered and/or vulnerable species in Cabonne can be found on the website for DECCW. There are no known threatened species and/or endangered ecological communities under the *Threatened Species Conservation Act* in the Village Zone at Canowindra, however, this does not mean that there are not any in existence. Each development application will need to address this issue.

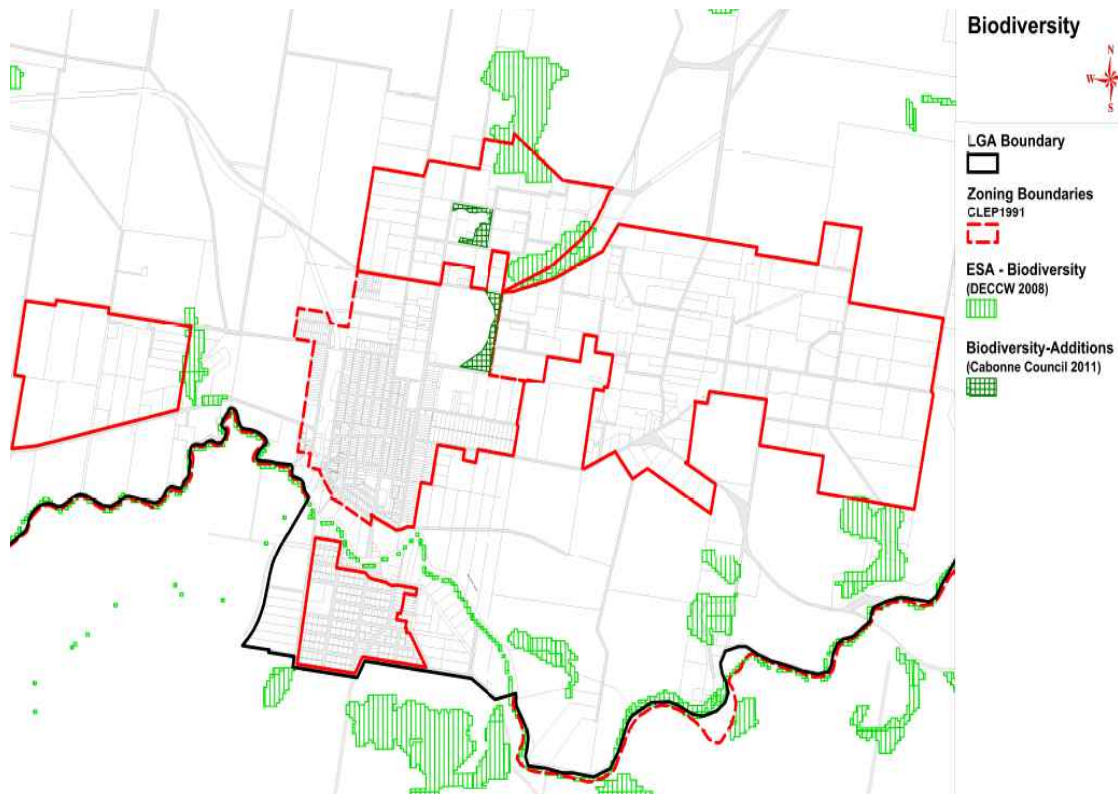


Figure 13: Map of Environmentally Sensitive Areas – Biodiversity for Canowindra and surrounds (Source: DECCW 2008 / Council GIS 2011).

Issues & Strategies

- **Ecological Corridors:** There is a need to protect and enhance remaining significant remnant or native vegetation in or around Canowindra. Attempts should be made, where possible, to plant native vegetation and enhance ecological corridors, particularly along the adjacent watercourses and adjacent allotments. This may necessitate the removal of non-native or invasive species and sourcing of native seeds from the local area.
- **Street Tree Planting:** There is potential to enhance street tree planting in Canowindra. Whilst urban areas do not necessarily require native species in gardens and streets, Canowindra may be suited to some native street tree planting in accordance with an updated review of the Canowindra Street Tree Masterplan (1995).

4.10.7. Bushfire Hazard

There are no bushfire prone lands identified by the Rural Fire Service in or around Canowindra. The area surrounding the village has been largely cleared for the purposes of broad acre agriculture and as such there is little in terms of remnant native vegetation that would represent a significant bushfire risk. However, risks can still result from grass fires and patches of significant vegetation so *Planning for Bushfire Protection* policies should still be followed.

4.11. Access, Transport & Parking

4.11.1. Air Transport

Please see summary in Cabonne Chapter [Section 2.7.1 – Air Transport](#). In general public air transport access is considered low for Canowindra with over a 1 hour drive to either Orange or Parkes Airports the nearest available. There are private airstrips in the Zone 1(c) land around Canowindra. Ballooning takes off from private lands or from the Showground/Racecourse and is a recreational activity.

4.11.2. Rail

Please see summary in Cabonne Chapter [Section 2.7.2 – Rail](#). Canowindra is located on the Eugowra Branch Line which runs from Cowra to Eugowra linking up with the Blayney-Demondrille Railway Line. The Eugowra Branch line is closed and the Canowindra Station was closed on 10 August 1974 (www.nswrail.net).

Originally this line was built to service the rich agricultural lands between Cowra and Forbes, mostly carrying grain and limited passengers. Whilst the line has been used by the Lachlan Valley Railway as a tourist railway, the bridge over Coochumber Creek near Canowindra has been removed to address flood issues so the line would require substantial work to re-open.

Issues & Strategies

Rail Access: The closure of the rail corridor removes the opportunity to utilise the existing line for freight or passenger movements. Due to the short nature of this branch and its lack of connections it is unlikely to ever offer a competitive passenger service. This line is likely to remain closed for the foreseeable future but should be retained as a future transport corridor in case the situation changes.

4.11.3. Road Hierarchy & Vehicle Traffic Impacts

Please see [Section 2.7.3 – Road Hierarchy](#) for more details. The primary road passing through Canowindra is Canowindra Road (Route 81 / MR 310) which is a north-south route linking the Hume Highway near Yass with the Mid Western Highway at Cowra and the Mitchell Highway at Molong. The route has moderate traffic volumes. This route has various local names as it passes through Canowindra from south to north including Lynn Street, Tilga Street, Rodd Street and Cargo Road.

Next in the hierarchy is the Belubula Way (Main Road) connecting Canowindra to the east with Mandurama (and the Mid Western Highway) in Blayney Shire (the Mandurama-Canowindra Road). Nangar Road is also a Main Road connecting Canowindra to the west with Eugowra and then onto Forbes and the Newell Highway.

The remaining roads are generally local roads. The pattern of local roads in Canowindra generally follows a grid-pattern which assists with navigation except where broken by topography and watercourses. Most local roads within the Village Zone are formed and paved but there are some roads that are gravel or unformed.

Issues & Strategies

Road Access: The primary issue with the road hierarchy highlighted by the community is that the main retail/commercial area along Gaskill Street is located off this route which can result in less passing traffic utilising the retail/tourism services in this location. This would primarily be improved by better signage and upgrades to the main street.

4.11.4. Bus

Please see [Section 2.7.4 – Bus](#) for more details. Canowindra has access to Countrylink Services that provide connections to/from Parkes/Forbes and Cootamundra/Cowra through to Orange/Bathurst/Lithgow) daily in each direction passing through Cudal and sometimes

Eugowra. In addition there are school bus services that bring children from the surrounding rural areas to Canowindra's primary and secondary schools and also connect to schools in Orange and Cowra.

Issues & Strategies

Bus Access: Public bus transport is available for people living in Canowindra for connections along Canowindra Road / The Escort Way to Orange, Parkes and Cowra. This enables trips to key regional centres and provides some mobility for those without access to private transport. There are also some direct connections through Eugowra and Cudal but not through other settlements (without a change in buses). This may affect those seeking to work or shop regularly in Canowindra from other settlements.

4.11.5. Parking



Figure 14: Possible investigation areas for increased public parking (Source: Council GIS 2011)

Canowindra is reaching a size where parking in the main retail/commercial area along Gaskill Street can be sparse during key times of the day. This could be partially as a result of the density of business along the main street and the lack of off-street parking areas, peak times for shopping activity (e.g. before and after school), business owners parking in the street outside their stores, or employees parking in the street during working hours. It has not been the role of this Strategy to resolve this issue. However, Figure 14 shows some possible sites for future investigation for public off-street parking areas that may be able to link through to Gaskill Street.

Private sites may be difficult to obtain. Council owns a site behind the library that is not currently used but the difficulty will be connecting this through to Gaskill Street. Areas to the west and south of Gaskill Street already have formal and informal parking areas but it may be difficult for passing tourists to find these areas and there would need to be substantial road upgrades.

Issues & Strategies

Provision of Parking: The lack of an easily accessible off-street public parking area requires further investigation as it may be reducing use of local businesses and accessibility for passing tourists. This is an issue that requires multiple approaches including a review of on-street parking controls, education for local users, and potential investment in parking sites that have good connection to Gaskill Street.

4.11.6. Pedestrian Access

Pedestrian footpaths are provided in Canowindra in the key pedestrianised areas close to the business centre including Gaskill Street, Tilga Street and Ryall Street. A large area of Canowindra does not have fully formed footpaths and these are unlikely to be provided in the short to medium term. Council's Pedestrian Accessibility and Mobility Plan ('PAMP')(see [Section 2.7.5 – Pedestrians](#) for more details) includes, but is not limited to, new footpaths, drop kerbs and refuges along parts of Gaskill, Tilga, Ross, Blatchford, Ryall, and Rodd Streets and Browns Avenue to a total of \$381,000 (see Table 6 and Figure 2 in report). Council is currently acting on this work program. One of the main issues is pedestrian mobility and accessibility in the town centre including pedestrian crossings and access to parking areas. There are issues with the location and design of disabled parking areas and pedestrian ramps and this is currently being reviewed by Council.

4.11.7. Cycle Access & Facilities

Council's Bicycle Plan (2005) (see [Section 2.7.6 – Cycling](#) for more details) recommends the creation of *"a highway crossing near the swimming pool and a dry weather crossing of the Belubula River Overflow via an off-road path on the western side of the highway"* (page 15) to avoid having to cross MR310 between the bridges. *"Additionally moving the school zone 40km speed limit signs to encompass the proposed highway crossing could provide additional safety for the crossing"* (page 15).

4.12. Utilities & Infrastructure

4.12.1. Water Supply

Canowindra is connected to the Central Tablelands Water supply system that is sourced from Lake Rowlands in Blayney Shire. There is also a bore providing a back-up source if required. The village's water storage is the older reservoir in combination with the newer Moorbel reservoir located to the east of the town.

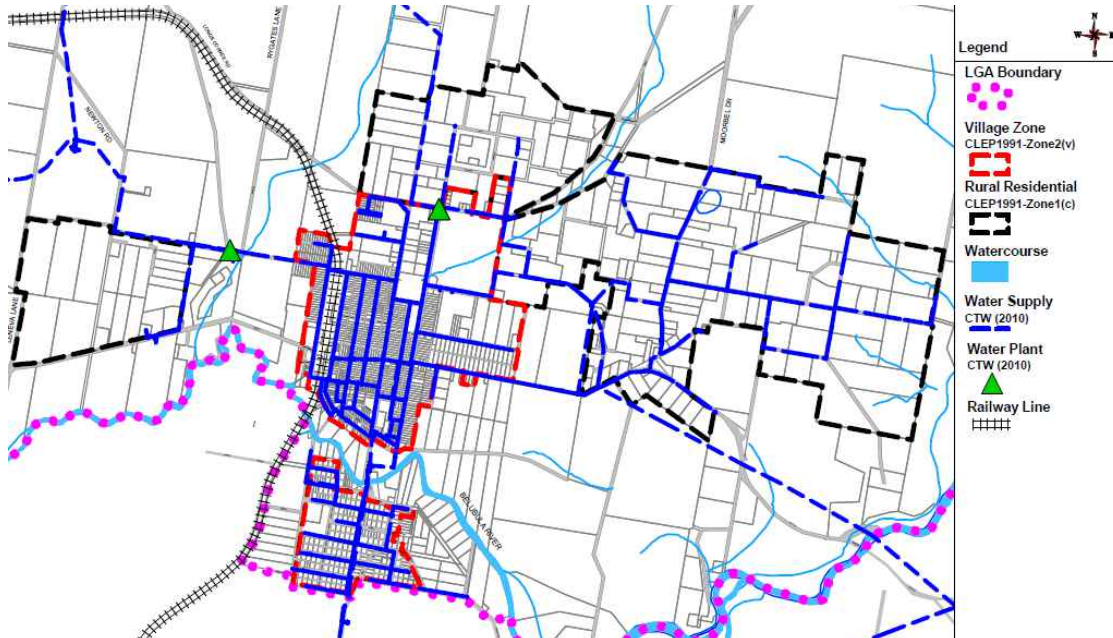
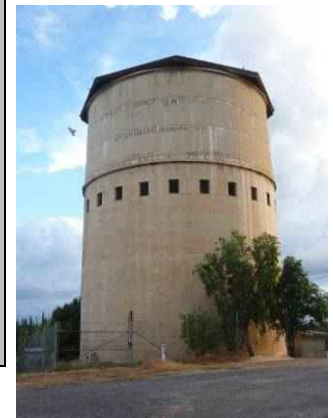


Figure 15: Existing water lines in Canowindra (Source: Council GIS / Central Tablelands Water 2010).

Issues & Strategies

- **Water Connections:** There are no known constraints to water connections in the existing Village Zone. Canowindra is unique in that water connections may be available in a reasonably large area of rural residential lands which may drought-proof some dwellings. However, the cost of further connections may require further review.
- **Water Security:** There are no known constraints to provision of water to Canowindra from CTW's system but a secure water yield has not been determined for the entire network. It is assumed that the proposed expansion of Lake Rowlands would improve water security for the region and Canowindra. However, if larger scale industry were to locate in Canowindra then there would need to be a review to ensure there is sufficient water supply to meet the additional needs of any industry.



4.12.2. Stormwater & Drainage

As Figure 16 shows, kerb and gutters are not provided to all of the streets within the Canowindra Village Zone but are limited primarily to the major streets north of the Belubula River. The North Canowindra area is better serviced by kerb and gutters than most other settlements in the Shire and this provides a higher degree of pedestrian amenity in these areas. The areas of South Canowindra are less well serviced but these areas have a lower density of housing and perhaps less drainage issues.

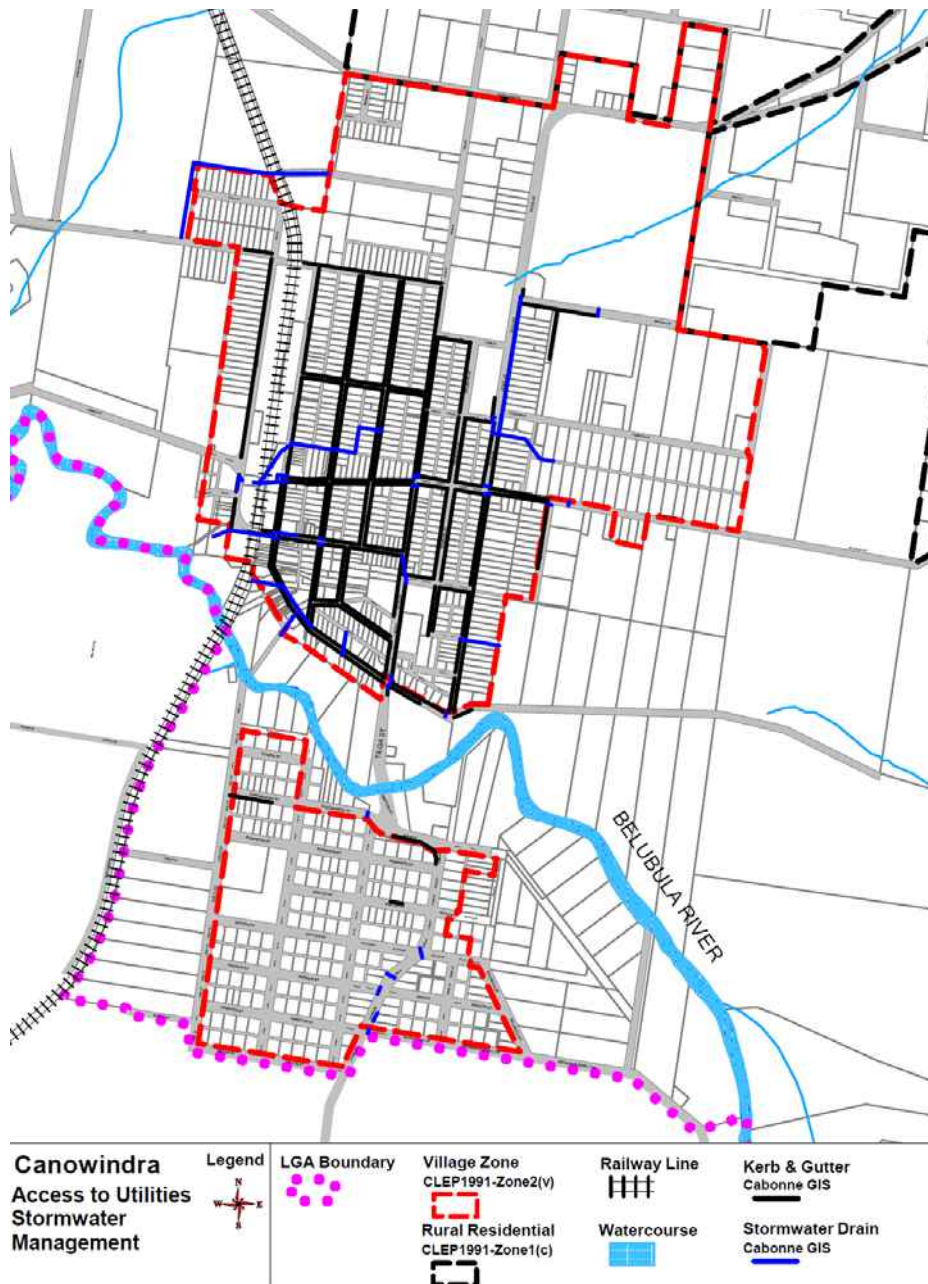


Figure 16: Stormwater infrastructure in Canowindra (Source: Council GIS 2010).

Issues & Strategies

There are no known significant drainage issues noted in this Strategy. Council should review whether there are any stormwater or drainage issues that require further stormwater works in Canowindra. There is a high level of kerb and guttering in North Canowindra but significantly less so in South Canowindra and this is unlikely to change in the foreseeable future.

4.12.3. Sewerage

Sewage Management System

Canowindra's sewerage scheme (Treatment Plant and Pump Stations) built in 1968/69/70/71. The Sewage Treatment Plan ('STP') is located to the west of the Village Zone with access of Wenz Land and/or Nangar Road. This consists of an old trickling filter plant that is managed by Council.

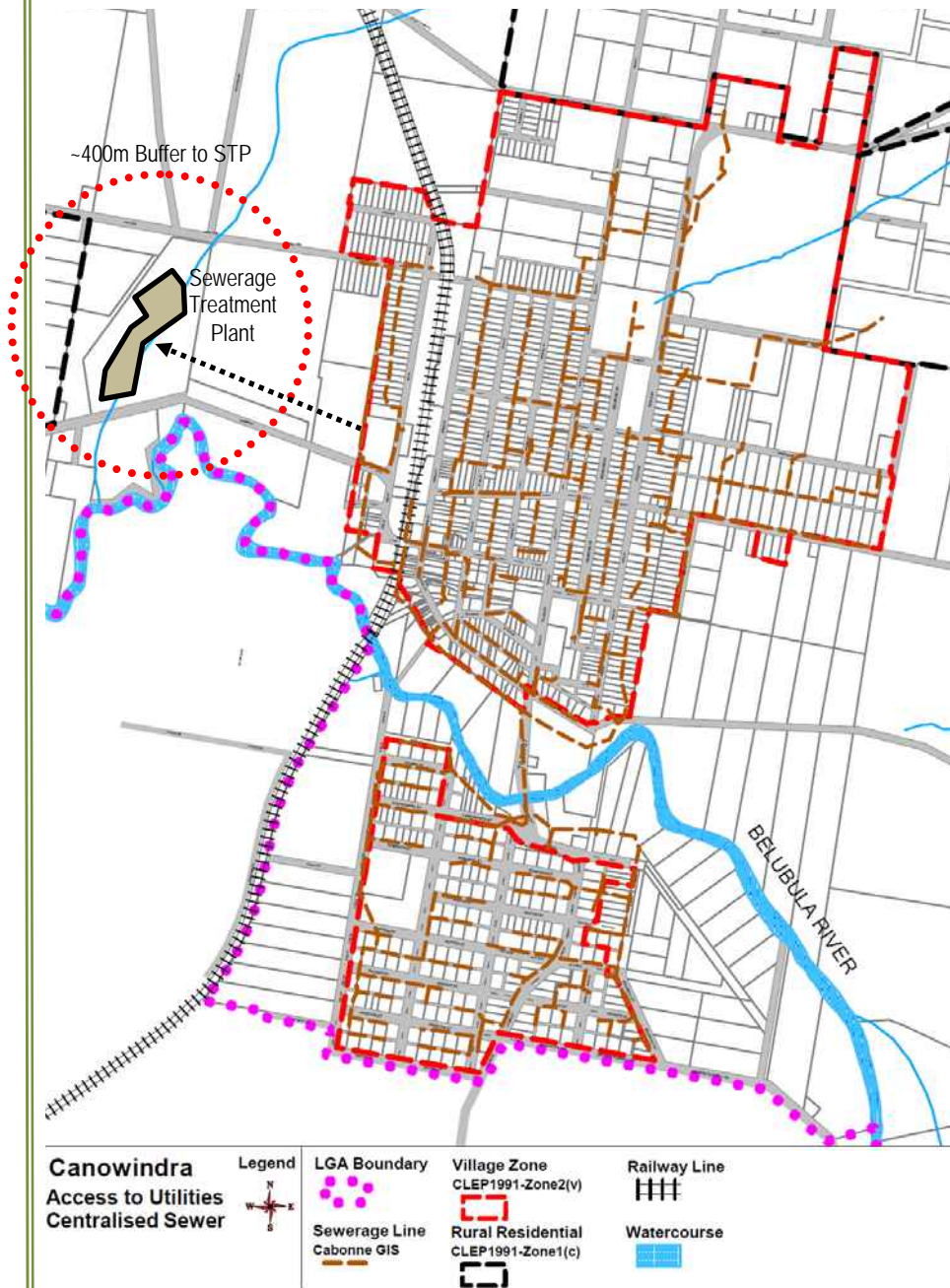


Figure 17: Location of existing sewer lines in Canowindra (Source: Council GIS 2010).

Access

As Figure 17 shows, the existing scheme services an area which roughly approximates the Village Zone only (not the 1(c) zones). Most of these connections run through the rear lanes or the rear of blocks. Most areas of the Village zone are within reasonable proximity to existing services except for the areas between Clyburn Street and Longs Corner.

Capacity

The plant has a capacity of 2,500 Equivalent Persons ('EP') that is in excess of the current population of Canowindra. This Strategy has estimated that at the maximum growth rate of 0.7%/year the Village Zone will reach a population of 2,197 by the year 2036. Therefore, the plant has some capacity for growth. However, according to council engineers, any significant expansion of the village would require upgrading of the plant.



Upgrades

These treatment works were recently upgraded but the works were to the lagoons and not the plant itself. There was an upgrade of the treatment plant, irrigation, pump station and rising main in 1999/2000 (DSP2008). There was another upgrade to the STP in 2008/2009. The 2008 Capital Works Program for Canowindra STP includes \$100K for trickling filters upgrade in 2017/2018.

Reuse & Discharge

The STP Licence includes use of recycled water at the sportsground and showground / golf club. A licence is also held for an adjacent land owner at the STP site for watering of lawns and gardens in the area around his house. The through-put volume of the STP would not allow any increase in off-site use.

The STP has an annual discharge of 140-150ML. Discharge from the ponds is directly to the Belubula River after treatment but this only occurs rarely. Council is investigating addressing issues with discharge to the Belubula River by stopping discharge from the maturation ponds and discharging from the storage dams.

Issues & Strategies

- **Constraints to Growth:** There are no major constraints to residential growth from the existing sewerage system as it is within the projections of this Strategy. However, some extensions of the network will be required in new subdivision areas. If larger scale industry were to locate in Canowindra then there would need to be a review to ensure there is sufficient sewerage supply to meet the additional needs of any industry.
- **Land Use Zoning:** The State Government is recommending that all Sewage Treatment Plants ('STPs') are considered for a future infrastructure zoning that would clearly identify the importance of the STP and ensure that land use planning seeks to minimise encroachments from sensitive land uses that could impair the efficient use of the STP. At this time a 400m nominal buffer has been adopted for the Canowindra STP. This will be considered as part of the new LEP for Cabonne.

4.12.4. Electricity

As Figure 18 shows, access to electricity lines is readily available along most of the key streets in the Canowindra Village Zone and most major streets in the Rural Small Holdings areas except for the issues noted below. The major Pacific Power / Country Energy substation is located in the West Canowindra Rural Small Holdings area.

Issues & Strategies

Electricity: Electricity access is not known to be a significant constraint to growth in Canowindra. There may, however, be some added expenses with connecting houses in new residential subdivisions between Clyburn Street and Longs Corner Road. Significant growth may also have implications for the capacity of the local network, particularly if there are large energy consumers such as some industrial land uses. Canowindra is not located on a high voltage Transgrid network so there may be constraints to high energy consumption/ production industries locating to Canowindra (subject to detailed infrastructure review). This may constrain the growth of industrial uses in Canowindra.

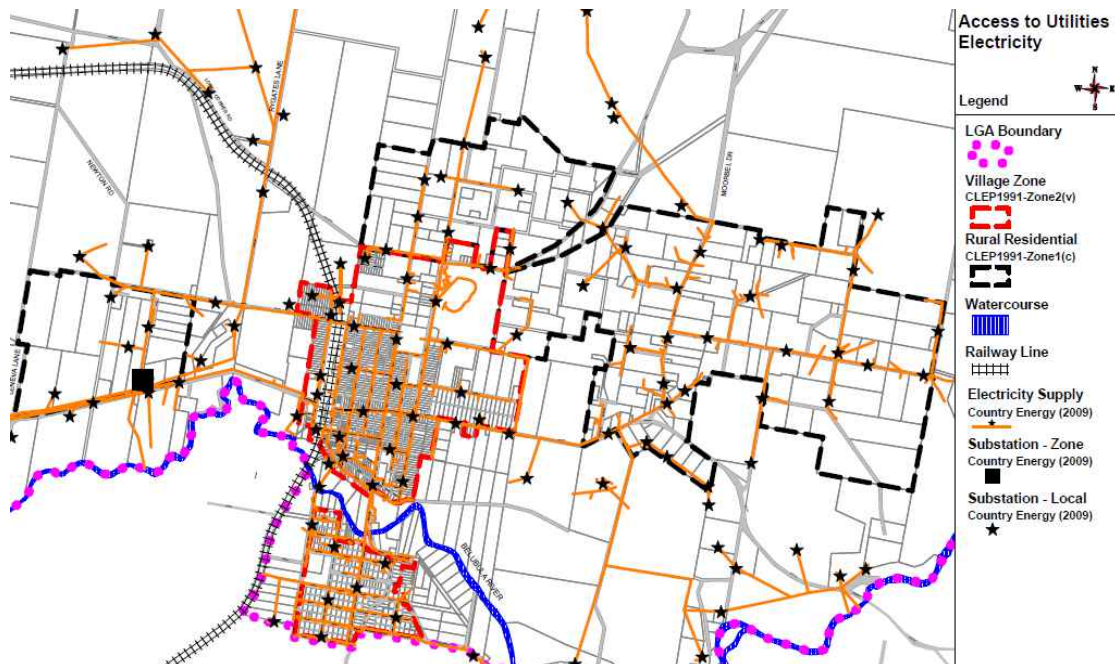


Figure 18: Location of electricity supply lines (orange) and substations (stars) in Canowindra. (Source: GIS file from Country Energy (2009) – not confirmed as accurate).

4.12.5. Telecommunications

Please see [Section 2.8.5 – Telecommunications](#) for a review of access to fixed, mobile and broadband telecommunication services in Canowindra and across Cabonne's settlements.

Issues & Strategies

Telecommunications: The key issue for Canowindra is spotty mobile phone coverage that requires further review. Canowindra may have future high speed internet access with the introduction of the National Broadband Network in the next 3-5 years and fibre optic cable with opportunities for business, education and community groups. There are no major constraints to growth from telecommunications.



4.12.6. Waste Management

Please see [Section 2.8.6 – Waste Management](#) for a review of access to waste management services in Canowindra and across Cabonne's settlements. The Canowindra waste depot is located approximately 8 kilometres to the west of Canowindra towards Eugowra (Nangar Road).

Issues & Strategies

Waste Management: Canowindra's existing waste depot has a limited lifespan of nine (9) years with current compaction technologies. Council is currently formulating a strategic plan to manage the long term options for the Shire. For Canowindra, this may include increased usage of the Eugowra site, improved compaction/waste management practices at the existing site, or a slight expansion of the existing site. This is unlikely to affect the growth of Canowindra but may affect the sustainability of waste management if waste needs to be transported further.



4.13. Heritage

4.13.1. Heritage Items

Currently under CLEP1991 there are no listed heritage items. In addition, CLEP1991 does include a heritage conservation area along Gaskill Street which does provide some degree of protection to the key items which are located within that area. However, many items of heritage interest are located outside the conservation area.

Council is currently finalising the *Community Heritage Study* (2003) building upon work that was conducted in 2003 and 2006. There are 70 items of heritage interest listed for the Canowindra area in the 2003 Draft Inventory and approximately 50 items of heritage interest that are in the Village Zone of Canowindra. Currently approximately 29 items in and around Canowindra are currently recommended for heritage listing in the new local environmental plan (subject to review).

4.13.2. Heritage Conservation Area

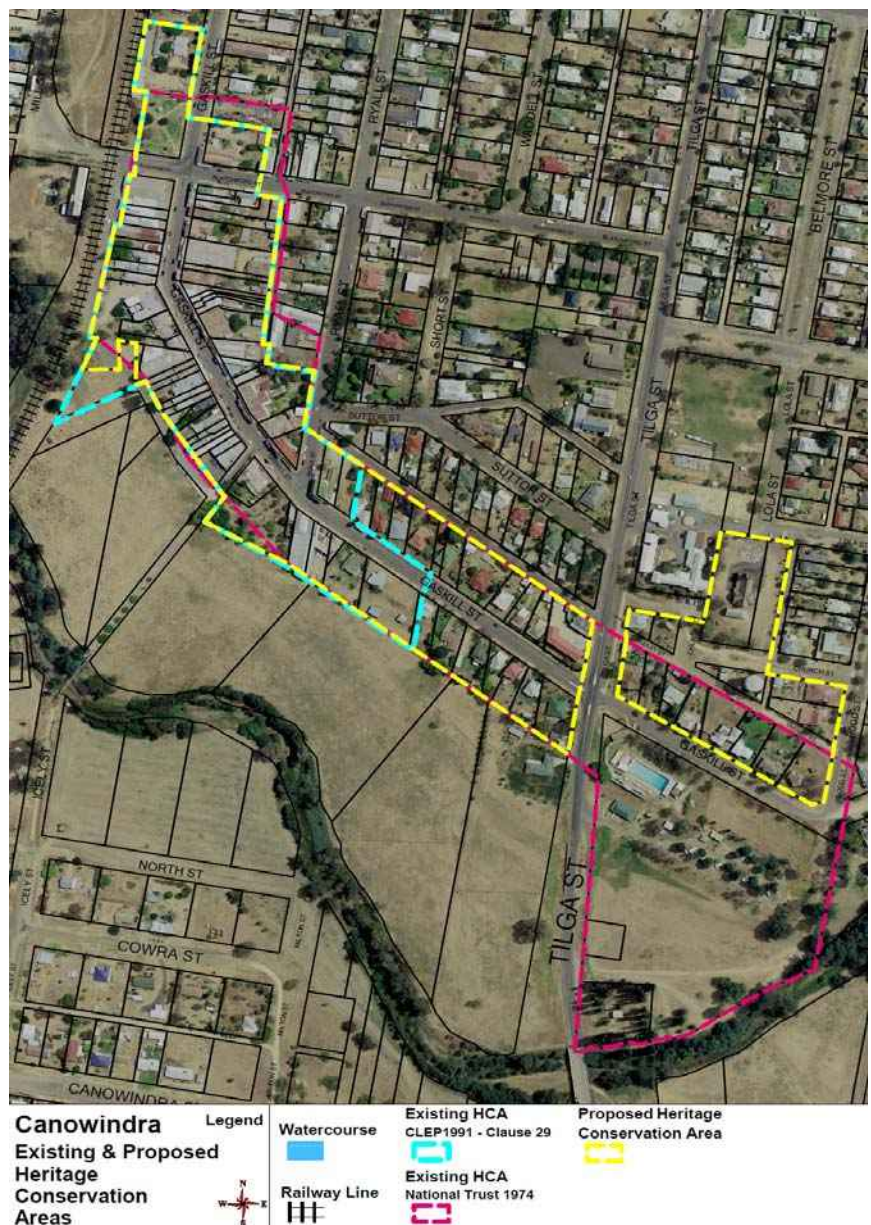
Canowindra is one of two key settlements (also Molong) that has a Heritage Conservation Area ('HCA') under CLEP1991. This HCA is primarily located along Gaskill Street, extending from just east of Ryall Street up to just north of Blatchford Street (Figure 19).

The National Trust has listed an expanded HCA which extends down to Rodd Street and includes the Canowindra pool and caravan park.

On this basis this Strategy recommends an increase in the heritage conservation area to include all of Gaskill Street as far as Rodd Street as well as the church that sits in a prominent position.

It is expected that the proposed HCA will be incorporated into the new planning controls (LEP & DCP) being prepared by Council and there will also be amended/additional controls governing HCAs in Cabonne.

Figure 19: Existing and proposed Canowindra Heritage Conservation Areas (Source: Council GIS 2011).



4.14. Summary of Existing Land Uses (Village Zone & Rural Small Holdings)

A summary of the existing land uses within the Village Zone and Rural Small Holdings Zones in proximity to Canowindra are provided in Figure 20 and Table 10.

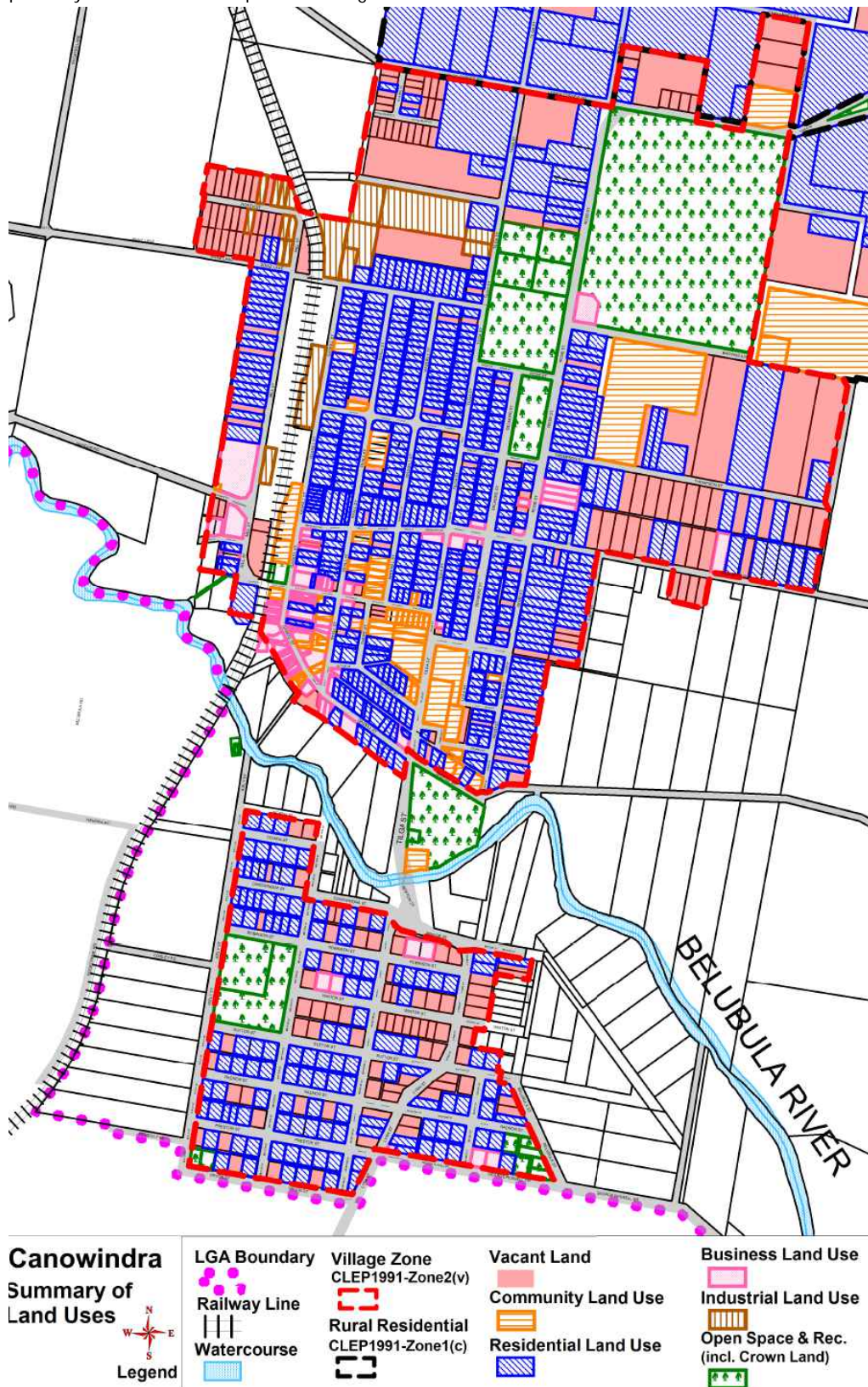


Figure 20: Location of each key land use in Canowindra's Village Zone (as at December 2009).

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A) Existing Village Zone	No. Lots	% Lots in Area	Description
Total Lots – Village Zone	1070	N/A	Total Area of 319.6ha (incl. roads / crown lands)
Vacant Lots	227	21.2%	No existing dwelling or business on lot
Dwelling Land Use Lots	670	62.6%	Mostly detached housing except aged care housing. Approx. 583 dwellings on 670 lots.
Business Land Use Lots	92	8.6%	Mostly retail & tourism services
Industry Land Use Lots	11	1.0%	Utilised lots within an existing industrial area
Community Land Use Lots	52	4.9%	Health, Religious, Community, Emergency, Tourism etc
Open Space & Recreation	18	1.7%	Parks, Reserves & Crown land
B) Existing Rural Small Holdings Zone (North Canowindra)			
Total Lots – Rural Small Holdings	46	100%	Total Area of 154.6ha (incl. roads)
Vacant Lots	18	39.1%	No existing dwelling or business on lot (mostly agricultural)
Dwelling Land Use Lots	24	52.2%	Detached housing
Community Lots	4	8.7%	Crown lands / Cemetery
C) Existing Rural Small Holdings Zone (East Canowindra / Moorbel)			
Total Lots – Rural Small Holdings	143	100%	Total Area of 486ha (incl. roads)
Vacant Lots	49	34.3%	No existing dwelling or business on lot
Dwelling Land Use Lots	90	62.9%	Detached housing
Open Space/Recreation	1	0.7%	Parks, Reserves & Golf Course
Community Lots	3	2.1%	Canowindra Hospital & Moorbel Hall
D) Existing Rural Small Holdings Zone (West Canowindra)			
Total Lots – Rural Small Holdings	23	100%	Total Area of 122ha (incl. roads)
Vacant Lots	13	56.5%	No existing dwelling or business on lot (mostly agricultural)
Dwelling Land Use Lots	9	39.1%	Detached housing (10 dwellings on 9 lots)
Community/Infrastructure Lots	1	4.4%	Pacific Power Electricity Sub-Station Facility

Table 10: Summary of Land Uses in Canowindra's Village Zone and Rural Small Holdings Zones (as at December 2009) (Source: Aerial photo & brief inspection).




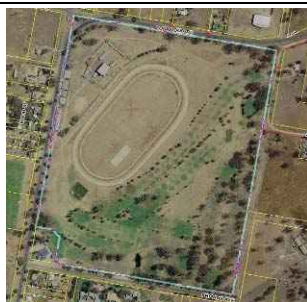
Issues & Strategies

- **Supply & Demand:** The aim of this Strategy is to review the supply of land for each land use in the urban area of each settlement and determine the estimated future demand for each land use to ensure there is sufficient supply of urban land for the growth of the settlement.
- **Residential Demand:** Residential land uses are the greatest consumer of urban land and take up 62.6% of the Village Zone Lots and 37.7% of the Rural Small Holdings Zone Lots.
- **Vacant Infill Development:** A significant proportion of existing total lots are currently vacant and may be able to support some of the additional growth of this settlement, subject to these lots being suitable for development.
- **Land Use Areas:** This Strategy seeks to identify appropriate areas in Canowindra for specific land uses such as industry, business, residential, open space and recreation, and environmental outcomes that seek to minimise land use conflicts and maximise accessibility.

4.15. Open Space & Recreation

4.15.1. Open Space & Recreation

Figure 20 shows the location of existing open space areas in Canowindra and Table 11 provides a short description and photos of some of the key open space and recreation areas.

Key Spaces	Activities	Owner / Lot/DP	Area	Photo
Charles McCarron Baths (Canowindra Swimming Pool) and Canowindra Caravan Park	The Crown land includes an existing 33m pool, a Caravan Park, and the old Scout's Hall is used as a Men's Shed. The pool and caravan park are run under separate contracts. There are current proposals for an upgrade of the pool progressing with Council. There is a Plan of Management for the Crown Lands. The old police paddock could be further developed in the future. Most of the rest of the land is flood prone.	Crown Land (Cabonne is trustee) Lot 64 DP750147	~4ha (but most is flood prone)	
Canowindra Memorial Park , Cnr Blatchford and Gaskill Streets	The park has a playground and toilets and as it is centrally located to the main street it provides amenity for residents and tourists. It underwent an upgrade by Council in 2009/2010. As Crown lands it needs a Plan of Management.	Crown Lands Lot 1 DP430733	0.2ha	
Morris Park , Rodd Street	Park includes BBQ, toilets and small playground with off-street parking. It is used for passive recreation and is an attraction for tourists and passers-by use for toilets and breaks. It has a formal planting arrangement created during the depression era using Canary Island and American Washingtonian Palms. These are high maintenance for Council. The park is not irrigated at this time. There is also no current Plan of Management.	Crown Land with Council as trustee Lot 1 DP758221	1.86ha	
Canowindra Showground, Racecourse, Golf Course & Squash Courts	This includes a golf course and showground (trotting and horse racing and show events) with showground buildings. There is also an effluent reuse system at base of track that uses water from Canowindra STP.	Crown Land - Trustees, Show-ground Lot 121 DP750147	30.4ha	

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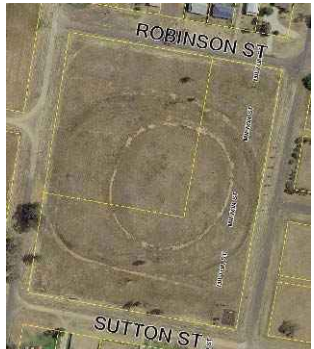
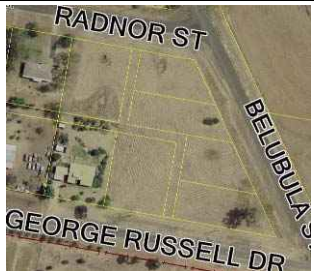
Key Spaces	Activities	Owner / Lot/DP	Area	Photo
Canowindra Recreation Ground Tilga Street	This includes 3 formal playing fields for a range of sports as well as a skate park facility for youth. It is well utilised but Council does not need additional fields at this time. There is an existing Plan of Management. Recent issues with rubbish and vandalism have resulted in the need for additional fencing/security though this was controversial with the community.	Part Crown & Council DP750147 Lot 62 Lot 193 Lot 192 Lot 194 Lot 195 <u>Total</u>	4.68ha 1ha 1ha 0.9ha 0.9ha <u>8.48ha</u>	
South Canowindra Crown Land between Robinson and Sutton Streets	This vacant Crown land only has a small playground at south-east corner and is of such a large size that it is unlikely to be fully-utilised. At the community meeting it was expressed that not all of this land was needed for open space. See Section 4.16.3 – Potential Subdivision of Larger Lots (Village Zone) for a review of the potential of part of this land for future residential uses as well as a future playing field (subject to more detailed studies & community consultation).	Crown Lands Lot 178 DP750368 Lot 7005 DP1020354 <u>Total</u>	2ha 2.8ha <u>4.8ha</u>	
South Canowindra Crown Land Cnr Radnor & Belubula Streets	This vacant Crown land has no supporting recreational infrastructure and is located such that its recreational potential is limited. See Section 4.16.3 – Potential Subdivision of Larger Lots (Village Zone) for a review of the potential of this land for future residential use.	Crown Lands Lots 4-9 DP758221	0.96ha	
Total Area			50.7ha	

Table 11: Summary of major open spaces / recreation areas in the Town of Canowindra.

Supply & Demand

There are a range of passive / active and formal / informal recreational areas spread throughout Canowindra with over 50.7 hectares within the Village Zone and additional lands outside the Village Zone. For an estimated 1,782 people this equates to approximately 284m² per person. However, the majority of this space has minimal facilities. It would appear there is no need for additional space (and some space could be rationalised if it would result in improved facilities).

Issues & Strategies

Open Space: There is reasonably good level of open space per person in Canowindra and a range of recreational opportunities (both passive and active) for the current population. No changes are proposed or needed at this time.

4.16. Vacant Land

Vacant lots are important as they can provide the potential for infill development within the existing Village Zone that may take up some of the projected future growth of each settlement.

4.16.1. Total Vacant Lots

A vacant lot is identified as any lot that does not currently contain any significant building (dwelling or business - active or vacant) and may be capable of supporting a dwelling. However, it may contain ancillary sheds, garages, gardens or septic systems on these lots and these lots may be held by an adjacent non-vacant lot.

Figure 20 and Table 10 show approximately 307 vacant lots in the existing urban zones (including Village Zone and Rural Small Holding Zones) (as at December 2009). Subject to consent, each of these existing lots is likely to be able to support a building/dwelling (assuming it meets the minimum lot size).

Zone	No. Vacant Lots	% of Total Vacant Lots
Village Zone (Industrial Area)	34	11.1%
Village Zone (North of Belubula River)	118	38.4%
Village Zone (South of Belubula River)	75	24.4%
Village Zone (Sub-Total)	227	--
Rural Small Holdings (West Canowindra)	13	4.2%
Rural Small Holdings (North Canowindra)	18	5.9%
Rural Small Holdings (East Canowindra)	49	16%
Rural Small Holdings (Sub-Total)	80	--
Total Vacant Lots	307	100%

Table 12: Summary of total existing vacant allotments in Canowindra's Village Zone and Rural Small Holdings Zones (as at December 2009).

4.16.2. Vacant Lots and Natural Hazards or Constraints (Village Zone)

This section only looks at the constraints on the Village Zone land as vacant lots in the Rural Small Holdings Zones are less likely to be constrained from supporting a dwelling due to the larger lot sizes.

As the history section suggests, many of the settlements in Cabonne were created by the historical subdivision of land which sometimes did not take into account the natural hazards or topography that may make it difficult or costly to develop some lots.

As Figure 21 & Table 13 show, in Canowindra's Village Zone there are approximately 29 vacant allotments that have a low potential for future development due to natural hazards such as flooding, significant vegetation, difficult access, and steep gradients that would make development significantly more expensive and less likely to occur.

In addition, sites that are highlighted in this Strategy for future industrial use (34 vacant lots) are removed from the vacant land supply as these lots should be protected against encroachment from dwellings to allow for future industrial expansion. There are very few vacant sites in the proposed business zone so there is no need to exclude these from residential use.

As a result, the total number of vacant lots (307) is reduced down to approximately 164 vacant lots that have a potential of being able to support a business/dwelling (subject to detailed studies and development consent). As these lots are already subdivided, it is assumed that they could be put on the market at any time.

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Zone / Area	Vacant	Constrained	Unconstrained
Village Zone (Industrial Area)	34	34 for future industrial uses	0 available for dwellings
Village Zone (North of Belubula River)	118	20	98
Village Zone (South of Belubula River)	75	9	66
Village Zone (Total)	227	63	164

Table 13: Summary of Vacant Lots Affected & Unaffected by Constraints (Village Zone Only).

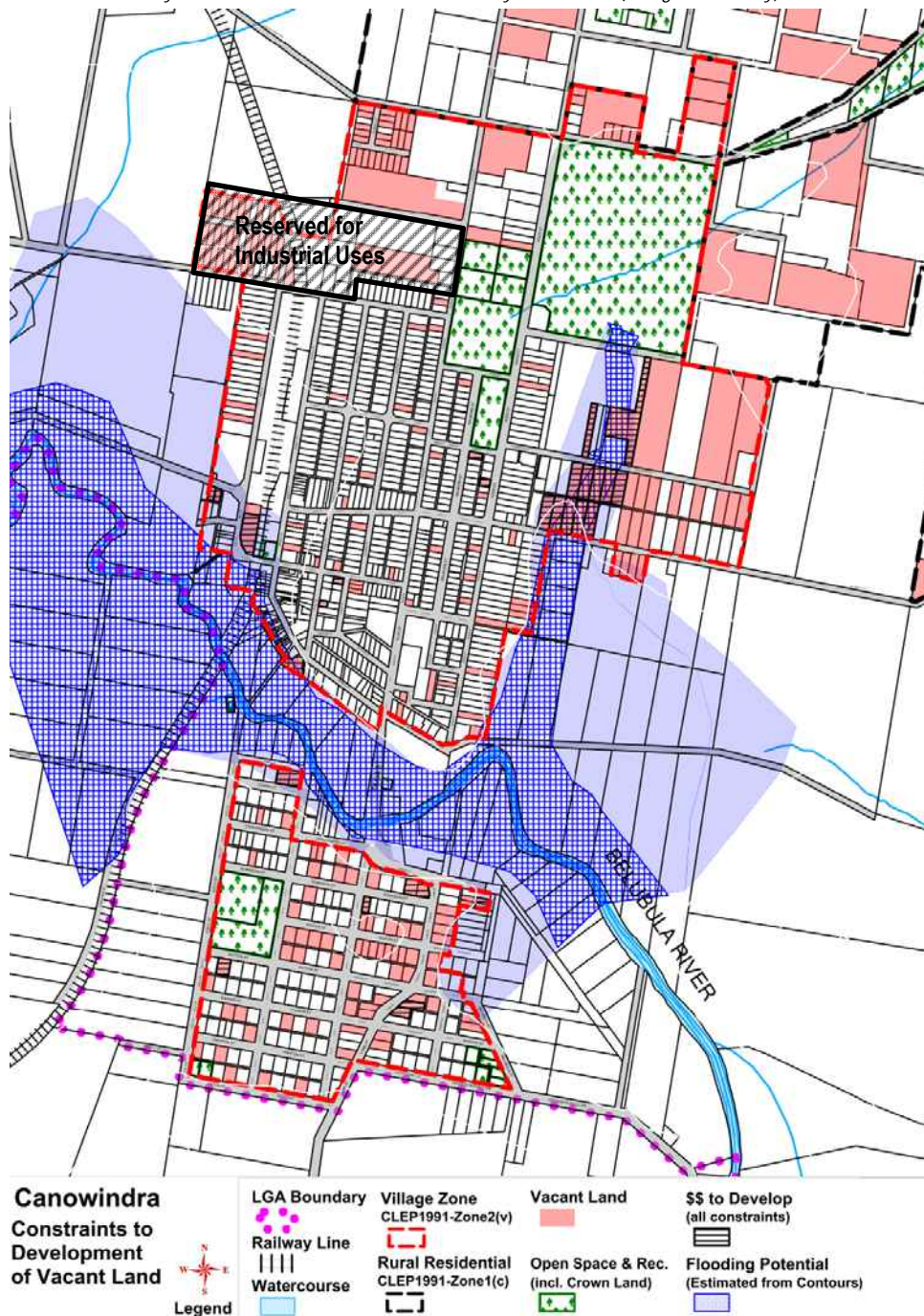


Figure 21: Vacant allotments and those affected by constraints to development (black hatching) in Canowindra's Village Zone (as at November 2009) (Source: Aerial photo and brief street analysis).

4.16.3. Likelihood of Development of Vacant Lots

It is important to note that the community often claims that some of these vacant lots should not be counted for the purposes of infill development because the current owners are not interested in selling.

It is important to note that this Strategy is looking to review land supply over the next 30 years. Whilst some existing landholders may be currently reticent to make land available, over a 30 year period this position could change, particularly as land prices rise and people no longer need larger lots.

Council can only make a 'guesstimate' of what percentage of lots may become available for sale or development over a 30 year period but this Strategy has made the assumption that 60% of available land for dwellings in Canowindra will be taken up over a 30 year period based on a stronger demand and support for development of smaller lots.

4.16.4. Potential Subdivision of Larger Lots

This issue is addressed in more detail in [Section 4.20 – Residential Land Uses \(Village Zone\)](#) and [Section 4.21 – Residential Land Uses \(Rural Small Holdings\)](#) after a review of the opportunities and constraints for these areas.

4.17. Community Land Uses

Figure 20 shows the location of the key community land uses in Canowindra. For the purposes of this Strategy, 'community uses' are defined as buildings, services, facilities and infrastructure that are not-for-profit and/or support the local community.

As stated in [Chapter 2 – Cabonne Overview](#), community uses are permitted in a broad range of zones and, therefore, there is no need for a detailed analysis of supply and demand of land for these uses. However, community uses are often a vital service for the community and provide employment, and social and economic support. A more detailed review of access to community services for all of Cabonne's settlements is provided in [Section 2.10 – Services & Facilities](#).

4.18. Business Land Uses

Warning: Please note that services / facilities change regularly and this section merely provide a 'snapshot' of key services / facilities to assess issues in each settlement in 2010/11.

4.18.1. Existing Retail/Commercial Businesses (2010)

Overview

Canowindra offers a range of business services suitable to a town of its size and one of two primary centres in Cabonne but not all services can be supported with this population size. This section provides an overview of the broad types of businesses that were available in 2010 to indicate the level of services – not a complete list of businesses (as this will change over time).

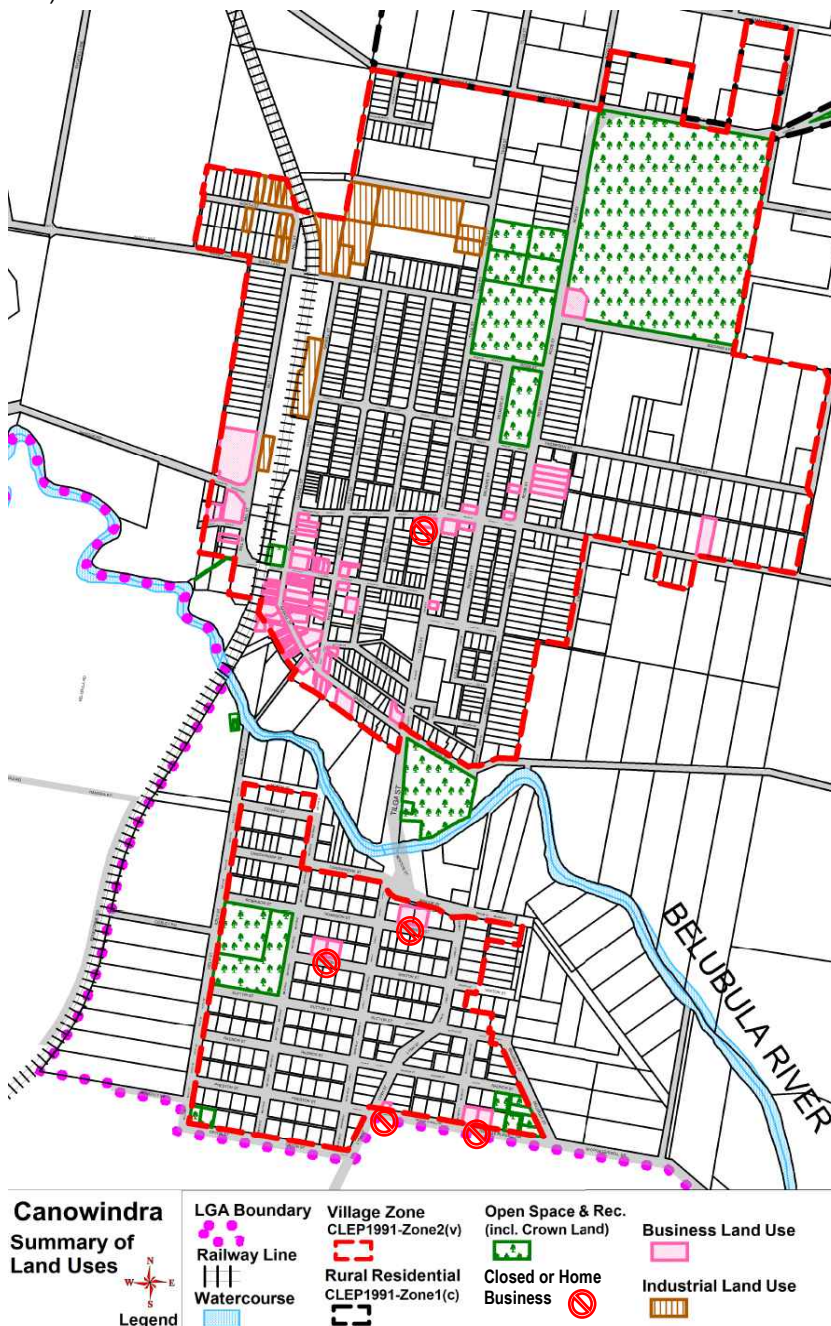


Figure 22: Location of existing business or industrial land uses in the Canowindra Village Zone (as at 2010) (it may not include all home businesses or home industries).

Location

As Figure 22 shows the majority of the existing retail/commercial businesses in Canowindra's Village Zone are concentrated along the main street of Gaskill Street, with some additional business/industrial uses in Blatchford Street, Mill Street and Ferguson Street and then a scatter of businesses throughout the rest of the Village Zone.

The advantage of the compact nature of the 'business district' is that it clearly identifies a core business area with a couple of ancillary centres that may could be supported by appropriate 'business' zonings in the future LEP. This section will also review any businesses that are outside any future business zone to ensure equity in their ongoing operations.

Business Areas

There are three main areas where businesses are concentrated in Canowindra:

- The core retail/commercial area for Canowindra extends along Gaskill Street from Ferguson to just beyond Ryall Street. Most of this coincides with the heritage conservation area and streetscape and is dominated by narrow frontage lots with stand-alone businesses (retail/commercial) and community uses with a few dwellings.
- A small secondary business area exists along Ferguson Street from Tilga Street to Rodd Street. These businesses are dominantly either highway service or tourism related and gain much of their business from passing traffic that is required to turn from Rodd Street into Ferguson and Tilga Streets on the path from Orange to Cowra.
- There is a small business area to the west of the old rail line that is predominantly taken up by rural service businesses and farm machinery sales.

In general, the majority of stand-alone businesses (not including home businesses and home industries) are within these three business areas.

Post & Banking

Canowindra has a reasonable level of core postal and banking services considering its size. The aim would be to prevent any further loss of banking facilities. Current facilities include:

- Australia Post Office, 54 Gaskill Street – post & payment facilities;
- National Australia Bank – full banking service;
- Westpac Bank – bank agency at the Canowindra Newsagency;
- Commonwealth – bank agency at the Post Office;
- Calare Credit Union;
- Redibank ATM.

The CTC Community Technology Centre closed in November 2007 (sign still on building next to police station).

Essential Services & Groceries

Canowindra has a range of local essential services and grocery shopping, including:

- Lawrence's IGA (supermarket 7 days), Gaskill Street;
- Fruit Mart, Gaskill Street;
- Garden Of Roses, 72 Gaskill Street, supermarket + takeaway.

Canowindra has a range of essential local services including a newsagency, chemist, hairdressers, liquor shops, florist, bookstore, photographers etc. The aim would be to supplement these with additional health related businesses and fresh food and grocery outlets as the town grows.

Professional Services

Canowindra has a range of professional services including, but not limited to accountants, pharmacists, solicitors, doctors, computer repairs, real estate agents and the Canowindra Phoenix newspaper. Most of these are located on Gaskill Street.

Rural, Landscape & Hardware Supplies

Canowindra acts as a rural and hardware service centre for the surrounding catchment and has a reasonable level of existing rural services including:

- Bryton Wool, Tilga Street – wool brokers + buyers;
- CRT Kinselas Farm Supplies, Mill Street;
- Lucerne Foods Canowindra Pty Ltd, Mill Street – agricultural machinery;
- Canowindra Produce Co Pty Ltd, Clyburne Street – grain + produce wholesale;
- Rusty Spade, Gaskill Street – garden nursery;
- Chris Williams, Gaskill Street – rural supplies.

Vehicle & Mechanical

Canowindra has a good range of vehicle repair / highway services including:

- Auto Repair Centre/Caltex, 43 Ferguson Street;
- Canowindra Motors, 29 Gaskill Street – used car dealers;
- Central Motors Canowindra, 91 Gaskill Street, Canowindra (6344 1075) – NRMA;
- BP Fuel, 76 Rodd Street;
- Canowindra Tyre Service, Rodd Street – tyre repairs + services;
- Mobil, 43 Ferguson Street – fuel;
- Ken's Service Centre, Rodd Street - motor service stations + garages;
- Nangar Service Station - motor service stations + garages;
- Shell Service Station, 36 Ferguson Street.

Speciality Stores

A growing aspect of Canowindra's business sector is specialty stores. This includes clothes/fashion, craft and antique stores, gifts and homewares, toys, nurseries and florists, art supplies and art galleries. These businesses service local needs and passing tourism. They are able to utilise many of the smaller footprint storefronts along Gaskill Street and fit within the heritage streetscape. There is a tendency for some of these businesses to change hands over time. However, it would appear that there has been an increasing demand for boutique stores that act as a key attraction for tourists to visit Canowindra.

Tourism Attractions

Canowindra has a range of tourism attractions including, but not limited to:

- Canowindra's heritage streetscape, particularly along Gaskill Street;
- The Age of Fishes Museum, Gaskill Street and the fossil site outside of town;
- The Canowindra Historical Museum, Gaskill Street; and
- A range of speciality shops and cafes that provide boutique shopping, art, craft, local wines and foods, and cafes/restaurants;
- Wineries/vineyards around Canowindra;
- Balloon rides and ballooning companies;
- Festivals linked to bushranger history and food and wine;
- Sporting events.



Accommodation

The tourism infrastructure is supported by a range of accommodation types including:

- The Old Vic Inn, Gaskill Street, historic guest house and restaurant;
- River View Motel, corner Gaskill and Tilga Streets;
- Blue Jacket Motel, accommodation + function centre (not currently fully operational);
- Canowindra Caravan Park, Tilga Street; and
- A range of bed & breakfasts and accommodation outside the village centre.

Issues & Strategies

- **Loss of Retail to Regional Centres:** Local shopping is likely to be impacted by the proximity of Canowindra to Cowra and Orange and access to higher level services in these centres. There are issues with making local businesses economically viable when people do not shop locally. There are several retail / commercial buildings that have been vacant for some time several that are for sale. The community needs to work together to facilitate business opportunities.
- **Speciality Shopping:** Unlike Molong, Canowindra has a stronger provision of boutique shopping that may be supported by the stronger tourist trade. There appears to be a growth in boutique and specialist businesses which will promote diversity in the local economy.
- **Tourism Activities:** Canowindra is fortunate to have a range of tourist related activities and attractions (including heritage and history) that cater for passing tourism and longer stays. There are always opportunities to strengthen tourism in and around Canowindra as part of a broader regional strategy. Tourism is likely to grow as a key part of the local economy, particularly if there is retention and enhancement of heritage and streetscape (especially along Gaskill Street) and innovative businesses and tourism attractions. However, there is a concern that the main street is not drawing as many tourists as it used to and this would need to be addressed as part of a broader Tourism Strategy.
- **Tourism Infrastructure:** The main constraint to growth in tourism is perhaps the lack of accommodation options in Canowindra. Whilst some motels are not running at full capacity, anecdotal evidence suggests there is insufficient supply of group accommodation / serviced apartments / bed and breakfasts to cater for peak periods during the year.

4.18.2. Existing Supply of Land for Businesses

This section focuses predominantly on the existing businesses in the core business area along Gaskill and Ryall Streets. Figure 23 shows the boundaries of the core business area and separates existing business sites by those that are fully occupied and those that are either vacant or under-utilised.

A rough calculation of the floor space of fully occupied existing business sites/buildings in the core business area along Gaskill/Ryall Streets is between 10,000m² and 12,000m². It is assumed that not all of this space is utilised to its full potential and there is some potential for expansion for existing businesses on these lots (predominantly in storage areas to the rear of lots). However, many lots have nearly 100% building coverage – so there is limited potential for new business development on these lots. Therefore, most business expansion would need to occur on vacant business/lots.

A rough calculation of the floor space of vacant or under-utilised existing business sites/buildings in the core business area along Gaskill/Ryall Streets is between 6,000m² to 8,000m² (~60% of the existing occupied business floor space). Even if only half this space was usable then this still equates to 3,000m² to 4,000m² (~30% of the existing occupied business floor space).

There are at least 10-12 vacant existing businesses. There are also several lots adjacent to businesses that are either vacant or only have light structures where businesses could locate within this core business area.



Figure 23: Existing businesses in the core business area separated by fully occupied and vacant or under-utilised premises/sites (as at March 2011).

Issues & Strategies

Supply of Land: Rough calculations of available floor space within the core business area along Gaskill/Ryall Streets would suggest that there is up to 6,000m² to 8,000m² that is currently vacant or under-utilised (~60% of the existing occupied business floor space). Even if only half this space was usable then this still equates to 3,000m² to 4,000m² (~30% of the existing occupied business floor space). This would suggest that there is no need for an expansion of the core business area for at least the next 5-10 years.

4.18.3. Constraints to Business Growth

As discussed above, the key constraint to business growth in Canowindra is creating economically viable businesses where local people can be encouraged to shop locally at an affordable price and some speciality businesses can be made accessible to tourists.

Whilst population growth rates in the Village Zone are low or negative, the growth in rural residential lots around Canowindra would suggest that, overall, Canowindra will have a growing population and this growth will create additional demand for services.

The key issue is getting these people to shop locally so there is less expenditure in regional centres such as Cowra and Orange where there is a greater range and sometimes cheaper prices. Core areas where Canowindra appears to be creating a niche are for rural services and boutique shopping.

Another issue is that most local shopping occurs during the week whereas tourism trade is strongest on the weekends. It is difficult for owner-run businesses to stay open 6 or 7 days a week to maximise trade. There may need to be better co-ordination to ensure that core tourism businesses are open for limited hours on weekends – especially during peak tourism times of the year or during tourism events.

There are also some concerns by local businesses that passing traffic has to turn off the main route from Orange to Cowra along Tilga Street – there are sometimes missed opportunities to get passing traffic to stop. Some traffic does stop at the secondary business centre on Ferguson Street but may not then stop again at Gaskill Street. There is also an associated issue with lack of public parking on Gaskill Street, especially during peak tourism periods/events.

Heritage is another issue that may be perceived to constrain business growth as the core business area correlates with the heritage conservation area. This Strategy recommends that in many ways heritage and streetscape are benefits to business growth rather than a constraint as it attracts passing traffic into Gaskill Street and improves pedestrian amenity. Business operations that cannot fit within a heritage streetscape due to their building requirements still have opportunities to locate in the other business areas that are outside the heritage conservation area.

Flooding is an issue that affects several areas of Canowindra, particularly the southern side of Gaskill Street which is proximity to the Belubula River. Whilst the southern edge of many business properties may be affected, it is not expected that businesses will expand into flood prone lands beyond the existing built form.

Issues & Strategies

Constraints to Business Growth: The core constraints to business growth in Canowindra include, but are not limited to, heritage, flooding, accessibility, and creating businesses that are economically viable and attractive to those requiring services. The greatest constraint results from loss of services to larger regional centres. This Strategy is unable to affect human behaviour on this issue and can only seek to provide land that is best suited to business purposes.

4.18.4. Potential Business Demand

A key concern for residents and business owners is sufficient land / building space to allow for future business growth. Whilst there may be a perceived issue with finding suitable land for new businesses in the denser / built up areas along Gaskill Street, this Strategy suggests that the types of businesses that are likely to require space in Canowindra can be serviced by the three proposed business areas.

This Strategy suggests that based on the above supply of potential business floor space that the proposed business areas (particularly the core business area along Gaskill Street) has the potential to absorb substantial growth in some key businesses as follows:

- **Speciality Services:** Perhaps the greatest growth predicted in the next 5-10 years will be in boutique or speciality shops catering for both local and tourism trade. Speciality shops are generally suited to smaller premises (50-200m²). There are at least 8-10 existing vacant buildings along Gaskill and Ryall Streets that would be able to accommodate these types of businesses with only minimal need for new building stock. If these uses are primarily tourism related then there is also some vacant land located in the secondary business area along Ferguson Street.
- **Rural Services:** Canowindra will continue to remain as a key rural centre for the southern end of Cabonne and surrounds. Growth in this area is not expected to be high as there is continued rationalisation of agricultural practices. Rural services are better suited to large sites with good vehicle access on the edge of town such as the area to the west of the rail line. This area includes a number of sites that are under-utilised or vacant that could allow for some limited expansion of this business type.
- **Grocery/Food Services:** Canowindra appears to be less successful at retaining larger-scale grocery, food and appliance stores. The existing Walker's store would be ideal for a 2nd large grocery/food/hardware store (there is a Development Application for this site in 2011) so there is very limited need for new large vacant sites in the core business area for these purposes.
- **Transport/Highway Services:** There is a relatively high level of vehicle related services along key routes in Canowindra. It is not expected that there will be a significant expansion in these services over the next 5-10 years. However, there may be a growth in trucking and logistic companies. These services would be best located in the proposed industrial area(s) to minimise impacts on neighbouring residential properties.

This section refers primarily to larger-scale stand alone businesses that are the dominant use on a site. This Strategy recommends that these business uses should be co-located with other businesses in core business areas to reinforce retail/commercial activity, improve accessibility to businesses by locating along key pedestrian streets, and to minimise impacts on residential uses through traffic and loading/unloading etc.

Please note that this Strategy does not preclude smaller home businesses and home industries from locating in residential areas where it can be shown that the residential use is the dominant use of the land and any land use conflicts are minimised and can be addressed to preserve residential amenity.

Issues & Strategies

Potential Business Demand: This Strategy suggests that the existing business areas should be able to support growth in some of the niche areas where Canowindra is likely to need additional businesses over at least the next 5-10 years. There is sufficient vacant or under-utilised land within these areas and these sites would be able to support the business types that are expected to growth during this period.

4.18.5. Proposed Business Area(s)

As a result of the above findings, this Strategy suggests that if any business area were to be defined in a future planning instrument – the existing core business areas are likely to be a suitable boundary to support existing businesses and business growth.

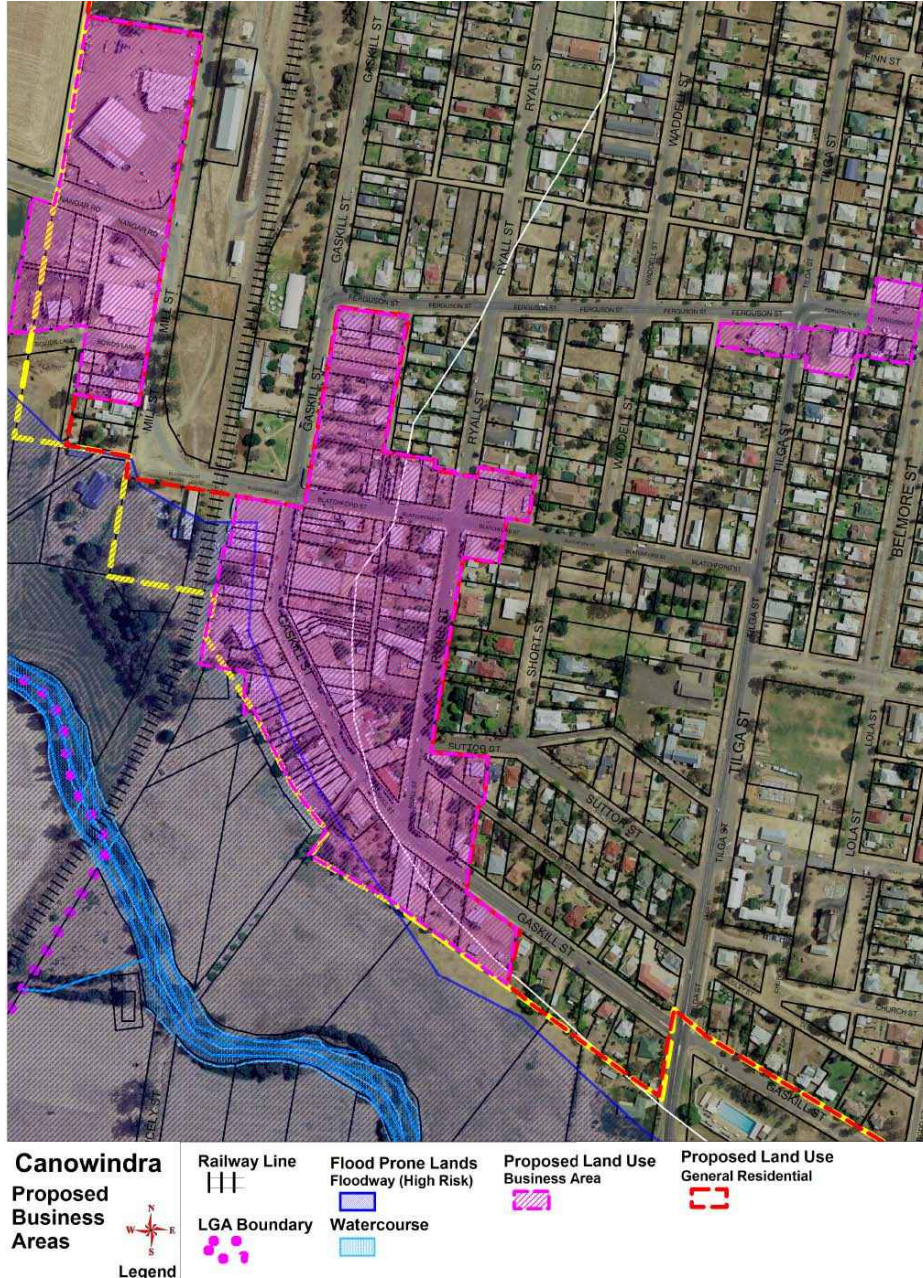


Figure 24: Proposed core business areas for Canowindra.

Therefore, the proposed core areas for business in Canowindra includes:

- Primary Retail/Commercial Area:** The majority of this area is located along Gaskill and Ryall Streets and incorporates the majority of existing retail/commercial businesses. This area should be the focus of most retail/commercial businesses, with a mix of both local shopping and tourism services. It will be necessary for most businesses to be sensitive to the heritage conservation area, but in most circumstances this will not be a significant issue as it will involve the use of existing building stock. Business activities in this area would have minimal impacts on residential properties. There is significant opportunity for

infill development of existing vacant and under-utilised buildings in this area that will provide a minimum of 5-10 years growth for these land uses;

- **Tourism/Highway Area:** The existing businesses at the intersections of Ferguson, Tilga and Rodd Streets are predominantly aimed at highway related uses and tourism purposes. This area should be preferred for these uses with only smaller ancillary retail/commercial uses so that it does not unduly compete with the Primary Retail/Commercial Area. There is some limited opportunity for infill development of existing vacant buildings and under-utilised land in this area that will provide a minimum of 5-10 years growth for these land uses;
- **Rural Services Area:** The existing businesses along Mill Street, west of the railway line are predominantly aimed at providing rural services. This area should be designated for larger format buildings outside the heritage conservation area that have a quasi-industrial nature with machinery and vehicle repairs but do not require a main road frontage. There is some capacity for intensification of uses on under-utilised land that will provide a minimum of 5-10 years growth for these land uses.

4.18.6. Existing Businesses outside the Proposed Business Area(s)

Excluded Businesses

It is recognised that the three (3) proposed business areas do not encompass all of the existing businesses in Canowindra. There is understandable concern from these businesses as to the effect of any rezoning of land that would affect their ability to operate. This section seeks to clarify these issues.

In Canowindra existing stand-alone businesses that are outside the proposed business areas include: BP / WestOil Service Station; Ken's Service Centre; Canowindra Tyre Service; the Golf Club; the Blue Jacket Motel; the Riverside Motel; and several closed/vacant businesses in South Canowindra including an old neighbourhood shop.

Permissibility in Residential Zone

One solution is that some of these businesses would be permissible in any residential area. Whilst the new LEP is still being drafted, preliminary drafts suggest that hotel/motels, neighbourhood shops, home or 'cottage' businesses with a dwelling, and possibly registered clubs will be permissible uses in a residential zone. Therefore, the lack of a business zoning will not affect these businesses and will allow development of new businesses of these types.

Existing Use Rights

Existing Use Rights were explained in [Chapter 2 – Cabonne Overview](#). The key issue with existing use rights is that it would allow existing approved businesses to continue their current operations even if they were subsequently to be located in a zone where that use was prohibited. The primary constraint to these uses is that they only have limited ability (up to 10% of floor space) to expand and some limitations to changes in use. However, they can be bought / sold / run as a business. In many cases, businesses such as Ken's Service Centre and Canowindra Tyre Service have already developed the majority of their sites so major expansion is unlikely. This covers the majority of remaining businesses outside the proposed business areas. Therefore, the chance of impact of implementing a business zone is relatively low to existing businesses.

4.18.7. Areas for Future Business Expansion

Business Land Supply

In the three designated business areas, most of the opportunities for growth are either through utilisation of vacant or under-utilised land or infill development in vacant or under-utilised existing buildings. These areas are all generally constrained by residential areas, agriculture, flood prone lands or heritage and are not suitable for significant expansion of the proposed business boundaries.

This Strategy recommends that the proposed business areas have sufficient growth for a minimum of 5-10 years supply of the business types that are expected to be attracted to Canowindra. However, the Strategy recognises that economic changes can result in sudden changes to the viability of businesses and there may be a need for investigation of other business lands. However, this should only occur when there has been over 60-70% take up of existing vacant or under-utilised sites in existing business areas or there is a risk of damage to these business centres.

Highway Related Businesses / Bulky Goods

In particular, the key business use that is not currently provided for in Canowindra – but that may grow in the medium to long term (10-20 years) would be highway related uses and larger-format industrial retail buildings.

These uses would need to be located on or near the main traffic route through Canowindra and need large areas of land for larger format buildings with off-street parking. However, key issues include, but are not limited to, impacts on neighbouring residential amenity, competition with other business centres, impacts on streetscape and heritage character and the key gateways to town, and the visual impacts of simpler construction buildings with off-street parking areas.

This could include service stations and ancillary restaurants, hardware and landscape supplies, car showrooms, farm machinery sales, homeware stores, and bulky goods. It is not expected that there would be demand for these sizes or types of businesses in the next 10 years until Canowindra grows substantially and these business demand may be met by Cowra and Orange. These sites would not be suitable for industrial uses or trucking/logistics operations that do not require a main road frontage and have a high visual/amenity impact.

Future Investigation Areas

However, if these businesses were to express an interest in Canowindra the following sites have been identified for future investigation, subject to addressing key issues – some of which are listed below.

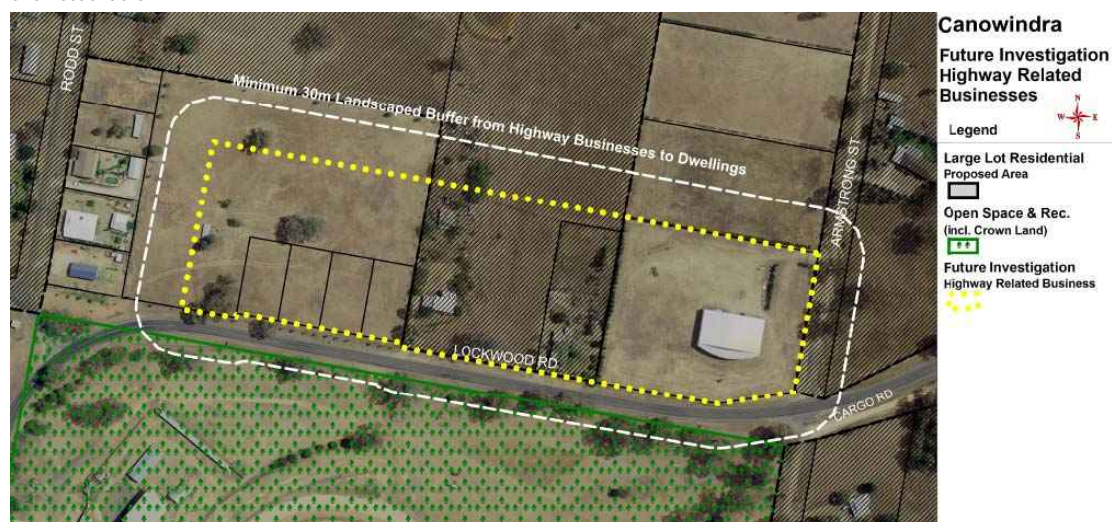


Figure 25: Area (1) for future investigation for highway related businesses.

Area (1) (Figure 25): This area (~4.5 hectares - ~110m deep and 410m long)(Figure 25) located on Lockwood/Cargo Road at the northern gateway to Canowindra is partially in the existing Village/Residential Zone and partially in the Rural Small Holdings/ Large Lot Residential Zone.

Advantages of this land include an existing quasi-industrial/business building owned by Council currently used by the SES and there is a large amount of vacant land opposite the Showground where there are minimum noise impacts. Disadvantages include the need to remove two existing dwellings and proximity to existing dwellings on Rodd and Armstrong Streets as well as the high visibility of the site at the town's main northern entrance.

Area (2) (Figure 26): This area (~1.8 hectares - ~75-100m deep and 230m long)(Figure 26) located on Rodd Street (between Thompson St and the Belubula Way) is located closer to the existing business areas than Area (1).

Advantages of this land include an existing BP service station on a large under-utilised site with the remaining deep (100m) lots being relatively under-utilised and in close proximity to the park. Disadvantages include the need to remove nine existing dwellings and proximity to existing dwellings on all three street frontages, some of which may have heritage qualities. The cost of purchasing the existing dwellings may make this site less economically feasible.



Figure 26: Area (2) for future investigation for highway related businesses.

Both Sites: Neither of these sites should be developed until a full business study has been prepared that would ensure the rezoning is justified by strong interest from 3-5 new large format businesses that would not compete with the existing business areas. In addition, it would be preferable to adopt a master plan for the preferred site that showed the long-term design and operation of the whole area rather than a piece-meal approach of individual planning approvals.

In order to ameliorate the impacts from both sites the preferred site would need to be developed with a consistent master plan that utilised the entire area for highway related businesses and placed a minimum 30m landscaped buffer around the perimeter of the site with a landscape design for the entire site to manage visual and acoustic issues. The design of the buildings and parking areas would need to be of a high standard with subtle colours and articulation of the buildings and address any heritage impacts.

4.19. Industrial Land Uses

4.19.1. Existing / Proposed Industrial Land

As Figure 27 shows, DCP No.7 has generally provided for future industrial activity to the west of the railway line and north of Wenz Lane. This also confirms that existing industry to the east of the railway line and north of Clyburn Street is also accepted by the DCP.

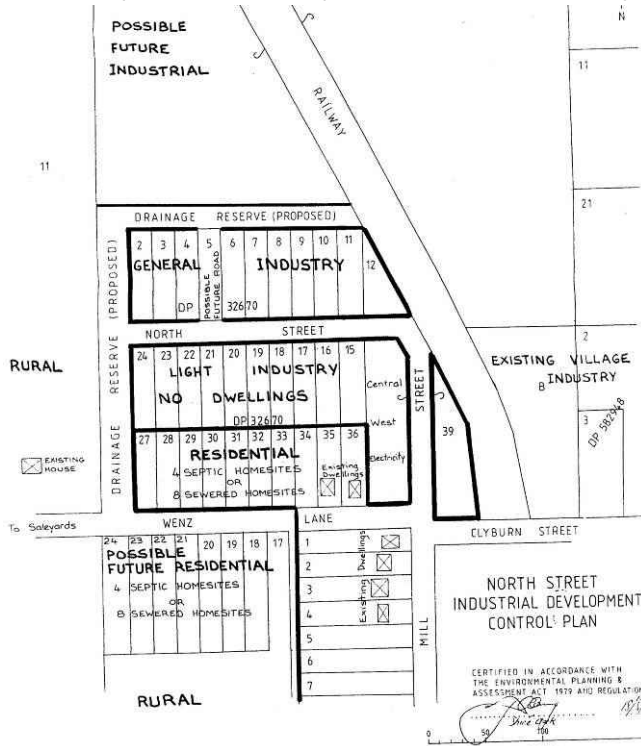


Figure 27: Area governed by DCP No.7 – North Street Canowindra Industrial.

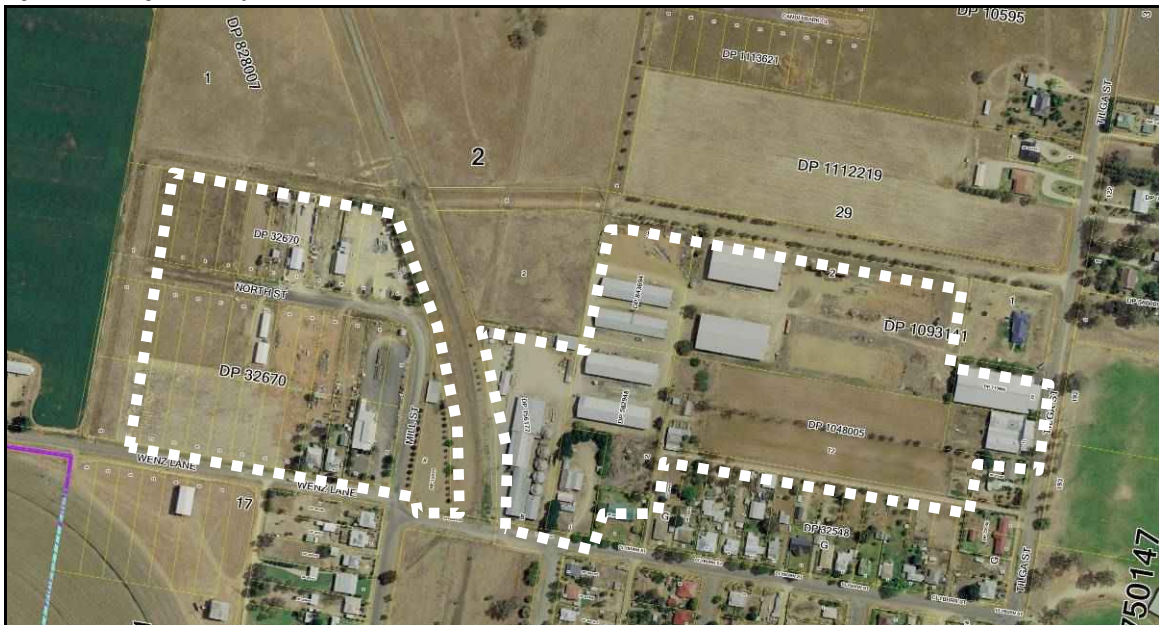


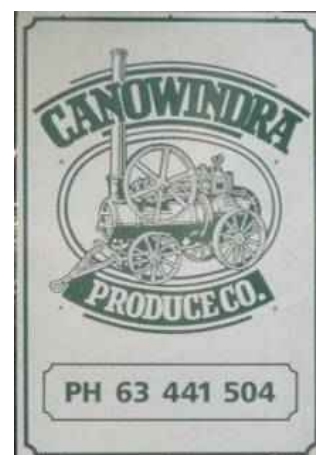
Figure 28: Aerial photo of the existing industrial area in Canowindra (Source: Council GIS 2010).

4.19.2. Existing Industrial Land Uses

Some of the uses in the primary industrial area include:

- Central West County Council (Country Energy) Depot;
- Earsmans Mixed Concrete Pty Ltd;
- Canowindra Self Storage;
- MGA Central West – Sheds & Garages;
- Canowindra Produce;
- Bryton Wool.

Outside this area there are some quasi-industrial activities/sites including the grain storage facilities on the old rail line (GrainCorp), the truck/trailer/machinery repairs (Lucerne Food Parts & Repairs), and rural supplies (Kinselas / CRT). Please note that there may be other home industries outside this area not listed here.



4.19.3. Need for an Industrial Zone

The key benefit of creating an industrial area is that it can be located and designed to minimise land use conflicts, particularly with regards to sensitive residential land uses. It also should provide sufficient land for expansion of industrial uses without any additional impact.

The current Village Zone makes this difficult because industrial uses are theoretically permissible anywhere in the zone, subject to addressing key issues. This provides no certainty to someone buying a sensitive land uses - such as a dwelling – that an industrial land use may be placed adjacent or near to that use.

Whilst there has never been an Industrial 'Zone' under CLEP1991, Canowindra has been fortunate to have at least have a nominated industrial area under DCP No.7. But this level of classification is unlikely to be sufficient for future industrial growth.

Issues & Strategies

- **Need for Industrial Zone:** As Canowindra is a 'mature' town it is recommended that it seek to specifically nominate and possibly 'zone' industrial land to clearly specify areas for industrial uses, maximise buffers to adjacent sensitive uses, and allow for development controls to guide development of these areas.
- **Issues with DCP No.7:** Whilst DCP No.7 has specified an industrial area it has several issues including that it does not include all of the industrial uses (it excludes Canowindra Produce and Bryton Wool), it promotes residential uses in close proximity to the industrial uses, and it provides insufficient area for future growth. Therefore, a new industrial boundary should be nominated by this Strategy.



4.19.4. Supply of Industrial Land

Table 14 shows the area of existing land set aside for industrial uses that is proposed to be included in a future industrial area. The industrial estate has an existing area of 13.98 hectares of which approximately 6.76 hectares is still vacant (48%).

Area	Total Area (excl. roads)	Total No. of Lots	Average Size of Lots	No. of Lots Used	No. of Vacant Lots	Area of Vacant Land
West of Rail	5.42 ha	35	1,600m ² - 2,900m ²	12	23	2.64 ha
East of Rail	8.56 ha	8	3,000m ² - 26,800m ²	7	1	4.12 ha
Total	13.98 ha	43	N/A	19	24	6.76 ha

Table 14: Supply of land within the existing industrial area of Canowindra (as at 2011).

4.19.5. Key Industrial Drivers

Regional Competition for Industrial Land Uses

It should be acknowledged that the appropriate location and supply of industrial land needs to look not only within each settlement, but also across Cabonne and the region. There is competition to attract industrial uses between each settlement in Cabonne as well as with core industrial areas in Orange, Parkes, Cowra, Wellington, Dubbo and Blayney. The industrial areas in Orange and Cowra, in particular, are fully serviced, based on or near rail lines and major highways, and have a critical mass to attract new businesses.

Challenges & Opportunities

It is necessary to recognise that Canowindra faces some challenges to attracting industry including, but not limited to, lack of proximity to a major highway, a closed rail system, no 'critical mass' of existing industry, limited access to larger utilities (high voltage power/natural gas etc), a small regional population and demand for products, distance to Sydney markets, flood prone lands, and increased centralisation of industry to regional centres.

However, some of the benefits in Canowindra include, but are not limited to, a good supply of flat land, proximity to highly fertilise agricultural lands and rural produce, an existing industrial estate with growth potential, a base population size to provide a reliable workforce, reasonable access to water, and the potential future proximity to a major gas pipeline. The key issue is to identify industries that would benefit from these opportunities and not restricted by the challenges.

Light Industrial uses

As shown by the existing industries, in general, Canowindra has managed to predominantly attract light industries and rural industries to its industrial area. This Strategy believes that these are likely to continue to be the main industrial types in demand for this area.

Potential future industrial types may include (but are not limited to) steel and concrete fabrication, engineering workshops, packaging plants, trucking and logistics, waste recycling, processing and packaging of rural products, rural/hardware/landscape supplies, vehicle and machinery repairs, and Council and utility authority depots etc.

Most of these operations do not require highway frontage to market their products but do require reasonable road access that supports a range of truck movements. The existing industrial estate is sufficient in this regard. Whilst these operations are not of a scale to demand rail transport, if it were to be provided in the future it may improve transport of goods to Sydney markets and beyond.

Most light industrial types will be seeking lots ranging from 1,600m² (small start up companies) to 4,000m² (larger operations with storage and trucking needs). Some rural industries such as Canowindra Produce may need larger sites of 2 hectares to allow for storage and processing of their products.

In the last 10 years there has generally only been take-up of a limited number of the smaller sites for small industrial businesses (3-4 sites). This would tend to indicate that local demand for industrial sites is relatively low until there are substantial changes in the local economy or advantages for locating industry in Canowindra.

Heavy Industry

The Rural & Industrial Strategy recommends that heavier industries are located in the proposed industrial area at Manildra. This is supported by this Strategy on the grounds that there is limited competitive advantage for heavier large-scale industries in Canowindra at this time and the impacts would be significant on the town. Therefore, there is no need to provide a heavy industrial area in Canowindra at this time. However, this may need to be revisited when the gas pipeline is constructed.



Projected Demand

Based on historical demand and the existing industrial supply, there is likely to be a need for 4-6 additional small (2,000m²) to medium (4,000m²) light industrial sites in the next 5-10 years. In addition, there may be potential for 1-2 new larger scale (1 hectare) (possibly rural) industries or an expansion of the existing Canowindra Produce facility. As a result, the estimated demand in Canowindra for the next 10 years is approximately 2-3 hectares of land. This is less than the existing supply and suggests that additional land is not required at this time.

Issues & Strategies

- **Industrial Competition:** Canowindra may find it difficult to compete with major regional industrial 'nodes' for larger-scale industries. However, it should focus on industries that leverage off rural produce and local demands and seek to provide a cost effective industrial land product that can attract future industry without impacting on the town. A more detailed Industrial Study should be completed to identify and target industrial types that would be socially, environmentally and economically sustainable in Canowindra.
- **Light Industrial Types:** The primary 'type' of industrial use that is likely to be in demand and supported in Canowindra are light industries revolving around logistics, fabrication, light manufacturing, packaging and service industries. A range of site sizes will be required from approximately 1,600m² to 2 hectares.
- **Projected Industrial Demand:** This Strategy provides a preliminary estimate of industrial demand but a more detailed study would be recommended. This Strategy suggests that in the next 5-10 years demand is likely to be for 2-3 hectares of land and this could easily be accommodated on existing vacant industrial land. Therefore, there is no need to 'rezone' additional industrial land as part of the next LEP.

4.19.6. Proposed Industrial Area(s)

As a result of the above projections, this Strategy recommends that the existing industrial area is clearly nominated for future industrial uses as shown in Figure 29. This includes the existing industrial estate highlighted in DCP No.7 but also includes the original land specified for residential uses adjacent to Wenz Lane. It also includes all of the Canowindra Produce and Bryton Wool land to the east of the railway line, providing approximately 14 hectares of land.



Figure 29: 60-100m buffers to the proposed Canowindra Industrial Area (Source: Council GIS 2011).

The best way to protect the industrial area from encroachment would be to nominate the entire area only for industrial uses and not support any future applications for dwellings on this land. This would amend the current recommendations under DCP No.7. This Strategy recommends that the area is protected by an industrial 'zone' in the future LEP rather than mapping in any new DCP.

4.19.7. Buffer Zones to Industrial Uses

Buffer Zones

The purpose of a 'buffer' is to separate conflicting land uses activities and thereby lessen the potential impact of one activity or series of activities on an adjoining activity. The greatest conflict with industrial land uses is the sensitivity of residential uses and amenity. Industrial uses can impact on residential amenity through noise, dust, odour, light etc. In turn, if residential uses encroach on industrial areas then it can result in controls which impede the operations and economic growth of those industrial uses.

Whilst existing residential development may already encroach on existing and proposed industrial land this does not justify reduced setbacks for future dwellings. Also, it is important to plan for increased industrial activity (including road traffic) rather than setbacks based on existing industrial operations. A buffer may include both residential and/or industrial land – so the burden is absorbed by both land users.

Estimated Buffer

If the proposed industrial type for the industrial area is likely to be light industrial then the buffer zone required around the industrial activities would not need to be as large as that for heavy industry. Buffer zones are generally dependent on the impacts of particular industries.

A rough 'rule of thumb' would be for a minimum 60 metre buffer to the industrial boundary with a preference for a 100 metre buffer. Roads can be included in buffer areas – but if they will be used for industrial / truck traffic then dwellings should have additional setbacks from the road frontage. Not all of this buffer would need to occur outside the industrial area. It may be suitable to have a minimum setback of 10m for all industrial buildings as part of the buffer. This 'range' of buffer zone around the proposed industrial area is shown in Figure 29. Where possible, this buffer should have significant tree plantings to reduce visual impacts and dust.

Impacts on Surrounding Properties

Figure 29 shows that there are several (up to 13) existing houses within the minimum (60m) buffer. However, the majority of houses along Clyburn Street are more than 65m from the industrial boundary to the south. These setbacks are unlikely to increase but the purchasers of these houses would have been aware they were adjacent to an industrial area.

To the north of the site the key issue is the subdivision for dwellings to the north of the unnamed lane known as MacDonald Lane (off Tilga Street north of Canowindra Produce). There is a current approval to subdivide this land for residential uses ranging from 11-12 lots but at the time of subdivision a range of required dwelling setbacks/buffers were implemented ranging from 20 to 50m from the front boundary.

As MacDonald Lane is likely to provide the primary access to any expansion of development on the Canowindra Produce site the lane is likely to have significant increases in heavy vehicle movements that will impact on the residential areas to the north. Therefore, whilst the road easement is 20 metres wide, the inclusion of this within the buffer would not ameliorate all noise impacts.

As a result, houses to the north should be setback a minimum of 40m and preferably 50m from the residential lot/road boundary. This will require larger lot sizes of up to 4,000m² to support a dwelling to allow for sufficient open space to the north of any building envelope. In effect these

larger lots would create a transition between the industrial area and the denser urban subdivisions at Longs Corner Estate to the north.

Home Industries

Whilst this could be perceived to be an under-utilisation of the land in the front section of these blocks there is potential to investigate the use of these blocks for a range of home businesses and home industries that would benefit from access to an industrial standard road. For example, these lots could support the parking of larger vehicles/trucks in the southern section of the lots whilst the northern sections are used for residential purposes. In general, whilst home industries would generally be permissible with consent within a general residential zone, this Strategy recommends that any industrial uses co-locate, where possible, adjacent to the proposed industrial area. The industrial components of home businesses would be permitted to occur within the desired buffers to the industrial area so that this land is not wasted.

4.19.8. Future Investigation Area(s)

As industrial demand can change relatively rapidly, even though there is currently an over-supply of industrial land this could change if a number of industrial operators are attracted in a short period of time. To guide future planning it is proposed that two (2) areas are identified for future investigation as follows:

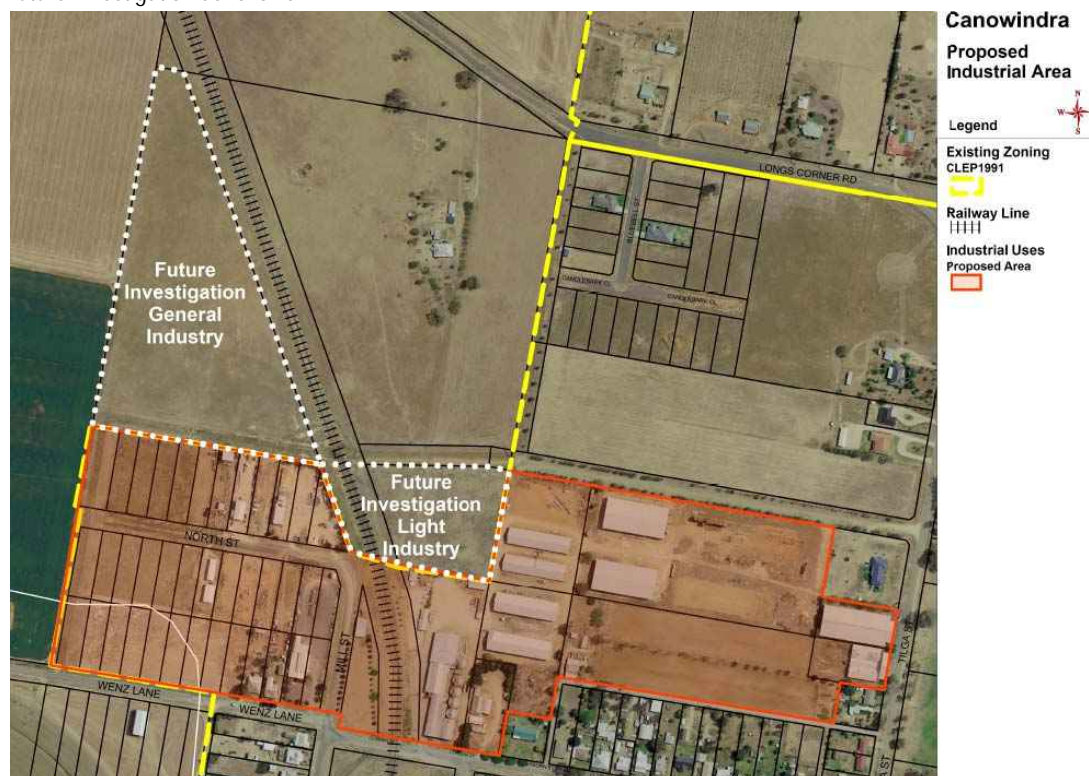


Figure 30: Proposed future industrial area and areas for future investigation for expansion (Source: Council GIS 2011).

- **Light Industry:** At the end of the unnamed lane off Tilga Street there is a vacant area that is part of a greater agricultural lot that would create a natural extension of the existing area adjacent to the rail corridor. The land is adjacent to an existing industrial area and is the part of the lot below the drain and away from the existing dwelling and adjacent residential areas but would only have a buffer of 50-100 metres and, therefore, would be suitable only for light industry.
- **General Industry:** To the north of North Street there is a vacant lot owned by Council that would provide a natural extension for industry along the rail corridor. It is important to note

that the site owned by Cabonne Council was already highlighted for future investigation in DCP No.7 and has a minimum buffer of 200 metres from any existing or proposed urban land to minimise land use conflicts and may be suitable for heavier industrial uses (if required). This would provide an additional 4.69 hectares of land.

In total, this would provide an additional 5.94 hectares of land (42% additional land) (Table 15) subject to at least 60% of the current vacant land being utilised.

Area	Total Area (excl. roads)	Lot Description	Owner
West of Rail	4.69 ha	Lot 1 DP828007	Cabonne Council
East of Rail	1.25 ha	Part Lot 2 DP828007	Private landowner
Total	5.94 ha		

Table 15: Supply of land within the proposed future investigation areas for industrial expansion.

4.20. Residential Land Uses (Village Zone)

4.20.1. Existing Residential Character

Number of Dwellings / Occupancy Rate

As of December 2009, there were 670 lots used for dwellings in Canowindra's Village Zone (62.6% of the total lots) according to a count from aerial photo and street analysis with an estimate of 583 dwellings (excluding individual aged care units).

The ABS 2006 Census (Quickstats) recorded 709 private dwellings in the Census Collection District (slightly larger than the Village Zone) with 72 vacant private dwellings (10.2% of total private dwellings) and 637 occupied private dwellings. The average household size is 2.2 people per dwelling compared to 2.6 in Cabonne and Australia. This may partly be caused by the high proportion (33%) of lone-person households which may be partly attributed to the higher percentage of people over the age of 65 years (22.2%).

Dwelling Types

Whilst there are some examples of dwellings from the late 1800s, most of the existing housing stock is from the mid to late 1900s. Newer housing is interspersed with some of the older housing stock. Some housing is reaching the end of its life and will need to be replaced where it is not nominated as a heritage item.

The dominant dwelling type in Canowindra is the detached or separate dwelling (90.7%). Canowindra also has a limited number of flats, units or apartments (27 or 4.2%); semi-detached housing (4 or 0.6%), and other dwelling types (28 or 4.4%). The majority of medium density housing types are aged care retirement facilities.

Lot Sizes

As stated in [Section 4.5 – Settlement Pattern](#), the majority dwelling lots in the area north of the river are 600m² to 800m² (with frontages of 15-20m and depths of 40-60m) with some larger lots up to 1,200m². To the south of the river dwellings lots are generally approximately 2,000m² (40m by 50m) but some subdivisions have halved these lots to 1,000m² (25m by 50m). In general, the lot sizes are more compact towards the town centre and larger towards the periphery.

For lots of size greater than 1,000m² the lot depth and width is generally sufficient to allow the placement of a dwelling with good side setbacks and a good rear yard. For lots less than 800m² there may be need for clear controls to guide setbacks and ensure good house and building design on these narrower lots. This will be guided by current state government initiatives to allow complying development within residential zones on smaller lots. There may be some opportunities for consolidation and subdivision to provide for medium density in close proximity to the town centre in the future.

Dwelling Densities

The density of housing in Canowindra ranges from as low as 3-5 dwellings/hectare south of the Belubula River to 7 to 11 dwellings/ hectare (excluding roads) north of the Belubula River. This is a relatively low density of housing, particularly in close proximity to the centre of town. There is generally a large yard attached to each dwelling with a 'suburban' character.

Where there is medium density housing the density may increase up to 25-30 dwellings / hectare (excluding roads). With reductions in standard lots down to 500m² there may also be slight increases in density but resulting decreases in landscaped and open space areas.

Rental Rates

Out of 637 occupied private dwellings in Canowindra, 162 dwellings are rental properties (25.4% of occupied dwellings) (Source ABS 2006). Canowindra has a reasonably high rate of rental properties but supply does not always equal demand.

Issues & Strategies

- **Density / Character:** A combination of larger lot sizes and a dominance of detached dwellings means that the dwelling densities in Canowindra are relatively low. This produces a very suburban character for most dwellings with low scale and large yards. However, increased densities may offer an alternative to consumption of more land for growth and improved sustainability.
- **Housing Types:** The majority of dwellings in Canowindra are detached and there are limited medium density housing types. Whilst part of the attraction of living in Canowindra is to have a separate dwelling, with an increasingly larger older population and high percentage of lone-person households there is likely to be future demand for small or more compact housing that is lower in maintenance on smaller lots. There is currently a limited choice of housing types in Canowindra to meet this future need.
- **Rental Supply:** There may be an issue with the provision of rental properties and affordable housing in Canowindra to meet the needs of lower socio-economic groups and itinerant workers.
- **Development Controls:** There are no major issues with the character and design of dwellings in Canowindra but there may need to be some controls to ensure that the character of key streetscapes in Canowindra is preserved. This may involve restrictions on the use of transportable/relocatable houses and shed-style homes to ensure that they are in keeping with the existing housing stock materials and sympathetic to heritage items.

4.20.2. Projected Dwelling Demand

Dwelling Occupancy Rate

The occupancy rate is the number of people that will live in each house. **Rural & Industrial Strategy - Local Profile Paper – Table 2.12**, notes that for Cabonne, the average household size has decreased from 2.9 (1991), to 2.8 (1996), to 2.7 (2001), to 2.6 (2006). Therefore, average household sizes have decreased over the last 15 years and this is also occurring in neighbouring Shires.

The occupancy rate for Canowindra (ABS data) is also expected to remain low over the next 10-30 years, especially if there are increases in aged care housing (senior citizens living alone); families having less children (smaller family sizes); and greater variety of housing types which attracts younger people to live independently. On this basis it is assumed that the estimated occupancy rate in Canowindra in the year 2036 will average 2.3 people per dwelling (up from 2.2 in 2006). This is reasonably consistent with the Rural & Industrial Strategy which projects an occupancy rate in Cabonne Part C (including Canowindra) of 2.3 people per dwelling (**Local Profile Paper – Table 8.16**).

Dwelling Demand from Projected Population Growth

As stated in **Section 4.8 – Projected Future Population**, the projected annual population growth rate for Canowindra ranges from +0.3%/year (minimum) to +0.7%/year (maximum) with an average of +0.5%/year. As this Strategy needs to cater for the greatest potential land demands, dwelling demand will be based on a **maximum** annual population growth rate of +0.7%/year, even if this rate is never achieved.

With an estimated 2006 population in the Village Zone of 1,499 people, the projected population of this area by the year 2036 based on a maximum growth rate of 0.7%/year is 1,848 people, an additional 349 people over the 2006 Census figure. A projected rate of 2.3 people per dwelling in 2036 results in a requirement for an average of 137 dwellings over 30 years (to 2036) (Table 16).

Method	Calculation	Projected Demand for New Dwellings by 2036
Dwellings required by Additional Population	349 / 2.3 per dwelling	152
Dwellings required by Total Population minus Total Dwellings	1,848 / 2.3 per dwelling (803) minus existing total dwellings (709 ABS)	94
Dwellings required by Total Population minus Occupied Dwellings	1,848 / 2.3 per dwelling (803) minus existing occupied dwellings (637 ABS)	166
Average Dwelling Demand to 2036	152 + 94 + 166 (412) / 3	~137

Table 16: Calculation of projected dwelling demand from estimated population growth to 2036 (based on estimated population of Canowindra Village Zone) (Source: ABS data www.abs.gov.au).

Dwelling Demand Projected from Historical Growth in Dwellings

An alternative method to estimate dwelling demand is to project from historical growth of dwellings based on ABS Census data (Table 17). Census information provides the number of total private dwellings and number of occupied dwellings in the Canowindra ABS Census District (Village Zone only) since 1976.

ABS Census	Total Dwellings		Occupied Dwellings	Unoccupied Dwellings	% Unocc. Dwellings	
1976	576		548	28	4.86%	
1981	623		564	59	9.47%	
1986	647		584	63	9.74%	
1991	670		609	61	9.11%	
	Census data not accessible					
2001	697		606	91	13.06%	
2006	709		637	72	10.16%	
	Total Dwellings			Occupied Dwellings		
Average	△	%△	Av. Ann. %△	△	%△	Av. Ann. %△
1976-2006	+133	+23.1%	+0.76%	+89	+16.2%	+0.54%
1986-2006	+62	+9.6%	+0.48%	+53	+9.1%	+0.45%
2001-2006	+12	+1.7%	+0.34%	+31	+5.1%	+1.02%

Table 17: Change in occupied and total private dwellings 1976-2006 (Source: ABS Census).

It can be seen over a variety of periods the rate of growth of both total and occupied dwellings averages at approximately 0.7%/year. Based on this rate of growth continuing for the next 30 years, in 2036 there is estimated to be 874 total dwellings (an increase of 165 dwellings) and 785 occupied dwellings (an increase of 148 dwellings). Therefore, an average of an additional 157 dwellings is estimated to be needed in the Village Zone by 2036.

Dwelling Demand Projected from Development Applications

An alternative method to estimate dwelling demand is based on the historical number of dwelling applications approved each year by Council for new dwellings in the Village Zone (Table 18). Please note that this has limited accuracy as development approval does not necessarily ensure that these new dwellings were built.

On this basis it could be projected that there could be demand for approximately 109 dwellings over 30 years in the Village Zone (based on a continuation of current approval rates).

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	Av.
DAs	2	1	1	1	5	2	5	8	2	8	5	40	3.64 dwellings/yr OR 109 dwellings/30yrs

Table 18: Total number of dwelling applications approved 1999-2010 (financial years) in Canowindra's Village Zone (Source: Council records - Fujitsu Database).

Dwelling Demand - Summary Table

Table 19 summarises the finding above to suggest that approximately 134 additional (new) dwellings will be required in the Village Zone by 2036 (30 years) compared to the 2006 figure.

Projected No. of Dwellings Required by 2036 based on following calculation method	Increased No. of Dwellings from 2006
Projected Population Growth (Max. 0.7%/year)	137
Projected Development Applications	109
Projected Historical Dwelling Growth (Max. 0.6%/year)	157
Average $137 + 109 + 157 = 403 / 3$	134 Additional Dwellings

Table 19: Projected additional dwellings needed by 2036 based on a variety of projection methods.

4.20.3. Supply of Vacant Small Lots for Dwellings

As stated in [Section 4.16 – Vacant Land](#), there are a total of 227 vacant lots in the Village Zone of Canowindra. However, if vacant land in the industrial estate and lots constrained by natural hazards are excluded then there are 164 vacant lots in the Village Zone. Assuming that only 60% of these lots became available over the next 30 years, this land could provide an additional 98 dwellings. However, it is important to note that some of these lots are larger than the minimum lot size permitted in the Village Zone and some lots may be capable of further subdivision (see below).

4.20.4. Potential Subdivision of Larger Lots (Village Zone)

Please note that any estimations of future subdivision potential of large lots are subject to detailed site studies and Council assessment of any subdivision proposal. These figures cannot be relied upon by the Applicant/Community as representing the development potential of these lots as these numbers are an estimate for the purposes of this Strategy only.

Subdivision Controls

Under Clause 17 of CLEP1991 the minimum lot size ('MLS') for subdivision in the Village Zone is 500m² for areas serviced by sewer and 2,000m² for those areas serviced by septic system. It is assumed that all Village Zone is capable of being serviced by reticulated sewer. It is envisaged that these subdivision controls are likely to remain the same or similar in any future planning instrument. Please note that this section does not address the provision of dual occupancy or 'granny flat' dwellings (2 dwellings on the same lot).

Subdivision Potential in South Canowindra – Existing Dwellings

As stated in **Section 4.5 – Settlement Pattern**, the majority of lots in South Canowindra are 2,000m² in size (>40m in width) with some subdivision resulting in 1,000m²-1,250m² lots (>20m in width). In general, the desired character for South Canowindra appears to be for a single dwelling on a larger lot. It is unlikely that the market in this area will support dwelling lot sizes in this area significantly below 1,000m² as the lot width would need to reduce below 20m (except for corner lots) and this would impact unduly on access, amenity and privacy.

Lots with an existing dwelling generally have either a dwelling size or orientation or a garage/ancillary shed that makes subdivision less likely. Therefore, it is assumed that a relatively small number of 2,000m² lots with existing dwellings (primarily corner lots with dual access) would be likely to be subdivided in the next 30 years. This Strategy assumes that from 20 existing lots approximately 20 additional 1,000m² lots could potentially be created. It is assumed that only 60% of these are likely to be created in the next 30 years – an addition of 12 dwelling lots.

Subdivision Potential in South Canowindra – Vacant Lots

Nearly all of the 2,000m² vacant lots in South Canowindra have the potential for further subdivision down to 1,000m² lots. The South Canowindra Village Zone has 66 unconstrained vacant lots. Approximately 40 of these are 2,000m² lots that could produce up to eighty (80) 1,000m² lots if fully subdivided. It is assumed that only 60% of these are likely to be created in the next 30 years – an addition of 48 dwelling lots.

Subdivision Potential – Crown Lands

As noted in **Section 4.15 – Open Space & Recreation** there may be some under-utilised Crown Lands in South Canowindra that could be considered for residential purposes in the future. Please note that this has not yet been agreed with State Government and it would require the reclassification of land and further investigation of dwelling potential and community consultation.

The two (2) sites for further investigation by Council include:

- Crown Land (1):** The area between Robinson, Sutton, Icely and Milton Streets. This includes two lots – one rectangular lot ~2ha in size (~150m by 130m) and the surrounding lot ~2.8ha in size. The rectangular lot is an idea size for a standard sports field and may be sufficient to provide both active and passive recreation needs for this area (subject to detailed studies). The remaining lot (2.8ha) could potentially produce twelve (12) 1,250m² lots (along Milton Street), five (5) 2,000m² lots along Sutton Street and two (2) 1,500m² lots along Icely Street – a total of 19 lots (using a subdivision pattern that does not require any additional roads – more lots possible if additional roads added). CTW water supply lines run along Robinson, Sutton & Winton Streets and could be extended along Milton Street. Centralised sewerage runs along Icely, Robinson, and part of Sutton and Milton Streets and could be extended relatively easily.

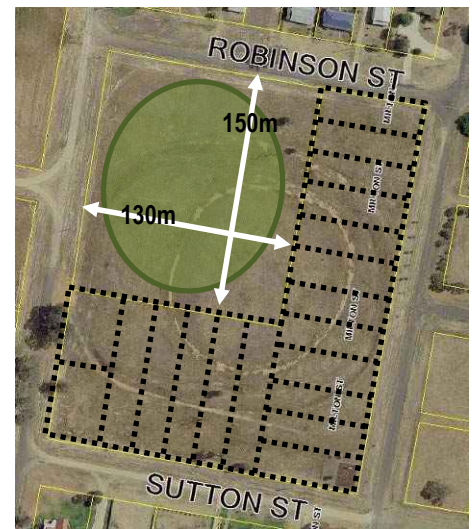
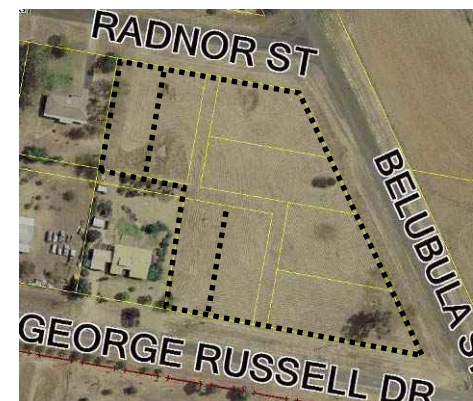


Figure 31: Illustrative future potential subdivision of Crown Land for dwellings subject to further investigation (opposite).

Figure 32: Illustrative future potential subdivision of Crown Land for dwellings subject to further investigation (opposite).

- Crown Land (2):** The area between Radnor and Belubula Streets and George Russell Drive. This contains six (6) vacant Crown lots ranging in size from 1,250m² to 2,000m² (excluding the rear lane). This could support another eight (8) potential dwellings with a relatively easy subdivision with no additional roads with the smallest lot size at 1,000m².



CTW water is located on the road frontages of Radnor Street and George Russell Drive. Centralised sewerage is located along Radnor and Belubula Streets so these properties could be serviced relatively easily.

Therefore, the total potential dwelling lot yield from this Crown land is 27 dwellings or if only 60% of these are likely then an additional 16 dwellings. Please note that any development of Crown Land is subject to Crown approval and may also be constrained by native title or land claims.

Subdivision Potential in North Canowindra – Existing Dwellings (Small Lots)

Generally any lots that are approximately 1,000m² or smaller are fully developed as the lot width is ~20m and there is insufficient room for dual access to the lots (except on corner lots). Even the majority of 2,000m² lots (for example, the east of Rodd Street) only have a 20m road frontage that is likely to preclude further subdivision in the short term.

Whilst rear lanes are an option their 6m width is unlikely to be able to support more than irregular traffic and these lanes should not become primary frontages for lots in the near future. Therefore, the future subdivision potential of lots with existing dwellings (other than those discussed in the next section) is assumed to be zero by this Strategy even though some potential is possible. The only other option is consolidation of existing lots for medium density housing – but this is addressed in [Section 4.20 – Residential Land Uses \(Village Zone\)](#).

Subdivision Potential in North Canowindra – Vacant & Existing Dwellings (Large Lots)

North of the Belubula River (excluding industrial lots) there are approximately 20-25 large unconstrained lots (vacant or with single dwellings) located near Longs Corner Road, Cargo Road and between Belubula Way and Browns Avenue.

The approximate area of this under-utilised land is approximately 32 hectares. It is assumed that up to 25% of this area would be needed for road and open spaces resulting in a potential development area of 24 hectares. Based on an average desired lot size of 2000m² (well above the minimum lot size – as most of these are located on the periphery of the urban area) it is assumed that these large lots could support approximately an additional 120 dwellings or if only 60% were likely to be produced this would result in 72 additional dwellings.

4.20.5. Summary of Supply of Land for Dwellings to 2036

Based on the above information there are 164 unconstrained vacant blocks in the Village Zone (98 North of the Belubula and 66 South of the Belubula). Some of the larger lots are capable of further subdivision. The total potential lots and likely dwellings are set out in Table 20.

Existing Village Zone	Existing Lots	Potential New Lots After Subdivision	Likely New Dwellings over 30 years (60%)
South Canowindra (Existing Dwellings)	20 dwelling lots	20	12
South Canowindra (Vacant Lots)	40 vacant lots	80	48
South Canowindra (Small Vacant Lots)	26 vacant lots	26	16
South Canowindra (Crown Lands)	Existing open space	27	16
North Canowindra (Large Lots)	20 vacant lots 2 dwelling lots	120	72
North Canowindra (Small Vacant Lots)	78 vacant lots	78	47
Village Zone (Total)	164 vacant lots 22 dwelling lots	351 Lots	211 Dwellings

Table 20: Summary of potential lots and likely dwellings from use of vacant land and future predicted subdivision in the existing Village Zone of Canowindra.

4.20.6. Comparison of Supply & Demand for Dwellings to 2036

Summarising all of the above sections there is a projected demand for 134 additional dwellings in Canowindra's Village Zone over the next 30 years and a potential for approximately 211 small vacant lots in this area (after subdivision). Therefore, the total supply of land available in Canowindra's Village zone compared to the demand is shown below:

211 (likely dwelling lots created) X 30 years = 47 years supply
134 (projected demand for new dwellings)

Even if there were no further subdivision then the total existing supply of 164 vacant unconstrained lots could provide 37 years of supply. And assuming that only 60% of the existing vacant land became available (98 lots) these would provide 22 years of supply. As there is sufficient supply for 10 years there is no need to rezone any additional land at this time for Urban Residential Uses.

Issues & Strategies

Need for Rezoning in Next LEP: There is assumed to be no need to rezone any additional urban residential land in the next LEP as there is sufficient land to provide well in excess of 10 years supply based on the projected growth rates.

4.20.7. Medium Density Housing

Demand for Smaller Housing

The calculations above for dwelling supply and demand are premised on existing land supply being utilised for single detached dwellings. However, it is important to consider that Canowindra is a sufficiently 'mature' town that is likely to have increasing demand for smaller housing types and an increased range of housing types/sizes.

Increased housing choice is more likely to meet the growing demographic demands for younger couples, older lone person households, and lower socio-economic groups. An increase in medium density development would also provide a higher number of houses with a lower supply of land. This could potentially take up additional dwelling demand and reduce reliance on existing vacant land or further subdivision.



Existing Medium Density Housing

There are some limited examples of higher density housing appearing in Canowindra. For example there are attached villas/townhouses located at 76 Tilga Street and 17-19 Waddell Street. The developer response to the deeper narrow blocks is generally to use row housing with a driveway down the side. However, this does not always produce good amenity or streetscape outcomes. There are also examples of aged care housing in Canowindra and, for example, the Moyne Aged Care facility is well out of town on the Nangar Road.

Challenges to Medium Density Housing

The issue with Canowindra is that there are a number of potential challenges to the introduction of medium density housing. The most suitable area for medium density would ideally be within 200-400m walking distance of Canowindra's business centre, with larger sites with road access, where it will not impact on heritage streetscapes and the land is relatively flat and easy to develop.

However, there are only limited vacant lots within this desired area and the purchase of existing dwellings for demolition and amalgamation is less economically viable. A medium density housing development has been approved west of the rail line on Mill Street and this may be one of the last few larger lots available in close proximity to the business area.

The only areas with vacant larger lots would be outside the 800m walking distance to the centre. These lots would require additional investment in community transport and access to services and facilities for those without private vehicles (e.g. Moyne Aged Care facility).

In addition, there is often some community opposition to medium density and lower income housing on smaller blocks because there is reduced building setbacks and higher densities of people that can have impacts on neighbouring residential amenity.

Proposed Outcome

For the above reasons it is not proposed to specify in this Strategy a defined area for medium density housing. Instead, Council will consider applications on their merits.

However, an alternative dwelling type that can produce additional dwellings on existing lots is the use of dual occupancies and secondary dwellings on the same lot as the original dwelling. These additional dwellings could be built on the rear of existing lots with shared access driveways. Sometimes these are referred to as 'granny flats'. In some circumstances these rear dwellings can be subdivided from the front/primary dwelling to create two separate lots.

Whilst secondary dwellings can be built on lots as small as 1000m², in order to maximise amenity it would be advisable to have a minimum frontage of 40m and lot depth of 50m (total area 2000m²) to support these additional dwellings. Subdivision may only be approved on larger dwellings (subject to further review).

An example of lots that may be suitable for secondary dwellings and potential subdivision would be those located immediately to the east of Rodd Street, especially those between Browns Avenue and Belubula Way. These east-west oriented lots have a depth of 100m and width of 20m with most houses in the western half. The eastern half faces onto a road easement or future lane/road that could provide alternative access allowing the rear of the lots to be subdivided for additional dwellings.

Proposed Densities & Dwelling Supply

Current dwelling densities in the areas shown are as low as 5-10 dwellings per hectare (nett – excluding roads). The aim of any medium density development would be to perhaps double this density up to approximately 15-20 dwellings per hectare (nett) without impacting significantly on amenity, heritage or streetscape values and better utilise the existing land resources.

Any estimate of the potential for secondary dwellings in Canowindra would be rough only but this model of housing could provide a minimum of 30-50 additional dwellings which would further reduce the need for expansion of urban boundaries to provide more housing.

In the next few years there may be limited 'perceived' demand for medium density housing. However, as the ageing of the population increases, demand is expected to drive increased housing choice and medium density may provide some of the solutions in the medium to long term. Therefore, this is a medium to long-term strategy.

Issues & Strategies

- **Medium Density Housing:** Council should consider the potential for Canowindra to accommodate a range of higher density infill housing types within the existing urban area. This is more likely to consist of dual occupancies / secondary dwellings that a great number of townhouses and villas. However, the options should be kept open until more detailed studies are completed. This could potential provide additional dwelling supply to meet the needs of those looking for smaller or more affordable housing types.
- **Development Controls:** As medium density housing types result in increased potential for impacts on neighbouring properties it will also be necessary to develop appropriate controls to protect residential amenity, access and parking, heritage and streetscape character, and ensure appropriate subdivision opportunities.

4.20.8. Future Investigation Area

An alternative to medium density development taking up some of the demand is that there is a potential expansion of the general residential area of Canowindra. Figure 33 shows the suggested location for future investigation for this expansion area that is to the north of Canowindra. This area forms a natural extension of the existing core urban area for the following reasons:

- It is located in the existing Zone 1(c) (Rural Small Holdings) area so it would not take up any additional prime agricultural land and it would reduce the potential over-supply of large lot residential land;
- There is already a subdivision pattern showing a prevalence towards smaller lots;
- There is access to reticulated water and sewer in close proximity to the south of Longs Corner Road (though this would require further review and studies);
- Many of the lots are under-utilised and dwellings are located to allow for some additional subdivision;
- It is not affected by flooding, bushfire or most other natural constraints.

This area should not be rezoned until there is increased take-up of vacant land in the existing urban area, particularly in South Canowindra.



Figure 33: Future investigation area for growth of urban residential area of Canowindra (Source: Council GIS 2011).

4.21. Residential Land Uses (Rural Small Holdings)

4.21.1. Overview of Large Lot Residential Supply

Overview of Land Supply

As shown in [Section 4.16 – Vacant Land](#) and set out in Table 21 there are ~763 hectares of land in Zone 1(c) (Rural Small Holdings) surrounding Canowindra in Cabonne of which a significant percentage is under-utilised.

Area	Total Area (hectares)	Developable Land (ha)	Total Lots	Existing Dwellings	Vacant Lots	Existing Dwelling Density (dw/ha)
West LLR	122	120	23	9	13	0.075dw/ha
North LLR	155	140	46	24	18	0.170dw/ha
East LLR (Moorbel)	486	457	143	90	49	0.197dw/ha
Total	763 ha	717 ha	212 Lots	123 Dw.	80 Lots	---

Table 21: Summary of Rural Small Holdings areas and existing development density (Source: Aerial photos and site reviews as at December 2009).

Existing Subdivision Controls

Under Clause 16 of CLEP1991 the MLS for subdivision in Zone 1(c) (Rural Small Holdings) is 0.4 hectares (except for a few select areas covered by the *Cabonne Rural Settlement Strategy 1999*). Achieving the MLS is subject to other controls and development consent.

Desired Lot Size

The majority of the lots in the existing Rural Small Holdings Zones are larger than the minimum lot size of 4,000m². On this basis it is assumed that there is a desired larger average lot size in this area of 1-2 hectares and the majority of the lots are capable of further subdivision, not just the existing vacant lots.

Issues & Strategies

Overall Supply of Large Lot Residential Land: Whilst there has been reasonable take up of existing lots there is still a large amount of vacant land, and that land that does support dwellings is developed at very low densities with lot sizes well above the permitted minimum lot size of 4,000m². This would suggest that there is a significant over-supply of large lot residential land and there is no need to provide additional zoned land in the next LEP.

4.21.2. Overview of Large Lot Residential Demand

As stated in [Section 4.6 – Historic Population](#), there have been historically moderately strong growth rates (0.7%/year) for the east (Moorbel) rural residential area and very high growth rates in population (4.42%/year) estimated for the north and west rural residential areas. This contrasts with the negative historical population growth in the Village Zone and suggests that the current demand is for larger lots and a 'rural' lifestyle compared to smaller lots and an 'urban' lifestyle in the Village Zone. The projected population growth for each area based on these growth rates is provided in Table 22.

Area	Existing Dwellings	Est. Pop. @ 2.3p/dwelling	Historical Growth Rate	Est. Pop. by 2036	Change in Pop. by 2036	Est. Need for New Dwellings by 2036
West LLR	9 dwellings	21 people	4.42%	65 people	44 people	20 dwellings
North LLR	24 dwellings	55 people	4.42%	169 people	114 people	50 dwellings
East LLR (Moorbel)	90 dwellings	207 people	0.7%	248 people	41 people	18 dwellings
Total	123 dwellings	283 people	N/A	482 people	199 people	88 dwellings

Table 22: Estimated existing and projected populations for each area by 2036.

Issues & Strategies

Overall Demand for Large Lot Residential Land: There would appear to be demand for approximately 50-100 additional dwellings based on rough projections of recent growth in these areas. More detail is provided in the sections below.

4.21.3. West Canowindra Large Lot Residential Area ('West LLR')

Existing Land Uses

As stated above, of the 23 lots, there are 9 dwelling lots and 13 vacant lots. There are 1 lot <1ha; 9 lots@~2ha; 7 lots@~4ha; and 5 lots @~14ha. Those lots with dwellings generally are 2-4 hectares/lot. Most of the western section of the area is used solely for agricultural purposes (shown as vacant).

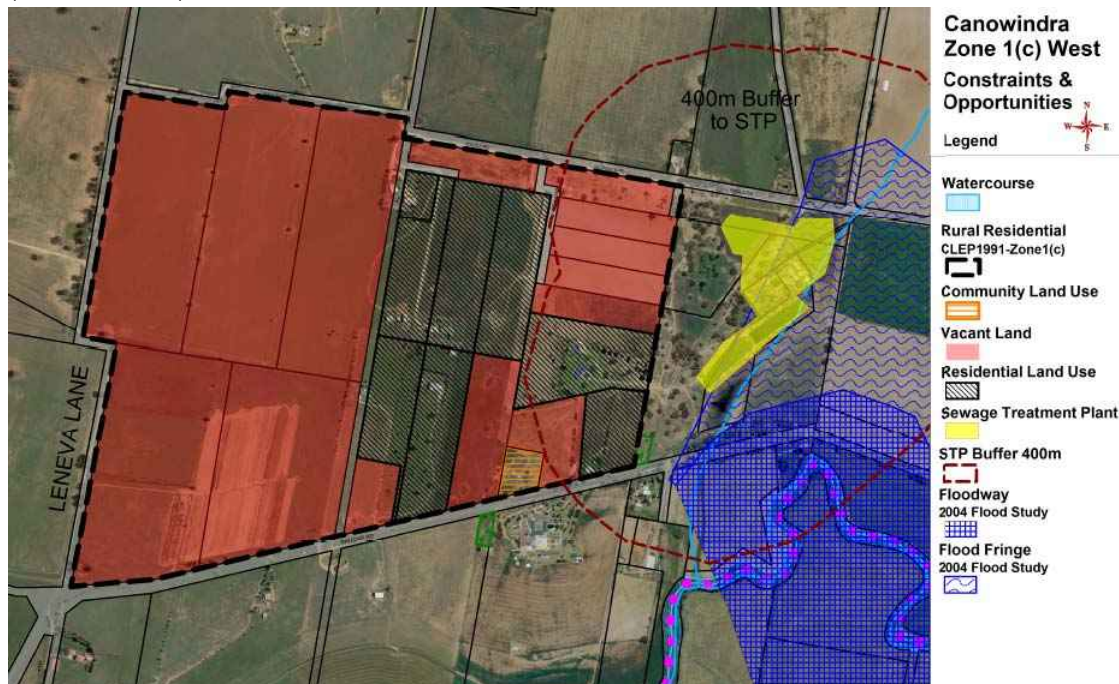


Figure 34: Existing land uses and key constraints in the West LLR (as at 2010).

Key Constraints & Opportunities

a) Sewage Treatment Plan ('STP')

Adjacent to the east of the West LLR area is the Canowindra Sewage Treatment Plant ('STP'). STP's could create potential issues with odours from the treatment ponds impacting on neighbouring residential amenity. DECCW has guidelines that suggest that new dwellings should not be built within a 400m buffer of any STPs to minimise these impacts.

An accurate odour buffer has not been determined for the Canowindra STP at this time so this Strategy assumes that a 400m buffer may be required. This 400m buffer extends to affect part of 6 lots along the eastern edge, including some existing dwellings. These lots will need to remain at least 1-2 hectares in size to allow dwellings to be setback at least 400m from the STP treatment ponds.

b) Agricultural Production

Active agriculture is continuing on most of the lots in the western half of the Zone and on all of the surrounding lands to the north, west and most of the south of the West LLR. There may be potential land use conflicts between agriculture and dwellings. The aim would be to avoid unnecessary development of prime agricultural land unless there is sufficient demand. Proposed lots should have lot sizes that allow for larger dwelling setbacks from agricultural land.

c) Flooding

Existing flood studies for Canowindra only extend to the south-eastern edge of the West LLR. Therefore, there is no accurate flood mapping for the lower lying areas along Nangar (Eugowra) Road that are within the existing West LLR. Any development in this area may be required to provide a localised flood study to support any significant development.

Supply & Demand

The number of lots/dwellings that could be supported by the existing Zone depends primarily on the lot size (assuming no constraints to development) and a range is shown in Table 23. However, as the future desired lot size is expected to be approximately 1-2 hectares per lot the existing zoned area could potential support approximately 50-100 additional dwellings.

This is much higher than the projected demand for dwellings up to 2036 of 20 dwellings. Therefore, there is a significant oversupply of land in this area. Potentially the total number of required dwellings (~30 dwellings) could be located in an area of 60 hectares (or half the existing zoned area).

Method / Av. Lot Size	Potential Total Lots	Minus Existing Dwellings	Potential Additional Lots/ Dwellings
Very High (0.4ha/lot)	120ha/0.4ha = 300 lots	300-9	291
Medium High (1ha/lot)	120ha/1ha = 120 lots	120-9	111
Medium (2ha/lot)	120ha/2ha = 60 lots	60-9	Most Likely Scenario - 51
Low (4ha/lot)	120ha/4ha = 30 lots	30-9	21

Table 23: Potential lot/dwellings that could result from the existing zoned area (West LLR).

Proposed Land Use Arrangement

As a result of the significant oversupply of land for growth in the West LLR area and the constraints noted above it is proposed to reduce the area proposed for large lot residential uses (Figure 35) by approximately removing 3 large lots totalling 40 hectares in area (leaving 80 hectares in the West LLR area).

These 3 lots are prime agricultural land used solely for agriculture at this time. They also have reduced development potential as they would need substantial upgrades to get road access and utilities to these lots. The three lots have a single owner. This owner has other land holdings that are not developed within the proposed large lot residential area so there is sufficient development potential for this owner until the next LEP review.

Proposed Land Supply & Demand

Based on a total proposed area of 80 hectares for large lot residential uses, the supply of dwellings is dependent on the size of each lot / density. As noted above, it is expected that the desired lot size for this area will be 1-2 hectares in size. At a Minimum Lot Size ('MLS') of 1 hectare per lot this will provide up to an additional 70 dwellings (Table 24). This is more than sufficient to cover the projected demand for 20 dwellings in the next 30 years noted above.

Method / Av. Lot Size	Potential Total Lots	Minus Existing Dwellings	Additional Lots/ Dwellings
71 Very High (0.4ha/lot)	80ha/0.4ha = 200 lots	200-9	191
Medium High (1ha/lot)	80ha/1ha = 80 lots	80-9	Minimum Lot Size - 71
Medium (2ha/lot)	80ha/2ha = 40 lots	40-9	Most Likely Scenario - 31
Low (4ha/lot)	80ha/4ha = 20 lots	20-9	11

Table 24: Potential lot/dwellings that could result from the proposed large lot residential area (West LLR).

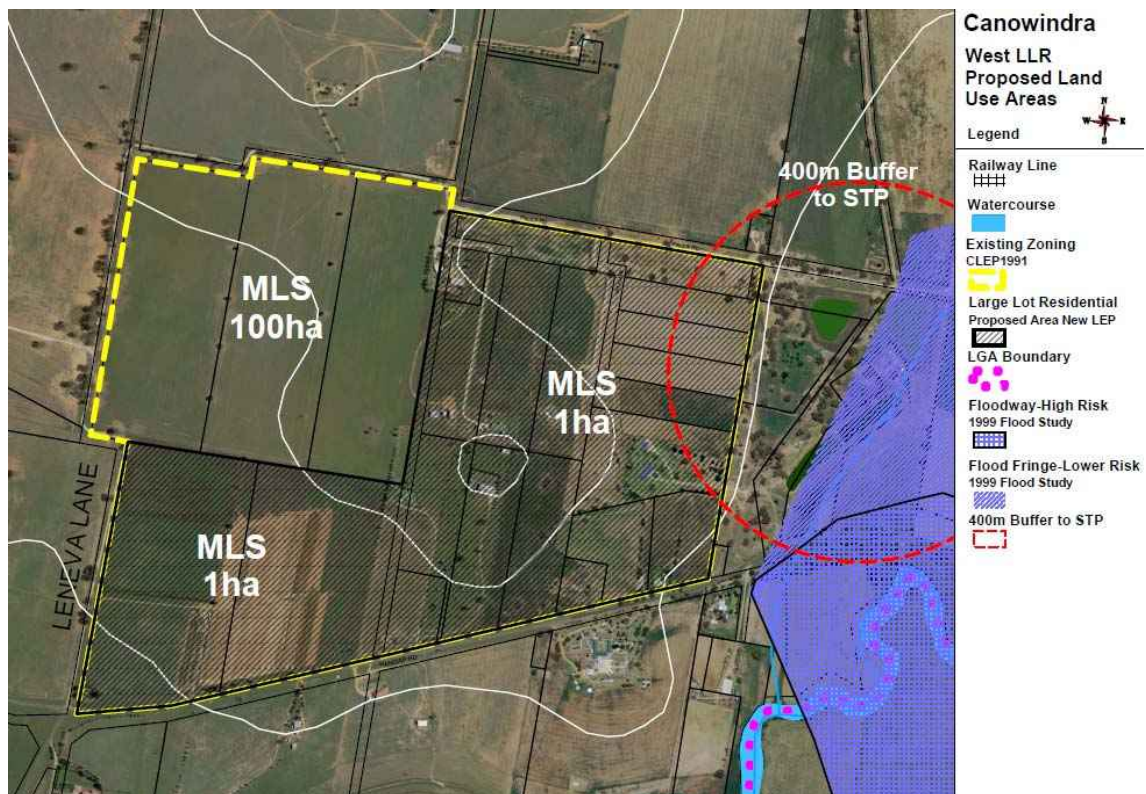


Figure 35: Proposed Land Use Areas for the West Canowindra LLR area (Source: Council GIS 2011).

4.21.4. North Canowindra Large Lot Residential Area ('North LLR')

Existing Land Uses & Sizes

As stated above, of the 46 lots, there are 24 dwelling lots and 18 vacant lots with the cemetery located in the middle of the zone. There are 5 lots <1ha; 9 lots@~2ha; 25 lots@~4ha; and 3 lots >4ha. Those lots with dwellings generally are 2-4 hectares/lot.

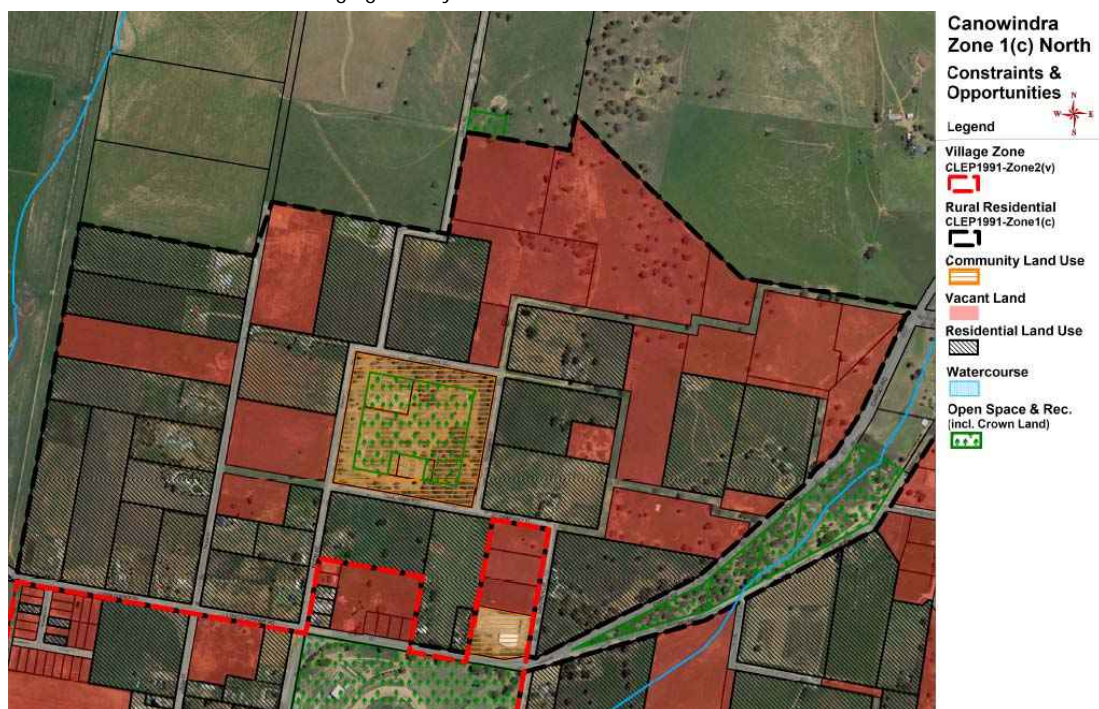


Figure 36: Existing land uses in the North LLR (as at 2010).

Key Constraints & Opportunities

a) Protection of Agricultural Lands

Active agriculture is continuing on some of the lots in the northern and eastern sections of the Zone and to the north of the area. There may be potential land use conflicts between agriculture and dwellings. The aim would be to avoid unnecessary development of prime agricultural land unless there is sufficient demand and avoid further subdivision of lots that have a dominant agricultural purpose. Proposed lots should have lot sizes that allow for larger dwelling setbacks from agricultural land to reduce potential conflicts.

b) Minimising Visual Impacts at Entrance

It is important to note that the North LLR area is located immediately adjacent to road between Orange and Canowindra, making this a key gateway to the town. In addition, the parts of the North LLR fronting the main road are on relatively sloping land that makes any development highly visible from the road and would require additional costs for vehicle access and excavation for dwelling sites. In order to reduce the visual impact of development and recognise the reduced development potential of this land the land east of the ridgeline would be expected to have a lower subdivision potential to avoid higher densities of dwellings.

Supply & Demand

The number of lots/dwellings that could be supported by the existing Zone depends primarily on the lot size (assuming no constraints to development) and a range is shown in Table 25. However, as the future average lot size is expected to be 1-2 hectares the existing zoned area could potential support approximately 46-116 additional dwellings. At 2 hectares per lot this would be very similar to the projected demand for dwellings up to 2036 of 50 dwellings. At 1 hectare per dwelling this would result in an over-supply. Therefore, there is no need to rezone any additional land to meet a 25-30 year supply.

Method / Av. Lot Size	Potential Total Lots	Minus Existing Dwellings	Additional Lots/ Dwellings
Very High (0.4ha/lot)	140ha/0.4ha = 350 lots	350-24	326
Medium High (1ha/lot)	140ha/1ha = 140 lots	140-24	116
Medium (2ha/lot)	140ha/2ha = 70 lots	70-24	Most Likely Scenario - 46
Low (4ha/lot)	140ha/4ha = 35 lots	35-24	11

Table 25: Potential lot/dwellings that could result from the existing zoned area (North LLR).

Proposed Land Use Arrangement

On this basis it is not proposed to change the zoning pattern from the existing large lot residential zone boundary in CLEP1991. However, based on the constraints noted above, the main way to minimise visual impact of new dwelling development along the main road and respond to the steeper topography would be to have a higher Minimum Lot Size ('MLS') for these areas. Whilst a 1 hectare MLS may be suitable for the areas around the cemetery, to the east of the ridgeline sloping down to the main road to Orange it is proposed to institute a 2 hectare MLS.

The proposed 1 hectare area will cover approximately 100 hectares and affect 25 landowners and 30 lots. There are only four (4) lots below 1 hectare in this area and three (3) have an existing dwelling. The fourth lot is held by a landowner with significant other landholdings that will enable further subdivision/development potential. The remaining lots are generally 2-4 hectares in size. All of these larger lots will have subdivision potential. It is estimated that there is potential for an additional 68 new dwellings.

The proposed 2 hectare area will cover approximately 40 hectares and affect only three (3) landowners (Bowd, Melhuish & Timbrell). There are five (5) lots below the 2 hectare MLS but

there are development opportunities on other land for these limited landowners. Of the thirteen (13) lots affected, ten (10) lots are vacant. The majority of the lots are greater than 3.7 hectares in size ranging up to 10 hectares. Except parts of those three (3) lots used for dwellings, the remaining parts are used mostly for grazing agriculture. The low intensity of subdivision and take up of vacant land would suggest that their reduced development potential is already appreciated. It is estimated that there is potential for an additional 16 new dwellings in this 2 hectare area.

Proposed Land Supply & Demand

Therefore, for both the 1 and 2 hectare areas the total lot/dwelling potential under the proposed land use arrangement is 78 new dwellings. There is a projected demand for up to 50 dwellings in this area in the next 30 years so there is sufficient supply. Even if only 50% of the lots eventuate then that is over 23 years supply in this area. The MLS can be reviewed in the future if additional supply is required.



Figure 37: Proposed land use arrangement and MLS for the North LLR (Source: Council GIS 2011).

4.21.5. East Canowindra Large Lot Residential Area ('Moorbel LLR')

Existing Land Uses

As stated above, of the 144 lots, there are 90 dwelling lots and 44 vacant lots. There are 36 lots <1ha; 33 lots@~1-3ha; 45 lots@~3-6ha; 18 lots@~6-8ha; and 3 lots >13ha. Those lots with dwellings generally are 2-4 hectares/lot.

Key Constraints & Opportunities

Due to the size of this area, there is a large perimeter, most of which is adjacent to the Rural Zone and active agriculture. In particular, intensive agriculture is occurring along the southern boundary of the large lot residential area. There may be potential land use conflicts between intensive/non-intensive agriculture and rural residential lifestyle blocks including spraying, noise, lights and night-time harvesting etc.

The Department of Primary Industries (formerly Industry & Investment) has also identified historic mining interests which occurred in the south-eastern section of this area as there may be issues with ground stability as well as future mineral potential in this area. However, Council does not have any further information on this issue.

There may also be some drainage and low level flooding issues along the western section of the area adjacent to the showground but this is unlikely to severely limit development in these areas for standard rural residential sized blocks.

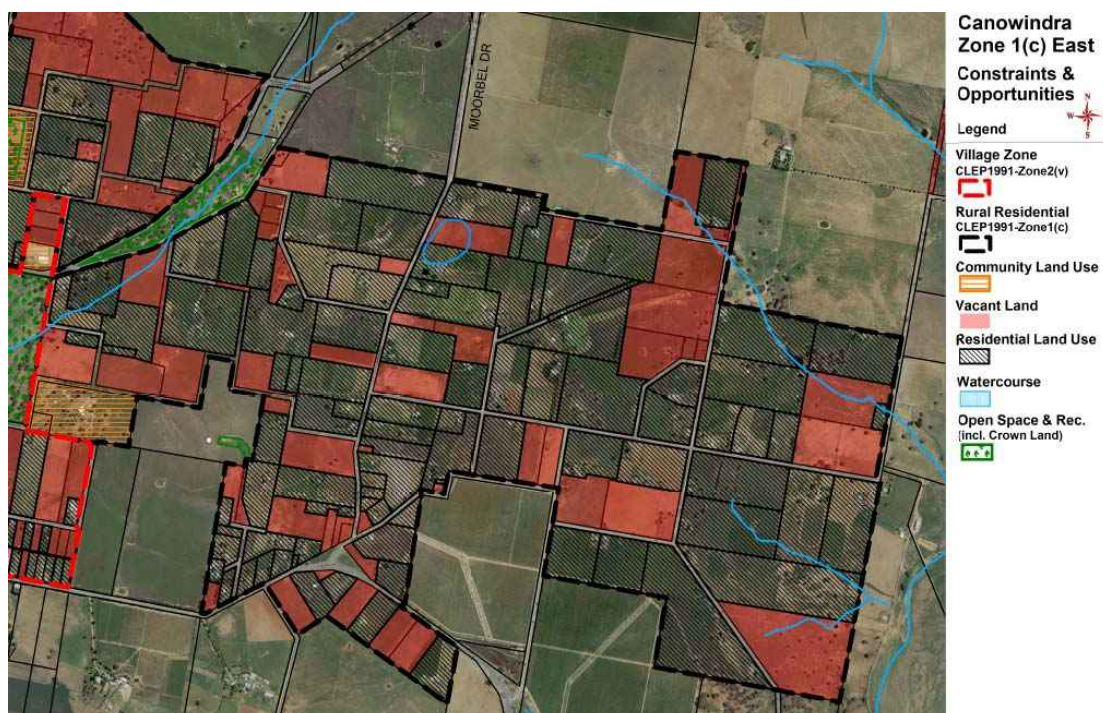


Figure 38: Existing use of lots in East Canowindra (Moorbel) (as at 2010).

Supply & Demand

The number of lots/dwellings that could be supported by the existing zone depends primarily on the lot size (assuming no constraints to development) and a range is shown in Table 26. However, as the future average lot size is expected to be 2 hectares the existing zoned area could potential support approximately 139 additional dwellings. This is a significant oversupply compared to the projected demand for dwellings up to 2036 of 18 dwellings. However, it is fairly similar to the demand if the lot size average is closer to 4 hectares. Therefore, there is no need to rezone any additional land to meet a 25-30 year supply.

Method / Av. Lot Size	Potential Total Lots	Minus Existing Dwellings	Additional Lots/Dwellings
Very High (0.4ha/lot)	457ha/0.4ha = 1143 lots	1143-90	1053
Medium High (1ha/lot)	457ha/1ha = 457 lots	457-90	367
Medium (2ha/lot)	457ha/2ha = 229 lots	229-90	139
Low (4ha/lot)	457ha/4ha = 114 lots	114-90	24

Table 26: Potential lot/dwellings that could result from the existing zoned area.

Proposed Land Use Arrangements

Whilst there is the potential to remove some lands from the area for large lot residential uses, this is difficult because there are no large number of parcels (or large holdings) held by a single owner where there is vacant land that would allow down-zoning without significant impact to landholders' existing expectations.

However, based on the constraints noted above, the main way to achieve a more efficient subdivision pattern is to have a higher Minimum Lot Size ('MLS') of 2 hectares for the areas in the east of the zone and a lower MLS of 1 hectare in closer proximity to the existing Village Zone (Figure 39).

The proposed 1 hectare area will cover approximately 240 hectares (excluding the hospital and golf course but including roads) and affect approximately 98 lots. There are only nine (9) land ownership that are below 1 hectare in this area and only two (2) do not have an existing dwelling (but could apply under the existing controls). The remaining lots are generally 2-4 hectares in size. All of these larger lots will have subdivision potential. It is estimated that there is potential for an additional 140 new dwellings in this area.

The proposed 2 hectare area will cover approximately 230 hectares (including roads) and affect approximately 40 lots and 30 landowners. There are only three (3) lots but zero (0) land holdings below the 2 hectare MLS so there are development opportunities for all landowners (including existing dwellings). Of the 40 lots affected, 13 lots are vacant. The majority of landholdings are greater than 4 hectares in size ranging up to 14 hectares. The larger lots are generally utilised for grazing / agriculture. The low intensity of subdivision and take up of vacant land would suggest that their reduced development potential is already appreciated. It is estimated that there is potential for an additional 72 new dwellings in this 2 hectare area.

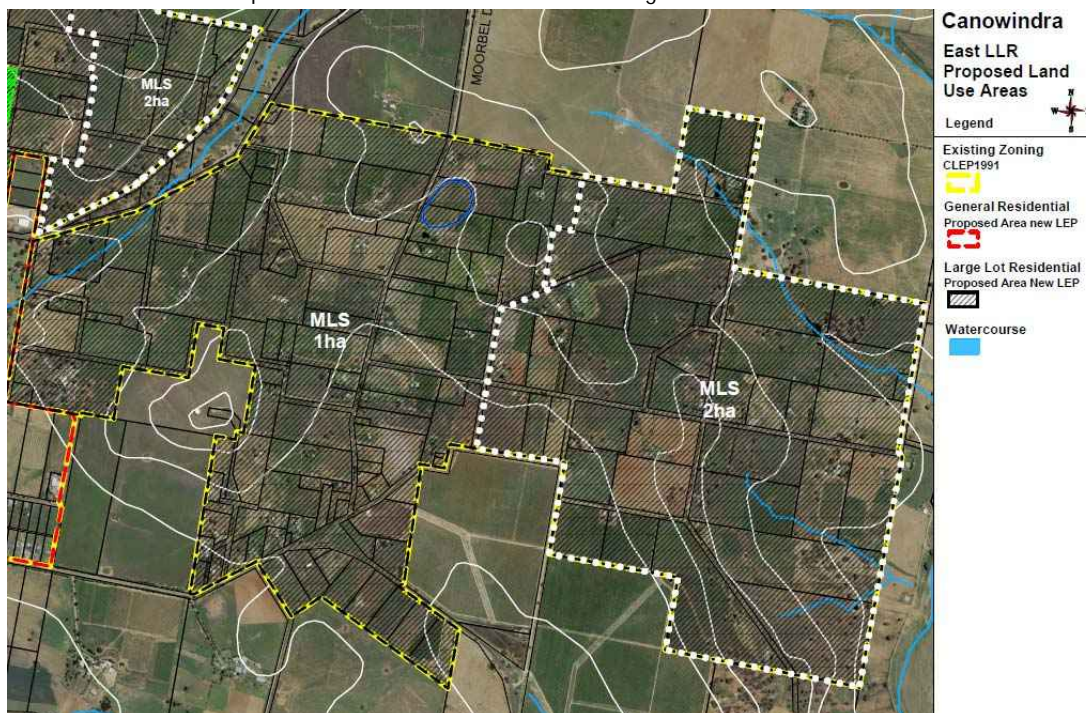


Figure 39: Proposed land use arrangements and MLS for the Moorbel LLR (Source: Council GIS 2011).

Proposed Land Supply & Demand

Therefore, for both the 1 and 2 hectare areas the total lot/dwelling potential under the proposed land use arrangement is 212 new dwellings. There is a projected demand for up to 18 dwellings in this area in the next 30 years so there is still a significant oversupply but it is reduced from the current potential oversupply of 1,000 dwellings. The MLS can be decreased in the future if additional supply is required.

4.22. Previous Land Use Strategies

4.22.1. Previous Studies

It is important to conduct a review of all relevant previous studies as they can provide valuable information on key opportunities and constraints as well as key recommendations that have been put to the community. Where possible, this Strategy should be consistent with those recommendations (unless there are clear reasons to change recommendations).

Key studies relevant to the land uses of Canowindra include:

- Cabonne Council (1990) *Canowindra Village & Environs – Proposal to Prepare a Development Control Plan* (Shire Planner – G.Barry) ('1990 Draft DCP');
- Habitat Planning (2005) *Draft Canowindra Village Strategy* ('2005 Strategy');
- GHD (2008) *Subregional Rural and Industrial Strategy* ('R&I Strategy').

4.22.2. Canowindra Village & Environs – Proposal to Prepare a Development Control Plan ('1990 Draft DCP')

The 1990 Draft DCP set out objectives, preliminary controls, and a set of sub-zones specifying areas for particular land uses within the Village Zone. Key objectives included reducing land use conflicts, provision of land for urban/ industrial / commercial development, efficient use of infrastructure, heritage and landscape conservation, and avoidance of environmentally constrained lands. All of these objectives continue to apply today to this Strategy. Please note that the hardcopy is missing a number of maps and pages that require further review.

4.22.3. Draft Canowindra Village Strategy (2005)

The key features and major strategic directions identified in Canowindra are shown in Figure 40 and summarised by the 2005 Strategy as follows:

Recommendations of 2005 Draft Strategy	Response in this Strategy
Commercial: <i>A preferred core commercial activity area defined by Gaskill, Blatchford and Ryall streets (both sides).</i>	Agreed in principle – subject to the detailed mapping presented in this Strategy.
Mixed Use: <i>An area preferred for a mix of commercial and higher density residential activities adjoining the core commercial area (defined by Ferguson, Tilga, Gaskill, Ryall and Blatchford streets).</i>	Agreed in principle – subject to the detailed mapping presented in this Strategy. However, it is not estimated that a high level of higher density residential will result in this area.
Village Zone: <i>The 2(v) zone to be extended on the northern side of Murga Road to test the market for residential development in this elevated precinct.</i>	Disagree – there is no need for additional urban residential lands for the short to medium term and it may conflict with the industrial growth objectives in this Strategy.
Highway Business: <i>The areas on the western and northern sides of the racecourse and showgrounds to be identified as suitable for highway business type land uses.</i>	Partially agree – see this Strategy for recommended sites. However, there is a low probability of needing these sites in the next 5-10 years.
Industrial: <i>An area on the north-western fringe of the village preferred for industrial land uses. An extension of the 2(v) zone is recommended in this area to provide for an industrial 'estate' of proportions appropriate for Canowindra. The rural land immediately to the west of this area is identified as suitable for potential long term industrial development.</i>	Agree in principle – see the detailed mapping in this Strategy. However, it should not extend down into existing established residential areas and into the Longs Corner Estate which is now residential. Future extensions should occur to the north-west along the rail corridor.
Heritage: <i>The low residential density/heritage character of the village to be protected and perpetuated.</i>	Agree to protect heritage character. Some medium density may be appropriate in suitable locations but mostly a low density character is likely to be retained.
Infill Development: <i>The whole of the residential area to the south of the river has the opportunity for substantial infill residential development as does the existing 2(v) zoned land on the eastern fringe of Canowindra between Mandurama</i>	Agreed that infill development should occur in South Canowindra with the majority down to low density 1,000m ² lots with some limited medium density opportunities. Infill development in eastern parts of North Canowindra

<i>Road and Browns Avenue. In the longer term, there is potential for residential development to expand further to the east.</i>	should be outside the floodway/floodplain. There is some long term potential to extend to the east.
Flooding: <i>The 1 in 100 year flood level of the Belubula River to be accurately mapped (the LEP provides an approximation) and the 2(v) zone boundary adjusted accordingly.</i>	Agreed. This has been incorporated into this Strategy.
Future Growth: <i>The long term future urban growth of Canowindra should be to the northeast centered on the Orange Road.</i>	Disagree. This area has a number of constraints that make substantial development difficult/costly and may impact on the northern entrance to town.
Rural Small Holdings: <i>No change is required to the existing 1(c) zone other than any development in to the northeast for rural residential purposes will need to take account of Strategy proposing future urban residential development in the long term.</i>	Only minor rezoning is proposed in the large lot residential areas. The primary change is the increase in minimum lot sizes for subdivision proposed by this Strategy.

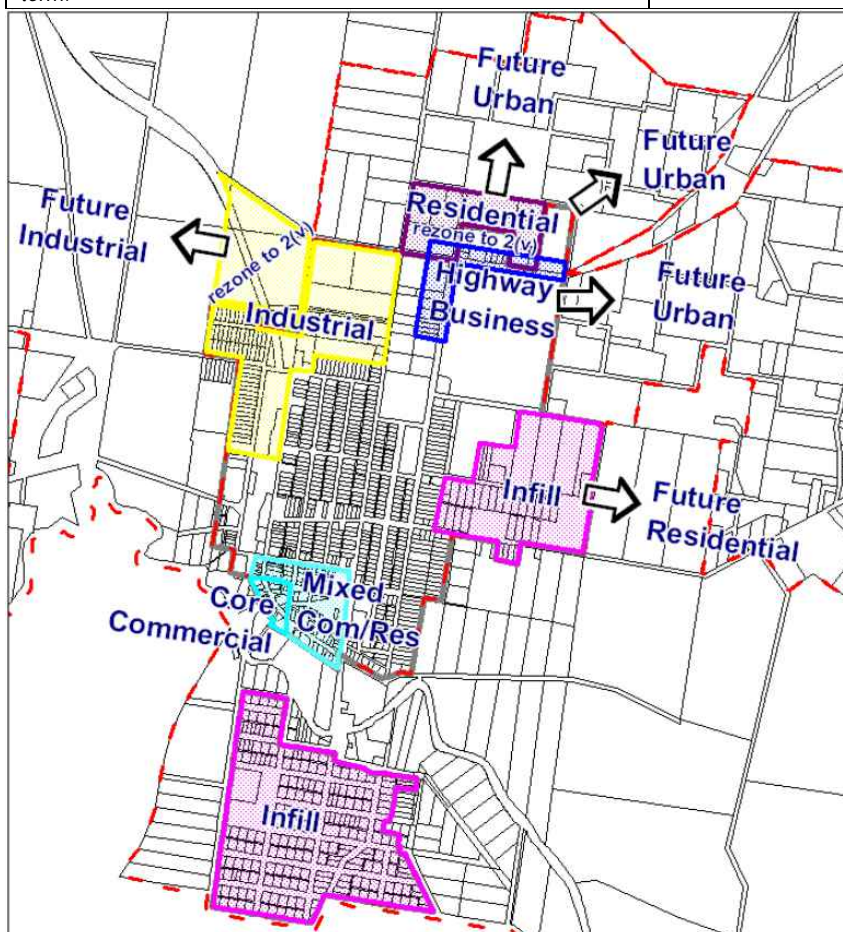


Figure 40: Proposal for growth of Canowindra in the Draft Canowindra Village Strategy (2005).

4.22.4. Subregional Rural and Industrial Strategy (2008)

There were no outcomes from the R&I Strategy that were particularly applicable to Canowindra in anything other than general terms, as follows:

- **Large Lot Residential:** Canowindra was not identified for any further large lot residential expansion and this is agreed and supported by this Strategy.
- **Industrial:** The R&I Strategy only identified larger format and heavier industrial lands around Manildra of sub-regional importance in the Cabonne Shire. Therefore, it did not look at industry at the settlement level. This Strategy seeks to supplement the R&I Strategy with a local industrial strategy for Canowindra.



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Document Control

Version	Date	Author	Summary	Reviewed
A	August 2011	A.Napier	Draft for Internal Review	DES
B	December 2011		Draft Final	DES
C	March 2012		Final for Public Exhibition	KB
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Final	August 2012		Amendments Incorporated	AN

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5. Village of Eugowra

Please note that **Chapter 5 – Village of Eugowra** should be read with **Chapter 2 – Cabonne Overview** as some of the Issues and Strategies applicable to all settlements are not reproduced in this chapter.

5.1. Executive Summary & Proposed Land Use Arrangements

5.1.1. Historical population growth

At the 2006 Census the population of Eugowra's Census District (which includes the Village Zone, the Rural Small Holdings Zone and limited adjacent Rural Zone lands) was 535 people. In the Eugowra Census District the population decreased by 116 people from 1976 to 2006 (an average of negative 0.59% per year).

Year	Population (Quickstats)	Change	Average Annual % Change
1961	669	N/A	N/A
1971	651	-18	-0.23%
1976	651	0	0%
1981	577	-74	-2.27%
1986	579	+2	+0.07%
1991	572	-7	-0.24%
1996	612	+40	+1.40%
2001	589	-23	-0.75%
2006	535	-54	-1.83%
1961-2006		-134	-0.45%
1976-2006		-116	-0.59%
1986-2006		-44	-0.38%
1996-2006		-77	-1.26%

Table 1: Census population and population change for Eugowra's Census District (Source: www.abs.gov.au).



5.1.2. Key Factors Influencing Population/Economic Growth

Eugowra has a number of potential influences that could result in positive population and economic growth including, but not limited to, the reasonably high base population, proximity to Forbes and Parkes, its natural and cultural history / heritage / tourism potential / key festivals, access to a reliable reticulated potable water supply, access to reticulated sewer for village lots, a new multi-purpose health service and some aged care provision, some local industries including extraction and processing of natural materials such as wood and granite, and a strong village character and sense of community.

However, there are a number of potential negative influences that could hamper population and economic growth including, but not limited to, a population that has been decreasing particularly since 1996, a significant area affected by flood risk and drainage issues, a significant area is bushfire prone, proximity to Forbes and Parkes that may hamper local business activity, the loss of rail transport, and limited local employment opportunities and services.

5.1.3. Projected Population Growth

Based on the opportunities and constraints the Village of Eugowra's population is expected to grow at a projected average annual rate ranging from -0.5%/year (minimum) through to +0.3%/year (maximum) with an average of -0.1%/year. *(Please note that growth rates will change over time and this is an estimated average growth rate over the 30 year period).*

Based on the **maximum** growth rate of +0.3%/year the population will grow to 585 people by 2036 - an increase of 50 people over the 2006 Census population. This growth will create some limited additional demand for residential, business, industrial, community and open space/recreation land uses that may need to be provided in Eugowra and the region.

5.1.4. Proposed Land Use Zone(s)

It is good planning practice that settlements above 1,000 in population should consider adopting specific zones for each land use ('complex zoning'). The aim of this requirement is to minimise potential land use conflicts and recognise the need to plan for and consolidate key land uses.

As the 2006 population of the Eugowra Census District (which includes the Village Zone and Rural Small Holdings area) was 535 people, this Strategy recommends that Eugowra retain a 'Village Zone' (or the equivalent under the Standard LEP Instrument) as this would provide the greatest flexibility to facilitate growth whilst it is at a relatively low level. However, this Strategy also suggests that the nomination of a light industrial area that could foster growth and employment whilst minimising impacts on the rural village qualities of the residential areas.

5.1.5. Summary of Proposed Changes

As shown in Figure 1 the following proposed land use areas (and changes) are recommended by this Strategy (in summary) (for more detail see specific land use sections in this Chapter):

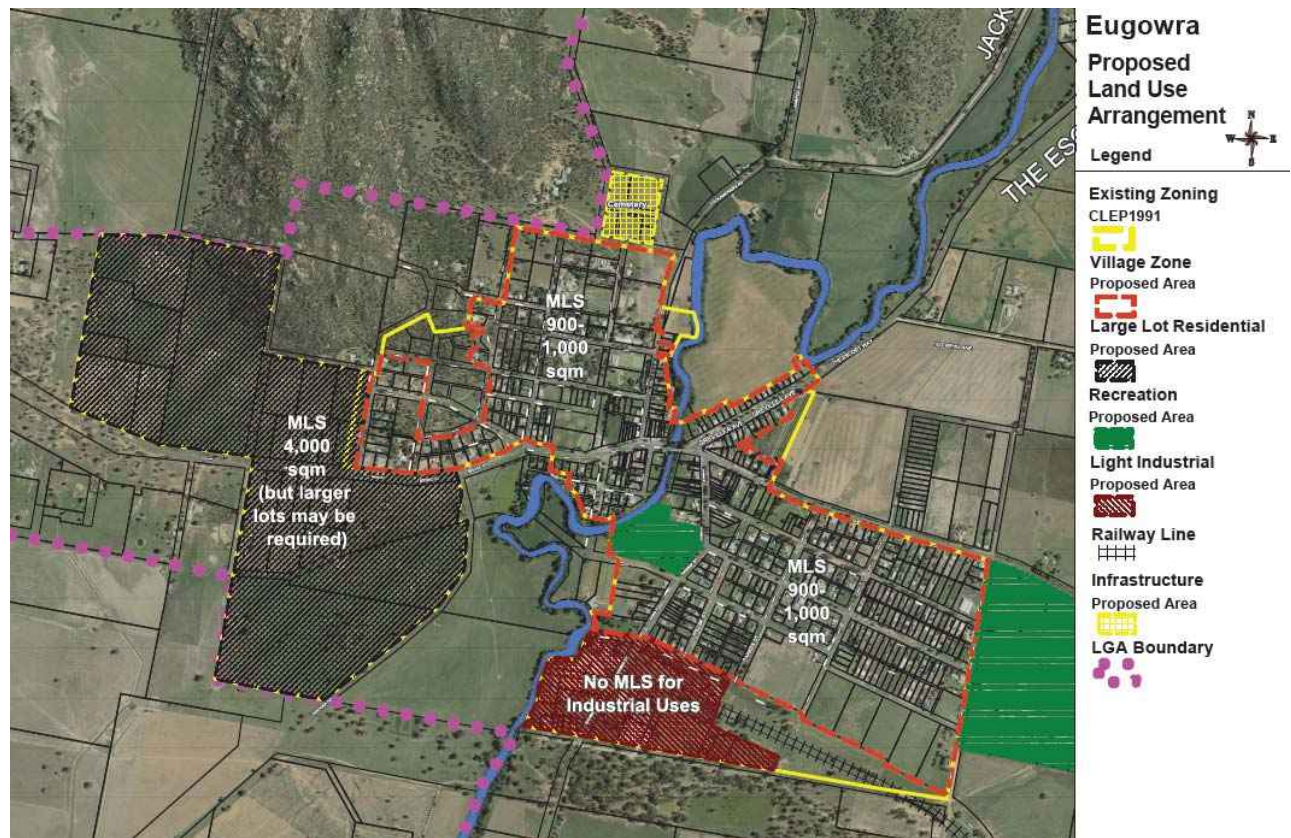


Figure 1: Summary of proposed land use arrangements for the Village of Eugowra and surrounds (Source: Council GIS 2012).

a) Village Zone

Overview

As stated above, this Strategy proposes to retain a Village Zone for the core area of Eugowra. Based on the calculation / projections in this Strategy there is no need to rezone any additional Village Zone land in the next local environmental plan ('LEP') as there is sufficient land to provide over 26 years supply. If there is a change in the growth rate of Eugowra then there is sufficient 'buffer' in the existing supply to provide land for dwellings over a 10-15 year period to enable Council to amend this Settlement Strategy and consider amending the LEP to rezone more land (if appropriate).

Having said this, there remains the issue of maximising the development potential of existing vacant land by addressing flood risks. Council has adopted a flood study that provides options for mitigation of floods and this will need to be pursued to find cost effective and efficient ways to manage flooding. The first priority should be to minimise the risk of overland flows from Puzzle Flat Creek over land to the east of the settlement.

Land Removed from Village Zone

This Strategy recommends removing the following areas from the existing Village Zone boundary:

- **Crown:** Crown land lots to the north-west of Eugowra which have significant vegetation, a high bushfire risk and sloping terrain that will be difficult to develop. Development would also necessitate release by crown for private purchase and there may be native title implications (put into the adjacent rural area);
- **Floodway:** Limited lots between Cookamidgera Road and the Mandagery Creek that are located in the high hazard floodway, have a very low development potential, and are currently used for agricultural uses (put into the adjacent rural area);
- **Agricultural:** Part of a lot off Grevillea Avenue that is currently used for orcharding and forms part of a larger agricultural block that has drainage and potential flooding issues (put into the adjacent rural area);
- **Split Zoning:** Part of two lots to the west of West Street to remove a split zoning where there is limited potential for development (put into the adjacent large lot residential area);
- **Railway:** Part of the disused railway corridor that is not currently available or suitable for development (put into the adjacent industrial or rural area);
- **Industrial:** Lands to be designated for industrial uses along Nanima Street south of and including part of the railway line land (see below).

Minimum Lot Size

Under Clause 17 of CLEP1991 the minimum lot size ('MLS') for subdivision in the existing Village Zone is 500m² (for areas serviced by sewer – which includes the majority of Eugowra's existing Village Zone) and 2,000m² for those areas serviced by septic system). However, the smallest residential lot sizes are generally 1,000m² (20m by 50m lots) (except for along Grevillea Avenue and in some parts of the historic main streets where there is no additional subdivision potential).

The road and subdivision pattern does not generally make subdivision below 900 to 1,000m² suitable when seeking to provide good lot access/width and protect the village's heritage and rural character. In addition, demand is likely to be for slightly larger lots in Eugowra. Therefore, it is intended to increase the MLS in the proposed Village Zone to 900 to 1,000m². This will not prevent some medium density types of housing from being established on larger lots. However, in the future if growth increases then the MLS could be reviewed and potentially decreased where it will not impact on the streetscape.

b) Community Land Uses

There is no need to specifically nominate land for community land uses as they will be permissible with consent throughout the proposed Village Zone. This is not expected to have a high land demand as most key community services are already catered for or can be accommodated in existing building stock or vacant land.

c) Business Land Uses

There is no need to designate a particular business 'zone' at this time for Eugowra as a Village Zone will provide sufficient flexibility for growth and there are some existing vacant buildings that can be re-used for business uses. Growth areas in business may include ongoing local shopping services and boutique businesses that meet the needs of tourists.

It would be preferred if new businesses were located in proximity to the existing village centre near the intersection of Nanima and Pye Streets and were located outside the floodway and high flood risk lands where existing and future businesses can develop and minimise risk / maximise investment. Any transition of existing businesses out of the floodway is likely to require significant time and money and many of the buildings have heritage interest or significance that adds to the character of Eugowra.

d) Light Industrial Area

Overview

With a history of issues surrounding land use conflicts between business/industry and residential uses this Strategy recommends the nomination of a light industrial area to partly address this. The intent would be that any new light industrial (stand-alone businesses) would be preferred in this area away from sensitive dwellings whilst home industries with low impacts may be suitable in the Village Zone.

This Strategy proposes to replace part of the existing Village Zone with a new industrial area along Nanima Street (south of and including part of the disused railway land) that encompasses the existing sawmill, granite factory, and rural produce sheds.

This area has a number of under-utilised or vacant lots including part of the terminating area of the Canowindra to Eugowra railway to provide some additional land supply for small industrial operators in an area that is already serviced by water and sewer. Use of the railway land will be subject to agreement from the railway authorities and potential reclassification of the land that may take some time to achieve.

Supply & Demand

Eugowra does not have a comprehensive study of industrial demand and supply but historical evidence suggests that there is some local demand for 1-2 small to medium (2,000-8,000m²/lot) serviced light industrial sites every few years. The proposed area is ~19.3 hectares (including roads) of which at least 4-5 hectares is vacant and readily available for industrial uses and another 4-5 hectares may be suitable for future use subject to closure of the rail corridor and acquisition of the land. This could provide between 5-10 new industrial sites (subject to addressing flooding and other issues).

Note that existing dwellings in this area have 'existing use rights' that allow them to remain unless and until they sell or redevelop their land for industrial purposes. The light industrial classification is intended to show the desired 'character' for the area but may not be inconsistent with existing dwellings. However, new dwellings should not be permitted in this area that could increase potential land use conflicts with existing and future industrial uses.

Note that Council is also considering the demand for larger industrial blocks on Casuarina Drive south of Eugowra. Services would need to be extended to this area and there needs to be

additional assessment of flood, flora and fauna and geo-technical aspects to ensure this site can be maximised for use subject to demand for larger industrial sites. There is a development approval for the subdivision of land at this location but the conditions of approval still need to be addressed prior to the rezoning. Therefore, it is not included in the proposed land use arrangements in this chapter. This may form part of a future planning proposal for rezoning to the Department of Planning & Infrastructure.

Minimum Lot Size

No MLS is proposed for the proposed light industrial area at this time as different industrial types have different site requirements. Therefore, any subdivision of this area would need to justify the intended lot size and avoid over-fragmentation of land or sterilisation of other lots.

e) Large Lot Residential Area

Overview

This Strategy proposes to replace the existing Zone 1(c) (Rural Small Holdings) area with a large lot residential classification (without changing the area / boundary) that, in effect, would support similar styles of large lot residential development.

Minimum Lot Size

Under Clause 16 of CLEP1991 the MLS for subdivision in Zone 1(c) (Rural Small Holdings) is 4,000m² (except for a few select areas covered by the *Cabonne Rural Settlement Strategy 1999*. Achieving the MLS is subject to other controls such as supporting a septic system.

The existing controls should be retained in the proposed large lot residential area. In general there are very few existing lots that are less than 6,000m² and the market is likely to prefer slightly larger lots at this time (the average is 1-2 hectares). Larger lots may also be required to achieve setbacks for bushfire asset protection zones and minimising impacts on significant vegetation.

This Strategy has estimated that over the next 30 years on average there will be a new dwelling built every 2 years in this area or a total of fifteen (15) dwellings over 30 years. Therefore, if there is an average lot size of 2 to 4 hectares the existing zoned area could support up to 30 years supply of large lot residential dwellings and there is no need to rezone any additional large lot residential land at this time.

f) Open Spaces / Recreation Land Uses

There is no perceived need for additional land for public recreation and open space at Eugowra at this time. However, a more formal review should be conducted across Cabonne. There is likely to be more of an issue with maintaining existing spaces and providing appropriate facilities for a range of passive and active recreation.

5.1.6. Future Growth Directions

If the growth rates of Eugowra were to increase beyond the projections in this Strategy then there may be future potential to amend the zoning to allow the settlement to grow.

The two main possibilities are an extension for large lot residential uses to the north-east of the village (north of Pye Street) and the future consideration of an extended light industrial estate (over the existing industrial subdivision) to the south of Eugowra. This is dealt with in specific detail relating to growth potential for each land use below.

5.2. Regional Location

The Village of Eugowra is located in the south-western area of Cabonne in close proximity to the local government boundary with Forbes Shire Council (Figure 2).

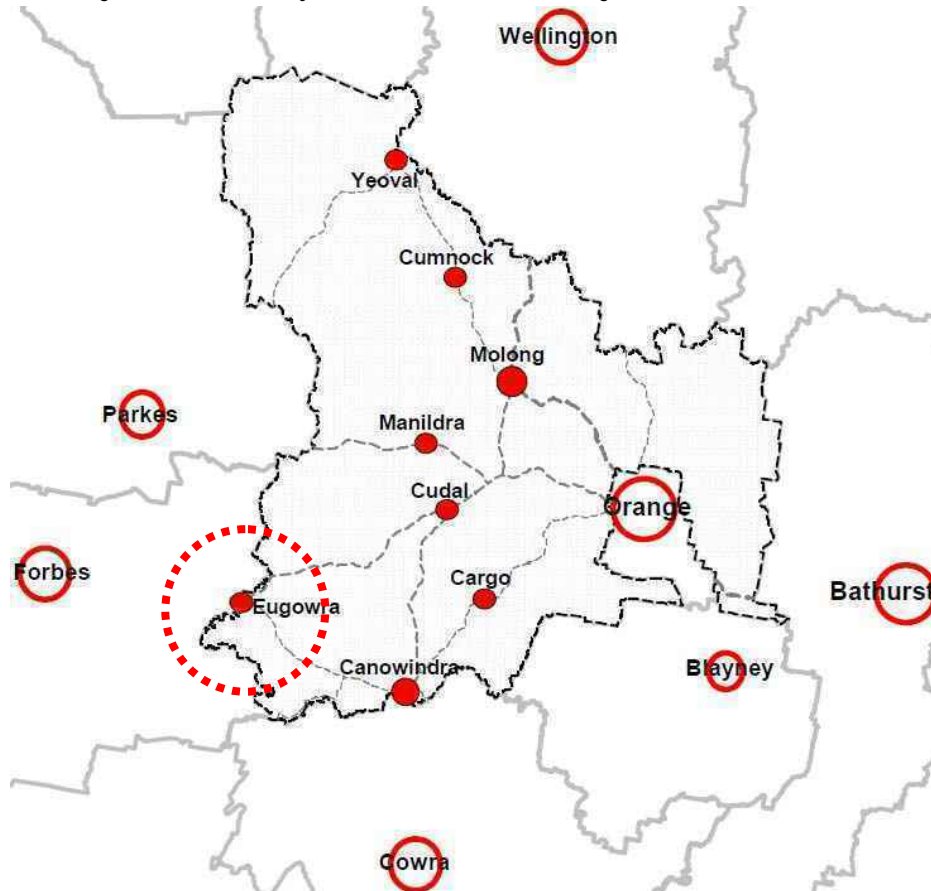


Figure 2: Location of the Village of Eugowra and proximity to key regional centres and settlements (Source: Council GIS 2011).

Eugowra is located approximately:

- 34km (25-30 minutes drive) from Canowindra via Pye Street;
- 34km (30-35 minutes drive) from the Town of Forbes via the Forbes-Eugowra Road;
- 42km (35-40 minutes drive) from the Town of Parkes via the Parkes-Eugowra Road;
- 42km (35-40 minutes drive) from Cudal via The Escort Way;
- 55km (50-55 minutes drive) from Manildra via The Escort Way & Manildra-Toogong Road;
- 66km (60 minutes drive) from the Town of Cowra via Pye Street and Canowindra Road;
- 70km (60 minutes drive) from the Town of Molong via The Escort Way and Peabody Road;
- 80km (70 minutes drive) from the City of Orange via The Escort Way.

It can be seen that Eugowra is just on the edge of the 'commuter zone' (25-30 minutes drive) of Forbes and just outside the 'commuter zone' for Parkes (the next major settlement). Parkes and Forbes are likely to be the nearest major centres that provide a higher level of services and retail to meet the needs of Eugowra. The survey for the Community 2025 Plan showed that Eugowra's number one strength was its location to major centres (56.7% of respondents).

Issues & Strategies

- **Proximity to Cabonne Settlements:** Eugowra is at the south-western end of Cabonne and is, therefore, closest to the other Cabonne settlements of Canowindra, Cudal and Manildra. Eugowra predominantly services the surrounding rural areas.
- **Proximity to Major Centres:** The closest major settlement to Eugowra is Forbes. Eugowra is expected to have a close relationship with Forbes and then Parkes for higher level services.



5.3. Existing Zoning

Figure 3 shows the existing zoning pattern in and around Eugowra under CLEP1991 including:

- **Zone 2(v) (Village Zone)** - The core urban area of the Village of Eugowra (pink on Map) (Total area of ~ 176.3ha) incl. roads & open spaces);
- **Zone 1(c) (Rural Small Holdings)** - Large lot residential area (orange on map) (Total area ~ 92.7ha) to the west of the village zone;
- **Zone 1(a) (General Rural)** for all other surrounding areas (red on map).

Forbes Shire is the local government area to the south-west and north-west of Eugowra (white on map) and the area adjacent to Cabonne is generally in a rural zone.

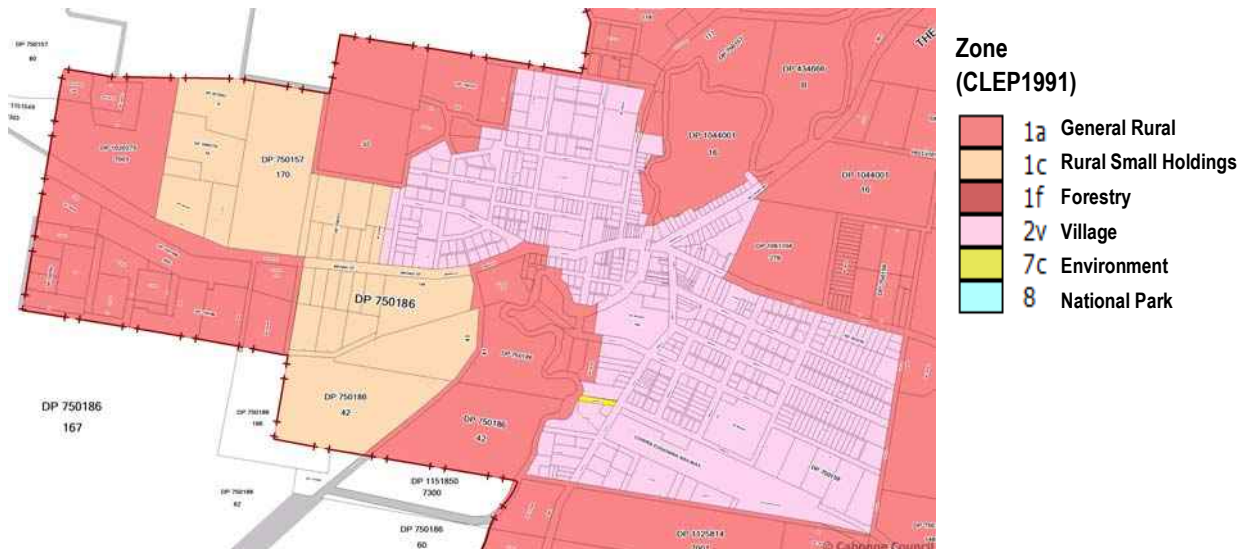


Figure 3: Existing zoning for Eugowra and surrounds (Source: CLEP1991 – Council GIS 2010).

The 'urban' boundary of Eugowra has expanded and contracted slightly over time as the population has varied. Whilst it is difficult to pin-point dates when boundaries have changed, it would appear that there was originally a much larger area for the town and suburban lands in the early 1900s with the town boundary extending further south-west of Broad Street and north-west into the vegetated areas at the base of the mountain but was only as far south as Loftus Street in the eastern area. Subsequently the heavily vegetated areas in the western section were removed and the Village Zone was extended down to the Travelling Stock Reserve in the eastern section.

Issues & Strategies

Review of Zoning Boundaries: It is the role of this Strategy to define appropriate areas for each land use within the urban areas of each settlement to ensure sufficient supply of land for the next 5-10 years. This will then inform the preparation of new zoning boundaries under the proposed new Cabonne Local Environment Plan. Any expansion of the urban area of a settlement into the surrounding rural lands needs to be justified as it may take up important agricultural land that is important to the Cabonne economy. The fact that Eugowra is located in close proximity to the local government area ('LGA') boundary with Forbes Council means that there are some 'political' boundaries to the growth of Eugowra in this direction.

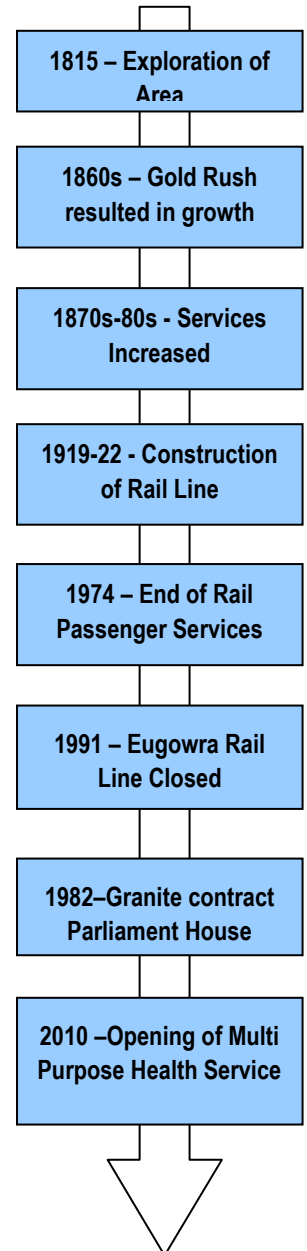
5.4. Settlement History

History is important because it explains why a settlement is located in its present location and how the settlement has changed over time. Eugowra is the Wiradjuri word meaning, *"Where the sand washes down from the hills"*. A short summary of key dates for Eugowra is as follows:

- **1815**-Explorer George William Evans was the first European to visit the Eugowra area.
- **1861**-The discovery of Gold in the Bathurst region had a fundamental impact on the Eugowra region. People from other areas of Australia, and even overseas rushed to the region in search of Gold.
- **1862** - Eugowra was famous for one of the biggest gold robberies in Australia's history. Frank Gardiner and his gang, including the infamous Ben hall, held up the Forbes to Sydney gold escort outside of Eugowra. The gang stole 2700 ounces of gold and some cash which amounted to around 14,000 pounds.
- **1860s**-1865 the Lachlan Gold Field was proclaimed. 1866 the Eugowra Hotel was first licensed; it was the first commercially used building in the town.
- **1870s**-In 1874 the first Private School in Eugowra was opened. The school attracted 12 students and was forced to close when the Public School opened in 1879.
- **1880s**-Businesses such as Butchers, Bakers, General Stores, Cafes and Greengrocers began opening. General Cemetery dedicated 11 march 1881. Public School Site dedicated 14 October 1881. On 23 January 1884 the site at the corner of Nanima and Pye Streets was nominated for the new post office at Eugowra.
- **1885** – 20 March Eugowra was proclaimed a town.
- **1910**-The first Telephone exchange was opened on the 24th of September. It was installed in the Post Office building.
- **1913**-The Commonwealth Bank first opened for business in New South Wales on the 13th of January, and commenced trading through 642 Post Offices throughout the state. This included Eugowra.
- **1919**-Construction of the Canowindra-Eugowra rail line began. Construction was meant to begin in 1915 but World War 1 intervened.
- **1921**-St John the Baptist Church was opened in Eugowra.
- **1922**-The first train arrived in Eugowra on Show Day, the 27th of September, conveying over 500 visitors. The line was officially opened on the 11th of December 1922.
- **1926**-The first copy of The "Eugowra News" was published on the 8th of January.
- **1970s**-In the 1970's stations along the Canowindra-Eugowra line were closed. Passenger services stopped in 1974. The line was truncated at Trajere in 1991 due a washaway near Eugowra but was completely closed by the end of 1991.
- **1982**-The Eugowra Granite Works secured an original contract to supply 1,820 cubic metres of Granite slab for the construction of the new Parliament House.
- **2010**- The new Eugowra Multi Purpose Health Service was opened on 30 September.

Issues & Strategies

Understanding the History: The history of Eugowra and its surrounds is an important factor both in understanding the location of the settlement, how it grew, key opportunities and constraints to its growth, and as a fundamental building block for tourism and community spirit. A comprehensive history of Eugowra should be prepared and/or collected by the local historical society and/or Council to allow Eugowra to appreciate and build on its history and protect and enhance the key heritage items and character. See [Section 5.13 – Heritage](#) for the proposed strategies for heritage items.



5.5. Settlement Pattern

5.5.1. Historical Subdivision Pattern

The original subdivision pattern for Eugowra would have arisen in the late 1800s or early 1900s. To a large extent the village boundary and subdivision pattern shown on historical maps dating back to the early to mid 1900s is very similar to the pattern present today with only limited additional subdivision of lots from limited growth that has occurred in the last 50 years.

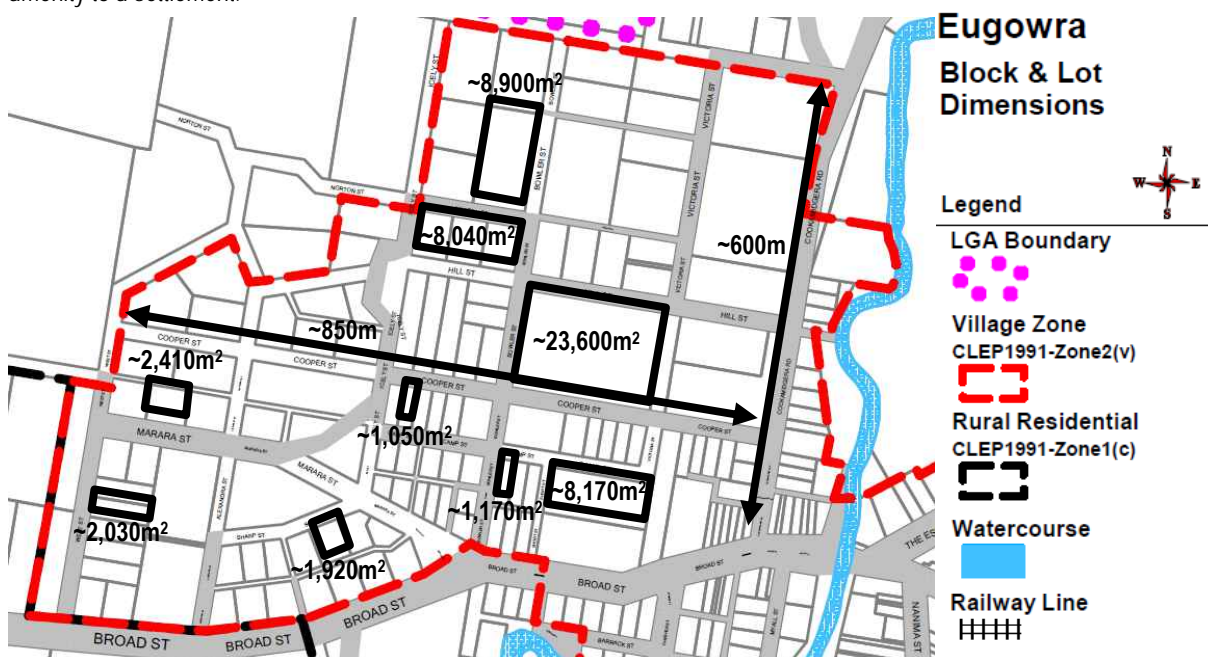
The vast majority of the historic subdivision patterns in settlements in Cabonne were based on a grid pattern with perpendicular streets and regular block sizes. In Eugowra, the blocks are generally oriented with the streets running roughly north/south and east/west with grid only slightly to the east of north. However, the grid is broken by the Mandagery Creek and topography to the north. It is important to note that at the time of these subdivisions a rear lane was incorporated through the middle of the larger blocks to allow the collection of sewage from the toilets at the backs of the blocks and many of these remain on the titles today.

Issues & Strategies

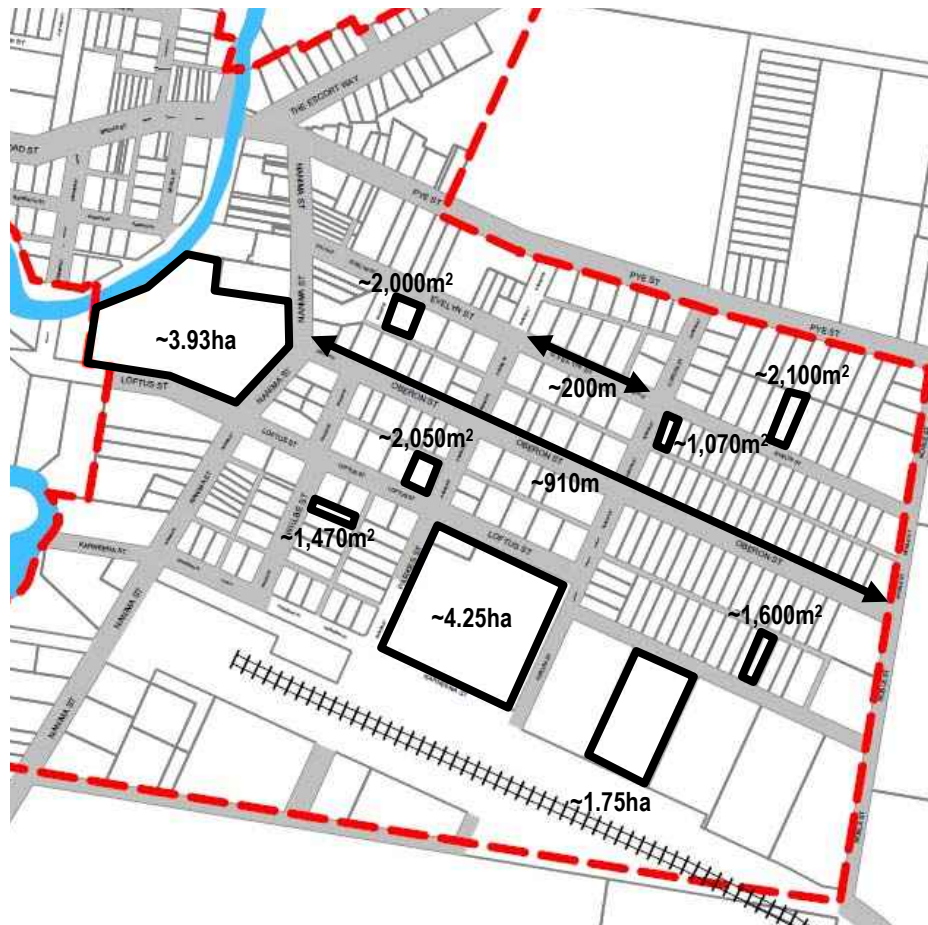
- **Subdivision Pattern:** Future road and subdivision patterns should integrate with the historical grid pattern (where possible) and seek to improve connectivity whilst responding to the topography.
- **Rear Lanes:** Council and the LPMA need to conduct an assessment of all of the public mid-block rear lanes and determine whether anything will be done to protect their public nature and whether they will be preserved or released for sale to the adjacent land owners.

5.5.2. Street Dimensions

Most of the streets in Eugowra are approximately 30 metres in width, except for some of the smaller local roads which are 20 metres in width. A 30 metre road width allows for a road with a lane in each direction and substantial on-road parking areas and kerb/pedestrian areas as well as the potential for incorporation of street trees in the road corridor with minimal impact on parking / pedestrian areas. Street trees can add considerable streetscape character and amenity to a settlement.



A) North-West Eugowra (West of Mandagery Creek)



B) South-East Eugowra (East of Mandagery Creek)

Figure 4: Areas, lengths & widths for some of the standard blocks and lots in Eugowra (Source: Council GIS 2011).

5.5.3. Block Sizes

Figure 4 shows some of the indicative block areas, lengths and widths in Eugowra. The most standard block sizes are located east of the creek and are 160-200m in length and 106m in depth (including a 6m wide rear lane). To the west of the creek there are less standard block sizes due to unformed roads, topography and the creek corridor.

Issues & Strategies

Block Sizes: Where there is a 'grid' road layout there is generally good permeability and ease-of-navigation with relatively short walking distances. However, the standard 200m blocks may result in slightly longer walking distances to traverse the settlement.

5.5.4. Lot Sizes

Lot sizes are fairly varied but are most regular to the east of Mandagery Creek. In general there are roughly square blocks of 2,000m² with a range of narrower lots from 1,000m² to 2,000m². As a result standard lot widths range from ~20 to 40 metres. There are still some larger lots up to 4.25ha east of the Creek. To the west of Mandagery Creek lots get down to approximately 1,000m² in size but range up to 23,600m².

Issues & Strategies

Lot Sizes: The existing lot depth/width is sufficient to create good side setbacks and a good rear yard for dwellings (though this gets more difficult with road frontages below 15m). As the Village Zone is sewered lot sizes do not need to support septic systems. There is potential to consider subdivision of some of the larger (>1,800m²) lots down to 900-1,000m² without the need for battleaxe style blocks or impacts on the streetscape.

5.6.

Historic Population

5.6.1. Census Area

The Australian Bureau of Statistics (ABS) Census Collection District ('CD') is the area that ABS uses to calculate the population and demographics for an area. Figure 5 shows there is one CD (yellow line) that incorporates all of the urban areas in Eugowra including the majority of the Village Zone (excluding a couple of buildings south of the railway line), all of the Rural Small Holdings Zone, and some of the adjacent Rural Zone.

Therefore, the Census data is a reasonably accurate measurement of the urban population and demographics of Eugowra but excludes most of the rural catchment of Eugowra that use Eugowra for services. The 2005 Draft Village Strategy for Eugowra appears to suggest that this broader catchment population may be as high 60-80 people.

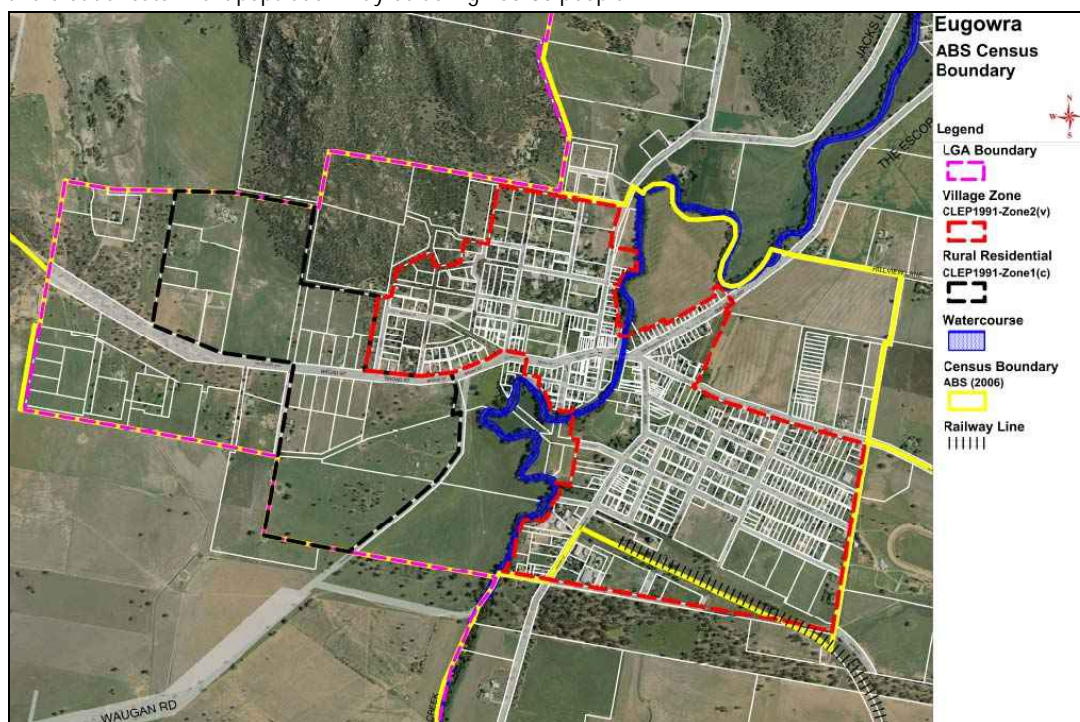


Figure 5: Alignment of the ABS Census Collection Districts in relation to Eugowra's urban zones (Source: Council GIS 2009 & www.abs.gov.au).

5.6.2. ABS Census Population of Eugowra

Table 2 shows that since 1976 the historical ABS population for Eugowra has generally sat in the range of 535 to 651 people. There was some growth from 1991-1996 but generally a negative trend for the remaining census periods. Since 1986 there has been an average annual decrease in population of negative 0.38% in contrast to the average annual growth of Cabonne of 0.45% per year for the same period.

Year	Population (ABS)	Δ from Previous Census	Average Annual % Δ from Previous Census
1961	669	N/A	N/A
1971	651	-18	-0.23%
1976	651	0	0%
1981	577	-74	-2.27%
1986	579	+2	+0.07%
1991	572	-7	-0.24%
1996	612	+40	+1.40%
2001	589	-23	-0.75%
2006	535	-54	-1.83%



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1961-2006	-134	-0.45%
1976-2006	-116	-0.59%
1986-2006	-44	-0.38%
1996-2006	-77	-1.26%

Table 2: ABS population for Eugowra from 1961-2006 (Source: www.abs.gov.au).

Issues & Strategies

Population Growth: The urban areas of Eugowra have experienced some small periods of population growth from 1991-1996, but generally there has been negative growth ranging from -0.59%/year (1976-2006) to negative 1.26%/year (1996-2006). This may suggest a potential for ongoing population decline or at best a static population in the future unless there is a significant change in key economic drivers in the village/area.

5.7. Summary of Opportunities & Constraints

It is important to try and summarise the potential for Eugowra to grow both in population and economic growth. Please note that more detail is provided on each of these issues in the subsequent sections of this Chapter.

5.7.1. Positive Factors

The key **POSITIVE** influences that may assist growth include:

- **Population:** The current population (535 people in both the Village Zone and Rural Small Holdings Zone in 2006) is a sufficiently high population to sustain a range of local services and facilities;
- **Proximity to Forbes/Parkes:** The proximity of Eugowra to the towns of Forbes and Parkes and its location on the connection between the regional centre of Orange and Forbes does provide some limited opportunities for economic growth along these key routes;
- **Tourism:** Significant potential for increased tourism due to the retention of a strong heritage character and links to history and natural heritage, a range of accommodation opportunities, a range of cultural facilities, its community spirit, and a range of things to do and see (with a focus on history, bushrangers, its natural beauty, national parks and nature reserves, and heritage);
- **Rural Character:** Attraction of the rural character, landscape and village lifestyle with proximity to Forbes and Parkes and other key settlements / industries for employment. Eugowra has a strong character with tree-lined streets and historic buildings. In fact, the survey for the Community 2025 Plan showed that Eugowra's key strengths included the 'Village atmosphere' (52.5%);
- **Rural Employment:** The region around Eugowra has a strong agricultural base of lucerne, wheat, wool and fat lamb production with growth in new areas of viticulture and canola. It is a reasonably rich agricultural area;
- **Affordability:** Attraction of a reasonable supply of affordable land that can make it more accessible for a mix of socio-economic groups (but this may not necessarily take in extra costs of development in flood and bushfire prone lands);
- **Health:** Provision of a new multi-purpose service that provides a 14-bed aged care accommodation (including dementia suitable, respite and palliative care), community health care services including physiotherapy and podiatry, facilities for co-located General Practitioner services and day care services that has the potential to allow older citizens to remain in Eugowra where there is access to care;
- **Aged Care:** Provision of a limited range of aged care units and support services that could be expanded to meet the needs of a growing aged population and allow this section of the population to 'age-in-place' and integrate with the community;

- **Industry:** There is some provision of some limited local industry (including quarrying, a sawmill and the famous Eugowra Granite Works) in and around Eugowra which diversifies employment, and supports economic growth;
- **Water:** Access to a secure water supply through the Central Tablelands Water network (from Lake Rowlands) with provision of potable water throughout the Village Zone and no major constraints on moderate levels of growth in the future;
- **Sewer:** Provision of a centralised sewerage system which would support smaller lot sizes and some additional subdivision whilst maintaining environmental outcomes and residential amenity;
- **Education:** Access to local primary schools and secondary schools in nearby major towns which makes it attractive for families with children;
- **Recreation:** Access to a good range of recreation facilities including both passive and active recreation areas and sporting facilities, particularly with school sports;
- **Community Spirit:** Good community associations that can foster community spirit and local solutions to community needs with a range of community and tourist events throughout the year. In fact, the survey for the Community 2025 Plan showed that Eugowra's key strengths included the 'People' (41.8%) and 'Country Community' (38.8%).

5.7.2. Negative Factors

The potential **NEGATIVE** influences on growth include:

- **Negative Population Growth:** Eugowra's Census District has been experiencing negative population growth for every census period except for two since 1961 and if the population continues to fall then there is less likelihood of maintain local services and economic growth;
- **Flooding:** The eastern area of the village is significantly affected by the potential for flooding and drainage issues. This includes a significant part of the core business district and there is a major economic cost and risk associated with regular floods. It also severely limits additional development in these areas, particularly due to a difficulty getting a bank loan for flood affected land, the impact on land values and development potential, and the difficulty selling land that is flood affected;
- **Bushfire:** The western area of the village is significantly affected by the potential for bushfire with the village backing onto the Eugowra Nature Reserve and historic bushfires which have impacted on Eugowra;
- **Proximity to Regional Centres:** The proximity to Forbes and Parkes may have the negative effect of limiting Eugowra's growth in services, employment and industry and people investing less in their local businesses. There is also an increasing centralisation of government services and larger scale industries to larger centres;
- **Transport:** The fact that the existing rail line is closed and unlikely to re-open in the foreseeable future means that freight and passenger movements are limited to road transport. Part of the original growth of Eugowra stemmed from its location on an active rail line and this is now no longer present;
- **Employment:** There is a heavy reliance on a limited number of key employers including local government, schools, the hospital and the rural sector. This may not be robust enough to survive economic, social and political change which would have a significant impact on economic growth and the population. There is a general concern in the community (Community 2025 Plan Survey) about the lack of local employment, particularly for youth) and the number of local businesses closing down;
- **Retail & Entertainment:** Limited local retail services / entertainment and range of opportunities, particularly after-hours.

Issues & Strategies

Population Growth: In conclusion, Eugowra is a beautiful village with a strong history and community. However, it has a number of challenges to retaining its current population and encouraging economic growth so population growth estimates are likely to be relatively low for the foreseeable future or there may be a declining population.

5.8. Projected Future Population

Warning: The estimated population in 2036 is only an estimate based on the factors considered in this chapter and it may be affected by future changes in growth potential.

For all of the above reasons, it is estimated that the projected growth rate for Eugowra for the next 30 years is likely to be in the range of -0.5% to +0.3% with an average annual growth of -0.1%.

Table 3 shows how the existing and projected rates of growth for Eugowra fit with other growth rates in the area and the resulting population projections (based on an estimated 2006 population of 535 people – including both the Village Zone and Rural Small Holdings Zones).

Range of Potential Average Annual Population Growth Rates	Av. Ann. Growth Rate	Projected Population (Year)						Δ in pop. 2006-2036
		2011	2016	2021	2026	2031	2036	
MAJOR NEG. GROWTH Eugowra Growth Rate 1976-2006 <u>Proj. Growth Rate Minimum</u>	-0.50%	522	509	496	484	472	460	-75 Minimum
MINOR NEG. GROWTH Proj. Cabonne Pt.C (incl. Eugowra) <u>Proj. Growth Rate Average</u>	-0.10%	532	530	527	524	522	519	-16 Average
LOW GROWTH	+0.10%	538	540	543	546	549	551	+16
LOW-MEDIUM GROWTH <u>Proj. Growth Rate Maximum</u>	+0.30%	543	551	560	568	577	585	+50 Maximum
MEDIUM GROWTH ABS 1986-1996 Cabonne	+0.50%	549	562	577	591	606	621	+86
MEDIUM-HIGH GROWTH ABS 1996-2001 Cabonne	+0.70%	554	574	594	615	637	660	+125
HIGH GROWTH	+1.00%	562	591	621	653	686	721	+186

Table 3: Projected population growth for Eugowra's Census District based on different growth scenarios.

Issues & Strategies

- **Regular Review:** The growth rate for Eugowra should be reviewed every census period (5 years) to see whether it accords with the estimated rates of growth and, if not, growth projections and the supply of land may need to be modified to take into account the new estimated growth rate.
- **Significant Negative Growth:** If the historical growth rate of Eugowra continues at a rate of approximately negative 0.5%/year then there will be a decrease in population by 2036 of 75 people, resulting in a total population of 460 people by 2036. If this occurs then this will have a significant impact on the ability of Eugowra to maintain its current level of services and facilities.
- **Average Growth:** Assuming an average projected population growth for Eugowra of negative 0.1%/year there will be a decrease in population by 2036 of 16 people, resulting in a total population of 519 people by 2036.
- **Maximum Growth:** Assuming a maximum projected population growth for Eugowra in the low to medium range of 0.3%/year there will be an increase in population by 2036 of 50 people.

an additional 50 people, resulting in a total population of 585 people by 2036.

- **Supply & Demand:** The increase in population (if it occurs) will result in a slight increase in demand for additional housing, employment, services, and facilities. The greatest demand (in area) will be for residential land.

5.9. Demographics

Warning: The demographic information in this chapter is only valid on the Census night in 2006 and due to the small census population it is subject to significant change over time.

The following provides a short summary of the demographics for Eugowra's Collection District in 2006 that are relevant to this Strategy and/or different from the demographics for Cabonne. Please see [Section 2.6 – Demographics](#) for a comparison of all of the settlements and Cabonne.

- Age:** 26% of Eugowra's population were over the age of 65 years of age and 43.9% of the population was over the age of 55 years of age. The median age of Eugowra was 50 years compared with 41 for Cabonne and 37 years for Australia.
- Labour Force:** 6.2% of the labour force in Eugowra (13 people) were unemployed compared to 3.7% for Cabonne and 5.2% for Australia. 239 people over the age of 15 were not in the labour force.
- Occupation:** 18.7% of employed people were labourers; 16.2% managers; 16.2% technicians and trades workers; 14.6% community and personal service workers; 10.6% clerical and administrative workers; 9.1% professionals; 7.1% machinery operators and drivers; and 4.5% sales workers.
- Employers:** 11.6% in sheep, beef cattle and grain farming; 6.1% in hospitals; 5.6% in school education; 4.5% in road freight transport; 4.0% in cafes, restaurants and takeaway food services.
- Income:** The median individual income (\$295), median household income (\$560), and median family income (\$638) were significantly less than the Australian averages (\$466, \$1,027, \$1,171 respectively).
- Family Characteristics:** 30.7% were couple families with children (C=45.2%; A=45.3%); 55.6% are couple families without children (C=43.2%; A=37.2%); and 13.7% are one parent families (C=10.6%; A=15.8%).
- Dwelling Characteristics:** There were 269 private dwellings (of which 226 were occupied) on the night of the census. 93.4% were separate houses; 3.1% flat, unit or apartment; and 3.5% other dwellings. The average household size was 2.2 people per dwelling compared to 2.6 in Cabonne and Australia.
- Household Composition:** 68.1% were family households (C=73.4%; A=67.4%); 31.9% were lone person households (C=22.3%; A=22.9%); and 1.3% were group households (C=1.5%; A=3.7%).

Issues & Strategies

- **Age:** With such a high percentage of older citizens and a higher median age than Australia there will be significant increased pressure and demand for aged care and health services and a corresponding lack of younger / employment aged people to provide economic growth in Eugowra. Eugowra is fortunate to already have health infrastructure and some limited services to support this group but it will need to be maintained and grow to support a growing aged population or there could be a significant movement of older people away from Eugowra over time.
- **Employment:** There is a reasonable mix of employment types in Eugowra but there is a heavy reliance on the rural sector, health and education for local employment. There is not as much manufacturing as present in some other settlements such as Manildra and

Molong. If there were to be economic, social or political circumstances that resulted in the reduction or loss of any of these employers then it would have a significant impact on Eugowra though most government employers would be expected to be stable.

- **Income:** Eugowra has a significantly lower median income than the Australian average which may affect economic growth and the options available to the community.
- **Family Characteristics:** A reduction in families with children and increase in families without children may result in less support for the local schools. A slightly higher percentage of one parent families also require additional assistance and services.
- **Dwelling Characteristics:** The dominance of detached housing combined with an ageing population may indicate a need for greater housing choice in the future.
- **Household Composition:** The high percentage of lone person households (31.9%) may reflect the older age but also supports demand for smaller houses in the future or housing choice for changing demographic and socio-economic needs.

5.10. Environment & Natural Hazards

5.10.1. Topography & Views

Understanding the topography is important to understanding potential restrictions on settlement growth, appropriate locations for key land uses, and key natural hazards (e.g. slope) and opportunities (e.g. views) for each settlement.

The urban area of Eugowra lies between approximately 250 metres and 360 metres above sea level. There are higher hills located to the north-west of the Village Zone falling down to Mandagery Creek. There is also a small fall from east to west across Puzzle Creek Flat in the east of the village. However, in general the land is relatively flat to the east of Mandagery Creek which results in a larger floodplain. The hills to the north-west provide an important landscape backdrop to the development in Eugowra and are an important part of the settlement's character. However, the changing topography does place some limitations on growth and land uses in the north-west area.

Issues & Strategies

- **General:** Eugowra is located in an area of undulating topography/hills that results in some steeper slopes and low-lying areas that would be less suitable/more costly to develop for certain land uses (e.g. industrial sites requiring large flat sites).
- **Cut and Fill:** Where possible, land uses should be located so as to minimise the need for cut and/or fill of land to create a suitable construction site. Sites with any significant slope should be avoided or require larger lot sizes for a wider choice of dwelling/building locations. This may restrict growth of the Village Zone to the north-west of Eugowra.
- **Visual Importance:** The undulating topography and surrounding hills creates a strong visual landscape, backdrop to development, and character for Eugowra and are worthy of protection. The visibility of the higher land and its vegetation may necessitate increased protection of vegetation and sparser development patterns to protect the scenic backdrop to the settlement. This may not be a suitable area for settlement growth.
- **Industrial Land Uses:** It may be difficult to find suitable sites for larger-scale industrial land uses as the relatively flat areas in proximity to the town are likely to have flooding issues and the non-flood affected lands do not have sufficient flat land to support industry.

5.10.2. Geology & Mineral Potential

The Department of Primary Industries (as of 2011) has provided Council with a Mineral Resource Audit of Cabonne Shire dated February 2010 (Figure 6). Please note that this is based on existing information and there may be additional mineral resources not identified on this map as there are exploration licences across a significant percentage of Cabonne.

The Mineral Resource Audit shows that whilst there are no areas within the existing Village Zone with identified or potential mineral resources, there are four key quarries located in the surrounding lands including the Carmina Quarry (south), Carmina Grey Quarry (east), Lio Rosa Quarry (south-east) and Townsends Sand Pit (south).

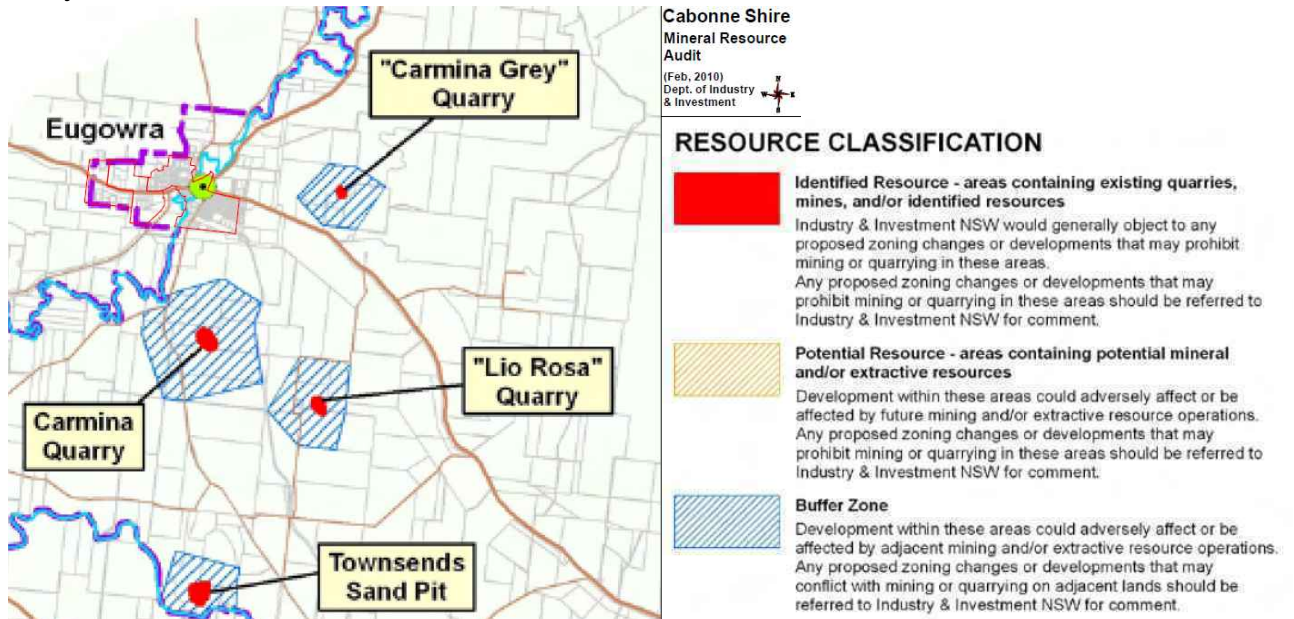


Figure 6: Excerpt of Mineral Resource Audit of Cabonne Shire (Source: Department of Primary Industries, February 2010).

Issues & Strategies

Mineral Potential: The buffer zones for the existing quarries do not extend as far as the existing urban areas but suggests that growth or additional intensification in these areas could conflict with the ongoing operation of these quarries and result in increased land use conflicts. These quarries continue to provide an important economic resource for Eugowra. However, there are no major gold or copper potential resource areas in close proximity to Eugowra, unlike for some other Cabonne settlements.

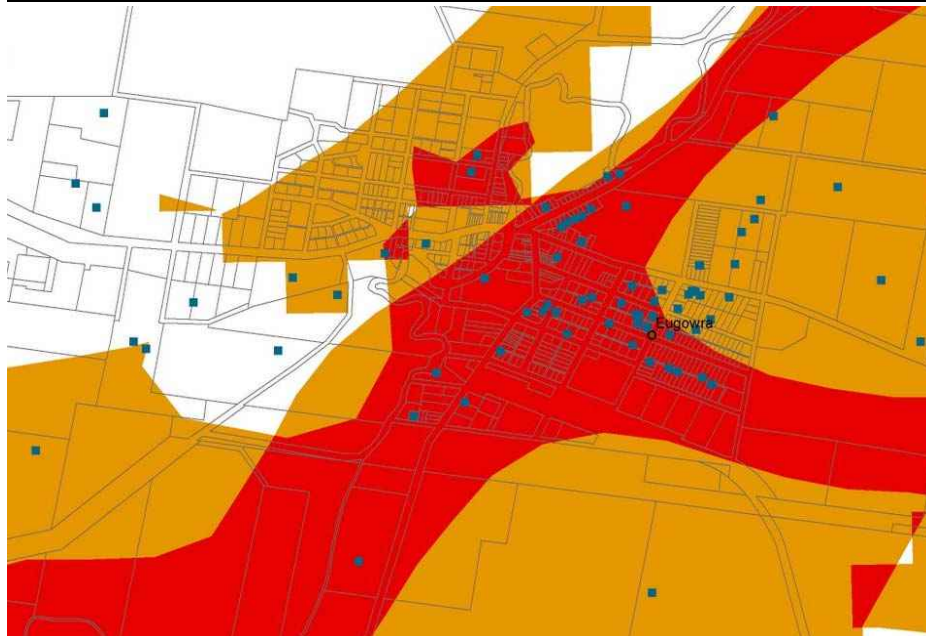
5.10.3. Groundwater

The Environmentally Sensitive Area – Groundwater Vulnerability mapping provided by the NSW Office of Water (Figure 7) shows that generally within 1km of the Mandagery Creek there are areas of both high and or moderately high groundwater sensitivity that effectively cover the entire Village Zone (but not the majority of the Rural Small Holdings Area). This figure also shows the existing bores known in this area (as of early 2011).

This mapping indicates that land uses that are likely to have a higher impact on groundwater quality (for example, feedlots or heavier industrial land uses) are not appropriate for those areas with a high or moderately high groundwater sensitivity. There needs to also be careful thought when intensifying land uses that may have a cumulative impact on groundwater systems, including when on-site effluent systems are used. In addition, there should not be a reliance on bores as a secure water supply for any development that cannot connect to centralised water.

Issues & Strategies

Groundwater Vulnerability: There is either a high or moderately high groundwater vulnerability affecting most of Eugowra's Village Zone and extending to the south into proposed industrial areas. These areas would not be suitable for land uses with potential for significant contamination of groundwater sources (potentially including heavier industries or intensive animal agriculture).



Legend

- Groundwater Licences
- High GW Vulnerability
- Moderately High GW Vulnerability

Figure 7: Excerpt from Environmentally Sensitive Areas - Sensitive Water Resources for Eugowra (Source: DECCW 2008).

5.10.4. Watercourses & Flooding

Watercourses

Water management is an important aspect of land use planning. The general aim is to minimise impacts on natural water systems from development and manage local drainage and flooding issues. Biodiversity is addressed in more detail below.

"Mandagery Creek rises in the Noahs Ark Range near Molong and has a catchment area of 1880 km² above Eugowra. Major tributaries include Boree Creek, which rises near Orange and joins the main creek 28km east of Eugowra, and Manildra Creek which originates in the northern part of the catchment and joins Mandagery Creek near Manildra. Waterhole Creek is another major tributary which joins Mandagery Creek just upstream of Eugowra. Mandagery Creek joins the Lachlan River about 18 km downstream of Eugowra" (Lyll & Macoun, 1999).

The Mandagery Creek floodplain has the greatest influence on the urban character of Eugowra in terms of a natural hazard. Mandagery Creek divides the town into eastern and western portions and the floodplain affects the majority of central and eastern areas of the settlement. In addition, there are additional overland flow issues associated with Puzzle Flat Creek to the east of the village (Figure 8).

Flood Studies

There have been several reports and documents related to flood issues in Eugowra including:

- Lyll & Macoun Consulting Engineers (August 1999) *Eugowra Floodplain Management Study* ('1999 Flood Study');
- Cabonne Council, Draft *Development Control Plan No.11 (Flood Prone Land in Eugowra)* (exhibited in late 2004 but never adopted);

5. Village of Eugowra Cabonne Settlement Strategy

- Cabonne Council, *Interim Development Control Plan No. 16* (adopted in late 2009 and advertised in 2010);
- Lyall & Associates Consulting Water Engineers (March 2010 – Draft for Public Exhibition) *Review of Eugowra Floodplain Risk Management Study 1999*.

Flood Prone Lands

Please see the above reports, the NSW Floodplain Development Manual (2005) and Chapter 2 – Cabonne Overview for a more detailed explanation of flood classification and its potential impacts. The impacts are summarised below.

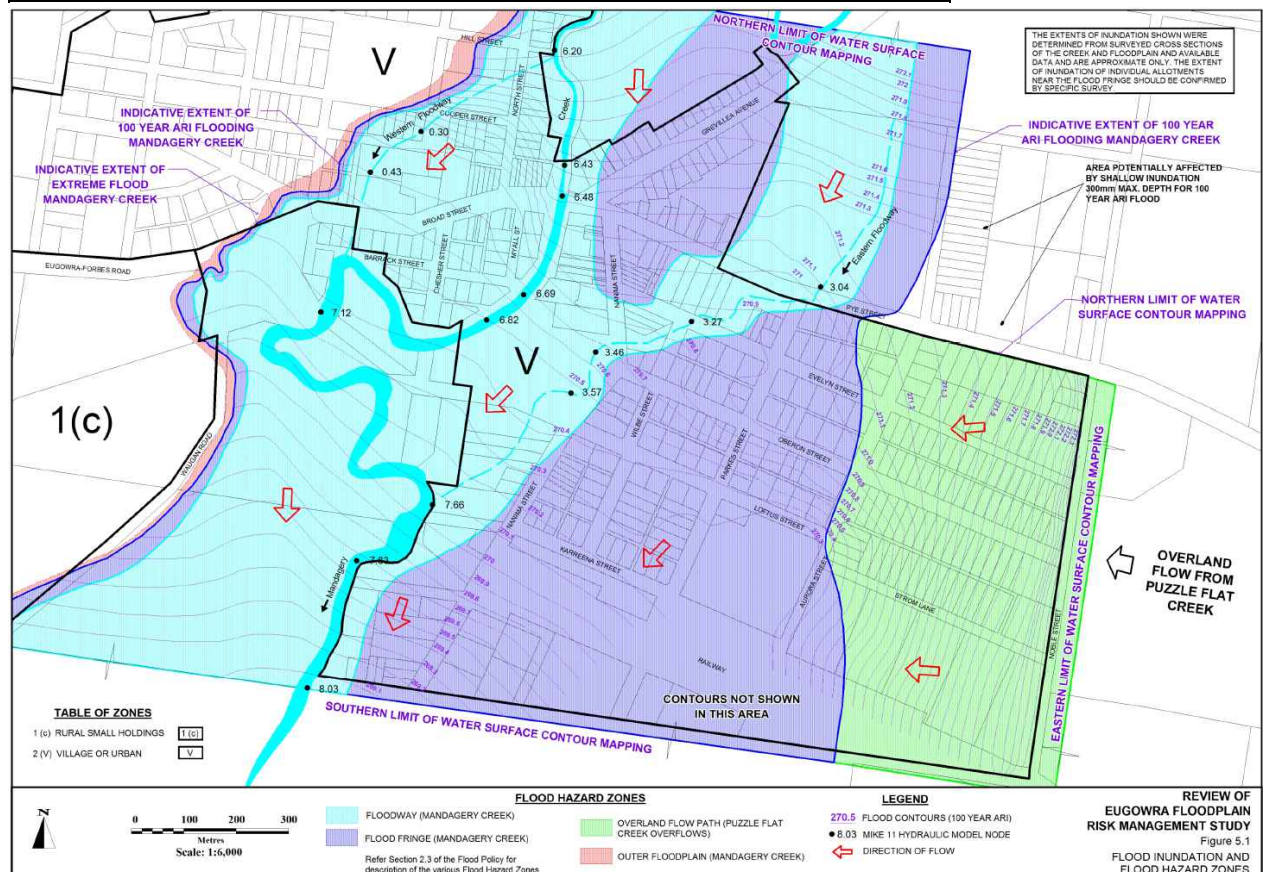


Figure 8: Flood and drainage prone lands in Eugowra based on the Lyall & Associates (2010) Review of Eugowra Floodplain Risk Management Study 1999 Figure 5.1 (Source: Lyall & Associates & Council GIS). Section 5.2 of the 2010 Review summarises the flood hazard zones in Eugowra as follows:

- **Floodway (Mandagery Creek):** The zones within the extent of the 100 year ARI flood resulting from flooding on Mandagery Creek which are important for the conveyance of flow. There are two Floodway areas shown on Figure E1.1 of Appendix E (reproduced as Figure 5.1): the strip of land including the channel of Mandagery Creek and its immediate overbank areas, including the Western Floodway; and a separate breakout channel from the creek denoted the Eastern Floodway (also known locally as Billygoat Creek). The Floodway is synonymous with areas where the hazard is high on the basis of depth and velocity of flow. Within this area new residential or commercial/industrial development on vacant land would not be allowed. Council at its discretion and depending on the merits of the case may allow replacement of existing buildings subject to the receipt of documentation and controls which ensure to its satisfaction that the development will not increase flood risk in the area.
- **Flood Fringe (Mandagery Creek):** Land, other than the Floodway zones, which lies within the extent of the 100 year ARI Mandagery Creek flood. Depth and velocity of flow

would be such that Low Hazard conditions would prevail in this area. Development would be permitted subject to controls over minimum floor levels.

- **Overland Flow Path (Puzzle Flat Creek Overflows):** Land zoned 2(v) Village or Urban in the East Eugowra area which lies outside the extent of 100 year ARI flooding from Mandagery Creek. Development would be permitted subject to controls over minimum floor levels.
- **Outer Floodplain (Mandagery Creek):** Land lying within the narrow strip of land on the western overbank of Mandagery Creek between the 100 year ARI flood and the Extreme Flood. Council will check applications for residential developments in this zone and nominate floor levels which are no lower than the residential **Flood Planning Level** (100 year ARI flood level plus 500 mm), to ensure that finished floor levels are no lower than in the adjacent **Flood Fringe (Mandagery Creek)** area. Apart from Council checking floor levels, there are no flood related controls in this zone.

It is important to note that the description above sets out the lands that are currently flood or drainage prone. However, subject to which mitigation methods are adopted and constructed, the extent of these flood prone lands is likely to change in the future. Whilst the 2010 Review has only recently been adopted by Council, the exact mitigation methods have not yet been adopted and budgeted.

Therefore, for the purpose of this Strategy it is assumed that whilst the floodway (Mandagery Creek) and outer floodplain (Mandagery Creek) are unlikely to change significantly, there is likely to be some future reductions in the flood fringe (Mandagery Creek), overland flow path (Puzzle Flat Creek). This may reduce the impact of flooding/drainage issues on area to the east of Eugowra Village to the east of either Parkes Street or Aurora Street (subject to detailed future studies). Therefore, not all vacant blocks in east Eugowra have been discounted for future development when determining land supply & demand.

Issues & Strategies

- **Flood Prone Lands:** There is a potential for flooding along the low-lying areas close to Mandagery Creek and drainage issues associated with several watercourses.
- **Flooding Issues (Development Potential):** Flooding is clearly a major issue with the Eugowra residents. Some residents argue that no strategic planning processes can take place until such time as the flood plan issue is resolved and that a lot of land shown as flood prone does not get inundated. However, as the mitigation methods have not been agreed to at the time of this Strategy it has had to assume certain outcomes to determine land supply and demand and development potential.
- **Constraint to Growth:** The potential for flooding may limit expansion of Eugowra to the east and north of the settlement, including existing vacant lots in these areas where development may either be prohibited or significantly more expensive to meet development controls.

5.10.5. Biodiversity & Vegetation

The Environmentally Sensitive Area – Biodiversity mapping provided by DECCW in 2008 suggests that there are some areas of significance generally aligning with existing significant vegetation on the slopes of the hills and along existing travelling stock reserves to the south and east of the urban areas. These areas can be seen in Figure 9. However, there is very limited significant vegetation in the Village Zone and Rural Small Holdings Zone except for along Mandagery Creek.

There is an opportunity to strengthen the ecological connections along the existing watercourses and drainage lines and connect these to the stands of significant vegetation outside the Village Zone in Crown Lands (where possible).

A list of threatened, endangered and/or vulnerable species in Cabonne can be found on the website for DECCW. There are no known threatened species and/or endangered ecological communities under the *Threatened Species Conservation Act* or provided in the mapping from DECCW in the Village Zone at Eugowra, however, this does not mean that there are not any in existence. Each development application will need to address this issue.

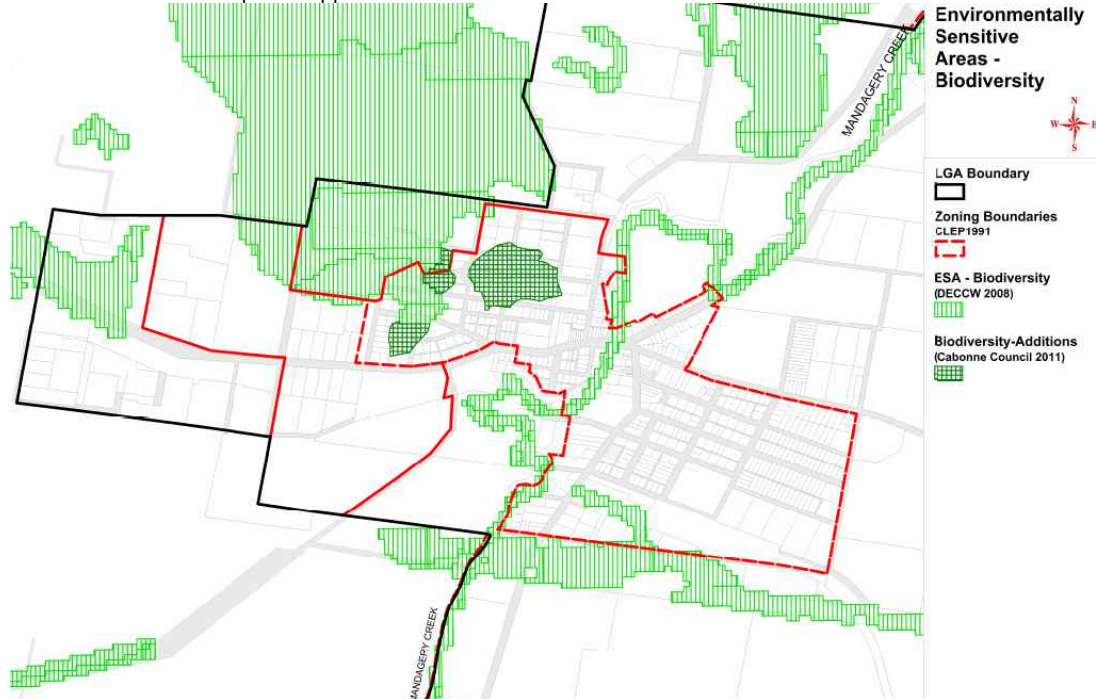


Figure 9: Environmentally sensitive area- biodiversity mapping for Eugowra and surrounds (Source: State Government mapping 2008 + Council GIS 2011).

Issues & Strategies

Ecological Corridors: There is a need to protect and enhance remaining significant remnant or native vegetation in or around Eugowra. Attempts should be made, where possible, to plant native vegetation and enhance ecological corridors, particularly adjacent to watercourses and connecting to Crown lands / travelling stock reserves. This may necessitate the removal of non-native or invasive species and sourcing of native seeds from the local area. However, there is also the contrary need to avoid exacerbating any bushfire risk to Eugowra (see below).

5.10.6. Bushfire Hazard

Figure 10 shows existing Rural Fire Service mapping for bushfire prone land in and around Eugowra. Significant areas of Eugowra west of Mandagery Creek are covered by either Vegetation Category 1 (orange) or 2 (yellow) bushfire risk and the 100m buffer (red). The most recent major bushfire in this area occurred on 21 December 2001

The highest risk areas are associated with the heavily vegetated areas around the foothills adjacent to the Village Zone including a number of Crown lots to the west of Icely Street with very limited development potential. Generally in areas of Vegetation Category 2 (yellow) development can occur subject to meeting additional development controls.

Issues & Strategies

Bushfire Prone Lands: Bushfire prone lands are likely to limit development potential to the north-west of Eugowra, particularly for the Crown lands that do not necessarily need to remain in the Village Zone. Development of the large lot residential lands may require larger buffers and lot sizes to address bushfire hazard. The existing bushfire mapping is currently being updated by the Rural Fire Service but is unlikely to change significantly in Eugowra.

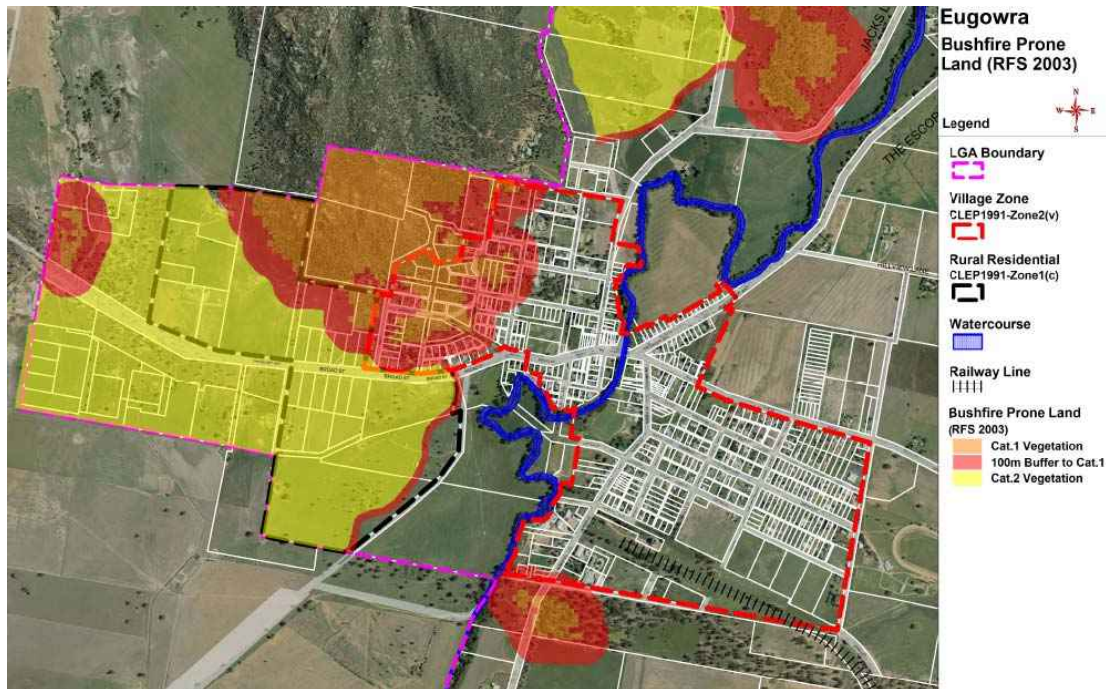


Figure 10: Bushfire prone land mapping for Eugowra & surrounds (Source: RFS 2003 & Council GIS 2010).

5.11. Access, Transport & Parking

5.11.1. Air Transport

Please see summary in Cabonne Chapter [Section 2.7.1 – Air Transport](#). In general public air transport access is considered low to medium for Eugowra with a 40-45 minute drive to Parkes Airport the nearest available.

5.11.2. Rail

Please see summary in Cabonne Chapter [Section 2.7.2 – Rail](#). Eugowra is located at the terminating point of the Eugowra branch of the Blayney-Demondrille railway line that connects from Cowra through Canowindra to Eugowra. The branch was used to access the rich agricultural lands between Cowra and Forbes and to primarily transport grain. It was built in stages from 1910 through to 1922 with the Eugowra station opening on 11 December 1922 (Source: www.nswrail.net).

Passenger services first stopped in 1974. It was then reopened by the Lachlan Valley Railway for tourist purposes. However, the line was not maintained and it was cut by erosion first in 1991 at Trajere (near Eugowra) and then the bridge at Cucumber Creek (near Canowindra) was removed to address flooding issues. Currently, services are suspended on the branch, as there is a stop block on the line just beyond the location of Cowra West. It is unlikely that the line will ever re-open due to a lack of demand and the high cost of upgrading the rail line.

Issues & Strategies

Rail Access: The closure of the rail corridor removes the opportunity to utilise the existing line for passenger or freight movements. Due to the short nature of this branch and its lack of connections it is unlikely to ever offer a competitive passenger service. This line is likely to remain closed for the foreseeable future but should be retained as a future transport corridor in case the situation changes.

5.11.3. Road Hierarchy & Vehicle Traffic Impacts

Please see [Section 2.7.3 – Road Hierarchy](#) for more details. Eugowra's main road is The Escort Way (Regional Road) that connects Orange to Forbes and passes through the middle of Eugowra. Eugowra is also connected to Canowindra via Nangar Road. No major issues were raised by the community with vehicles passing through Eugowra and passing traffic is essential to the local business services. The remaining roads are local roads. Most local roads within the Village Zone are formed and paved but there are some roads that are unformed or gravel.



5.11.4. Bus

Please see [Section 2.7.4 – Bus](#) for more details. Eugowra has access to Countrylink Services that provide connections between Parkes/Forbes and Orange every second day and between Parkes/Forbes and Lithgow every day. In addition there are school bus services that bring children from the surrounding rural areas to schools in Eugowra and Forbes.

Issues & Strategies

Bus Access: Public bus transport is available for people living in Eugowra for connections to Forbes and Orange. This would enable trips to key regional centres and provide some mobility for those without access to private transport. However, there are limited public bus transport connections between Eugowra and other settlements in Cabonne (except Canowindra and Cudal), other than the school bus network and Community Transport providers. This may affect those seeking to work or shop in Eugowra from other settlements.

5.11.5. Parking

There were very few community responses in the Community Plan 2025 Survey suggesting that there is insufficient parking in Eugowra so parking does not seem to be a key concern. Most business parking would be on-street but some off-street parking may be required if there are larger numbers or sizes of vehicles.

5.11.6. Pedestrian Access

There are limited pedestrian footpaths provided in Eugowra with the majority in the key pedestrianised areas close to the village centre including sections of Nanima Street, Broad Street, Pye Street, Hill Street (near the school) and Oberon Street. A large area of Eugowra does not have fully formed footpaths and these are unlikely to be provided in the short to medium term. Council prepared a Pedestrian Accessibility and Mobility Plan ('PAMP') (see [Section 2.7.5 – Pedestrians](#) for more details) includes, but is not limited to, improvements such as new footpaths, drop kerbs and refuges along parts of Pye, Nanima, Broad, Hill Streets and Mackays Creek Road to a total of \$125,000 (see Table 10 and Figure 6 in report). These seek to create improved pedestrian connections between the hospital and public school to the north-west of the village centre and the school, church and swimming pool to the east of the village centre. Council is currently acting on this work program.

5.11.7. Cycle Access

Council's Bicycle Plan (2005) (see [Section 2.7.6 – Cycling](#) for more details) recommends the following improved connections as follows:

- First Stage (Year 2) – link public school and hospital to Mandagery Creek along Hill, North and Broad Streets;
- Second Stage (Year 3) – link western side of creek to swimming pool along Pye and Nanima Streets;
- Third Stage (Year 4) – link from village centre to showground along Evelyn or Oberon Streets.

5.12. Utilities & Infrastructure

5.12.1. Water Supply

Water Provider & Sources

Eugowra is connected to the Central Tablelands Water ('CTW') supply system that is sourced from Lake Rowlands in the Blayney Shire. There is also the Gooloogong bore providing a back-up source if required. There is a pumping station located along Broad Street to the west of the Village Zone (see photo opposite).



Water Supply & Demand

There are no known constraints to provision of water to Eugowra from CTW's system but a secure water yield has not been determined for the entire network. It is assumed that the proposed expansion of Lake Rowlands may improve water security for the region, including Eugowra but this is a medium to long term proposition. However, if larger scale industry were to locate in Eugowra then there would need to be a review to ensure there is sufficient water supply to meet the additional needs of any industry.

Access to Water Supply

As Figure 11 shows, in general the primary area serviced by centralised water is the existing Village Zone. Most formed streets have a supply line and access to water for future development should not be a major constraint. There is also a small extension along Broad Street to the west into the Rural Small Holdings area and south along Nanima Street and east along Pye Street.

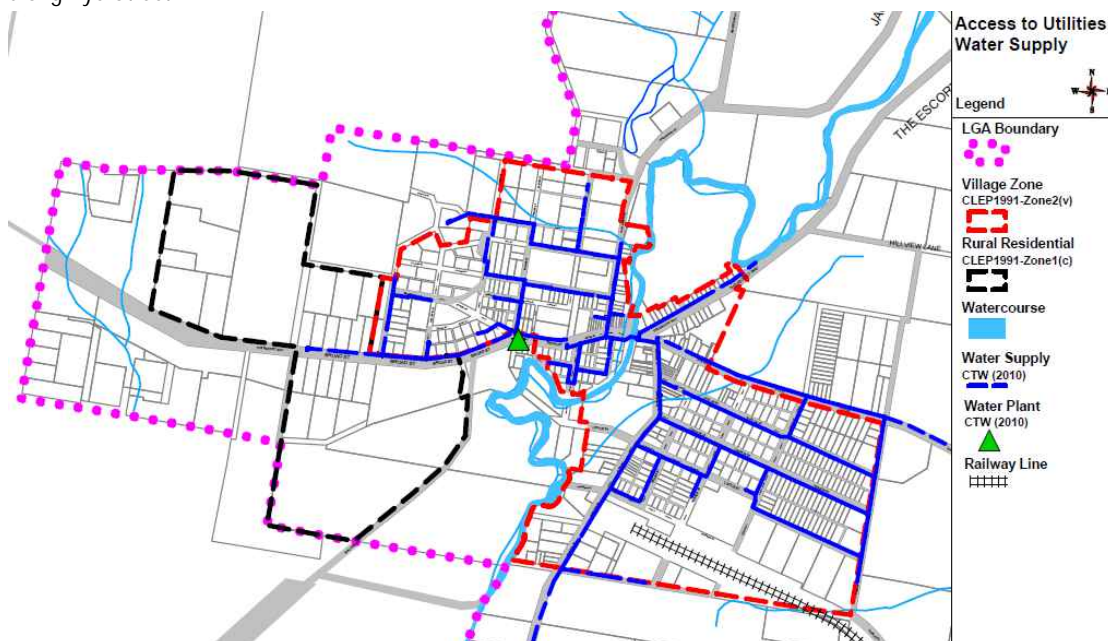


Figure 11: Existing water supply lines in Eugowra (Source: Council GIS / Central Tablelands Water 2010).

Issues & Strategies

Water: The provision of water is not a major constraint to growth in Eugowra within the Village Zone for small scale development. Any larger scale developments such as industry may have increased water requirements that require review.

5.12.2. Stormwater & Drainage

As Figure 12 shows, kerb and gutters are not provided to all of the streets within the Eugowra Village Zone but are limited primarily to the core business/pedestrian areas of the village including parts of Broad Street, Nanima Street, The Escort Way, Pye Street, and significant parts of Oberon Street, Cookamidgera Road, and Cooper Street. The remaining streets utilise grass swales for drainage, except for the odd under-road pipe for cross street drainage.

Drainage and flooding issues are dealt with in more detail in [Section 5.10.2 – Watercourses & Flooding](#).

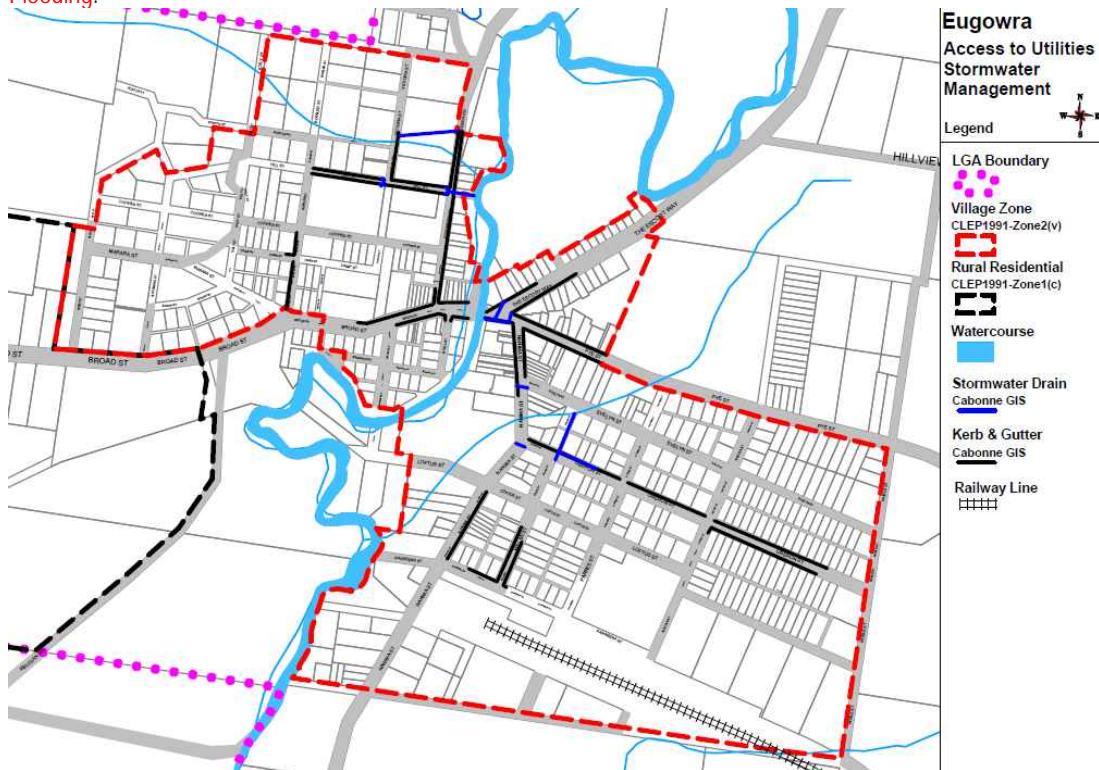


Figure 12: Existing stormwater infrastructure in the Village Zone of Eugowra (Source: Council GIS 2010).

Issues & Strategies

Stormwater & Drainage: There are no known significant drainage issues noted in this Strategy except during flooding events. There are some isolated areas of kerb & gutter at the south end of Nanima Street, Karreena Street, and Willbe Street and the western side of Bowler Street that should be connected, where possible, back to existing stormwater systems. Council should review whether there are any stormwater or drainage issues that require further stormwater works in Eugowra. Full kerb and guttering of Eugowra's streets is unlikely in the foreseeable future and may indeed be contrary to some of the heritage streetscapes.

5.12.3. Sewerage

System Design & Operation

A new sewerage scheme was commissioned in Eugowra in 1998 and completed in 1999. It is owned and run by Cabonne Council. It consists of three pumping stations, gravity and rising mains and a sewage treatment plant ('STP') on the Gooloogong Road (Casuarina Drive) approximately 1.5km south of the existing Village Zone.

The Joint Integrated Water Cycle Management (2009)('IWCM') states that "it was constructed to 'modified' gravity standards to enable the small community to afford a scheme and consists of smaller diameter pipe and flatter grades than those found in the larger towns. Treatment of the effluent depends upon oxidation in ponds and excess treatment effluent is to be directed to an irrigated paddock adjacent to the site' (BCO Land Use Strategy, 2006)" (Section.4C, page 35). "Provision is made for collection of any run off from the re use area and piping to a tributary of the Mandagery Creek. At no time since commissioning has effluent escaped overland to the Mandagery Creek" (Section.4C, page.37). As the Eugowra STP does not discharge any effluent from the site there is no DECCW (EPA) licence requirements.



Supply & Demand

The IWCM notes that the oxidation ponds at the STP have a total capacity of 550 Equivalent Persons ('EP'). This only slightly exceeds the existing population of 535 people. There are no other known capacities in the system but they are assumed to be same as the oxidation ponds.

Access to System

As Figure 13 shows, there is a reasonable level of access to the existing reticulated sewerage network in the majority of the Village Zone. Eugowra also has a public dump point design to service passing campervans and recreational vehicles which is located on Myall Street on the western bank of the Mandagery Creek. This is listed on the Campervan & Motorhome Club of Australian website (www.cmca.net.au). There is no dump point at the camping ground.

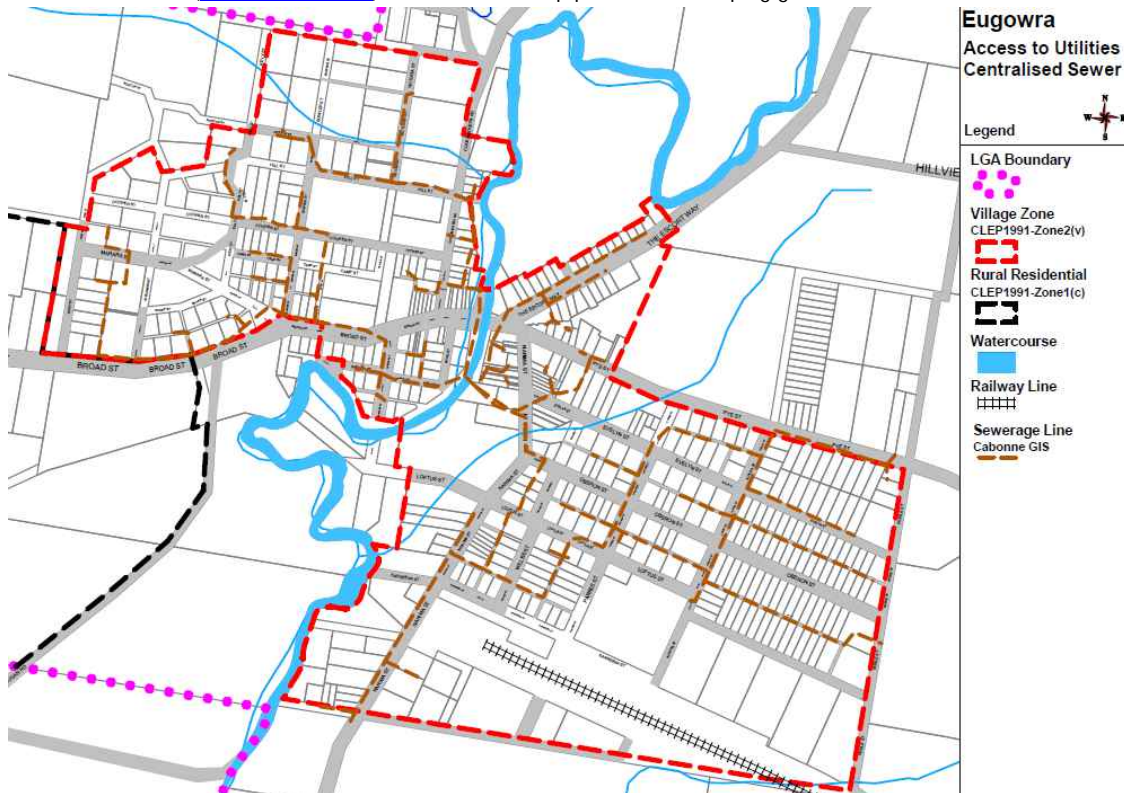


Figure 13: Existing sewer lines in Eugowra (Source: Council GIS 2010).

Issues & Strategies

- Constraints to Growth:** Based on this figure preliminary estimates would suggest there is only limited spare capacity in the existing sewerage system for growth. The minimum and average projected growth rates for Eugowra are both negative and pose no issue for capacity. However, if the maximum growth rate of +0.3%/year is reached then the system could potentially reach capacity by the year 2016. However, this is highly unlikely based on known growth rates. Council is currently assessing the existing capacities and capability of the system to meet future needs and should monitor growth in Eugowra closely. Council could investigate options or low cost augmentation works to existing system to allow for future growth with a re-use of effluent scheme incorporated if necessary.
- Sewerage Access:** Development of some lots in the higher areas to the north-west of Eugowra may be more difficult. There would also need to be an extension of supply systems in south-west Eugowra if development occurs along Loftus Street and the road connecting to Noble Street.
- Septic System Pollution:** Continued monitoring by DECCW and Council should ensure that water quality in adjacent creeks / watercourses and nearby groundwater systems is

not affected by ongoing and potential expanded use of septic systems and should also look at the cumulative effect of these systems. There may be a minor issue of water pollution as the public dump point is located in a flood zone.

5.12.4. Electricity

Figure 14 shows access to electricity lines is readily available along most of the key streets in the Eugowra Village Zone and along the main road adjacent to the Rural Small Holdings area.

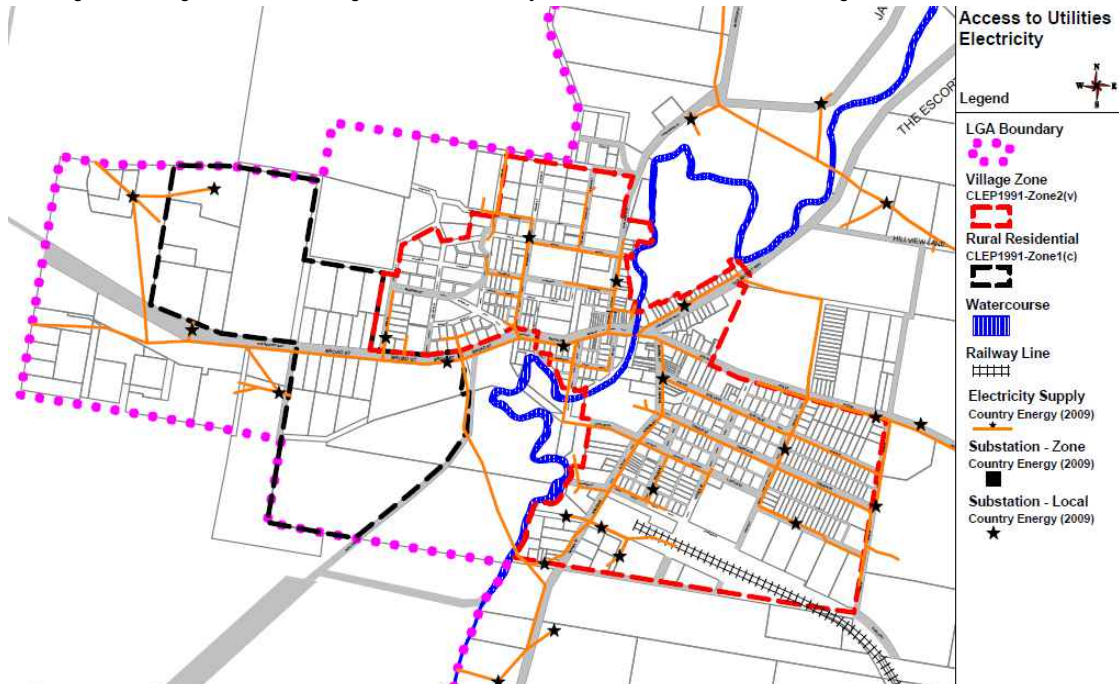


Figure 14: Electricity supply lines (orange) and substations (stars) in Eugowra. (Source: Country Energy (2009)).

Issues & Strategies

Electricity Supply: There are few constraints to standard residential development in Eugowra that cannot be addressed by minor extensions to the existing electricity network. However, as Eugowra is not located on a high voltage electricity line there may be limitations to support / attract industrial types that are high energy consumers. This is unlikely to change in the foreseeable future.

5.12.5. Telecommunications

Please see [Section 2.8.5 – Telecommunications](#) for a review of access to fixed, mobile and broadband telecommunication services in Eugowra and across Cabonne's settlements.

Issues & Strategies

Telecommunications: The key issue for Eugowra is spotty mobile phone coverage that requires further review. Eugowra may have future high speed internet access with the introduction of the National Broadband Network in the next 3-5 years but this access may be limited to wireless or satellite which may be a limiting factor.

5.12.6. Waste Management

Please see [Section 2.8.6 – Waste Management](#) for a review of access to waste management services in Eugowra and across Cabonne's settlements. Council's waste depot for Eugowra is located just over the council boundary in Forbes Council off The Escort Way. It currently has in excess of a 100 year lifespan to allow for growth and is one of the few depots in Cabonne which is relatively unconstrained in terms of landfill potential for the foreseeable future.



5.13. Heritage

5.13.1. Heritage Items

Currently under CLEP1991 there are no items listed for Eugowra even though there are obviously a number of buildings of heritage value. Council is currently finalising the Community Heritage Study building upon work that was conducted in 2003 and 2006 and this includes 30-40 items on the heritage inventory. At the time of writing, 19 items were recommended for listing in the new local environmental plan as heritage items (subject to adoption of the Study).

5.13.2. Heritage Conservation Area

There is no existing Heritage Conservation Area ('HCA') in Eugowra under the current CLEP1991 and there is no proposal to introduce a HCA in Eugowra at this time as part of this Strategy or the 2003 Draft Community Heritage Study. Whilst some streets certainly have qualities that make it attractive to live in Eugowra, the best mechanism for protection is through heritage listing of individual items at this time.

5.14. Summary of Existing Land Uses (Village Zone & Rural Small Holdings)

A summary of the existing land uses within the Village Zone of Eugowra is shown both graphically (Figure 15) and in a table (Table 4).

Existing Village Zone	No. Lots	% of VZ Lots	Description
Total Lots – Village Zone	<u>522</u>	N/A	Includes Crown land & open space
Vacant Lots	148	28.4%	No existing dwelling or business on lot
Dwelling Land Use Lots	266	51%	Mostly detached housing except aged care housing (-248 dwellings)
Business Land Use Lots	37	7.1%	Mostly retail & tourism services
Industrial Land Use Lots	8	1.5%	Existing industrial or business uses with higher impacts
Community Land Use Lots	27	5.2%	Health, Religious, Community, Emergency, Not for Profit
Open Space & Recreation	36	6.6%	Parks, Reserves, Vacant Council & Crown land
Rural Small Holding Zone	No. Lots	% of VZ Lots	Description
Total Lots	<u>27</u>	N/A	Includes Crown land & open space
Vacant Lots	20	74.1%	No existing dwelling or business on lot – Rural uses
Dwelling Land Use Lots	7	25.9%	Detached housing on large lots

Table 4: Key land use in Eugowra's Village Zone and Rural Small Holdings Zone (as at December 2009)

(Source: Aerial 2009 LPMA + Site Visits).

Issues & Strategies

- **Supply & Demand:** The aim of this Strategy is to review the supply of land for each land use in the urban area of each settlement and determine the estimated future demand for each land use to ensure there is sufficient supply of urban land for the growth of the settlement.
- **Residential Demand:** Residential land uses are the greatest consumer of urban land and take up 51% of the Village Zone.
- **Vacant Infill Development:** A significant proportion of existing total lots are currently vacant and may be able to support some of the additional growth of this settlement, subject to these lots being suitable for development.
- **Land Use Areas:** This Strategy seeks to identify appropriate areas in Eugowra for specific land uses such as industry, business, residential, open space and recreation, and environmental outcomes that seek to minimise land use conflicts and maximise accessibility.

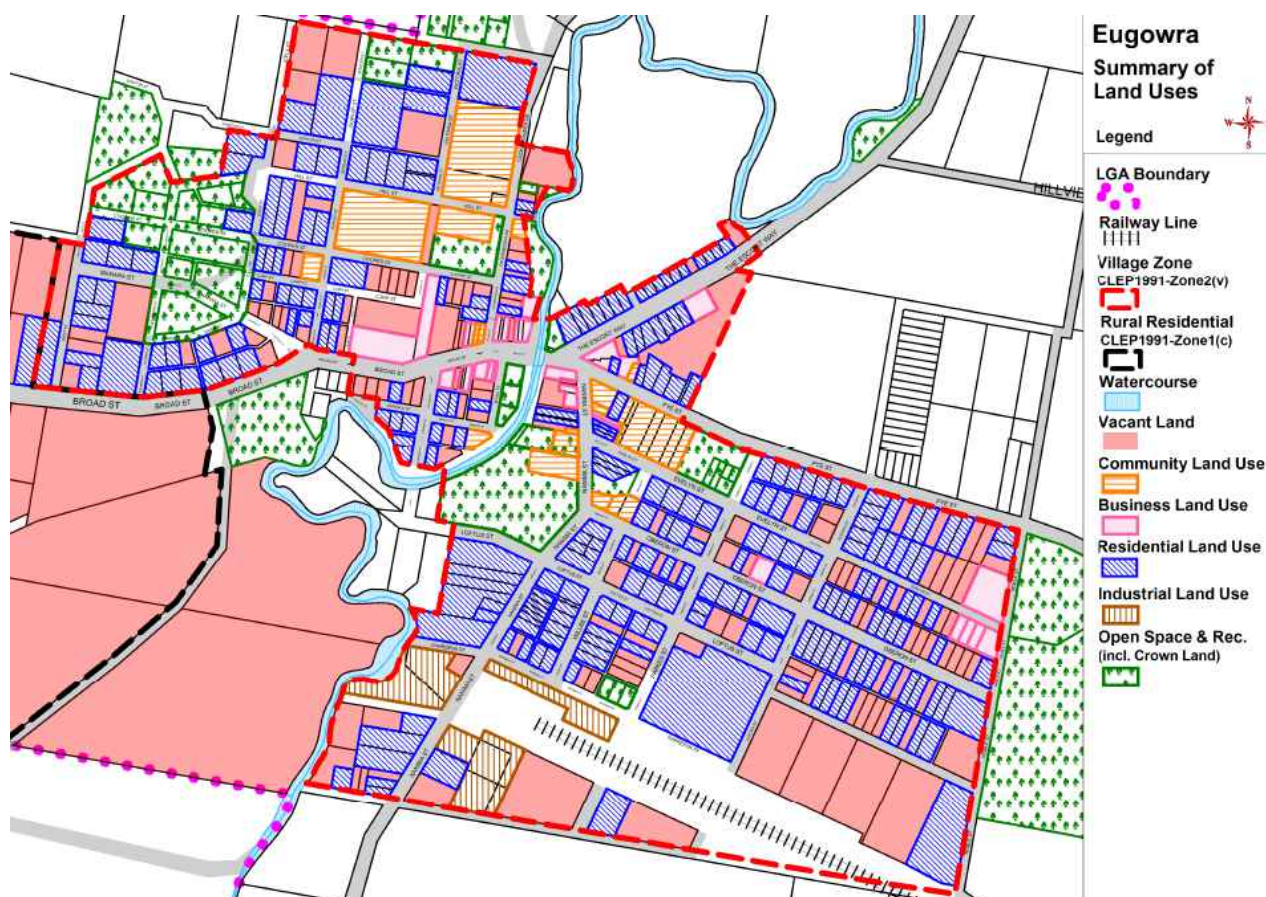




Figure 15: Key land use in Eugowra's Village Zone (as at December 2009).

5.15. Open Space & Recreation

5.15.1. Open Space & Recreation

Eugowra has the following open space and recreation areas as follows (Table 5):

Name/Owner	Activities	Owner / Lot/DP	Area	Photo
Pioneer Park, Cnr The Escort Way & Broad Street.	Park with picnic tables, BBQ, toilets and tourist stop-over facilities adjacent to Mandagery Creek. Future extension of park to land to east. This flood prone land has been obtained through voluntary repurchase (Council owned – operational land).	Cabonne Council Lot 1 DP314764 Lot 211 DP750182	0.17ha for lot with facilities	
Eugowra Memorial Park, Cnr Cooper & Cookamidgera (North) Streets	Park with war memorial, activity playground, shelter and toilet facilities. Formal plantings of palms. Backs onto Eugowra Bowling Club on the lot behind. Appears incomplete. Possible future project. No Plan of Management.	Crown Lands Lot 701 DP1020381	1.04ha	

5. Village of Eugowra

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Name/Owner	Activities	Owner / Lot/DP	Area	Photo
Eugowra War Memorial Swimming Pool , Cnr Nanima & Oberon Streets	Outdoor 25m swimming pool with covered areas and toilets / changing facilities. Run by s.355 Committee (endorsed by Council). \$2,000 contribution by Council plus rates, utilities & chemicals. Other costs managed through fees.	Cabonne Council Lots 4& 5 DP758396 & Lot 7011 DP1021063	0.38ha	
Eugowra Sportsground	Playing field and ancillary spaces backing onto the Eugowra Pre-school facility and youth hall, canteen & toilets. RFS/Fire Shed also on property. Small skate park facility (1 st in Cabonne). Grounds do not get a lot of use. Also includes sewer pumping station. There is Plan of Management (Amended July 2009).	Crown Lands Lot 7009 DP1021063	3.93ha	
Eugowra Showground (Outside Village Zone)	Showground Society has 20 year lease. Includes SES shed. Includes Tennis, toilets, animal husbandry sheds, judges' box and trotting track. Part is leased for grazing. There is a Plan of Management (2006). Levee bank to south diverts water away.	Crown Land with Council as trustee, Lots 71/150 DP750182	36.43ha <u>3.45ha</u> <u>39.88ha</u>	
		Total Area		

Table 5: Key open space and recreational opportunities in and around Eugowra.

Issues & Strategies

Open Space: There is reasonably good level of open space per person in Eugowra (both inside and outside the Village Zone) and a range of recreational opportunities (both passive and active) for the community. There may be some additional recreational needs if the population grows but the primary issue is with maintaining the existing facilities to a standard that maximises their usage. It has previously been highlighted that there should be improved pedestrian access along the banks of the Mandagery Creek, where possible, for recreation and tourist usage.



5.16. Vacant Land

5.16.1. Vacant Lots (Village Zone)

Vacant lots are important as they can provide the potential for infill development within the existing Village Zone that may take up some of the projected future growth of each settlement.

As stated in [Section 5.13 – Summary of Existing Land Uses \(Village Zone & Rural Small Holdings\)](#), there are 148 vacant lots in the existing Village Zone.

5.16.2. Vacant Lots and Natural Hazards

Sometimes the historic pattern of subdivision has not taken into account the natural hazards or topography that may prevent a lot from being developed.

Figure 16 shows that there are a total of 90 vacant lots (red) in the Village Zone that may be difficult or costly to develop (black hatching) due to a range of constraints including, but not limited to, flooding, lack of road access, lot size or slope. 43 of these vacant lots are in the floodway (high hazard) and have very limited development potential. 47 lots either are in the flood fringe and/or the lots are already been utilised or difficult to develop. As a result, the total number of vacant lots (148) is reduced down to approximately 58 vacant lots that may have the potential to support a dwelling (subject to detailed studies and consent).

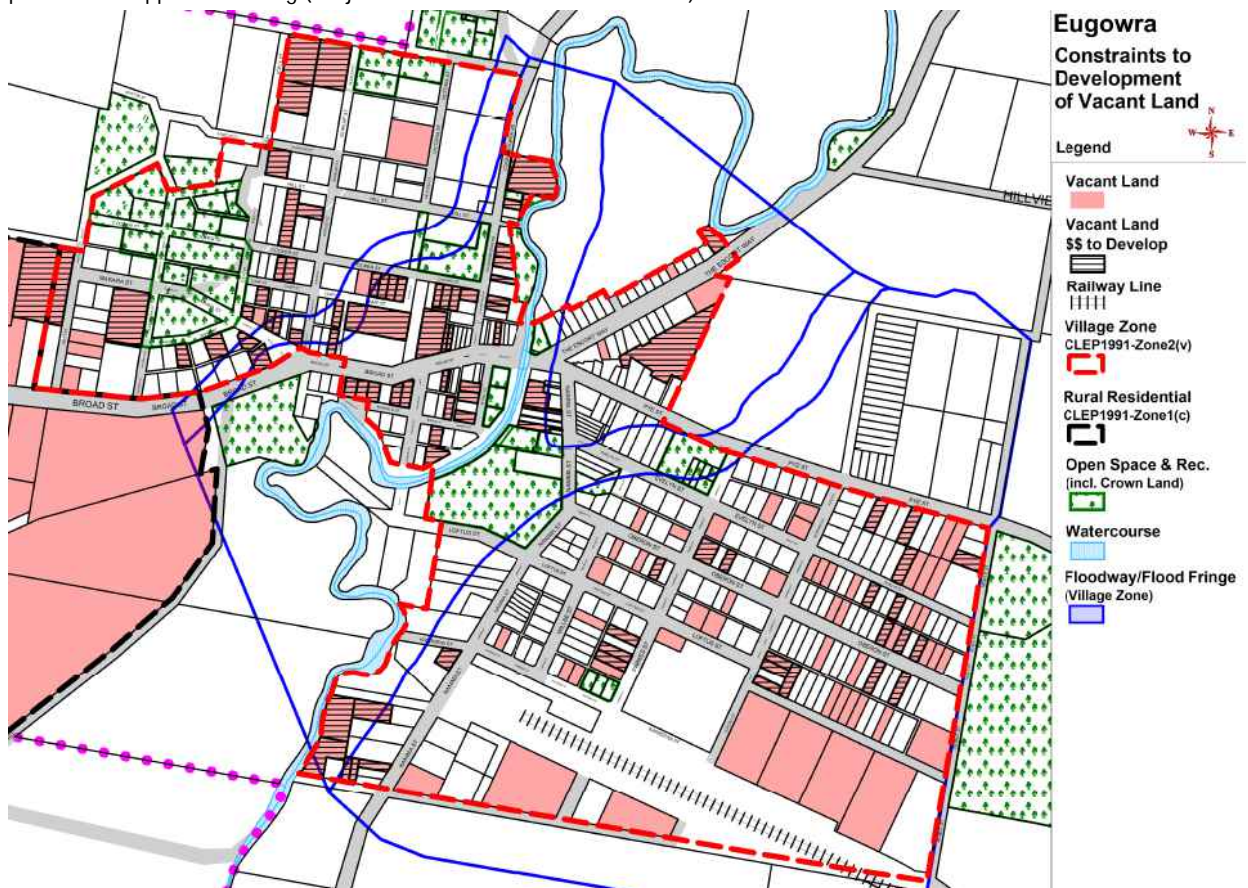


Figure 16: Vacant allotments and constraints to development in Eugowra (as at December 2010) (from aerial photo and brief street analysis).

The majority of these developable lots are located east of Mandagery Creek and are either in the flood fringe or within an area subject to overland flows (see [Section 5.10.4 – Watercourses & Flooding](#)). However, as flooding or bushfire would effectively make all vacant land in the Village Zone difficult to develop this Strategy has had to assume that the recommended future flood mitigation works in the 2010 *Review of Eugowra Floodplain Risk Management Study 1999* will reduce flood potential/risk – particularly in the eastern area in the future to allow many lots

outside the flood hazard area to be developed (subject to meeting flood controls, finance, consent etc). As these lots are already subdivided, they could be put on the market at any time.

5.16.3. Subdivision of Larger Lots for Potential Redevelopment

Existing Vacant Lots

Of the 58 vacant lots with a higher development potential there are 12 lots which are sufficiently large that they have a high probability of being further subdivided (subject to demand). These 12 lots are likely to produce an additional 9 lots, increasing the vacant small lots with higher development potential to 67.

Existing Large Dwelling Lots

In addition of the 266 dwelling lots in the Village Zone there are 6 dwelling lots with additional subdivision potential that sit outside the floodway. These 6 lots are estimated to produce an additional 19 vacant developable lots.

The biggest potential source of these lots is the mostly vacant block located between Loftus, Parkes, Aurora and Karreena Streets. Council has previously been approached with intentions to develop this block which has a vacant area of approximately 4 hectares. A conservative estimate would assume that 2,000m² lots would be desirable in this location resulting in an additional 15 lots/dwellings in addition the existing one (1) dwelling.

Total Potential Vacant Lots

As a result the total new potential lots created from subdivision of both vacant and existing dwelling land is $9 + 19 = 28$ new lots / dwellings. The total number of potential vacant lots from existing land supply is $67 + 19 = 86$. The majority of these would be expected to be used for new dwellings (subject to demand).

5.16.4. Likelihood of Development of Developable Lots

It is important to note that the community often claims that some of these vacant small lots should not be counted for the purposes of infill development because the current owners are not interested in selling. However, this Settlement Strategy is looking to review land supply over the next 30 years and whilst the existing landholders may be reticent to make land available that could be expected to change over these lengths of time, particularly as land prices rise and people no longer need larger lots.

Council can only make a 'guesstimate' of what percentage of lots may become available for sale or development. Therefore, Council is proposing a very conservative estimate of 50% possible available vacant lots is a reasonable percentage over a 30 year period as the demand is slightly lower in Eugowra than in some other Cabonne settlements.

5.16.5. Total Potential Supply of New Lots in the Existing Villages Zone

Therefore, a summary of the potential total lots that could be redeveloped (assuming that each has a single dwelling) would be 43 lots / dwellings over the next 30 years (from 2006 to 2036) as shown in Table 6.

Source of New Lots for Dwellings	Vacant Lots Development Potential	Likely Number to be Available in next 30 years (50% Rule)
Small Vacant Lots Unaffected by Natural Hazards	58	29
Subdivision of Larger Allotments	28	14
TOTAL	86	43 Lots/Dwellings

Table 6: Potential developable lots / additional dwellings available in Eugowra over the next 30 years (subject to demand and supply).

5.17. Community Land Uses

Figure 15 shows the location of the key community land uses in Eugowra. For the purposes of this Strategy, 'community uses' are defined as buildings, services, facilities and infrastructure that are not-for-profit and/or support the local community and provide essential services.

As stated in [Chapter 2 - Cabonne Overview](#), community uses are permitted in a broad range of zones and, therefore, there is no need for a detailed analysis of supply and demand of land for these uses. However, community uses are often a vital service for the community and provide employment and social and economic support and growth. A more detailed review of access to community services for all of Cabonne's settlements is provided in [Section 2.10 – Services & Facilities](#).



5.18. Business Land Uses

Please note that services / facilities change regularly and this section and the following sections merely provide a 'snapshot' of key services / facilities to assess issues in each settlement.

5.18.1. Retail / Business

The following retail businesses and services were available in early 2010 in Eugowra:

Post Office

Eugowra has an Australia Post / Post Shop on Nanima Street. Services include all postal items including money orders / banking with a card or passbook (except Westpac and ANZ) / Post Billpay / Fax Service / Stationery Items / Cards / Sweets / Gifts / Books / CDs. However, in early 2010 it was for sale with attached residence.

Banks/Credit Unions/ATM

Eugowra does not have any major banks but it does have a range of banking facilities. The RTC Rural Transaction Centre at 45 Broad Street was Australia's first Rural Transaction Centre and was officially opened by the Prime Minister on 29 October 1999. Its services include the Reliance Credit Union, Centrelink, Medicare and a room for visiting professionals and other business services, including Internet access, laminating and binding (Source: Annual report 1999-2000 - www.infrastructure.gov.au). In addition there are cash/Eftpos facilities at the Central Hotel (ATM), Eugowra Post Office, Eugowra Quality Meats, Eugowra Supermarket, Eugowra Lube Centre and The Lady Bushranger.

Retail – Essential Services (Groceries)

Eugowra has a range of essential grocery services including a two supermarkets and a butcher including: Eugowra Supermarket + video hire, Broad Street; Eugowra Newsagency and Supermarket + Cyber Cafe, Broad Street; Eugowra Quality Meats; and Smiths Shed (fruit and vegetables).

Retail – Other Essential Services

Eugowra has a range of essential local services including a newsagency, hairdressers, and bookstore and some specialist clothes stores, antique, fabrics and jewellery stores including but not limited to: Head On In, Old Bank of NSW building, Nanima St; Eugowra Second Hand Book Shop, Pye Street; Somerset Lane Boutique, Nanima Street; Lavender & Lace Craft Cottage, Broad Street; Mandagery Art Studio, Broad Street, Nanami Lane Lavender Farm; and The Lady Bushranger, 51 Nanima Street. Eugowra News is the local newspaper.

Professional

There are a range of professional services including David Bigg – accountant; Eugowra Printing & Designs – printing; S G Cheney - Real Estate, Stock and Station Agents; and Lynette Crowe – Clinic at CWA rooms Nanima St - naturopathy, acupuncture, iridology, reflexology, reiki, lymphatic drainage, health foods, flower essences.

Automotive & Rural

Eugowra offers a range of agricultural and automotive services for the surrounding rural areas including Eugowra Lube Centre (& fuel), Oberon Street; Wykamp & Sons Mechanical Repairs, Broad Street; Walkers Ag n Vet Services, Farm Equipment & Suppliers, Evelyn Street; E&RJ Hay & Co P/L (sawmill), Nanima Street; and Eugowra Produce Mill JC Adams, Nanima Street.

Issues & Strategies

- **Business Services:** Eugowra offers a range of local shopping and business services that meets local needs but there may be limited chance for growth of these services as higher level services and shopping are often sourced from larger centres, particularly Orange.
- **Business Land Uses:** There appears to be a reasonable supply of existing buildings suited to commercial uses that are either vacant land or vacant buildings that could meet any additional growth requirements. There is no need to specify a business zone for Eugowra, however, the key issue is identifying non-flood prone land for future growth. In general business services should be directed to land east of Mandagery Creek and out of the flood way.

5.18.2. Tourism

Eugowra is fortunate to have a number of local visitor and tourist attractions including but not limited to:

- Eugowra Historical Museum & Bushranger Centre, Pye Street - Souvenirs, crafts, preserves, bushranger cards, plants, home cooking;
- The Lodge Markets (at the Masonic Hall): open 1st weekend of each month;
- The historic site for the Escort Way coach robbery;
- Eat Your Greens, Escort Way – Function Centre and restaurant;
- Kev's Kelpies - 'Karana', Nanami Lane – entertainment;
- A range of historic and heritage properties and streetscapes; and
- A range of places to eat.

Eugowra forms part of a greater 'bushranger trail' in the local area and there is a range of scenic and natural places to visit including Nangar National Park. (Note: Eugowra Escort Rock Cafe and Visitors Information closed down 23 December 2009).

There is a range of accommodation types from pub accommodation to bed and breakfasts and caravan and camping areas including, but not limited to:

- Central Hotel Eugowra – for up to 15 guests with shared facilities;
- Fat Lamb Hotel - meals and accommodation (7 rooms with shared facilities) with caravan and camping on site;
- BnB's BnB, 2km west of Eugowra – Bed & Breakfast, self-contained cottage (sleeps 5 in 2 bedrooms);
- Creekside Farmhouse, "Galwary" Cookamidgera Road: accommodation for up to 8 people in a self contained, historic farmhouse;
- Sandeanie Country Retreat – Bed & Breakfast 1km from Eugowra with 3 bedrooms supporting up to 10 guests;
- High Park – Bed & Breakfast with cabin for up to 4 guests;
- Seldom Seen – Bed & Breakfast – 6km from Eugowra supporting up to 4 guests;
- Showground Caravan & Camping with powered and unpowered sites.

Issues & Strategies

Tourism: The community have recognised that a key opportunity for Eugowra is to build on its tourism potential. Eugowra is successful in having a range of accommodation, boutique shops, and building on its history and heritage. Protection for heritage items should be a key part of this strategy. There is an opportunity to attract more caravans and passing travellers with improved camping and caravanning facilities.



5.19. Industrial Land Uses

5.19.1. Identified Industrial Land

As Eugowra has a Village Zone in CLEP1991 that permits a broad range of land uses (subject to consent) throughout the zone, there has not been an historical need to identify an area solely for industrial land uses in existing planning instruments for Eugowra. Having said this, [Section 5.22 – Previous Land Use Strategies](#) shows that consistently an area to the south of Eugowra has been identified for light industrial uses.

It is important to note that the GHD (2008) *Subregional Rural and Industrial Land Use Strategy* does not recommend Eugowra as a location for large-scale / heavier industries or industrial estates. However, the strategy remains silent on the issue of local industrial uses and, therefore, this Settlement Strategy seeks to review demand and supply at the local level for industrial uses.

5.19.2. Existing Industrial Land Uses

Industries within the Village Zone

The following are key industries within the Village Zone of Eugowra:

- JC Adams & Co Pty Ltd - Evelyn Street & Noble Street with ~7,530m² (Ag'n'Vet) plus 5,490m² (Silos & Weighbridge & Sheds) – Total of 13,020m²;
- Eugowra Produce – 1 Nanima Street with rural produce sheds and land totalling ~15,504m² privately owned land plus 1,416m² of road reserve – Total of 16,920m²;
- Central West Granite Supplies – Nanima Street – with sheds and land totalling ~4,144m²;
- E & RJ Hay Sawmill / Eugowra Timber Supplies, Nanima Street – with sheds and land totalling ~32,848m² privately held plus ~4,400m² of road reserve – Total of ~37,248m²;
- Canowindra Produce, Nanima Street (& along Karreena Street) – including silos for grain storage with land totalling ~10,100m².

Therefore, there is approximately 8.14 hectares of land currently used for industrial purpose or immediately attached to that industrial land. Only about 75% of this land is actually or potentially used for industrial purposes (~6 hectares).



Figure 17: Aerial photo of industrial uses at southern end of Nanima Street (Source: Council GIS 2011 – LPMA Aerial 2010).

Industries outside the Village Zone

Other than rural and tourism industries, the key extractive / processing industries in close proximity to Eugowra include quarrying at Carmina, 'Lio Rosa', 'Carmina Grey' and Townsends



Sand Pit. These activities are permissible under the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* in the rural zone and are not necessarily in conflict with the surrounding agricultural uses. In addition there is a large feedlot to the south of Eugowra that provides local employment and could support additional rural industry. These types of uses should not occur in close proximity to the existing village as they could affect residential amenity.

5.19.3. Local Issues

Need for an Industrial Zone

The key benefit of creating a light industrial designated area is that it can be located and designed to minimise land use conflicts, particularly with regards to sensitive residential land uses. It can also provide an area for expansion of industrial uses where encroachment by other non-compatible uses, objections to operations and growth, and the need for large land areas for 'buffers' can be minimised – thereby maximising economic growth and investment certainty and minimising cost to the community and industrial operators.

The current Village Zone makes this difficult because industrial uses are theoretically permissible anywhere in the urban zone, subject to addressing impacts and other development controls. With no clear industrial area there is no certainty for residential owners that light industrial uses occur away from residential areas and no certainty for industrial investors that they will get a consent.

Land Use Conflicts with Industrial Uses

Other than the JC Adams land (including the Ag'n'Vet services), all of the existing light industrial uses are located along the southern end of Nanima Street, south of Karreena Street and generally away from the core urban areas of Eugowra. However, there are six (6) existing dwellings in close proximity to these industries on Nanima Street. The majority of these dwellings were apparently built after development of the industrial uses and were supposedly aware of the potential for land use conflicts. As these industrial uses are generally centred in one location it suggests that the area should be identified as a light industrial precinct in this Strategy.

5.19.4. Existing Supply & Demand for Industrial Land

Regional Competition for Industrial Land Uses

It should be acknowledged that the appropriate location and supply of industrial land needs to look not only within each settlement but also across Cabonne and the region. There is competition to attract industrial uses between each settlement in Cabonne (especially Molong, Canowindra and Manildra) as well as between key regional centres (with core industrial areas in Orange, Parkes, Forbes, Wellington, Dubbo and Blayney). Most major industrial estate in key regional centres are fully serviced, based on or near rail lines and major highways, and have a critical mass to attract new businesses.

Challenges & Opportunities

Eugowra would face some significant challenges to attracting new larger-scale industries including, but not limited to: lack of proximity to a major highway, lack of an operational rail system and freight interchange, a limited number of existing industries, limited access to larger utilities (high voltage power/natural gas etc), a small regional population and local demand for products, distance to Sydney markets, flood prone lands, and increased centralisation of industry to regional centres with strong competition from nearby Parkes and Forbes.

However, some of the benefits in Eugowra for local light industrial activity include, but are not limited to, a supply of flat land, proximity to highly fertile agricultural lands and rural production, existing industrial activity to the south of the village with some vacant land supply, some local

extractive and rural industries, and access to centralised water. The key issue is to identify industries that would benefit from these opportunities and are not restricted by the challenges. In general, this Strategy recommends that small to medium sized lots (2,000-8,000m²/lot) that could support local manufacturing and fabrication, engineering services, vehicle repairs and rural supplies and machinery services would be suitable for Eugowra.

Heavy Industry

The Rural & Industrial Strategy recommends that heavier industries are located in the proposed industrial area at Manildra. This is supported by this Strategy on the grounds that there is limited competitive advantage for heavier large-scale industries in Eugowra at this time and there is insufficient infrastructure in Eugowra to support these kinds of industries. Therefore, there is no need to provide a heavy (higher impact) industrial area in Eugowra at this time.

Projected Demand

Based on historical demand and the existing industrial supply, there is likely to be a need for 2-3 additional small (2,000m²) to medium (8,000m²) light industrial sites in the next 5-10 years. In addition, there may be potential for 1-2 new larger scale (1-2 hectare) (possibly rural) industries. As a result the estimated demand in Eugowra for the next 10 years is approximately 2 hectares of land. This is less than the existing supply of vacant land in proximity to existing industrial land uses and suggests that additional land is not required at this time.

5.19.5. Proposed Industrial Land Use Area(s)

Figure 18 shows the proposed area for existing and proposed light industrial uses in Eugowra that are larger and higher impact than a home industry and should, where possible, be separated from established residential areas. Whilst there are some existing dwellings in this area these dwellings were mostly constructed after the industrial uses were present and were aware that there may be land use conflicts. The proposed area is ~19.3 hectares (including roads) of which at least 4-5 hectares is vacant and readily available for industrial uses and another 4-5 hectares may be suitable for future use subject to closure of the rail corridor and acquisition of the land. As this is in a high groundwater sensitivity area, only light industrial uses that will not have a risk of contaminating the groundwater should be permitted.



Figure 18: Proposed light industrial area for Eugowra (Source: Council GIS 2012).

Another possibility is to take up vacant land in the proposed future Village Zone for Eugowra (outside the existing/proposed industrial area on Nanima Street). A Village Zone is likely to allow applications for light industrial uses (subject to consent). However, due to the potential for increased land use conflicts this Strategy recommends that only home industries and very low impact light industrial uses should be supported in the future Village Zone (subject to merit based assessment). This would include quasi industrial-businesses such as the Ag'n'Vet and silos and weighbridge. Any heavier industrial uses should be located away from sensitive residential uses.

5.19.6. Sites for Future Investigation

In addition to the above possible industrial areas, Council has previously considered a new stand-alone industrial site south of Eugowra on Casuarina Drive at Lot 87 DP1100661 (Figure 19). This consists of a 22.7 hectare site that is currently used for agriculture and is separated from the existing Village Zone by a Travelling Stock Reserve ('TSR'). Council has purchased this site with the intention of developing it as an industrial estate.



Figure 19: Aerial photo of the proposed industrial lot (yellow outline) and approved subdivision layout for the proposed industrial estate south of Eugowra.

As at late 2011, Council has approved a Development Application for the subdivision of this lot into eleven (11) parcels ranging in size from 0.4 hectares to 2 hectares with a remnant lot to the south. This is intended to provide 10 industrial lots of a variety of lot sizes to meet future industrial demands. However, it is important to note that the development approval is subject to conditions of consent that must be met before the approval can be acted upon. Some of these conditions may include requirements to conduct a range of additional studies to investigate the suitability of the land for the intended purposes. There are also several works that need to be completed. Council has not provided a budget for these works as at late 2011 so this will need to be resolved before the subdivision can proceed.

As these matters had not been resolved at the time of preparing a new local environmental plan ('LEP'), Council has made a resolution to prepare a separate planning proposal to the Department of Planning & Infrastructure for the future rezoning of this land. The future zoning of this land will require Department approval and applications for industrial uses in this area will also require Council consent. This Strategy recommends that the existing industrial area within the Village Zone is utilised prior to commencing development of this new subdivision to reduce the costs of infrastructure provision.

5.20. Residential Land Uses (Village Zone)

5.20.1. Existing Residential Character

Number of Dwellings / Occupancy Rate

As at December 2009, there were 248 lots used for dwellings in Eugowra according to a count from aerial photo and street analysis in the Village Zone with an estimate of 248 dwellings (excluding individual aged care units). This is 51% of the total lots in the Village Zone. As a comparison, the ABS 2006 Census (Quickstats) recorded 269 private dwellings in the Eugowra Census District (that includes the Rural Small Holdings Zone) with an occupancy rate of 2.2 people per household and 43 vacant dwellings (16% of total private dwellings).

Dwelling Types

Whilst there are some good examples of traditional dwellings from the early 1900s, most of the existing housing stock is from the mid to late 1900s. Newer housing is interspersed with some of the older housing stock. Some housing is reaching the end of its life and will need to be replaced where it is not nominated as a heritage item.

The dominant dwelling type in Eugowra is the detached or separate dwelling (93.4%), however, there are also a limited number of flats, units or apartments (7 – 3.1%); and other dwelling types (8 – 3.5%). The majority of medium density housing types appear to be for seniors living.

Lot Sizes

As stated in [Section 5.5.4 – Lot Sizes](#), lot sizes are fairly varied but are most regular to the east of Mandagery Creek. In general there are roughly square blocks of 2,000m² with a range of narrower lots from 1,000m² to 2,000m². As a result standard lot widths range from ~20 to 40 metres. There are still some larger lots up to 4.25ha east of the Creek. To the west of Mandagery Creek lots get down to approximately 1,000m² in size but range up to 23,600m².

The existing lot depth and width is sufficient to allow the placement of a dwelling with good side setbacks and a good rear yard (though this gets more difficult with road frontages down to 15m). As the Village Zone is sewered there is no need to address the need for septic systems. There may be some opportunities for consolidation and subdivision to provide for medium density in close proximity to the town centre in the future.

Dwelling Densities

The density of most residential blocks in Eugowra ranges from approximately 4 to 12 dwellings/hectare (excluding roads). This is a relatively low density of housing. Most dwellings generally have a large yard resulting in a 'rural village' character and there are several vacant lots per block. It would appear that many of the larger 2,000m² lots could easily be subdivided down to 1,000m² resulting in a slight increase in density but resulting decreases in landscaped areas.

Rental Rates

Out of 226 occupied dwellings in Eugowra, 34 dwellings are rental properties (15% of occupied dwellings) (Source ABS 2006). Eugowra has a reasonable rate of rental properties but this strategy has not assessed the balance of supply and demand.

Issues & Strategies

- **Density / Character:** A combination of larger lot sizes and a dominance of detached dwellings means that the dwelling densities in Eugowra are relatively low. This produces a very suburban character for most dwellings with low scale and large yards. However, increased densities may offer an alternative to consumption of more land for growth and improved sustainability, subject to protecting the character and amenity of the settlement.
- **Housing Types:** The majority of dwellings in Eugowra are detached and there are limited medium density housing types (~7 flats & 8 other dwellings). The attraction of living in Eugowra is rarely to live in higher density dwellings. However, with a larger older

population there may be a future demand for small or more compact housing that is lower in maintenance on smaller lots and there is currently low choice of housing types in Eugowra to meet this future need (other than aged care housing).

- **Development Controls:** There are no major issues with the character and design of dwellings in Eugowra but there may need to be some controls to ensure that the character of Eugowra is preserved. This may involve restrictions on the use of transportable/relocatable houses and shed-style homes to ensure that they are in keeping with the existing housing stock materials and sympathetic to heritage items.

5.20.2. Projected Dwelling Demand

Dwelling Occupancy Rate

The occupancy rate is the number of people that will live in each house. [Local Profile Paper – Table 2.12](#), notes that for Cabonne, the average household size has decreased from 2.9 (1991), to 2.8 (1996), to 2.7 (2001), to 2.6 (2006). Therefore, average household sizes have decreased over the last 15 years and this is also occurring in neighbouring Shires.

The occupancy rate for Eugowra (2006 ABS data) is already quite low at 2.2 people per dwelling and would not be expected to increase over the next 10-30 years, especially if there are increases in aged care housing (senior citizens living alone); families having less children (smaller family sizes); and greater variety of housing types which attracts younger people to live independently. On this basis it is assumed that the estimated occupancy rate in Eugowra in the year 2036 will be approximately 2.1 people per dwelling. This is reasonably consistent with the Rural & Industrial Strategy which projects an occupancy rate in Cabonne Part C (including Eugowra) of 2.3 people per dwelling ([Local Profile Paper – Table 8.16](#)).

Dwelling Demand from Projected Population Growth

As stated in [Section 5.8 – Projected Future Population Growth](#), the projected annual population growth rate for Eugowra ranges from -0.5%/year (minimum) to +0.3%/year (maximum) with an average of -0.1%/year. As this Strategy needs to cater for the greatest potential land demands, dwelling demand will be based on a **maximum** annual population growth rate of +0.3%/year, even if this rate is never achieved.

Based on a 2006 population for all of Eugowra (including the Rural Small Holdings Zone)(the ABS Census District) of 535 people, the projected population of this area by the year 2036 is 585 people, an additional 50 people over the 2006 Census figure. A projected rate of 2.1 people per dwelling in 2036 results in a requirement for the following number of dwellings (Table 7). Therefore, the requirement for new dwellings based on projected estimations of population growth ranges from 79 to 237 dwellings over 30 years with an average of 158 new dwellings required.

Method	Calculation	Projected Demand for New Dwellings by 2036
Dwellings required by <u>Additional</u> Population	50 / 2.1 per dwelling	24
Dwellings required by <u>Total</u> Population minus <u>Total</u> Dwellings	585 / 2.1 per dwelling (279) minus existing total dwellings (269 ABS)	10
Dwellings required by <u>Total</u> Population minus <u>Occupied</u> Dwellings	585 / 2.1 per dwelling (279) minus existing occupied dwellings (226 ABS)	53
Average Dwelling Demand to 2036	24 + 10 + 53 (87) / 3	29

Table 7: Projected dwelling demand from estimated population growth to 2036 of Eugowra.

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Dwelling Demand Projected from Development Applications

An alternative method to estimate dwelling demand is based on the historical number of dwelling applications approved each year by Council for new dwellings (Table 8). Please note that this has limited accuracy as development approval does not necessarily ensure that these new dwellings were built.

On this basis it could be projected that there could be demand for approximately 57 dwellings over 30 years in the Village Zone plus (based on a continuation of current approval rates).

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	Av.
VZ	2	4	1	3	1	1	2	3	1	3	0	21	1.9 dwellings/year or 57 over 30 years

Table 8: Total number of dwelling applications approved 1999-2010 (financial years) in the Village Zone (Source: Council records - Fujitsu Database).

Dwelling Demand Projected from Historical Growth in Dwellings

An alternative method to estimate dwelling demand is to project from historical growth of dwellings based on ABS Census data (Table 9). Census information provides the number of total private dwellings and number of occupied dwellings in Eugowra Census District since 1976. It can be seen that total average annual dwelling growth from 1976-2006 was approximately 0.94%/year but total occupied dwellings was only 0.63%/year. Based on an average annual growth rate of +0.8%/year continuing for the next 30 years, in 2036 there is estimated to be 73 total dwellings (an increase of 73 dwellings) by 2036. However, this is for both the Village Zone and the Rural Small Holdings Area so this is likely to be slightly less in the Village Zone (say 60 dwellings).

ABS Census	Total Dwellings			Occupied Dwellings			Unoccupied Dwellings	% Unocc. Dwellings
1976	210			190			20	9.52%
1981	218			197			21	9.63%
1986	230			211			19	8.26%
1991	242			216			26	10.74%
	Census data not accessible							
2001	258			232			26	10.08%
2006	269			226			43	15.99%
Average	△	%△	Av. Ann. %△	△	%△	Av. Ann. %△		
1976-2006	59	28.1%	0.94%	36	19.0%	0.63%		
1986-2006	39	17.0%	0.85%	15	7.1%	0.36%		
2001-2006	11	4.3%	0.85%	-6	-2.3%	-0.52%		

Table 9: Change in occupied and total private dwellings 1976-2006 (Source: ABS Census).

Dwelling Demand - Summary Table

Table 10 summarises the finding above to suggest that approximately 182 additional (new) dwellings will be required by 2036 (30 years) compared to the 2006 figure for the Village Zone.

Projected No. of Dwellings Required by 2036 based on following calculation method	Increased No. of Dwellings from 2006
Projected Population Growth (Max. +0.3%/year)	29
Projected Development Applications	57
Projected Historical Dwelling Growth (Max. 1%/year)	60
Average 29 + 57 + 60 = 146 / 3	49 Additional Dwellings

Table 10: Projected additional dwellings needed by 2036 based on a variety of projection methods.

5.20.3. Estimated Vacant Lots Likely to be Developed

As shown in [Section 5.16 – Vacant Land](#) and Table 11, there are 43 potential lots in the Village Zone that are likely to be developed over the next 30 years, resulting in a potential dwelling supply of 43 dwellings (assuming each has a single dwelling).

Source of New Lots for Dwellings	Vacant Lots Development Potential	Likely Number to be Available in next 30 years (50% Rule)
Small Vacant Lots Unaffected by Natural Hazards	58	29
Subdivision of Larger Allotments	28	14
TOTAL	86	43 Lots/Dwellings

Table 11: Potential developable lots / additional dwellings in Eugowra over the next 30 years (subject to demand and supply).

5.20.4. Comparison of Supply & Demand for Dwellings

Summarising all of the above sections there is a projected demand for 49 dwellings in Eugowra's Village Zone over the next 30 years and a potential for 43 small vacant lots in this area. Therefore, the total supply of land available in Eugowra's Village Zone compared to the demand is shown below:

$\frac{43(\text{vacant unconstrained lots})}{49(\text{projected demand for new dwellings})} \times 30 \text{ years} = 26.3 \text{ years supply.}$

As there is sufficient supply for well in excess of 10 years there is no need to rezone any additional land at this time for residential uses.

Issues & Strategies

Need for Rezoning in Next LEP: Based on the calculation / projections in this Strategy there is no need to rezone any additional urban residential land in the next LEP as there is sufficient land to provide over 26 years supply. If there is a change in the growth rate of Eugowra then there is sufficient 'buffer' in the existing supply to provide land for dwellings over a 10-15 year period to enable Council to amend this Settlement Strategy and consider amending the Local Environmental Plan to rezone more land (if appropriate).

5.20.5. Medium Density Housing

Demand for Smaller Housing

The calculations above for dwelling supply and demand are premised on existing land supply being utilised for single detached dwellings. However, an alternative is to provide more medium density housing to meet possible demand for smaller housing types and an increased range of housing types/sizes for younger couples, older lone person households, and lower socio-economic groups.

Indicative Requirements for Medium Density Housing

There are a number of factors that would generally favour the identification of a site for medium density including, but not limited to:

- Access to public transport (to reduce reliance on private cars and the need for car parking);
- Access to key retail & community services (particularly health services) (to promote equity & reduce need for cars);
- Minimise impact on existing heritage streetscapes & items;
- Avoid sloping land where it would be more expensive/difficult for flat sites, accessible floor-plans, and ageing-in-place;
- Avoid land that is affected by natural constraints such as flooding or bushfire that may create a higher risk of loss to life or property;

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- Ensure that increased traffic densities can be supported by the local road network;
- Maximise amenity for users of the medium density dwellings by separation from major roads, industry and other sources of noise/dust/odour etc;
- Minimise impacts on amenity of neighbouring properties through loss of privacy, views, significant vegetation etc.

This Strategy has not done an in-depth analysis of the preferred locations for medium density in Eugowra. However, there is likely to be some vacant and under-developed sites in reasonable proximity to the hospital (out of the flood and bushfire prone areas) and in the areas east of Mandagery Creek above the 1 in 100 ARI flood area. In particular, Eugowra should leverage off the introduction of the Multi-Purpose Health Service by providing increased opportunities for independent seniors living and assisted units to allow people to continue living in Eugowra.

Issues & Strategies

Proposed Medium Density Area: Council should conduct more detailed studies on the appropriate areas for growth of medium density housing (particularly aged care housing) where it would address the principles of this Strategy. Medium density is likely to increase in demand and may be part of the solution for future residential growth and maintaining the population in Eugowra.

5.20.6. Minimum Lot Size for Dwellings

Based on the fact that most lots in the Village Zone are connected to centralised sewerage there is potential to subdivide these lots for dwellings down to approximately 500m² where a minimum road frontage of 15m could be maintained. However, the existing and desired character in Eugowra appears to be for slightly larger lots and the existing street and block subdivision pattern would make it difficult to achieve this.

Issues & Strategies

Minimum Lot Size (Urban Lots): Consistent with most of the smallest lots in Eugowra this Strategy proposes that the minimum lot size for urban lots should be 900-1,000m² if connected to the sewer and 2,000m² if (for any reason) they are not connected to sewer.

5.21. Residential Land Uses (Rural Small Holdings)

5.21.1. Land Uses (& Existing Population)

The following diagram (Figure 20) and table (Table 12) summarises the existing land uses and vacant land that could support further development in West Eugowra.

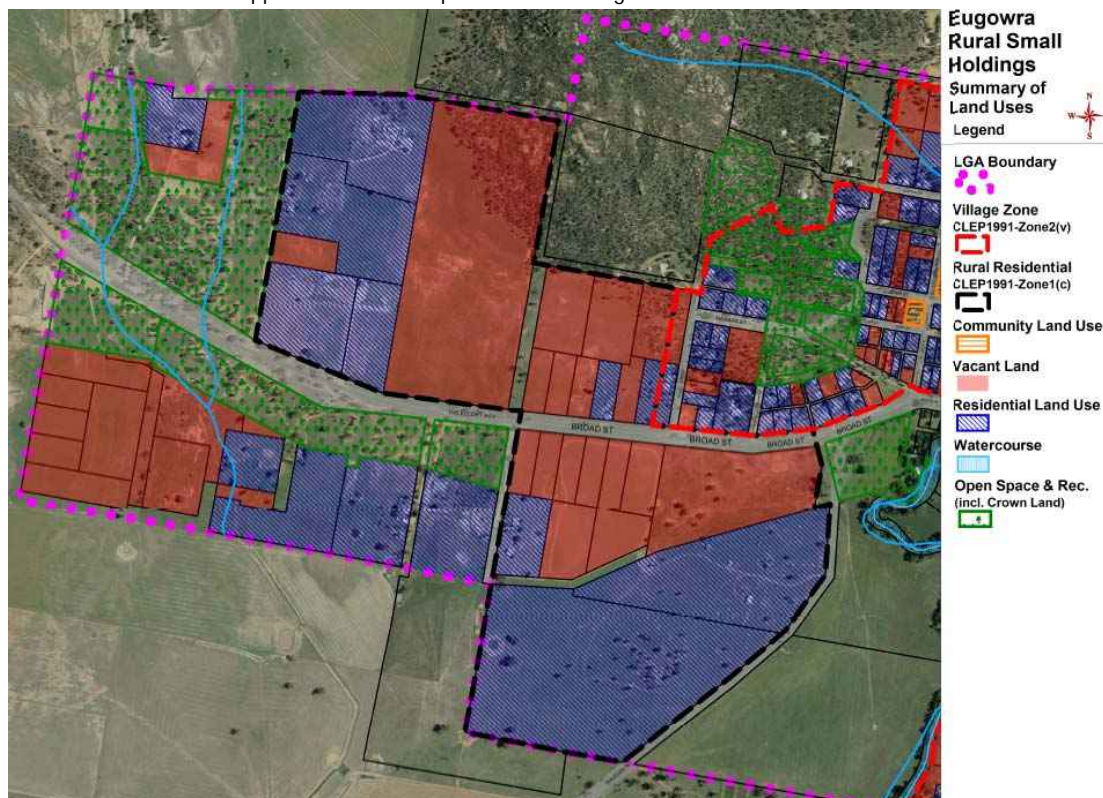


Figure 20: Land uses in Eugowra Rural Small Holdings in 2010 (Source: Council GIS 2011 & site visits).

Only 33% of lots have an existing dwelling. The majority of lots are less than 2 hectares in size but there are still several large lot of up to 15ha which are under-developed.

Existing Area of Zoned Land	Total Lots	Size of Lots	Lots with Dwellings	Dwelling Density	Est. Pop. @2.2p/dw	Vacant Lots
92 ha (incl. roads) ~88 ha (excl. roads)	27	11 lots <1ha / 7 lots @~1-2ha 4 lots @~2-6ha / 3 lots @>15ha	9 (33% of all lots)	0.1 dwelling /ha	20 people	18 (66% of all lots)

Table 12: Summary of land uses in Eugowra Rural Small Holdings in 2010.

Issues & Strategies

Existing Large Lot Residential: Whilst there is over 88 hectares of zoned land it is currently only supporting 9 dwellings with many vacant lots and some capable of further subdivision. There is a potential under-utilisation of existing zoned land.

5.21.2. Key Constraints & Opportunities

As Figure 21 shows, there are two key constraints affecting the Rural Small Holdings Zone in Eugowra. The dominant issue is the fact that nearly all the Zone is classified as bushfire prone land but with different categories of risk. The heavily vegetated areas in the north against the hills are Category 1 Vegetation (orange) including a 100 metre buffer (red) and would not be suitable for any development.

The remainder of the Zone is mostly Category 2 Vegetation (yellow) which has a lower bushfire risk but may require asset protection zones or special construction methods. Interestingly, most of this area has very little significant vegetation, but grass fires and ember attack are still a possibility. Whilst development in this area may be marginally more expensive to meet the

required standards, it is expected that there is potential for some development due to the limited supply of land in and around Eugowra that is not affected by natural hazards.

There is also some flood prone lands that extend along the Mandagery Creek floodplain, but due to the contours, only a limited area along Vaughan Road is affected and this is unlikely to significantly affect the development potential of this land.

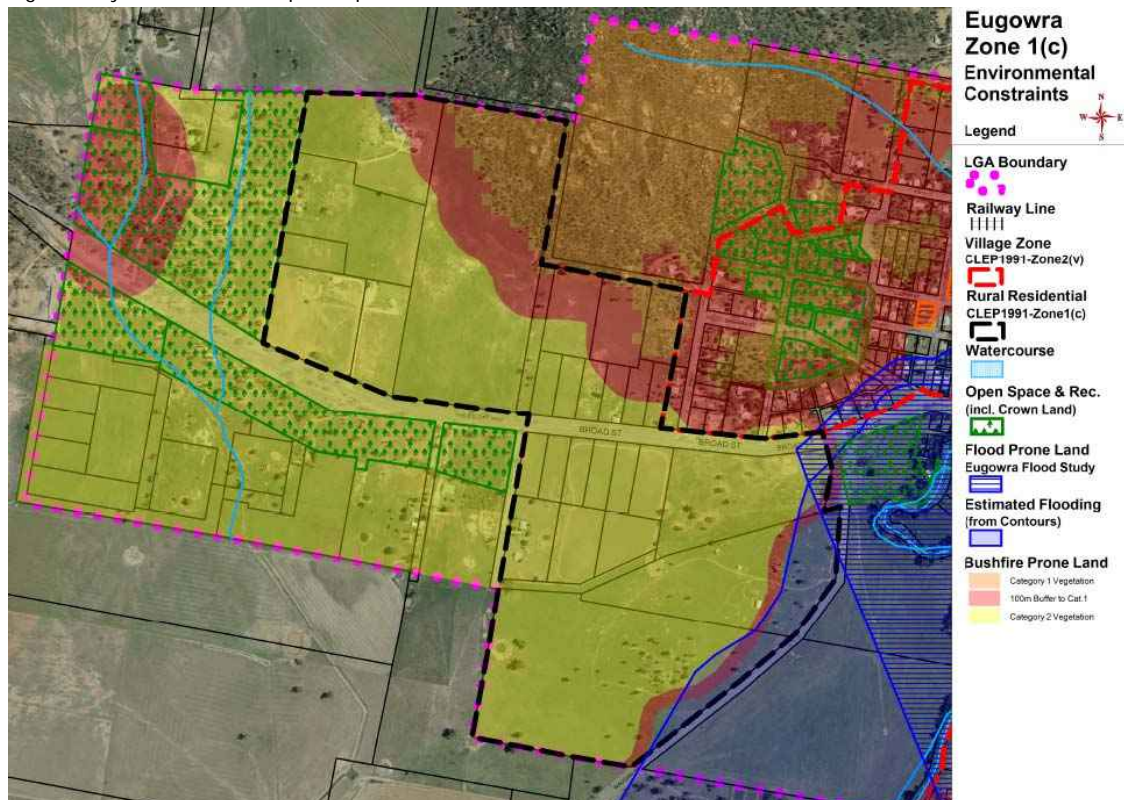


Figure 21: Key environmental constraints in the Rural Small Holdings Zone (Source: Council GIS 2010 / RFS 2003).

Issues & Strategies

Opportunities & Constraints: There are some significant constraints from development of large lot residential land from bushfire and partially flooding risk. However, this can be addressed by appropriate siting and building design in accordance with State Policy. Whilst the proposal is to retain a minimum lot size ('MLS') for subdivision of 0.4 hectare / lot (1 acre) in many circumstances a lot size this small may be unachievable. An average lot size in the area is more likely to be 2 hectares (see below).

5.21.3. Estimated Supply & Demand

Table 13 shows the potential dwelling yield from the existing land supply based on a variety of lot sizes. Based on an average lot size between 2ha and 4ha the 88 hectares of land could potentially support between 13 and 35 additional lots/dwellings.

Method / Av. Lot Size	Potential Total Lots	Minus Existing Dwellings	Potential New Lots/ Dwellings
Small (0.4ha/lot)	88ha/0.4ha = 220 lots	220-9	211
Medium (1ha/lot)	88ha/1ha = 88 lots	88-9	79
Medium (2ha/lot)	88ha/2ha = 44 lots	44-9	35
Large (4ha/lot)	88ha/4ha = 22 lots	22-9	13

Table 13: Potential lot/dwellings result from the existing zoned area.

As stated above, the average lot size in Eugowra's Rural Small Holdings Zone is likely to be greater than the permissible 4,000m² / lot. The 2005 Draft Strategy suggests that demand is

generally for 0.8ha to 2ha lots that allow for some livestock keeping and this Strategy generally agrees. When backing onto high bushfire hazard area the lots may need to increase from 2ha to 4ha to allow sufficient asset protection zones.

Whilst [Section 5.6 – Historic Population](#) suggests there has been an historical decrease in population in and around Eugowra over the last 20 years, this Strategy believes there will be some low to medium growth and demand for large lot residential lots over the next 30 years.

The Draft 2005 Strategy suggests that there may be up to 20 enquiries for large lot residential a year and actual demand might be a total of about six lots a year but that there is no land available on the market to meet this demand. There is limited data on the number of dwelling approvals in the Zone 1(c) area – but it would appear that at most one dwelling is approved and built on average every 2 years.

The community may be correct in stating that there is insufficient land on the market to meet demand and this may result in a low dwelling approval rate. However, there are 18 existing vacant lots that could potentially support a dwelling (as at 2010) and several lots well in excess of the desired lot size of 2ha to 4ha so land supply is not the issue but owners may not be selling this land. If this is the case then Council recommends that the community approach those land owners with vacant lots / larger land holdings and ask them to put them on the market as the first step before rezoning any additional lands.

Issues & Strategies

Supply & Demand: This Strategy has estimated that over the next 30 years on average there will be a new dwelling built every 2 years in this area or a total of fifteen (15) dwellings over 30 years. Therefore, if there is an average lot size of 2ha to 4ha the existing zoned area could support up to 30 years supply of large lot residential dwellings and there is no need to rezone any additional large lot residential land at this time.

5.21.4. Proposed Land Use Outcomes

Large Lot Residential Area

As there is sufficient land for at least the next 10 years there is the possibility of seeking to remove land from the large lot residential area that has a high risk of bushfire hazard. However, this would fragment the large lot residential zone and there is no easy way to divide the land to not affect particular land owners.

Minimum Lot Size

Alternatively, the existing large lot residential boundary could be retained and the issue addressed by a suitable minimum lot size ('MLS'). An MLS of 1 hectare for future subdivision would create sufficient large lot sizes to allow future dwellings to be located away from bushfire prone land and retain the larger lot character of this area that appears to be in demand. This will not preclude dwellings from being erected on existing subdivided lots that are less than 1 hectare in size so existing owners will not be affected. It also provides subdivision potential to a greater number of land owners.

However, this would require further study to identify the market for 1 hectare lots and the constraints in this area. Therefore, for the purpose of the new Local Environmental Plan it is proposed to retain the existing MLS for subdivision of 4,000m² but Council should consider large lot sizes where dictated by site analysis and constraints.

Rezoning Requests

Previous rezoning applications in 2005 have been received requesting rezoning of rural land to large lot residential in three key areas including:

- North of Eugowra on The Escort Way at 'Eat Your Greens';
- South of Eugowra between Casuarina Drive and Mandagery Creek; and
- South of Eugowra to the east of Casuarina Drive (now Council land).

This Strategy recommends that these areas are not rezoned for large lot residential uses in the next LEP as they cannot be justified based on supply/demand and there are also a range of

potential flood issues that would need to be considered in detail and addressed before any rezoning could occur. This does not preclude these land owners from conducting further investigations to support any proposed rezoning but clearly explains the matters that would need to be addressed for these applications to amend this Strategy and to be successful.

5.21.5. Future Investigation Areas

As Figure 22 shows, this Strategy recommends a future investigation area for large lot residential uses to the north of Pye Street that should be considered once existing supplies of large lot residential land achieve 60% subdivision (to minimum 2ha lots) and 60% take up of dwellings.

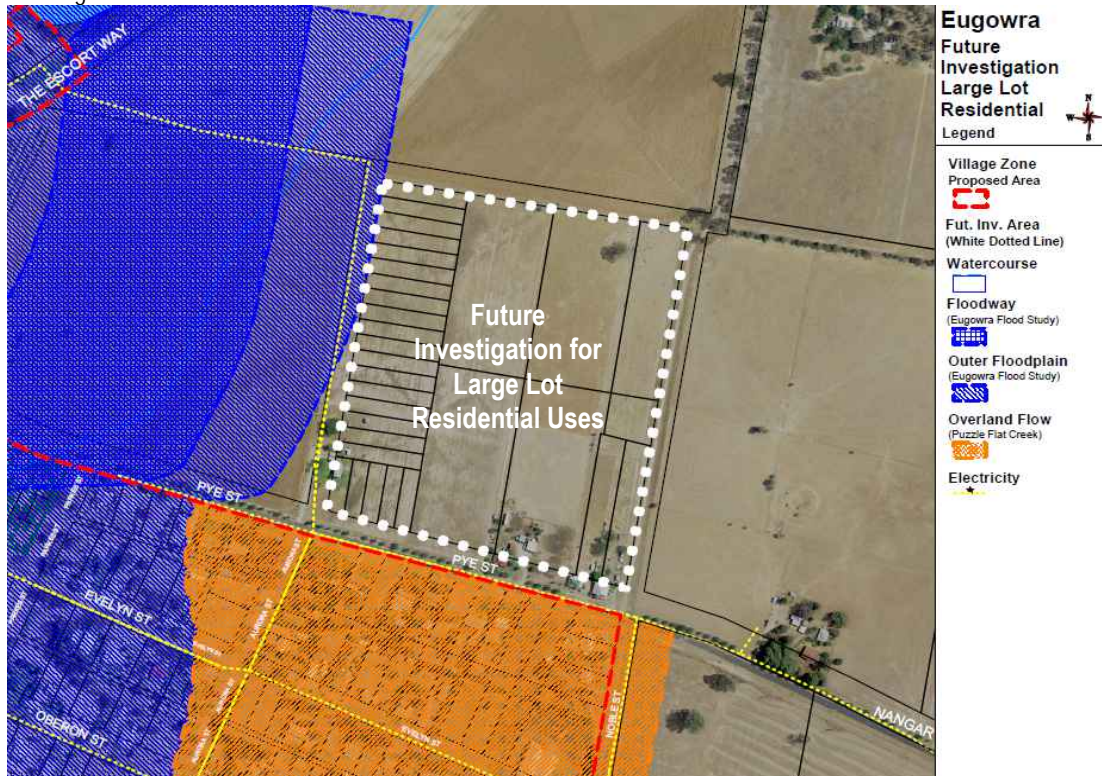


Figure 22: Future Investigation Area for large lot residential uses in north-east Eugowra (Source: Council GIS 2011).

This area is outside the Mandagery Creek Floodway and Outer Floodplain (1 in 100 ARI) so there is a higher probability that flood issues can be addressed. It is likely that the Puzzle Flat Creek overland flow path extends over this land but this may be addressed by future works and an appropriate floor level for development (once a more detailed site review is completed). The area already has a fragmented ownership (4 owners) and lot pattern (31 lots ranging from ~4,000m² to 1.6 hectares) and four dwellings that reduces its agricultural potential and it has very limited significant trees, biodiversity potential and bushfire risk.

It has an area of approximately 11.6 hectares that could potentially support between 11 (@1ha/lot) to 29 (@4,000m²/lot) dwellings or 7 to 25 new dwellings.

This area has frontage to Pye Street (sealed) and road reserves on the western and eastern sides. There is electricity running along the southern and western road reserves and reticulated sewer along the southern frontage.

Issues & Strategies

Future Investigation Area: This Strategy suggests a potential future investigation area for large lot residential uses ranging from 4,000m²/lot to 1ha/lot depending on the outcomes of detailed environmental and flood studies. This area should not be considered until 60% of the potential supply of the existing zoned land is developed for dwellings.

5.22. Previous Land Use Strategies

5.22.1. Previous Studies

It is important to conduct a review of all relevant previous studies as they can provide valuable information on key opportunities and constraints as well as key recommendations that have been put to the community. Where possible, this Strategy should be consistent with those recommendations (unless there are clear reasons to change recommendations).

5.22.2. 1990 Draft DCP – Eugowra Village & Environs

In 1990 there was an attempt to prepare a Development Control Plan for each of the villages including the 'Eugowra Village & Environs – Proposal to Prepare a Development Control Plan (1990)' ('1990 Draft DCP'). In effect this was a draft land use strategy for the village and it reached the following conclusions:

- **Vacant Land:** There were 60 vacant lots in the East Eugowra Village Zone with 30 of these being suitable for development due to flooding and sufficient site to support a septic system. Floor levels need to be elevated 300mm above natural ground. There were 27 vacant lots in the West Eugowra Village Zone but due to flooding and lack of servicing only 4-6 lots appear suitable for development (west of Icely Street). However, development of some of the Crown lands may accommodate about 20-30 larger type lots (more detailed investigations required).

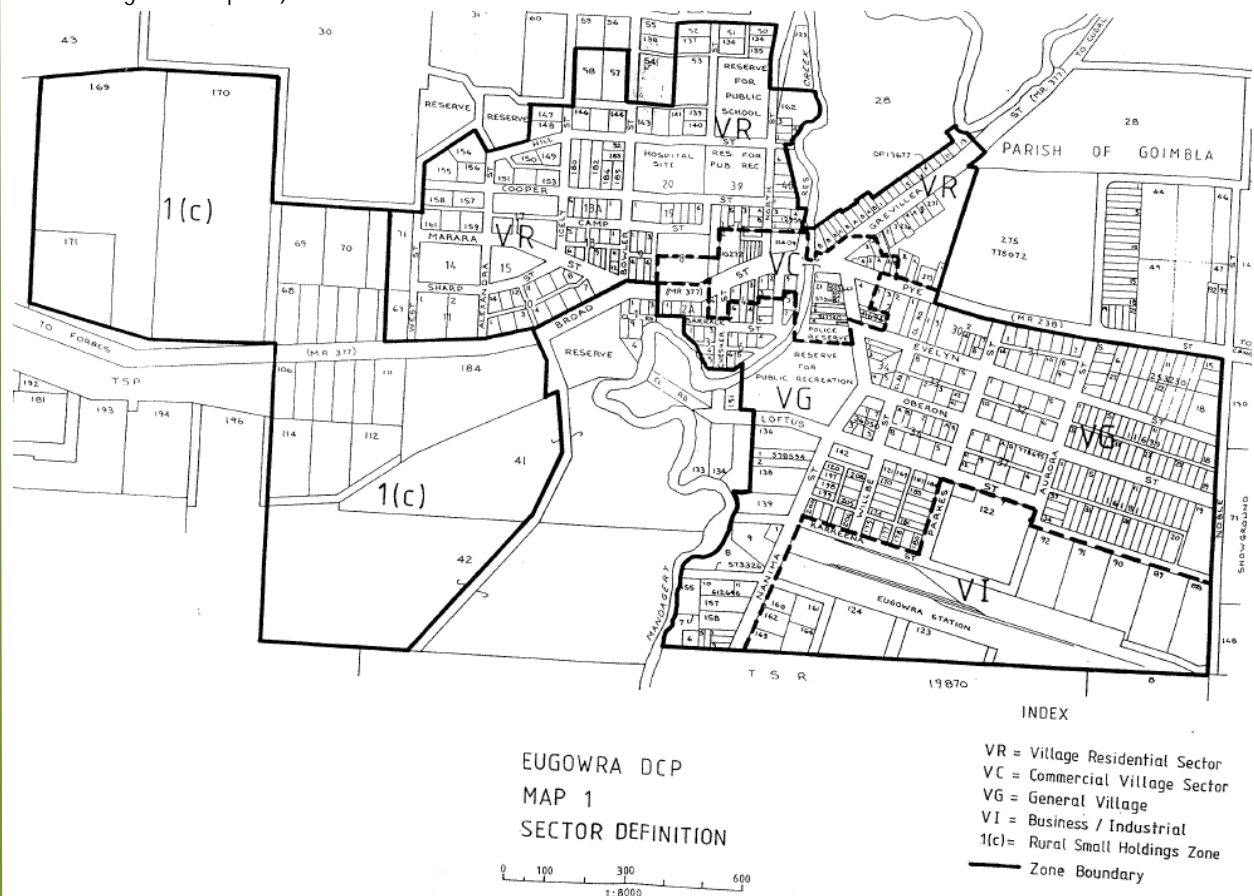


Figure 23: Excerpt from 1990 Draft DCP setting out potential commercial and industrial sub-zones.

- **Industrial Businesses (VI):** As shown in Figure 23 an area of land to the south-east on both sides of the railway easement was identified for industrial and business uses. The 1990 Draft DCP suggests that settlements like Eugowra have most to gain from broadening their local businesses, from increased processing or local raw materials and

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from promotion of local tourism" and whilst competition for businesses is high, successful is more likely when the town has sites identified and available for development.

- **Commercial Businesses (VC):** As shown in Figure 23 an area around Broad, Nanima and Pye Streets (where the existing businesses are present) is suitable. However, flooding was not discussed in detail.
- **General Village:** The remaining areas are either for mixed uses (VG) or residential development (VR). This is consistent with the continued use of a Village Zone for these areas.

This Strategy is largely consistent with the recommendations of the 1990 Draft DCP except that it does not promote development of the Crown Land due to bushfire risks and has a smaller area of industrial zoned land.

5.22.3. Draft Eugowra Village Strategy (2005)

The recommendations of the 2005 Strategy are addressed as follows: (see also FIG):

Draft 2005 Eugowra Village Strategy	Draft 2011 Settlement Strategy Response
Commercial: Core commercial activity to remain in the centre of town with new development preferred along Grevillea and eastern side of Nanima Street in areas not affected by the floodway.	This Strategy agrees that <u>existing</u> commercial/ business uses can remain in the flood prone areas in proximity to Mandagery Creek but substantial expansion may be difficult. This Strategy agrees that new commercial activity is preferred along Grevillea Avenue and the eastern side of Nanima Street in areas not affected by the floodway.
Industrial: Provision to be made for an industrial area between the railway line to the north and the traveling stock reserve to the south, surrounding the existing sawmill and engineering works as well as the area to the west between Nanima Street and the Mandagery Creek.	This Strategy agrees that the industrial activities may warrant a light industrial zone to highlight and protect their ongoing industrial operations. The key difference is that existing dwellings would not be included in any industrial zone and would remain in the Village Zone.
Village Zone (Extension): The 2(v) zone to be extended on the eastern (western) fringe to include a portion of the 1(c) area immediately to the west of West Street. Although development in this area would need to address the bushfire protection guidelines it is largely cleared and would provide elevated lots with extensive views for higher density residential development.	This Strategy has determined that there is no immediate need to rezone any additional land in the next LEP. However, it agrees that a future investigation area would extend to the west of West Street. This would include the twelve (12) small lots on either side of Broad Street for a future Village Zone extension. The majority of this land is only Vegetation class 2 for bushfire and is lower risk than the land immediately adjacent to the heavily vegetated areas.
Village Zone (Infill): Opportunity for residential infill development exists in the western higher lying areas of the village as well as on the southeastern fringe of the 2(v) zone. The western area however is constrained for development by bush fire requirements as well rocky outcrops. The largely undeveloped area on the southeastern fringe of the village zoned 2(v) also provides for infill development opportunities if floodplain development issues can be overcome.	This Strategy has recommended removal of the Crown lands on the western higher lying areas from the Village Zone due to their inclusion in an area of Category 1 vegetation for bushfire prone land which is high risk. This Strategy agrees that some infill development is supported to the south-eastern fringe of the Village zone on the existing vacant lots but this is dependent on addressing any flood hazard and overland flow issues from both the Mandagery Creek and Puzzle Flat Creek in accordance with the Floodplain Management Plan.
Future Investigation (Growth): Propose future urban growth on the area to the north of Pye Street to mirror the urban development to the south. Limitations on development in this area as it are also located within the floodway and floodplain, with planning of these areas to be according to the necessary requirements. Future urban expansion in an easterly direction on the northern side of the road to Canowindra, when supply of urban land needs to be increased.	This Strategy would support future investigation of the area to the north of Pye Street only where it can be shown that it would be outside the 1:100 ARI flood level + 0.5m freeboard and could address any overland flow issues to Puzzle Flat Creek in accordance with the Floodplain Management Plan. This is most likely to be suitable for large lot residential uses to allow larger lot sizes to address flooding and servicing issues.

Draft 2005 Eugowra Village Strategy	Draft 2011 Settlement Strategy Response
Flooding (DCP): DCP No. 11 for the Flood Prone Land in Eugowra to be finalised once it has addressed the relevant concerns of the community relating to flood levels.	DCP No.16 – Eugowra Flood Prone Land was approved by Council at the meeting on 21 December 2009. This DCP still raised issues for the community and was followed by a review of the Floodplain Management Plan which was adopted at the June 2011 Council Meeting. A new DCP will need to be drafted to integrate with a new LEP in the future.
Future Investigation (Rural Residential): Future 1(c) land to north of Eugowra beyond cemetery.	This Strategy does not suggest an extension of large lot residential land to the north of Eugowra beyond the cemetery as there is sufficient existing large lot residential supply for the foreseeable future and the proposed land has some significant bushfire prone lands and access to Eugowra may be broken by flooding of the Mandagery Creek.

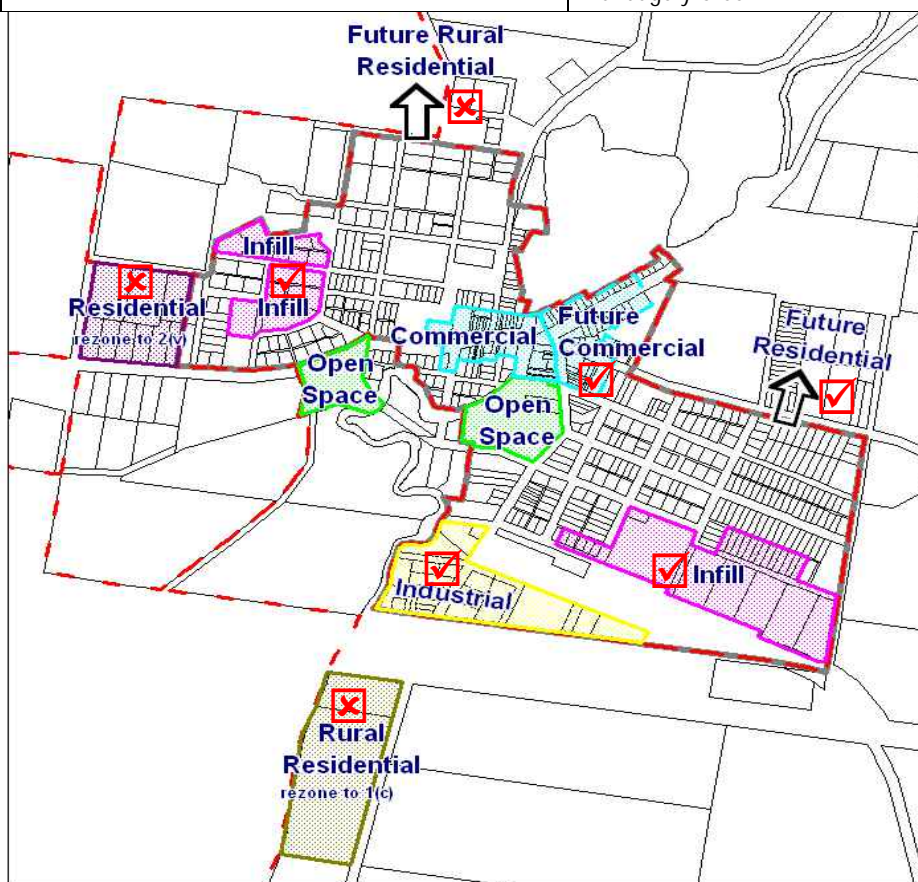


Figure 24: Key recommendations of the Draft 2005 Eugowra Village Strategy (with ticks and crosses to suggest where it agrees with the recommendations of this Strategy).

5.22.4. Subregional Rural and Industrial Strategy (2008) ('R&I Strategy')

There were no outcomes from the GHD (2008) *Subregional Rural and Industrial Land Use Strategy* ('R&I Strategy') that were particularly applicable to Eugowra other than the broad principles and as follows:

- **Large Lot Residential:** Eugowra was not identified for any further large lot residential expansion in the next LEP and this is agreed and supported by this Strategy.
- **Industrial:** The R&I Strategy only identified larger format and heavier industrial lands around Manildra of sub-regional importance in Cabonne. Therefore, it did not look at industry at the settlement level. This Strategy seeks to supplement the R&I Strategy with a local industrial strategy for Eugowra.



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Document Control

Version	Date	Author	Summary	Reviewed
A	July 2010	A.Napier	Draft	Internal Review
B	May 2011		Draft for Councillors	DES
C	July 2011		Amended Draft	AN
D	December 2011		Draft Final	DES
E	March 2012		Final for Public Exhibition	KB
Adopted	16 July 2012		Exhibition Copy + Amendments	DES
Final	August 2012		Amendments Incorporated	AN

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6. Village of Manildra

6.1. Executive Summary & Proposed Land Use Arrangements

6.1.1. Historical Population Growth

The ABS Census District for the Village of Manildra is a reasonable representation of the settlement's population at each Census, but does not include a few dwellings in the Rural Small Holdings areas. It is estimated that there are approximately another 12 people not included in the Census figures. Therefore, the 2006 population of Manildra is estimated to be approximately 515 people. As Table 1 shows, the census district (Village Zone + Rural Small Holdings) population has been falling since 1976 (except for 1991-1996).

Year	1976	1981	1986	1991	1996	2001	2006
Population	557	520	520	512	533	513	503
Av. Ann. Change from previous Census	N/A	-1.33%	0.00%	-0.31%	+0.82%	-0.75%	-0.39%

Table 1: Census population and population change for Manildra's Census District since 1976 (Source: www.abs.gov.au).

6.1.2. Key Factors Influencing Population/Economic Growth

For more detail see [Section 6.7 – Summary of Opportunities & Constraints](#).

Manildra has a number of potential positive influences that could result in positive population growth and demand for land including, but not limited to: Access to Orange-Broken Hill Railway line as a competitive advantage for industry; growth of Manildra Mill and Canola Mill with slight increases in employment; a relatively secure water supply; a high voltage electricity supply; Suitable lands to support larger industrial buildings; the identification of Manildra as a key industrial centre for Cabonne in the Rural & Industrial Strategy; proximity to Parkes as a potential future logistics/freight hub for the region; tourism and heritage potential on the key route from Orange to Parkes; potential for access to a future gas pipeline; and limited environmental constraints to growth.

Manildra has a number of potential negative influences that could hamper population growth and demand for land including, but not limited to: Negative historic growth rates; Manildra's location outside 'Orange's Commuter Zone' where the primary demand is occurring; the high cost of development and cost of finance; the perceived impact on amenity from the adjacent industries; the effect of native title claims on release of Crown land; Manildra's heavy dependence on the Manildra Mill / Canola Mill for employment and economic growth; and the perceived lack of growth in Manildra that may affect future investment.

6.1.3. Projected Population Growth

Based on a balancing of the positive and negative influences on growth above, the projected average annual rate of population growth for the Manildra up to the year 2036 is likely to range from -0.1% (minimum) through to +0.5% (maximum) with an average of +0.3% per year. *(Note that growth rates will change over time and this is an estimated average growth rate over the 30 year period).*

Based on the **maximum** growth rate of +0.5%/year and an estimated 2006 population of 515 people in Manildra, the projected 2036 population will be approximately 598 people, an increase of 83 people over the 2006 population. This growth will create some additional demand for residential, business, industrial, community and open space/recreation land uses that will need to be provided in Manildra and the region.

6.1.4. Proposed Land Use Zone(s)

The estimated 2006 population of Manildra is estimated to be approximately 515 people. Good planning practice suggests that settlements above 1,000 in population should consider adopting specific zoning for each land use ('complex zoning'). The aim of this requirement is for 'mature' towns to restrict certain land uses to specific areas to minimise potential land use conflicts and recognise the need to plan for and consolidate key land uses.

As Manildra's population is well below 1,000 people, this Strategy recommends that Manildra retain a 'Village Zone' (or similar zone under the Standard Instrument) for the key urban areas. However, in contrast to most other villages in Cabonne, Manildra has a strong set of industrial land uses that have the potential for land use conflicts with sensitive uses (e.g. dwellings). Therefore, this Strategy recommends the adoption of a defined industrial area to both encourage and support existing industry but also to protect encroachment between industrial and residential uses to minimise land use conflicts.

6.1.5. Summary of Proposed Changes

As shown in Figure 1, the following proposed land use areas (and changes) are recommended by this Strategy (in summary) (for more detail see the specific land use sections in this Chapter):

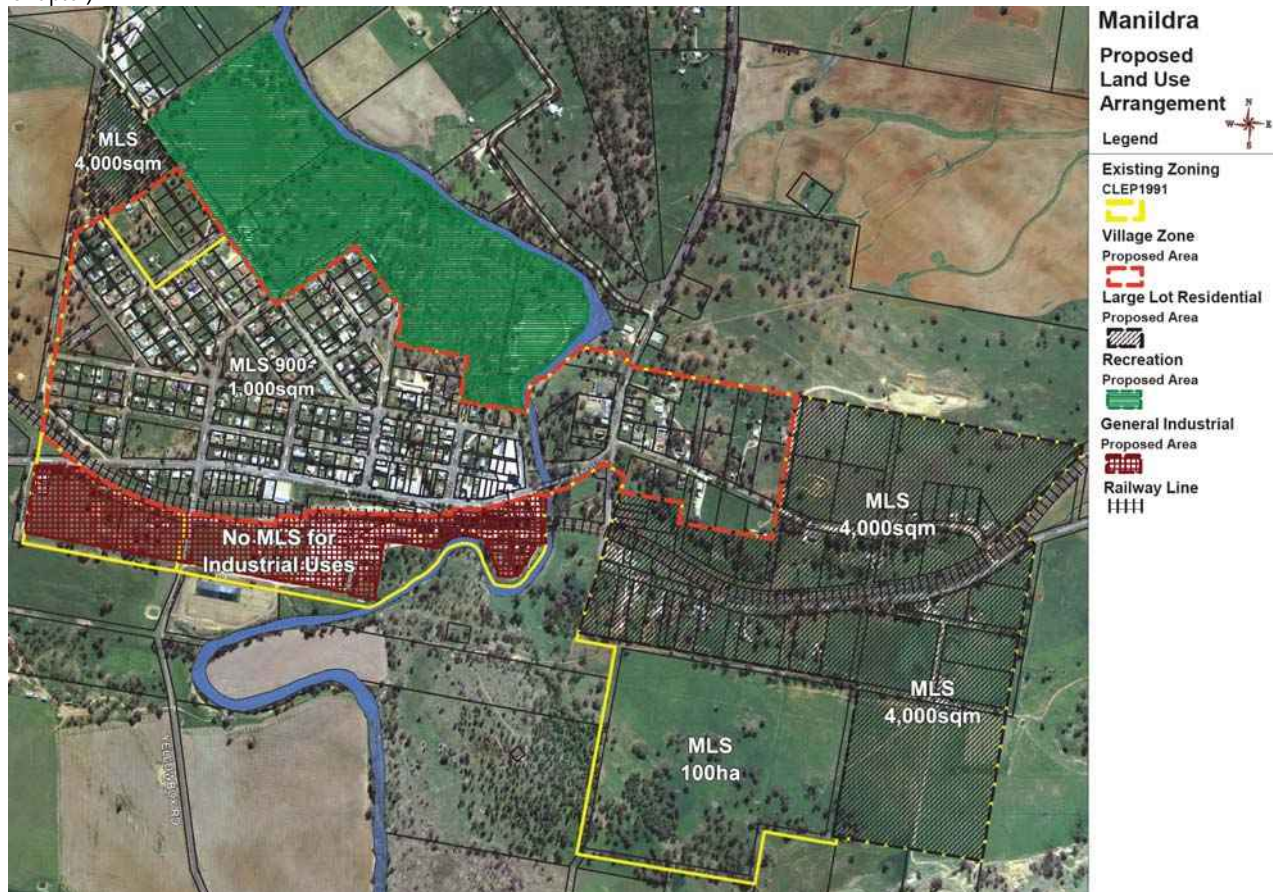


Figure 1: Proposed land use arrangement and minimum lot sizes for Manildra recommended by this Strategy (Source: Council GIS 2012).

a) *Industrial Area*

This Strategy recommends that the following areas should be included in a new general industrial zone with a total area of ~22.4ha (incl. roads) and ~20ha (excl. roads):

- **Existing Industrial Uses:** All existing industrial uses south of Kiewa Street (including the associated mill manager's residence) should be included in a designated general industrial area as part of the new LEP for Manildra. This has an area of approximately 10 hectares. The creation of a clear industrial zoned area gives certainty to the community and industrial operators as to the location of industrial uses whilst promoting increased separation from sensitive residential areas to the north of the railway line (see [Section 6.19 – Industrial Land Uses](#) for more detail). The mill manager's residence is a heritage item and does not have any significant additional development potential so the proposed industrial zoning will not affect any new dwelling potential.
- **Village Zone Lots:** In addition, the three existing village zone lots to the east of Boree Street between Dederang and Carlisle Streets should also be included in the industrial zone to allow for short term industrial growth until such time as the larger investigation areas to the south are rezoned for industrial purposes. This picks up three lots ranging in size from 0.35 ha to 2.24 ha, resulting in an increase of approximately 3.45 ha in potential industrial land (see [Section 6.20 – Residential Land Uses](#) for more detail).
- **Rural Small Holdings Lots:** In addition, the three existing rural small holdings lots to the west of Boree Street between Dederang and Carlisle Streets should also be included in the industrial zone to allow for short term industrial growth until such time as the larger investigation areas to the south are rezoned for industrial purposes. This area was clearly identified in the Rural & Industrial Strategy for future industrial expansion. This picks up three lots ranging in size from 0.34 ha to 3.96 ha, resulting in an increase of approximately 6.38 ha in potential industrial land (see [Section 6.20 – Residential Land Uses](#) for more detail).

b) *Village Zone*

It is proposed to retain a Village Zone for the core urban residential and business area of Manildra to provide the greatest flexibility for a range of compatible land uses.

However, in general retail and commercial operations should, where possible, be promoted along Kiewa Street to reinforce the existing business centre. The proposed Minimum Lot Size (assuming that lots are connected to centralised sewer) is 900-1,000m² per lot (or 2,000m² if there is no sewer connection).

This Strategy recommends that the area noted above for industrial use (existing or proposed) should be removed from the existing Village Zone (or Rural Small Holdings Zone) – in total approximately 12.55 hectares (including roads).

This Strategy recommends the area to the north-west of Whitton Street between Orange and Toogong Streets (excluding the large lot owned by Manildra Flour Mills) is added to the proposed Village Zone. There is already an historical subdivision pattern of 2,000m² lots on the blocks adjacent to Orange Street on which one house is currently being constructed and the rest of the lots are for sale. The other two lots are capable of further subdivision. As these already have an urban residential character and access to utilities no additional studies are needed for this amendment. This is an additional area of ~5.05 hectares.

Therefore, the total area of the proposed Village Zone is ~109 hectares (including roads and Mandagery Creek).

c) *Large Lot Residential Area*

On the basis that there is an oversupply of Rural Small Holdings land there is potential for Council to consider the following changes to the areas for large lot residential land uses (a total decrease of ~45 hectares):

- **Decrease - North-West:** As a result of the proposed extension to the Village Zone in the north-west of Manildra there would be a corresponding reduction in the large lot residential lands in this area. This would result in a reduction of approximately 4.85 hectares. The remaining Rural Small Holdings area is approximately 5.33ha and should have a minimum lot size of 4,000m²;
- **Decrease – South-West:** As a result of the proposed inclusion of this area in the new industrial area there would be a reduction of ~6.38ha of large lot residential land.
- **Decrease – South-East Agricultural Area:** There is a proposal to remove Lot 106 DP750162 from the Rural Small Holdings Zone. This lot has an area of 33.7 hectares. This lot is currently solely used for agricultural purposes and would require substantial additional cost to provide road access for development that would not be warranted with the existing demand. There is also an issue with potential bushfire prone land in the south of the lot and existing native vegetation that could be protected. As the landholder owns the adjacent lot (Lot 104 DP750162) of area 17.16 ha there is sufficient area for development potential for this owner. This area could be considered for future growth if demand significantly increases. The remaining large lot residential area to the east of Manildra is approximately 90 hectares in size.

d) *Recreation*

Major recreation areas such as the Showground, Golf Course, Jack Huxley Oval and the associated Crown land are recommended to be incorporated into a public or private recreation area instead of the existing rural zone to allow for further use and development of these areas for recreation purposes.

e) *Infrastructure / Other*

Council may also seek to designate special infrastructure areas such as the proposed Sewage Treatment Plant ('STP') to the north-west of the village and the existing waste depot to the south of the village.

6.1.6. Dwelling Supply & Demand

Existing Supply & Demand

The Strategy has estimated that there is a demand for an additional 50 new dwellings in Manildra over the next 30 years and the existing zoning pattern (CLEP1991) could provide up to 99 new dwellings.

Supply/Demand	By Year 2016 (10yrs)	By Year 2036 (30yrs)
Estimated Supply (Village Zone)	41	
Estimated Supply (Large Lot Residential Zone)	63	
Total Supply of Dwellings	104	
Estimated Dwelling Demand (All Zones)	20	50
Oversupply of Dwellings	84 Dwellings	54 Dwellings

Table 2: Total supply and demand for dwelling supply estimated over a 10 year and 30 year period.

Proposed Supply/Demand – Village Zone

Based on the proposed land use arrangements recommended in this Strategy the total area removed from the existing Village Zone would be approximately 13.6 hectares. The total area added to the Village Zone is approximately 5 hectares. However, it is important to note that the area being removed has no additional dwelling potential, whereas the area being added has the potential for 15-18 additional dwellings for 2,000m² lots (or more for smaller lots). Therefore, there is a total increase in dwelling potential that will meet some of the demand in Manildra over the next 10 years.

Proposed Supply/Demand – Large Lot Residential Area

The total proposed large lot residential area is ~98 hectares with only ~80 hectares that is developable. Based on the proposed land use arrangements recommended in this Strategy the proposed large lot residential area could provide between 50 and 90 new dwellings, well in excess of the projected demand for dwellings but providing opportunities for most land holders to develop their land (Table 3).

Location	Area Removed	New Total Area	Proposed MLS	Est. New Dwelling Potential
North-West / Orange Street	4.85ha	5.33ha	4,000m ²	Up to 10 new dwellings
South-West / Carlisle Street	6.38ha	(Industrial) 0 ha	N/A	0 new dwellings
South-East / Old Orange Road	33.7ha	~80ha	4,000m ² (but 1-2 ha likely)	Up to 40-80 new dwellings
Total	44.93ha	85.33ha	---	Up to 50-90 new dwellings

Table 3: Summary of projected demand & supply for proposed large lot residential land.

6.1.7. Future Growth Directions

If the growth rates of Manildra were to increase beyond the projections in this Strategy then there may be future potential to amend the zoning to allow the settlement to grow. This is dealt with in specific detail relating to growth potential for each land use below.

6.2. Regional Location

The Village of Manildra is located in the central/western area of Cabonne (Figure 2).

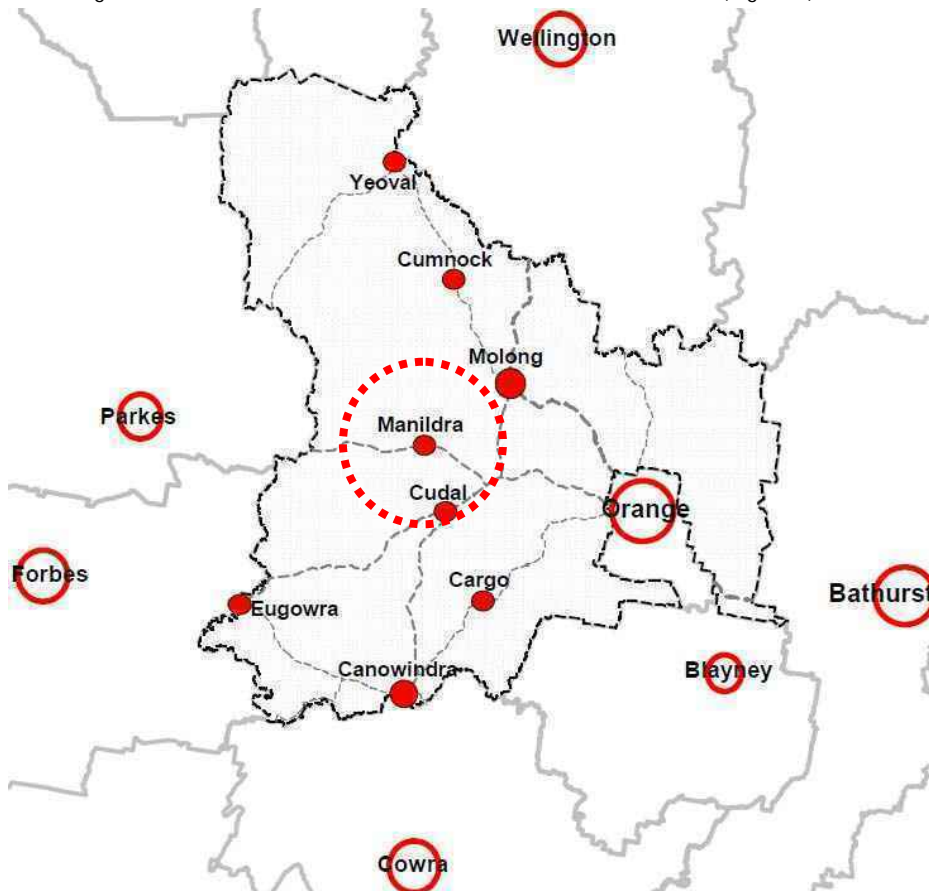


Figure 2: Location of Manildra in relation to key regional centres and settlements (Source: Council GIS 2010).

Manildra is located approximately:

- 15km (15-20 minutes drive) from Cudal via the Kurrajong Road;
- 22km (15-20 minutes drive) from Molong via Packham Drive;
- 46km (30-35 minutes drive) from Orange via Henry Parkes Way/The Escort Way;
- 50km (45-50 minutes drive) from Canowindra via the Cudal-Manildra Road and Nanami Lane / Route 81;
- 55km (40-45 minutes drive) from Parkes via the Henry Parkes Way.

It can be seen that Manildra is outside the preferred 'commuter zone' (25-30 minutes drive) from the City of Orange and the Town of Parkes (the next major settlements). However, Orange and Parkes are likely to be nearest major centres that can provide a higher level of services and retail to meet the needs of Manildra.



Issues & Strategies.

- **Proximity to Cabonne Settlements:** Manildra is relatively central in Cabonne and is within 30-50 minutes drive of nearly all of the other settlements in Cabonne. This is beneficial for people commuting to/from Manildra for work and services and would support any proposals to increase industrial employment in this central location.
- **Proximity to Major Centres:** The closest major settlements to Manildra are Orange and Parkes (and possibly Dubbo) that would provide higher level services that cannot be met in Manildra. As Manildra is just outside the 'commuter zone' of these larger settlements it makes accessing these higher services slightly more difficult, but this can have the benefit of supporting some local services in Manildra.

6.3. Existing Zoning

Figure 3 shows the existing zoning pattern in and around Manildra under CLEP1991 including:

- **Zone 2(v) (Village Zone)** - The core urban area of the Village of Manildra (pink on map) (Total area of ~122 ha incl. roads);
- **Zone 1(c) (Rural Small Holdings)** – Large lot residential areas (orange on map) (Total area ~ 149.5 ha incl. roads) made up of:
 - North-west area – approximately 11 ha;
 - South-west area – approximately 9.3 ha;
 - Eastern area – approximately 129.2ha;
- **Zone 1(a) (General Rural)** for all other surrounding areas (red on map).

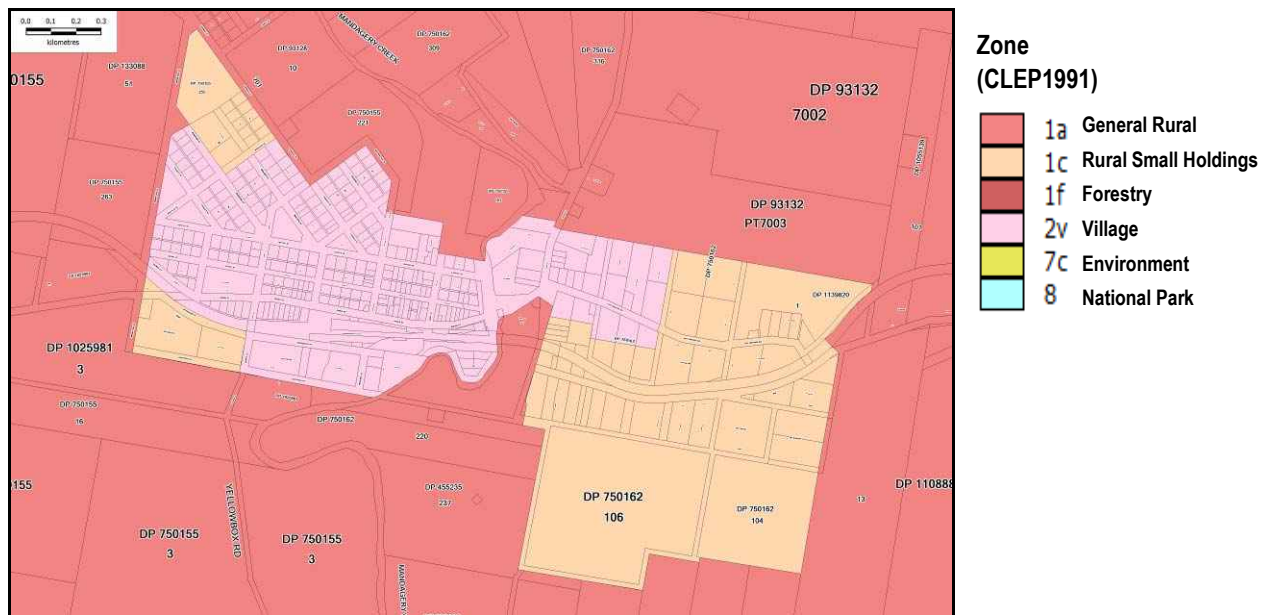


Figure 3: Existing zoning for Manildra and surrounds (Source: CLEP1991 / Council GIS 2010).

The 'urban' boundary of Manildra has expanded and contracted over time as the population has varied. Whilst it is difficult to pin-point dates when boundaries have changed, it would appear that the original village boundary included all land north of Carlisle Street extending to the north-east to include land as far as 1.7 kilometres from the current urban boundary. Subsequently, the village zone was retracted and the large lot residential areas were created, extending further to the south-east.

Issues & Strategies

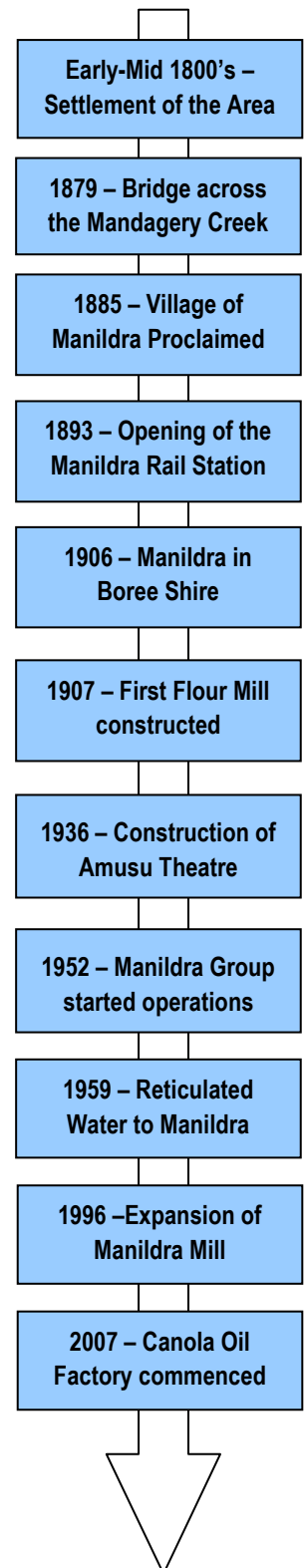
Review of Zoning Boundaries: It is the role of this Strategy to define appropriate areas for each land use within the urban areas of each settlement to ensure sufficient supply of land for the next 5-10 years. This will then inform the preparation of new zoning boundaries under the proposed new Cabonne Local Environment Plan. Manildra's Village Zone is relatively compact. Most of the Rural Small Holdings areas are relatively undeveloped. Any expansion of the urban area of a settlement into the surrounding rural lands needs to be justified as it may take up important agricultural land that is important to the Cabonne economy.

6.4. Settlement History

The history of each settlement is important because it explains why a settlement is located in its present location and how the settlement has changed over time. The name Manildra is believed to be an Aboriginal word meaning 'round about' or 'winding river' referring to the Mandagery Creek that divides Manildra.

One of the most comprehensive records of Manildra's history is Stapleton (1982) *Manildra on Mandagery*. A short summary of key dates for growth of the Village of Manildra is as follows:

- **1840s** or earlier – creation of Brymedura run along the Mandagery, Coates and Gumble Creeks. This was initially outside the limits of location set by the government. It was held by Lord then Boyd.
- **1861** – Land Act allowed for the release of land for smaller farms to be created in the area.
- **1879** – Construction of bridge across Mandagery Creek for Cobb & Co Coach route between Orange and Parkes (via Molong) and back (with two coaches a day).
- **1885** – Village of Manildra officially proclaimed on 20 March 1885. A small settlement grew on the eastern side of Mandagery Creek and consisted of the Coach and Horses Hotel, a store, the Catholic Church, a small hall, a police station, a blacksmith shop, and several houses.
- **1891** – The formation of the Post Office at Manildra replaced the need to walk to the post office at Meranburn (3.2 Kilometres away).
- **1893** – The Broken Hill Railway Line was extended past Molong to Manildra and Parkes and opened at Manildra on 18 December 1893. The station was located on the western side of the Mandagery and resulted in the relocation of the centre of the settlement.
- **1897** – Village and Suburban boundaries notified 29 May 1897.
- **1904** – By 1904, the original settlement of Manildra to the east had a public school, Church of England, hotel, police station, Post Office, Hall, Catholic Church, and Blacksmith. 'New' Manildra in the west had a number of shops and a hotel along Kiewa Street.
- **1906** – Manildra was included in the original Boree Shire formed at this time and based in Cudal.
- **1907** – The first flour mill was constructed by Worral Bros Gem of the West Roller Flour Mills. This mill was destroyed by fire in 1937.
- **1928** – A significant flood along the Mandagery Creek destroyed the bridge that was then later rebuilt.
- **1936** – A travelling picture show call 'The Amusu' was established in 1923 and settled permanently in Manildra in 1936 with the construction of the art-deco theatre. It is believed to be the oldest continuously running cinema in Australia Theatre, and movies are screened once a month.
- **1938** – A new flour mill was constructed by the Hamiltons and electrical power was installed in 1942. This resulted in the creation of The Feed Mill, known as Manildra Stockfeeds in the late 1950s.
- **1952** – The Manildra Group commenced operations with the purchase of the rebuilt flour mill. It supplied flour to bakeries in the Central West and Sydney. It remains privately-owned but now it is Australia's largest processor of wheat – more than a million tonnes a year – exporting to over 30 countries. The group's flour exports account for approximately 60 percent of Australia's total.
- **1959** – On 20 November 1959 reticulated water was provided to Manildra by the Central Tablelands County Council (now 'Central Tablelands Water').
- **1969** – The creation of the Manildra Field Station for university and government research into agriculture and crop production in the Manildra area.
- **1996** – Major upgrades commenced at the Manildra Flour Mill, including installation of B and C mills and improved warehousing and packing facilities. In 2001, the expansion of the Manildra Mill was completed. It now ranks amongst the 10 largest mills in the world.
- **2007** – Mac-Smith Manildra, MSM, was formed in Manildra to produce canola oils for sale into the industrial and retail market. These oils are marketed under The Healthy Baker brand. Business relocated to Manildra from Cudal area.



Issues & Strategies

Understanding the History: The history of Manildra and its surrounds is an important factor both in understanding the location of the settlement, how it grew, key opportunities and constraints to its growth, and as a fundamental building block for tourism and community spirit. Manildra should continue to build upon and reconstruct its history and protect and enhance the key heritage items and character. See [Section 6.13 – Heritage](#) for the proposed strategies for heritage items.



6.5.

Settlement Pattern

6.5.1. Historical Subdivision Pattern

It is important to recognise that in most circumstances Council and the community are dealing with an historical subdivision pattern for many settlements that has often been in existence for over 100 years. Without conducting a detailed historical study it is has not been possible to pinpoint exactly when the current subdivision pattern came into being but it is likely to have occurred in the late 1800s or early 1900s, especially with the 'new' Manildra being formed after the railway opened in 1893.

It is interesting to note that on an old Parish Map dated 1913 the railway line originally was intended to pass to the north of Manildra and all of the streets were aligned in a north-south and east-west grid. However, the railway line was then constructed to the south of Kiewa Street and the entire design for the settlement was changed. Historical subdivision maps from the early 1900s are very similar to the existing subdivision pattern (Figure 4), showing little change in the last 50-80 years except for creation of the rural small holdings areas.

The vast majority of the historic subdivision patterns in settlements in Cabonne were based on a grid pattern with perpendicular streets and regular block sizes. In Manildra, the blocks west of Mandagery Creek and south of Loftus Street are generally oriented with the streets running roughly north/south and east/west with grid only slightly to the east of north. However, the grid is broken by the Mandagery Creek and the railway line. To the north of Loftus Street the main streets are oriented north-west / south-east at a rough 45 degree angle to the horizontal.

It is important to note that at the time of these subdivisions a rear lane was often incorporated through the middle of the larger blocks to allow the collection of sewage from the toilets at the backs of the blocks and many of these remain on the titles today. However, the rear lanes are rarely fenced off from private property and have often been incorporated into the adjacent allotments in Manildra.

Issues & Strategies

- **Subdivision Pattern:** Future road and subdivision patterns should integrate with the historical grid pattern (where possible) and seek to improve connectivity whilst responding to the topography.
- **Rear Lanes:** Council and the LPMA need to conduct an assessment of all of the public mid-block rear lanes and determine whether anything will be done to protect their public nature and whether they will be preserved or released for sale to adjacent land owners.

6.5.2. Street Dimensions

Most of the streets in Manildra are approximately 30 metres in width, except for some of the smaller local roads which are 20 metres in width (Figure 4). A 30 metre road width allows for a road with a lane in each direction and substantial on-road parking areas and kerb/pedestrian areas. A 30 metre road width also allows for potential incorporation of street trees in the road corridor with minimal impact on parking / pedestrian areas.

6.5.3. Block Sizes

Figure 4 shows some of the indicative block areas, lengths and widths in Manildra. Generally, for the Village Zone west of Mandagery Creek the blocks are 100-106 metres wide and 200m long. For the Village Zone east of Mandagery Creek there are no standard blocks.

Issues & Strategies

Connections: Where there is a grid road/subdivision layout there is generally good permeability and ease-of-navigation with relatively short walking distances. However, some of the larger dimension blocks may result in longer walking distances to traverse the town and some urban lots are located up to 1km from the town centre.

6.5.4. Lot Sizes

Historical plans suggest that west of Mandagery Creek the lots used to be fairly regular in size with 40 metre road frontages and 50 metre lot depths resulting in a standard lot area of 2,000m². However, some of these lots have been subdivided in half to produce 20 metre road frontages and a standard lot area of 800-1,000m². There are some non standard blocks that are as low as 600m². To the east of Mandagery Creek lots are generally larger (over 1 hectare in size). The standard 2,000m² lot provides a depth and width that is sufficient to allow the placement of a dwelling with good side setbacks and a good rear yard. As the Village Zone has only recently (2011-2012) had reticulated sewer provided there is an opportunity to allow smaller lot sizes down to 900-1,000m² per lot.

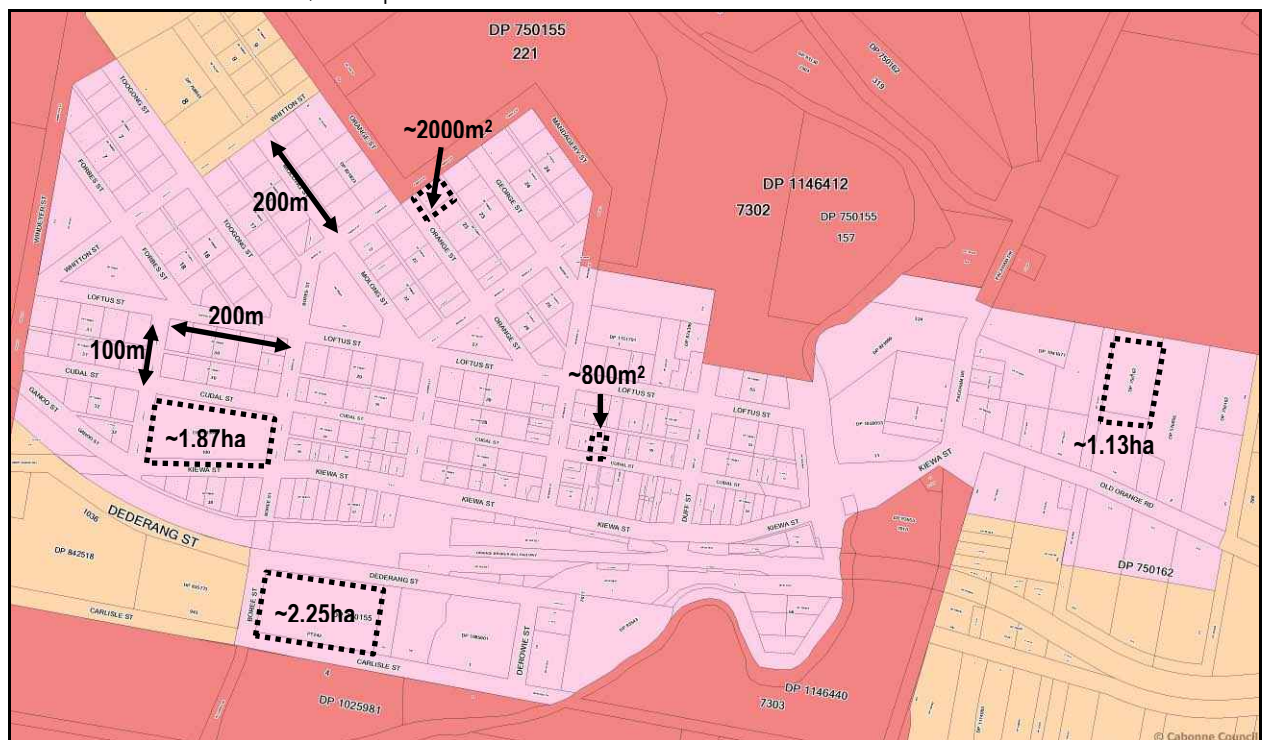


Figure 4: Areas, lengths & widths for some of the standard blocks and lots in Manildra (Source: Council GIS 2010).

Issues & Strategies

Smaller Lots: For lots less than 800m² there may be need for clear controls to guide setbacks and ensure good house and building design on these narrower lots. As Manildra is proposed to be sewered shortly and has centralised water supply then there is potential for an increase in smaller lot sizes down to 1,000m² where this can be shown to protect the desired streetscape and heritage character as well as neighbouring amenity.

6.6. Historic Population

6.6.1. Census Area

The Australian Bureau of Statistics (ABS) Census Collection District ('CD') is the area that ABS uses to calculate the population and demographics for an area. As Figure 5 shows, there is one CD that incorporates the majority of the urban areas in Manildra (yellow line) including all of the Village Zone and the majority of the Rural Small Holdings Zone.

However, there are approximately 5-6 dwellings in the eastern Rural Small Holdings Zone that are not included in the Census boundary. If the population in these additional dwellings is included it is estimated that the population would be increased by approximately 12 people (assuming all dwellings are occupied). Any population count for Manildra does not include the greater rural catchment population that may also use Manildra for services.

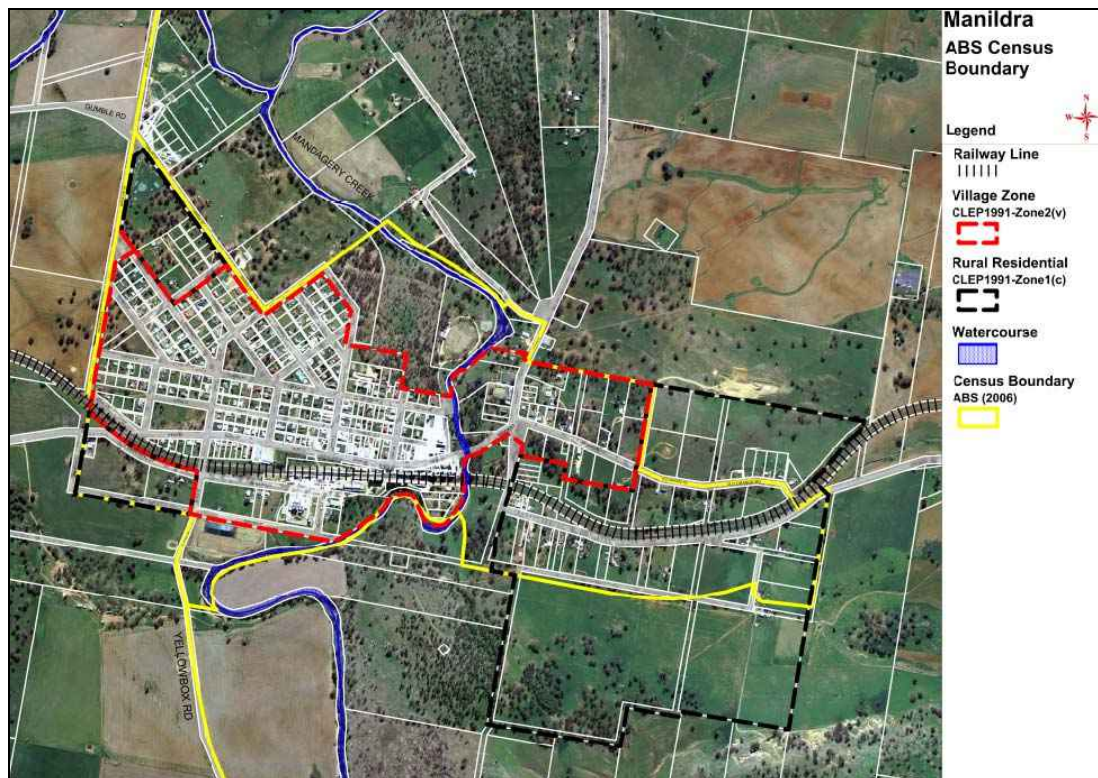


Figure 5: Alignment of the Australian Bureau of Statistics Census Collection Districts to Manildra's urban zones (Source: Council GIS 2010 & www.abs.gov.au).

Issues & Strategies

Measuring the Catchment: There are approximately 5-6 dwellings in the Rural Small Holdings Zone not included in the current Collection District for Manildra that may increase the ABS population by approximately 12 people. Attempts should be made to include these in the future Manildra Collection District to get a more accurate population count for the urban areas of the settlement.

6.6.2. ABS Census Population of Manildra

Table 4 shows that the historical ABS population for the census district for Manildra has generally sat in the range of 503 to 557 people for the last 30 years and other than an increase from 1991-1996, the population has generally been in decline. Over the 30 years of the Census there has been an average annual decrease in population of negative 0.32% in contrast to the average annual growth of Cabonne of 0.45% per year for the same period.

Year	Population (ABS Quickstats)	Δ from Previous Census	% Δ from Previous Census	Av. Annual % Change
1976	557	N/A	N/A	N/A
1981	520	-37	-6.64%	-1.33%
1986	520	0	0.00%	0.00%
1991	512	-8	-1.54%	-0.31%
1996	533	+21	+4.10%	+0.82%
2001	513	-20	-3.75%	-0.75%
2006	503	-10	-1.95%	-0.39%
1976-2006		-54	-9.70%	-0.32%
1986-2006		-17	-3.27%	-0.16%
1996-2006		-30	-5.63%	-0.56%

Table 4: Census population and population change for Manildra's Census District (predominantly the Village Zone) (Source: www.abs.gov.au).

As stated above, it is estimated that there are approximately another 12 people within the 'urban' zones of Manildra not included in the census district for Manildra. Therefore, the recent population estimate for Manildra is approximately 515 people.

Issues & Strategies

Decreasing Urban Population: The population of Manildra's Village Zone over the last 30 years of the Census has been decreasing at an average rate of 0.32% per year. This may raise issues of maintaining a sustainable and viable population if this decreasing population continues in the future.

6.7. Summary of Opportunities & Constraints

It is important to try and summarise the potential for Manildra to grow both in population and economic growth. Please see the following sections for more detail on each of these issues.

6.7.1. Positive Factors

The key **POSITIVE** influences that may assist growth include:

- **Transport (Rail):** Manildra is located on the Orange to Broken Hill Railway line (operational) which is a key transport line for freight from the Manildra Mill and Canola Mill and provides a competitive advantage for industry that may locate to Manildra;
- **Industry (Existing):** Manildra is the only settlement in Cabonne to have any large scale industry in Cabonne including the Manildra Mill and Canola Mill that provide a stronger base for employment and local economic growth. There are proposed to be slight increases in employment over the next 10 years;
- **Dwelling Demand:** Anecdotal evidence suggests that around 50% of the flour mill workers are living in Manildra and 50% are living elsewhere. The community has stated that if there was additional land then it could attract more workers to live locally. The mill has also indicated a desire for more workers to live locally to assist with changing rosters. However, there also needs to be acceptance that some workers will always choose to live elsewhere where there are higher levels of service/facilities (e.g. Orange) or for other reasons and villages close-by like Cudal are also seeking to attract these workers.
- **Industry (Proposed):** Manildra is the only settlement in Cabonne to have been identified in the Sub-Regional Rural and Industrial Strategy for significant additional lands for industrial expansion (to the south of the rail line). Therefore, Manildra is seen as the best location for large-scale industry in Cabonne in the future and is best placed to provide suitable and appropriately zoned land;
- **Proximity to Parkes:** Manildra is the closest settlement to Parkes which is predicted to be a key industrial/logistics/freight hub for inland NSW in the next 30 years. Manildra may be able to build on some of the potential economic growth at Parkes;

- **Transport (Air):** Manildra is just over 30 minutes drive to Parkes Airport which provides improved access to flights to Sydney compared to many other settlements in Cabonne;
- **Location:** Manildra is just outside the 'commuter zone' of both Orange and Parkes (and within the commuter zone of Molong) and, therefore, this may promote local shopping and use of local services/facilities which would make Manildra (and possibly Molong) more sustainable in the long term;
- **Population & Services:** The current population (estimated at 515 in 2006) has a sufficiently high critical mass to sustain a range of local services and facilities. Manildra's distance from Orange and Parkes may also provide greater support for local services;
- **Tourism:** There is potential for increased tourism due to the retention of key heritage items and history such as the Amusu Theatre, a range of accommodation opportunities, its location between Orange and Parkes, and its community spirit;
- **Rural Employment:** The region around Manildra has a strong agricultural base with growth in new areas of viticulture and canola and this rural catchment population may continue to support Manildra;
- **Affordability:** Manildra offers the attraction of a reasonable supply of affordable land compared to median prices in Molong and Orange;
- **Water:** There is access to a secure water supply through the Central Tablelands Water network (from Lake Rowlands) with provision of potable water throughout the Village Zone and no major constraints on quality or minor growth in the future (Interestingly there is still a concern apparent in the Community 2025 Plan Survey that water is a critical issue);
- **Sewer:** A centralised sewerage system was provided to Manildra in 2011/2012 which would support smaller lot sizes and some additional subdivision whilst improving environmental outcomes and residential amenity. The Community 2025 Plan Survey identified this a core need;
- **Education:** There is access to local primary schools and secondary schools in nearby major towns which makes it attractive for families with children;
- **Recreation:** There is access to a good range of recreation facilities including both passive and active recreation areas and sporting facilities, particularly with school sports;
- **Rural Character:** There is the attraction of the rural character, landscape and village lifestyle with proximity to Orange and Parkes;
- **Community Spirit:** There are good community associations that can foster community spirit and local solutions to community needs with a range of community and tourist events throughout the year. In fact, the survey for the Community 2025 Plan showed that the majority of people living/working in Manildra did so for the community spirit, people and rural character.

6.7.2. Negative Factors

The potential **NEGATIVE** influences on growth include:

- **Historic Population Growth:** Historic growth rates show that there has been a decreasing population in Manildra over the last 20 years with a strong negative downturn since 1996. If this pattern continues then it may be difficult to sustain existing services and facilities;
- **Location:** Manildra is just outside the 'commuter zone' of both Orange and Parkes and, therefore, is less likely to act as a commuter suburb for these larger employment/service settlements though it may act as a commuter suburb for Molong;
- **Perceived Availability of Land/Growth:** The Community have stated that there is a perception of a lack of available lots to meet current demand and this 'forces' people to live in surrounding towns and commute. Whilst this Strategy suggests there is vacant land available or the potential for further subdivision/ dwelling development, it may not meet the perceived needs of those who work in Manildra. As there is a low turnover of land and

little new development, the community believe that there is a perception of no growth in Manildra and this does not entice people to buy in the area;

- **Industrial Impacts on Amenity:** Another factor that may reduce demand is the impact of the flour mill and canola mill on amenity in Manildra. Odour, dust, noise and heavy vehicle movements sometimes make it more attractive to live outside the Village Zone or in nearby settlements. These issues were raised in the Community Plan 2025 Survey. Whilst the intention would be to ensure that future industrial growth minimised its impact on the character and amenity of Manildra there will always be a perception or some degree of impact that may reduce desirability of Manildra as a place to live;
- **Cost of Development:** The Community have repeatedly blamed the high cost of development making property development not economically viable. This is a consistent issue across Cabonne due to lower property values and high cost of infrastructure;
- **Cost of Finance:** There is increased difficulty getting bank finance for loans for development in Manildra as up to 30% equity may be needed to get a loan. This may be attributed to poor perception of future values in Manildra by investment/banking groups;
- **Native Title:** Without disrespecting the rights of indigenous owners to make claims over vacant Crown Land, there are a number of sites in Manildra where Crown Land in the Village Zone is subject to a Native Title claim. The process to seek release of native title is complex and takes up to 5 years and may act as a constraint to increased urban growth;
- **Flooding:** The area of the village along the Mandagery Creek is potentially affected by flooding and drainage issues in heavy rainfall events and there are currently no flood studies to accurately map the risk of inundation;
- **Bushfire:** There are some constraints to development and growth on the northern and south-eastern edges of the urban area due to bushfire prone land and significant vegetation that may limit development in these areas;
- **Employment:** There is a heavy reliance on a limited number of key employers including the Manildra Mill and Canola Mill. This may not be robust enough to survive economic, social and political change (including increased mechanisation) which would have a significant impact on economic growth and the population. The Community 2025 Plan Survey highlights the community's perception that employment is the key opportunity for Manildra;
- **Retail & Entertainment:** There are limited local retail services, facilities and entertainment, particularly after-hours to meet all the needs of a diverse population.

Issues & Strategies

Population Growth: In conclusion, the positives for the Village of Manildra tend to outweigh the negatives and suggest that Manildra has the potential to exhibit low to medium population growth over the next 10 to 30 years within some limited increasing demand for land and/or services. However, there are a number of challenges to growth and land supply that will need to be addressed.

6.8. Projected Future Population

Warning: The estimated population in 2036 is only an estimate based on the factors considered in this chapter and it may be affected by future changes in growth potential.

For all of the above reasons, it is estimated that the projected growth rate for Manildra is likely to be in the range of -0.1% to +0.5% with an estimated average annual growth of positive 0.3%. Table 5 shows how the existing and projected rates of growth for Manildra fit with other growth rates in the area and the resulting population projections (based on an estimated 2006 population of 515 people – including both the Village Zone and all of the Rural Small Holdings Zones).

Range of Potential Average Annual Population Growth Rates	Av. Ann. Growth Rate	Projected Population						Δ in pop. 2006-2036
		2011	2016	2021	2026	2031	2036	
MAJOR NEG. GROWTH Manildra Growth 1996-2006	-0.50%	502	490	478	466	454	443	-72
MINOR NEG. GROWTH <u>Projected Growth Rate Minimum</u> Projected Growth Cabonne Pt.C	-0.10%	512	510	507	505	502	500	-15 Minimum
LOW GROWTH	+0.10%	518	520	523	525	528	531	+16
LOW-MEDIUM GROWTH <u>Projected Growth Average</u>	+0.30%	523	531	539	547	555	563	+48 Average
MEDIUM GROWTH <u>Projected Growth Rate Maximum</u> ABS 1986-1996 Cabonne	+0.50%	528	541	555	569	583	598	+83 Maximum
MEDIUM-HIGH GROWTH ABS 1996-2001 Cabonne	+0.70%	533	552	572	592	613	635	+120
HIGH GROWTH (UNLIKELY)	+1.00%	541	569	598	628	660	694	+179

Table 5: Projected population growth for Manildra based on a variety of growth scenarios.

Issues & Strategies

- **Regular Review:** The growth rate for Manildra should be reviewed every census period (5 years) to see whether it accords with the estimated rates of growth and, if not, then growth projections and the supply of land may need to be modified to take into account the new growth factors.
- **Significant Negative Growth:** If the growth rate of Manildra continues at a historical rate of negative 0.5%/year then there will be a decrease in population by 2036 of 72 people. If this occurs then this will have a significant impact on the ability of Manildra to maintain its current level of services and facilities.
- **Average Projected Growth:** Assuming an average projected population growth for Manildra of 0.3%/year there will be an increase in population by 2036 of 48 people. At 2.3 people per dwelling this equates to a demand for approximately 21 new dwellings.
- **Maximum Projected Growth:** Assuming a maximum projected population growth for Manildra in the medium range of 0.5%/year there will be an increase in population by 2036 of an additional 83 people. At 2.3 people per dwelling this equates to a demand for approximately 36 new dwellings.
- **High Growth:** If Manildra adopts a consistently high growth of 1%/year then there may be issues with meeting the demands of that growth. However, Manildra has less constraints to higher growth than many of the other settlements.

6.9. Demographics

Please note that with such a small population these demographics are subject to change and are only a 'snapshot' of this settlement on Census night in 2006.

The following provides a short summary of the demographics for Manildra's Collection District in 2006 that are relevant to this Strategy. Please see [Section 2.6 – Demographics](#) for a comparison of all of the settlements and Cabonne.

- a) **Age:** 16.5% of Manildra's population were over the age of 65 years of age and 27% of the population was over the age of 55 years of age. The median age of Manildra was 36 years compared with 41 for Cabonne and 37 years for Australia.
- b) **Labour Force:** 4.1% of the labour force in Manildra (9 people) were unemployed compared to 3.7% for Cabonne and 5.2% for Australia. 143 people over the age of 15 were not in the labour force.
- c) **Occupation:** 30.2% of employed people were labourers; 13.7% managers; 13.2% clerical and administrative workers; 11.8% technicians and trades workers; 9.4% sales workers; 9% machinery operators and drivers; 8.5% community and personal service workers; and 3.8% professionals.
- d) **Employers:** 32.5% in grain mill and cereal product manufacturing; 4.7% in supermarket & grocery stores; 4.7% in hospitals; 4.2% in sheep, beef cattle and grain farming; and 2.8% in clubs.
- e) **Income:** The median individual income (\$384), median household income (\$765), and median family income (\$1,023) were only slightly less than the Australian averages (\$466, \$1,027, \$1,171 respectively).
- f) **Family Characteristics:** 44.6% were couple families with children (C=45.2%; A=45.3%); 41.5% are couple families without children (C=43.2%; A=37.2%); and 13.8% are one parent families (C=10.6%; A=15.8%).
- g) **Dwelling Characteristics:** There were 227 private dwellings (of which 202 were occupied) on the night of the census. 93.6% were separate houses; and 6.4% flat, unit or apartment. The average household size was 2.4 people per dwelling compared to 2.6 in Cabonne and Australia.
- h) **Household Composition:** 64.4% were family households (C=73.4%; A=67.4%); 31.2% were lone person households (C=22.3%; A=22.9%); and 5.4% were group households (C=1.5%; A=3.7%).

Issues & Strategies

- **Age:** Compared to the Australian average and other settlements in Cabonne, Manildra has a lower average age and lower percentage of older citizens. However, there is still an ageing population that will place increasing pressure and demand for aged care and health services and a corresponding lack of younger / employment aged people to provide economic growth in Manildra. Manildra may lose a percentage of its older population if it does not have the health and aged care services to support this group.
- **Employment:** Manildra has a reasonable mix of employment types with less reliance on government departments than in other settlements. However, there is obviously a heavy reliance on the flour mill and cereal production sector and associated labourers and trades people. If there were to be economic, social or political circumstances that resulted in the reduction or loss of any of these employers then it would have a significant impact on Manildra.
- **Income:** Manildra has a slightly lower median income than the Australian average but is generally better off than many of the settlements in Cabonne which should provide more economic growth opportunities.

- **Dwelling Characteristics:** The dominance of detached housing combined with an ageing population may indicate a need for greater housing choice in the future.
- **Household Composition:** The high percentage of lone person households (31.2%) and lower occupancy rate (2.4 people per dwelling) may reflect the older age but also supports demand for smaller houses in the future.

6.10. Environment & Natural Hazards

6.10.1. Topography & Views

Understanding the topography is important to understanding potential restrictions on settlement growth, appropriate locations for key land uses, and key natural hazards (e.g. slope) and opportunities (e.g. views) for each settlement.

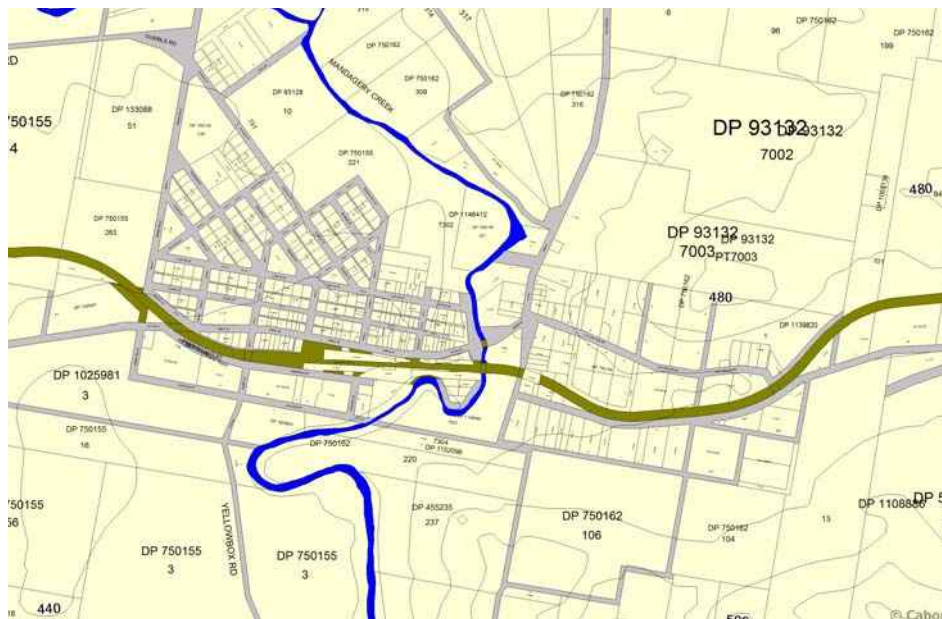


Figure 6: Topography of Manildra (Source: Council GIS 2010 & LPMA contour data).

The urban area of Manildra lies between approximately 440 metres and 500 metres above sea level (Figure 6). There are higher hills located to the north-east, south-east and south-west of the Village Zone with slopes falling down to Mandagery Creek.

Issues & Strategies

- **Slope:** Manildra is located in an area of undulating topography/hills that results in some steeper slopes and low-lying areas that would be less suitable (or more costly to develop) for settlement growth or for certain land uses (e.g. industrial sites requiring large flat sites). In general, slope is not a major constrain in the Village Zone.
- **Cut and Fill:** Where possible, land uses should be located so as to minimise the need for cut and/or fill of land to create a suitable construction site. Sites with any significant slope should be avoided or require larger lot sizes for a wider choice of dwelling/building locations. This may restrict growth of the Village Zone to the north-west of Manildra.

6.10.2. Geology & Mineral Potential

The Department of Primary Industries (as of 2011) has provided Council with a Mineral Resource Audit of Cabonne Shire dated February 2010 (Figure 7). Please note that this is based on existing information and there may be additional mineral resources not identified on this map as there are exploration licences across a significant percentage of Cabonne.

The Mineral Resource Audit shows that the Manildra Common Pit (which produces road base) is located to the north-east of Manildra and its buffer zone overlaps with part of the existing Village Zone and Rural Small Holdings Zone. This has the potential to reduce intensification of land uses to the east of Manildra. There is also the Riach Pit (road base) further towards Cudal.

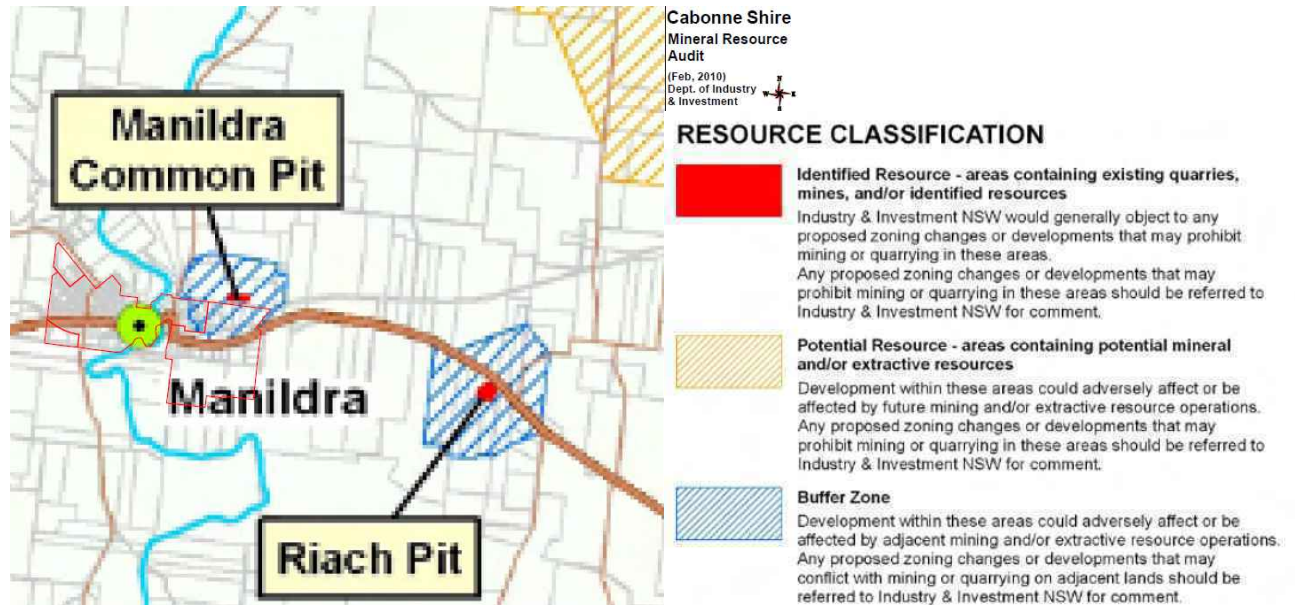


Figure 7: Excerpt of Mineral Resource Audit of Cabonne Shire (Source: Department of Primary Industries, February 2010).

6.10.3. Watercourses & Flooding

Please note that this Strategy provides only a broad overview of potential flood prone lands based on existing studies and estimations and cannot be relied upon for individual properties.

Watercourses

Water management is an important aspect of land use planning. The general aim is to minimise impacts on natural water systems from development and minimise overdevelopment of land that may have significant drainage and flooding issues. Biodiversity is addressed in more detail below.

Manildra is located in the upper areas of the catchment of Mandagery Creek and due to the terrain and hydrology, Manildra is not subject to significant flooding issues. However, there is the risk of some local inundation or drainage issues along Mandagery Creek and Flash Jacks Creek that may impact on land uses and safety.

The existing Clause 22 of CLEP1991 requires development in flood affected land to demonstrate it is not likely to impede the flood waters, imperil the safety of persons, aggravate the consequences of flood waters, or have an impact on the water table. For this reason it is preferable to exclude all flood liable land when identifying infill development sites or areas for future development at a strategic level. Land owners should make their own enquiries.





Flood Information

There have not been any comprehensive studies of flood issues in Manildra. Also, unlike some other settlements, there are no indicative flood areas noted on the maps in CLEP1991 to guide development of potentially flood prone land.

Therefore, without a flood study, this Strategy has sought to estimate flood levels from known contour data and presented this to the community at the Village Workshops to establish areas that may have flood or drainage issues only for the purpose of identifying land that may not be suitable for additional or more intensive development (subject to detailed flood studies)

Estimated Flood Levels

Estimated flood prone areas have been shown in Figure 8. In general, those lands likely to be affected by inundation or drainage issues are outside of the densely developed areas. Within the Village Zone there should be no further intensive development in proximity to Mandagery Creek (including the Mill and Manildra Public School). There may be impacts on the cost or suitability of development along Flash Jack Creek in the East Manildra Rural Small Holdings area that may limit further subdivision.

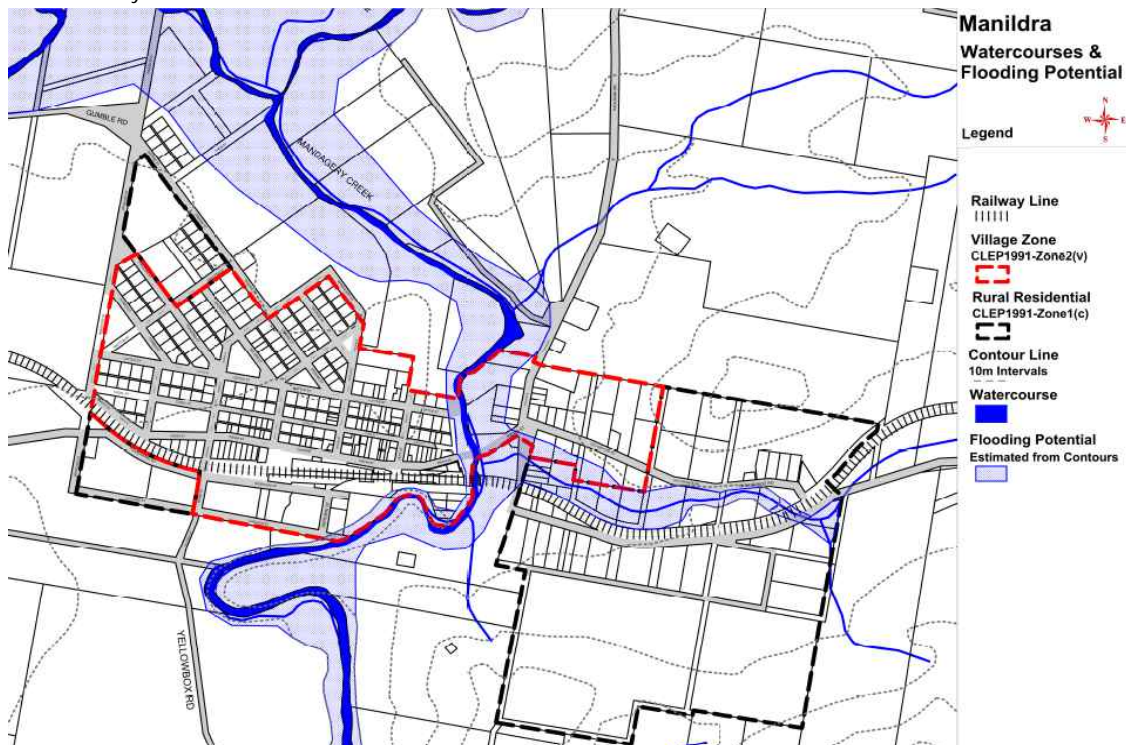


Figure 8: Key watercourses in Manildra and the estimated flood/drainage affected land (based on flood studies in the Village Zone and estimates outside the Village Zone) (Source: Council GIS 2010 & Council estimates).

Issues & Strategies

- Flood Prone Lands:** There is a potential for flooding along the low-lying areas close to Mandagery Creek and Flash Jacks Creek. Further intensity of development including significant subdivision should be avoided within the areas known to be flood affected. This is most likely to limit development in the East Manildra Rural Small Holdings area along Flash Jacks Creek.

- **Constraint to Growth:** The potential for flooding may limit expansion of Manildra to the east and north of the settlement. Intensive development of East Manildra may not be desirable if it would be cut off from the primary facilities in a flood.
- **Additional Information:** Council should seek funding to prepare a flood study for the Village of Manildra to further inform land use decisions.

6.10.4. Biodiversity & Vegetation

As Figure 9 shows, the majority of existing vegetation in and around Manildra is located to the north and south of the Village Zone, along Mandagery Creek, and parts of the Rural Small Holdings Zone. Manildra is fortunate to have a larger amount of significant vegetation than many settlements and improved opportunities for ecological connections along waterways and through Crown and private lands.

There is an opportunity to strengthen the ecological connections along the existing watercourses and drainage lines and connect these to the stands of significant vegetation outside the Village Zone (where possible).

A list of threatened, endangered and/or vulnerable species in Cabonne can be found on the website for DECCW. There are no known threatened species and/or endangered ecological communities under the *Threatened Species Conservation Act* in the Village Zone at Manildra, however, this does not mean that there are not any in existence. It is noted that there are a number of Endangered Ecological Communities in reasonable proximity to Manildra including degraded box gum woodland that should be protected and enhanced.

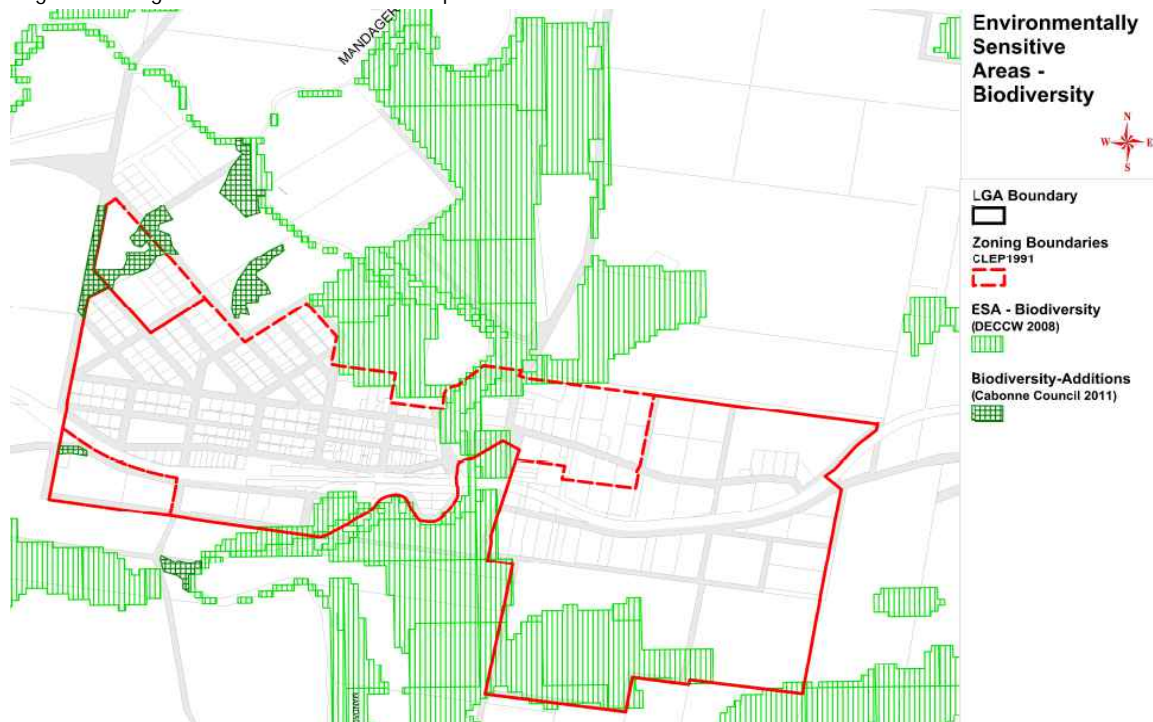


Figure 9: Map of environmentally sensitive biodiversity in and around Manildra (Source: DECCW 2008 & Council additions 2010).

Issues & Strategies

- **Protecting Biodiversity:** As there is no proposal in this Strategy to increase the footprint of the urban zones (Village Zone or Rural Small Holdings Zone) there is limited potential for impact on biodiversity. However, for areas identified for future expansion (particularly for industrial activities) there will need to be a comprehensive Local Environmental Study submitted prior to rezoning.

- **Ecological Corridors:** There is a need to protect and enhance remaining significant remnant or native vegetation in or around Manildra. Attempts should be made, where possible, to plant native vegetation and enhance ecological corridors, particularly along the adjacent watercourses and adjacent allotments. This may necessitate the removal of non-native or invasive species and sourcing of native seeds from the local area. However, there is also the contrary need to avoid exacerbating any bushfire risk to Manildra through dense planting close to urban areas (see below for more detail).
- **Street Tree Planting:** There is potential to enhance street tree planting in Manildra in accordance with the approved Street Tree Master Plan for Manildra (dated March 1999) which includes a mix of deciduous and evergreen trees in key locations. Council should review this Master Plan and its implementation program.

6.10.5. Bushfire Hazard

Figure 10 shows the area that was identified in the 2003/4 Bushfire Prone Land Mapping for Council. This mapping is currently under review. This mapping picks up core areas of vegetation to the south and north of Manildra that are within Vegetation Category 1 for bushfire risk and these areas may have significant limitations to development. Highlighted in yellow are additional areas that are outside the bushfire prone land mapping that may also pose some bushfire risk and may pose a limitation to development.

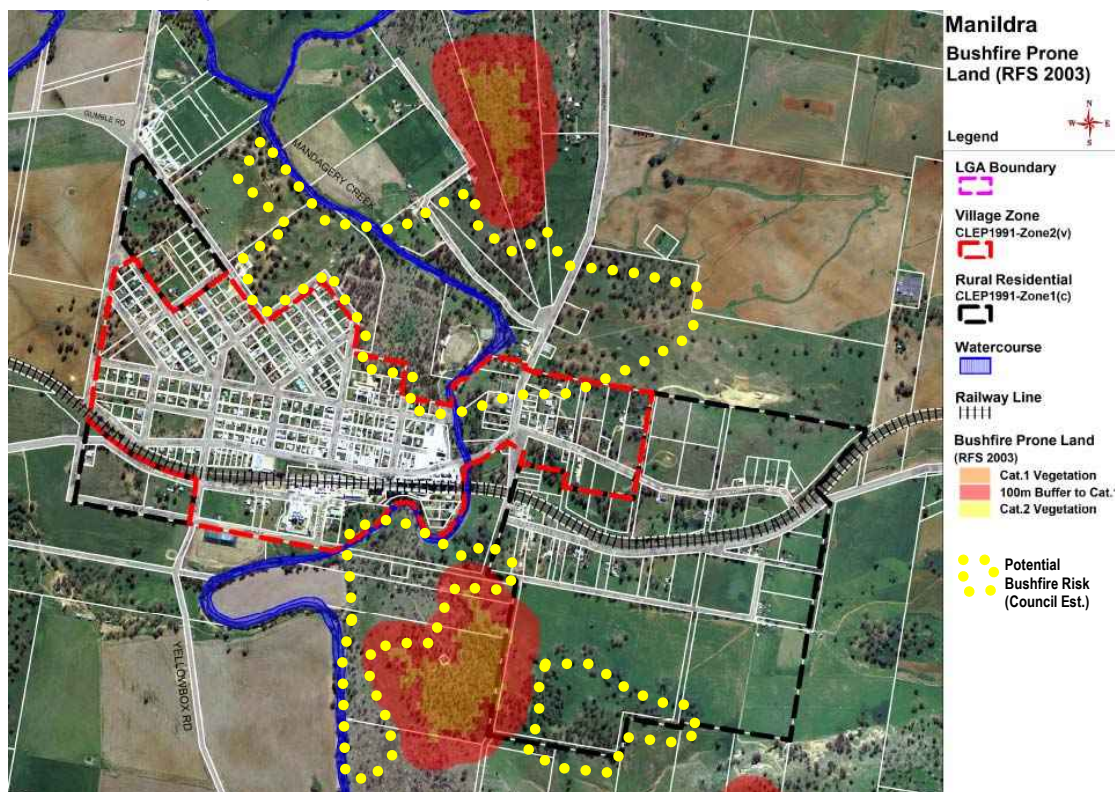


Figure 10: Bushfire prone land in and around Manildra (Source: Rural Fire Service Mapping 2003 & Council additions 2010).

Issues & Strategies

Bushfire Impact: The proximity of significant vegetation to the north and south of the Village Zone may require appropriate asset protection zones around the village boundary. Potential bushfire may also limit development of some Rural Small Holdings areas in the south-east of Manildra. This may also limit growth of Manildra in a northerly and south-easterly direction.

6.11. Access, Transport & Parking

6.11.1. Air Transport

Please see summary in Cabonne Chapter [Section 2.7.1 – Air Transport](#). In general public air transport access is considered medium for Manildra with a 30-35 minute drive to Parkes Airport the nearest available. Manildra has perhaps the best access to public air transport in Cabonne.

6.11.2. Rail

Please see summary in Cabonne Chapter [Section 2.7.2 – Rail](#). Manildra is located on the Broken Hill Railway Line connecting Orange, through Manildra, to Parkes, Broken Hill, Adelaide and Perth. The Manildra Station was opened on 18 December 1893 (Source: www.nswrail.net) but is now closed. A rail siding runs behind the platform to service Manildra Mills. Whilst the Broken Hill Outback Explorer and Indian Pacific trains pass through Manildra they do not stop so there are currently no passenger services.

There are a number of rail spurs and a private road-rail interchange at Manildra (Figure 11) that provides opportunities for loading and unloading of trains from Manildra Mill and the Canola Mill including grains, manufactured products and shipping containers. In this way products and materials can be distributed across Australia and to international markets relatively effectively.

This freight access is a key opportunity for the existing industries in Manildra and may also be able to support additional industrial growth in Manildra. This is one of the key reasons that Manildra has been identified for large-scale industry in the GHD (2008) *Subregional Rural and Industrial Land Use Strategy*. There may be opportunities to expand the rail loading/ unloading facility to include a full inter-modal road-rail interchange. However, as there is already an inter-modal facility at Parkes it may be difficult to justify an additional facility in Manildra (unless there is sufficient industrial growth to warrant a new facility).



Figure 11: Aerial photo showing the rail spurs adjacent to the Manildra Mills (Source: Council GIS – Aerial Photo 2009).

Issues & Strategies

- **Rail (Freight) Access:** Access to the Orange-Broken Hill Rail Line and provision of freight loading and unloading facilities in Manildra offers a competitive advantage for industry and is likely to support additional industrial growth in the future (as detailed in the GHD (2008) *Subregional Rural and Industrial Land Use Strategy*).
- **Rail (Passenger) Access:** Whilst passenger (tourist) services pass through Manildra, there is no operational station, and no access to passenger services from Manildra. This is unlikely to change in the foreseeable future and limits public transport accessibility in Manildra which will need to be supplemented by public buses.
- **Rail & Tourism:** The train/rail activity in Manildra is an attraction for rail enthusiasts and there is a proposal to build a viewing platform so locals and visitors can watch train operations from the park.

- Rail Constraints:** There is a need to avoid significant intensification of sensitive development (e.g. dwellings) in proximity to the rail line to minimise noise and vibration impacts. The rail line also acts as a barrier to passenger and traffic connections, particularly when large trains are being shunted for loading. There will be increasing traffic utilising the rail overpasses on the Orange Road, Kiewa Street, and Boree Street, particular with the growth of industrial uses to the south that may require rail crossing upgrades.

6.11.3. Road Hierarchy & Vehicle Traffic Impacts

Please see [Section 2.7.3 – Road Hierarchy](#) for more details. The primary road passing through Manildra is the Henry Parkes Way (Route 90) which connects Parkes through Manildra to The Escort Way into Orange. This is a Main Road that is the responsibility of the RTA, except where it passes along Kiewa Street in Manildra. There has been a recent upgrade to the connection between Manildra and The Escort Way in 2009/10. This route supports B-Double trucks up to 4.6 metres in height.

The other significant road is Packham Drive which connects Manildra to Molong but this is a local road managed by Council. The remaining roads are generally local roads. The pattern of local roads in Manildra generally follows a grid-pattern on the western side of Mandagery Creek. Most local roads within the Village Zone are formed and paved but there are some roads that are gravel or unformed. Gumble Road is also designated as a B-double route from Dubbo to the Mill.

Traffic Issues in Manildra

The primary issues raised at the Manildra Village Workshop in 2009 was the impact of heavy vehicles that are servicing the Manildra Mill and the lack of a vehicle turning bay and stop-off area resulting in heavy vehicles passing through local streets. The location and direction of the weighbridge at the mill off Kiewa Street means that long vehicles can only enter when travelling in an easterly direction on Kiewa Street (Figure 12). Therefore, if they have come from Orange or Molong they need to drive around the block onto Cudal Street to change direction.



Figure 12: Issue with trucks using local roads to turn vehicles to enter the weighbridge at the Mill (Source: Council GIS 2010/ Aerial Photo 2009).

This creates additional heavy traffic movements on local streets which the community is concerned increases safety risks and causes increased damage to road surfaces in these locations. The community is interested in identifying a truck turning area so that local streets are not used for this purpose. As at end 2010 sites adjacent to the bowling club have been put forward but there has been no resolution of this issue. A bypass is unlikely to occur in near future. The RTA has apparently not supported a truck u-turn bay.

Issues & Strategies

- **Road Access:** Henry Parkes Way is an important arterial route connecting Orange to Parkes (and the Newell Highway) and supports significant volumes of heavier vehicles and traffic. This key route passes through the centre of Manildra along Kiewa Street. This can impact upon residential amenity and safety along these routes, particular where it passes key community facilities such as schools. Whilst the community is interested in a by-pass route, this is not supported by the RTA and is unlikely to be economically viable in the foreseeable future. Council should review the main street design. The survey for the Community Plan 2025 indicates that 73.8% of people (No.1) say roads (traffic, access, maintenance) are priority areas.
- **Heavy Vehicle Impacts:** The community raised issues of heavy vehicles parking for long periods in Kiewa Street and needing to use local streets to turn around to access the weighbridge. The community would like to see a truck-turning area and lay-over area to resolve this issue. This is not currently supported by the RTA, but Council should continue to seek a resolution to these issues.
- **B-Double Route:** There is a classified B-Double Route from Parkes through to Orange and along Gumble Road to Dubbo. However, the Mill has raised a potential need to increase transport of their products and constraints of the road system. This is likely to require further negotiation with the RTA and may have impacts on safety and amenity.

6.11.4. Bus

Please see [Section 2.7.4 – Bus](#) for more details. Manildra has access to Countrylink Services that provide connections from Parkes (through Manildra) to Orange once daily in each direction. In addition there are school bus services that bring children from the surrounding rural areas to Manildra's schools and also connect to schools in Molong, Orange and Parkes.

Issues & Strategies

Bus Access: Public bus transport is available for people living in Manildra for connections to Parkes and Orange. This enables trips to key regional centres and provides some mobility for those without access to private transport. However, there are limited public bus transport connections between Manildra and other settlements in Cabonne, other than the school bus network. This may affect those seeking to work or shop in Manildra from other settlements (particularly Cudal and Molong).

6.11.5. Parking

There are two aspects of parking that may currently raise issues with the community in Manildra. The first is the requirement for staff parking for Manildra Mill which occurs on the western end of Kiewa Street. As the 2009 aerial photo would suggest (Figure 13), there is a current demand for about 40-50 car spaces at this end of the street. Most of this occurs as on-street parking and takes up both road frontages along Kiewa and wraps around into Duff Street. This may be having an impact on businesses and residences in this area of town.

As part of the original consent, the mill was required to build an off-street parking area and this is located on the south side of Kiewa Street opposite the key shops. However, this parking area is not heavily used by mill employees as it is a longer walk to the main mill buildings. The mill may need to continue working with its employees to increase usage of the designated parking area. Also, the Mill should consider provision of off-street parking for any future growth or redesign of the facility and this should be located in an area that is close to employee work areas.



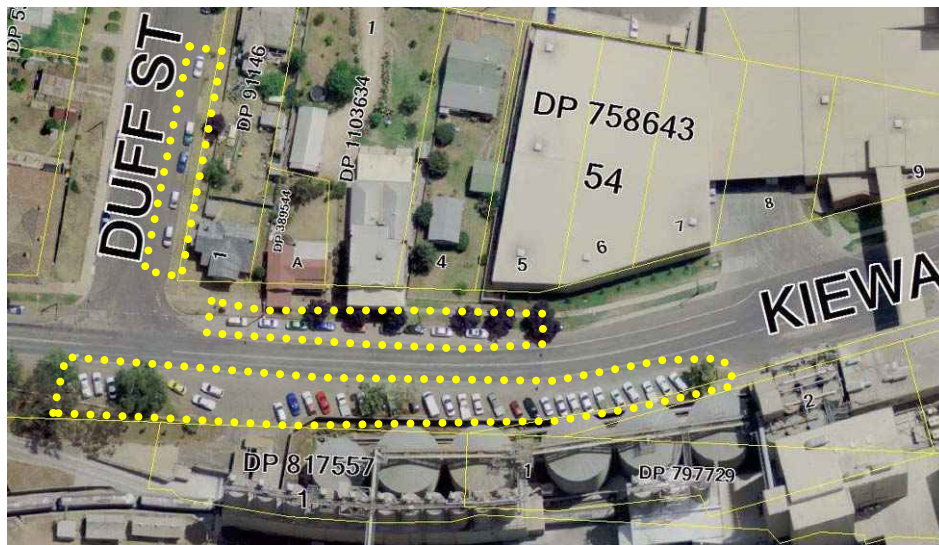


Figure 13: Core staff parking areas on Kiewa and Duff Streets (Source: Council GIS 2010/ Aerial Photo 2009).



Figure 14: Section of Kiewa Street where heavy vehicles are parking (Source: Council GIS 2010/ Aerial Photo 2009).

As raised above, there is also an issue with lay-over facilities for heavy vehicles servicing the mill. Currently trucks waiting for opportunities to load/unload will generally wait along the parking areas of Kiewa Street (Figure 14). Whilst this does not in general cause any traffic or parking problems, there are issues with the appearance of a large number of trucks and its impacts on the village character, particularly when parked over long periods.

The community has been investigating the need for a formal truck lay-over area (possibly beside the bowling club and opposite the service station) that could provide both a turning area and a parking area. Access to food and toilet facilities may also be required and continued support of the existing service station should be promoted where possible.

Issues & Strategies

- **Staff Parking:** Staff parking for the Manildra Mill is primarily occurring on Kiewa and Duff Streets rather than the purpose-built parking area. The mill should continue to focus on staff using the staff car-park and minimise impacts on other parking needs for Manildra.
- **Truck Parking & Lay-Over:** Truck parking for the Manildra Mill may be having some impact on the character of the settlement and its streetscape. Council should continue to work with the local community and landowners to identify solutions to truck-parking which may include a truck lay-over and turning area facility along Kiewa Street.

6.11.6. Pedestrians

There are pedestrian footpaths provided in Manildra along the northern side of Kiewa Street (the main shopping area) and along the southern end (both sides) of Derowie Street (in front of the Amusu Theatre). The vast majority of Manildra's streets do not have footpaths and there is limited kerb and guttering. This can be an issue for pedestrian amenity, particularly for older citizens but reflects the settlement's size and rural character. Council's Pedestrian Accessibility and Mobility Plan ('PAMP')(see [Section 2.7.5 – Pedestrians](#) for more details) includes, but is not limited to, new footpaths, drop kerbs and refuges along parts of Kiewa, Derowie, Duff, Cudal, and Loftus Streets to a total of \$239,000 (see Table 11 and Figure.12 in report). The priority for Manildra is a new drop kerb and refuge on both sides of the existing pedestrian bridge and intersection of Molong-Manildra Road and Old Orange Road. Council is currently acting on this work program.

There have been no noted pedestrian crashes in Manildra between 2002 and 2006. However, there may be a need to ensure pedestrian safety through appropriate street design and education. If there is increased industrialisation of Manildra then this plan would need to be reviewed to enhance separation of heavy vehicle movements and pedestrians, particularly along Kiewa Street.

In addition at the Village Workshop some of the community expressed an interest in improved access to natural environment, particularly along Mandagery Creek – walking tracks etc. This could provide additional advantages to Manildra as it does not currently take advantage of all of its environmental opportunities.

6.11.7. Cycle Access & Facilities

Manildra currently has some bicycle paths linking the Public School (on the east side of Mandagery Creek) to the shops (on the west side of the Creek) along Kiewa Street and an off-road path near Manildra Grain across Mandagery Creek to the Public School. Council's Bicycle Plan (2005) (see [Section 2.7.6 – Cycling](#) for more details) recommends the following improved connections as follows:

- First Stage (Year 3) – East Loftus Street, Route to Huxley Oval, Kiewa Street (west)
- Second Stage (Year 4) – Parkes Street and connection through to Huxley Oval through Crown Land, Kiewa Street (east) and out Packham Drive.
- Not in Program – West Loftus Street and Whitton Street.
- There is a need for additional line marking and signage as well as protection from heavy vehicles (particularly along Kiewa Street).

6.12. Utilities & Infrastructure

6.12.1. Water Supply

Manildra is connected to the Central Tablelands Water supply system that is sourced from Lake Rowlands in the Blayney Shire. The security of this water supply is addressed in more detail in [Chapter 2 – Cabonne Overview](#).

A detailed overview of the supply system is provided in Hydro Science Consulting (2009) *Joint Integrated Water Cycle Management (JIWCM) Evaluation Study*. In summary, water is pumped from a pipeline near Canowindra through Cudal and onto Manildra. There is a reservoir (2.27ML) & pump station at Grays Hill (towards Cudal) and Manildra Reservoir (0.45ML).

Figure 15 shows the local reticulation network for Manildra which extends into most streets in the existing Village Zone and some of the key road frontages in the Rural Small Holdings Zones. Therefore, access to water is not a significant constraint to development in Manildra. It is important to note that there is also a Water Sharing Plan for the Mandagery Creek Water Source (surface water) which may affect rural residential properties.

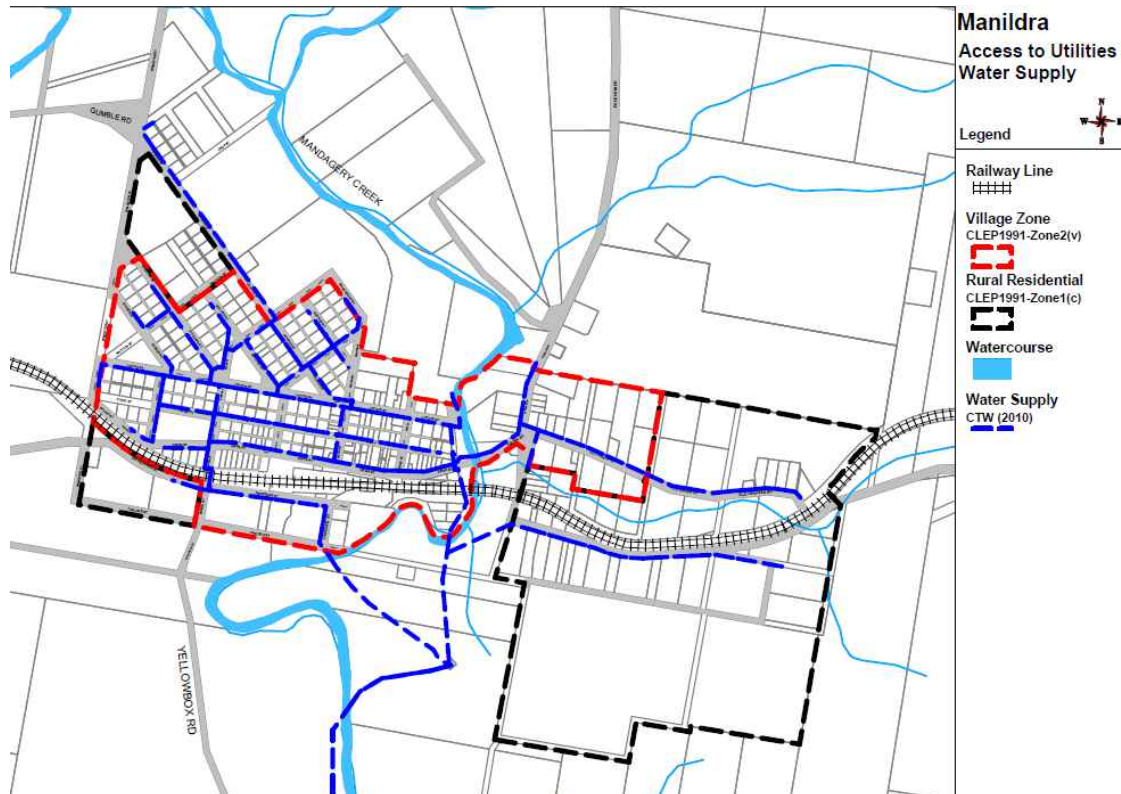


Figure 15: Existing water line locations in Manildra (Source: Council GIS 2010 / Central Tablelands Water).

Issues & Strategies

- Village Water Security:** Access to the Central Tablelands Water ('CTW') supply is likely to provide a secure water yield that can meet the future demand from the projected growth of the population up to 1% annual average growth. This places Manildra in a strong position for future growth, subject to regional water demands.
- Industrial Water Security:** Whilst CTW supply can sustain limited population growth along its network, if there is a significant expansion in demand created by high water consumers such as certain industries, then there may be issues with security of water and the capacity of the system to deliver the required quantities of water. Council may choose to support the proposal to expand Lake Rowlands to increase water security and potential system augmentation so that Manildra is able to attract and meet the demands of future industrial land uses.

6.12.2. Stormwater & Drainage

As Figure 16 shows, kerb and gutters are not provided to all of the streets within the Manildra Village Zone but are limited primarily to Kiewa, Cudal, Goimbla, and Derowie Streets and parts of Boree, Duff, and Loftus Streets. This generally correlates with the key pedestrianised streets. The remaining streets utilise grass swales for drainage, except for the odd under-road pipe for cross street drainage. Drainage and flooding issues are dealt with in more detail in [Section 6.10.2 – Watercourses & Flooding](#).

Issues & Strategies

Drainage: There are no known significant drainage issues noted in this Strategy. Council should review whether there are any stormwater or drainage issues that require further stormwater works in Manildra. Full kerb and guttering of Manildra's streets is unlikely in the foreseeable future and may indeed be unnecessary to address stormwater in most streets.

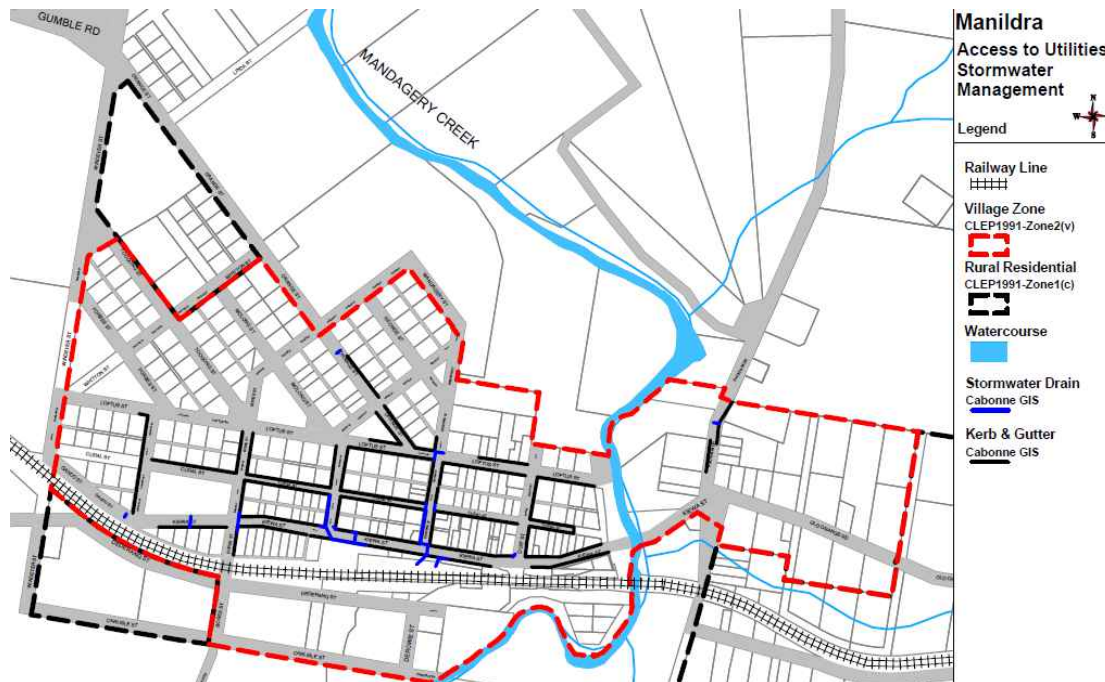


Figure 16: Existing stormwater infrastructure in the Village Zone of Manildra (Source: Council GIS 2010).

6.12.3. Sewerage

Centralised Sewerage

In 2011/2012, Manildra was provided with a centralised / reticulated sewerage system that will replace the reliance on individual septic systems. The reticulation system will predominantly extend throughout the existing Village Zone with only limited extension to properties on the Manildra-Orange Road in the Rural Small Holdings Zone. This is in accordance with Council's general policy to not provide centralised sewerage to the Rural Small Holdings Zone.

The Sewage Treatment Plant ('STP') will be located on the northern end of Windeyer Street (north of Mandagery Creek) away from the existing urban area in the General Rural Zone so there will minimal impacts from the STP on urban amenity.

Proposed Capacity of System for Village Zone

The STP will have a capacity to treat up to 740 Equivalent Persons ('EPs') (or roughly 308 Equivalent Tenements). The current population of all of Manildra is just greater than 500 people and the population in the Village Zone that will be serviced by the proposed STP is likely to be less than 450 people.

As **Section 6.8 – Projected Future Population** shows, even if a maximum average annual growth rate of 1% eventuated, the total population of Manildra would not exceed 700 people by 2036. Therefore, the proposed system easily has sufficient capacity to satisfy the predicted growth of Manildra's Village Zone to 2036.

Affect on Village Settlement Pattern

The key affect on the existing settlement pattern of introduction of a centralised sewerage system is that lot size no longer will be dictated by the need for sufficient land to support a septic system. Currently the dominant average lot size (from the historical subdivision pattern) in Manildra is 1,900-2,000m² in size. With centralised sewerage it is possible for lots to be subdivided down to as little as 600m² subject to addressing other development issues.

The critical issue in determining a minimum lot size for dwellings in Manildra then becomes one of the desired future character of the village and the acceptability/demand for smaller lot sizes/dwellings. There are already a number of lots in Manildra that are 800-1,000m² which suggests

this lot size is in demand and fits with the existing character. Subdivision of larger lots may also address the need for smaller lots and dwelling sizes to provide more housing choice for lone person household demand and an ageing population.

However, the settlement pattern is likely to be affected by the location of the proposed sewerage lines that are currently been designed by Council as extension of these lines to new properties may be prohibitive to development.

Capacity for Industrial Land Uses

The reticulation system will extend to the south of the railway line from Boree Street and to the east along Dederang Street. It is intended that the line will pick up office areas and toilets within the existing industrial facilities including the Canola Mill and perhaps the Manildra Flour Mill. This 'light' waste water will be easily accommodated in the system capacity. Also, the line along Dederang Street will be able to service the 'light' waste water needs of any future expansion of industrial uses along this street (to the east of Boree Street).

However, the proposed system has not been designed to handle effluent from industrial processes or trade waste ('heavy' waste water) and, therefore, this waste will require additional sewerage systems. As discussed in [Section 6.19 – Industrial Land Uses](#) below, there is a proposal for significant increases in industrial land to the south of the railway line and it would be expected that these land uses would produce significant quantities of waste water. The current system capacity of 740 EP is unlikely to be able to service a new large industrial estate if it were to eventuate. Therefore, any large-scale expansion of industrial land uses is likely to require a site-specific solution as part of any future rezoning of this land.

Whilst there is potential to connect into Council's proposed STP and the mains and ponds may be able to handle the potential waste water, the treatment system is not currently designed to deal with 'heavy' waste water. If only 'light' waste water is produced then this may enable connection into the proposed system.

Village Growth

Based on the proposed design and the location of the STP in north-west Manildra, the easiest places for future expansion of any urban zones and increased densities with connection to the centralised sewerage system will be in the north-west of the town. This correlates with the existing Rural Small Holdings Zone along Orange Street.

The most difficult place to extend the reticulation network is in the east of Manildra outside the Village Zone along the old Orange Road. This is likely to restrict any expansion of the Village Zone into the current Rural Small Holdings Zone in this area.

Issues & Strategies

- **Amenity:** The construction of a centralised sewerage system for the Village Zone of Manildra has provided a significant enhancement of amenity in Manildra but it is associated with additional levies that will be mandatory for new development.
- **Settlement Pattern:** The introduction of a centralised sewerage system has enabled subdivision of larger urban lots below the current size of 2000m². The proposed new development controls for Manildra are likely to suggest a minimum lot size to support a dwelling of 900-1000m² in order to protect the existing village character whilst providing increased housing choice and smaller lot/dwelling sizes to cater for future needs.
- **Village Capacity:** There are no major constraints to population growth and connections within the Village Zone for residential, business and community land uses as there is sufficient capacity within the proposed system for over 1% annual average growth.
- **Industrial Capacity:** There is only capacity within the proposed system to pick up some of the 'light' waste water from existing and proposed industry. However, if significant expansion of industrial land uses was to occur and there was a need to treat 'heavier' waste water types from industrial processes then a new solution will need to be

constructed. This is a constraint to industrial growth but is an efficient and appropriate way to address this issue.

- **Constraints to Growth:** As will be indicated later in this Chapter, the intended areas for possible expansion of the Manildra Village Zone correlate with those areas that will be easiest for future extensions of the reticulated network. Urban expansion to the east of Manildra is likely to be more expensive and difficult to service. Industrial expansion to the south of Manildra can be serviced for 'light' waste water with additional pump stations.

6.12.4. Electricity

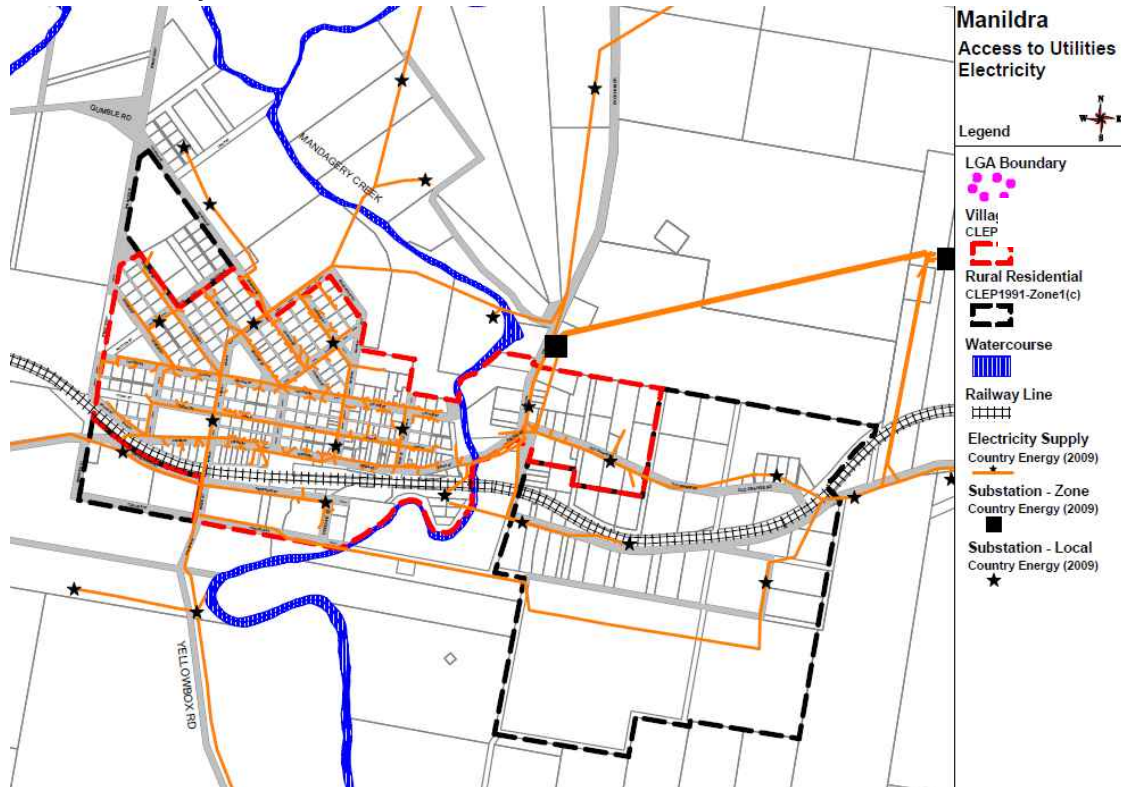


Figure 17: Electricity supply lines (orange) and substations (stars) in Manildra. (Source: Country Energy (2009) & Council GIS 2010 – not confirmed as accurate).

As stated in more detail in [Section 2.8.3 – Electricity](#), Manildra has access to an existing 132kV (high voltage) transmission line that connects back to Molong and there is a proposal to extend this line through to Parkes to increase the reliability of supply. This potential access to high-voltage electricity provides an attraction for high-energy consuming industries and businesses and energy generation proposals. This supports the recommendation of the Rural & Industrial Land Use Strategy that Manildra should be the primary centre for large-scale industrial growth.

As at July 2010, there is a current proposal by Infigen-Suntech to construct a 100 hectare solar farm at Yarran and Ainsdale off Packham Drive with the capacity of producing up to 50 megawatts of electricity. Manildra is one of four potential sites that may be suitable due to its high levels of sunlight, land access and transmission connection capability. This is an example of an 'industry' that can take advantage of the improved electricity connections at Manildra. This is likely to be a Part 3A (Major Projects) application to the State Government if it proceeds.

At the local level, Figure 17 shows that access to low-voltage electricity lines is readily available along most of the key streets in the Manildra Village Zone and along the main road adjacent to the Rural Small Holdings areas except for the issues noted below.

Issues & Strategies

- **Electricity Security:** Manildra already has access to a 132kV line from Molong and a new 132kV connection to Parkes will improve electricity security and make Manildra a key location in Cabonne for energy intensive industries that require energy security.
- **Local Access:** In general, local low-voltage power lines are present along most existing formed streets and this is not a significant constraint to infill development. Where there are proposals to increase development in Rural Small Holdings areas there may be additional costs associated with extending the electricity connection that may make some development prohibitive. The aim should be to focus on infill development and then concentrate development in new areas.
- **Industrial Access:** There is currently a low-voltage line extending along Yellowbox Road, Dederang Street and Carlisle Street. There will need to be substantial upgrades and extensions to service any new industrial area. As part of any rezoning process this should be agreed with Essential Energy and Transgrid.
- **Solar Generation:** Council should pursue the suitability of a proposal for a solar farm near Manildra where it can be shown that local issues can be suitably addressed. There is potential for Manildra to become an important location for renewable energy generation and maximise access to the high voltage transmission lines.

6.12.5. Telecommunications

Please see [Section 2.8.5 – Telecommunications](#) for a review of access to fixed, mobile and broadband telecommunication services in Manildra and across Cabonne's settlements. Anecdotal evidence suggests that there have been a number of recent improvements in mobile phone reception in and immediately around Manildra through the construction of new towers to the west but this may not extend out far into the surrounding rural areas.

Issues & Strategies

Telecommunications: There are no major issues for growth from telecommunication access in Manildra. Manildra may have future high speed internet access with the introduction of the National Broadband Network in the next 3-5 years but this access may be limited to wireless or satellite which may be a limiting factor.

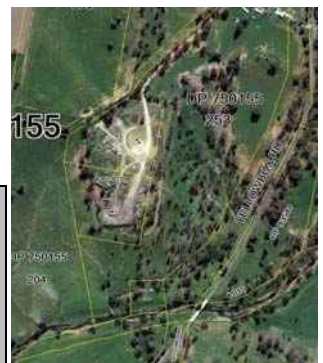


6.12.6. Waste Management

Please see [Section 2.8.6 – Waste Management](#) for a review of access to waste management services in Manildra and across Cabonne's settlements. Manildra has a waste site located just off Yellowbox Road approximately 4.5 kilometres to the south of Manildra near Mandagery Creek. The site includes Lots 85 & 254 DP750155.

Issues & Strategies

- **Landfill Capacity:** Manildra waste site plays an essential role in addressing Cabonne's waste needs as it services Manildra and part of Molong and Cudal. Manildra's landfill has an estimated lifespan of 8.5 years but there is a current proposal for extension of the existing landfill site to the west that could extend this to 13.7 years with current waste compaction practices or more if other methods are used.
- **Waste Management:** With the potential for a much larger industrial estate in South Manildra, there may be future opportunities for industries associated with waste recycling and re-use or treatment that may reduce waste landfill and improve sustainability. For example, there is a current proposal for Council and Manildra Flour Mills to operate a cardboard recycling facility in Manildra in the near future. There may also be potential for treatment of hazardous wastes produced from any industrial land uses. Council should review options to attract these types of industries for the region.



6.13. Heritage

6.13.1. Heritage Items

Heritage is a vital asset to the future and sustainable development of Manildra. It contributes to the character of the settlement and its attraction as a tourist destination. There are currently no heritage items listed in CLEP1991 so none of the items of heritage interest are receiving the protection of this important statutory document.

As part of the 2003 Community Heritage Study, thirty-two (32) items of heritage interest have been identified in the Manildra. Twenty-five (25) of these items are believed to be in the urban zones. Sixteen (16) items are currently recommended to be included in any new LEP for Cabonne as Heritage Items. Other items of heritage interest may be included in the future and this is subject to public consultation.

6.13.2. Heritage Conservation Area

There is no existing Heritage Conservation Area ('HCA') in Manildra under the current CLEP1991 and there is no proposal to introduce a HCA in Manildra at this time.

6.14. Summary of Existing Land Uses (Village Zone & Rural Small Holdings)

A summary of the existing land uses within the urban of Manildra is shown graphically (Figure 18), and numerically for the Village Zone (Table 6) and Rural Small Holdings Zones (Table 7).

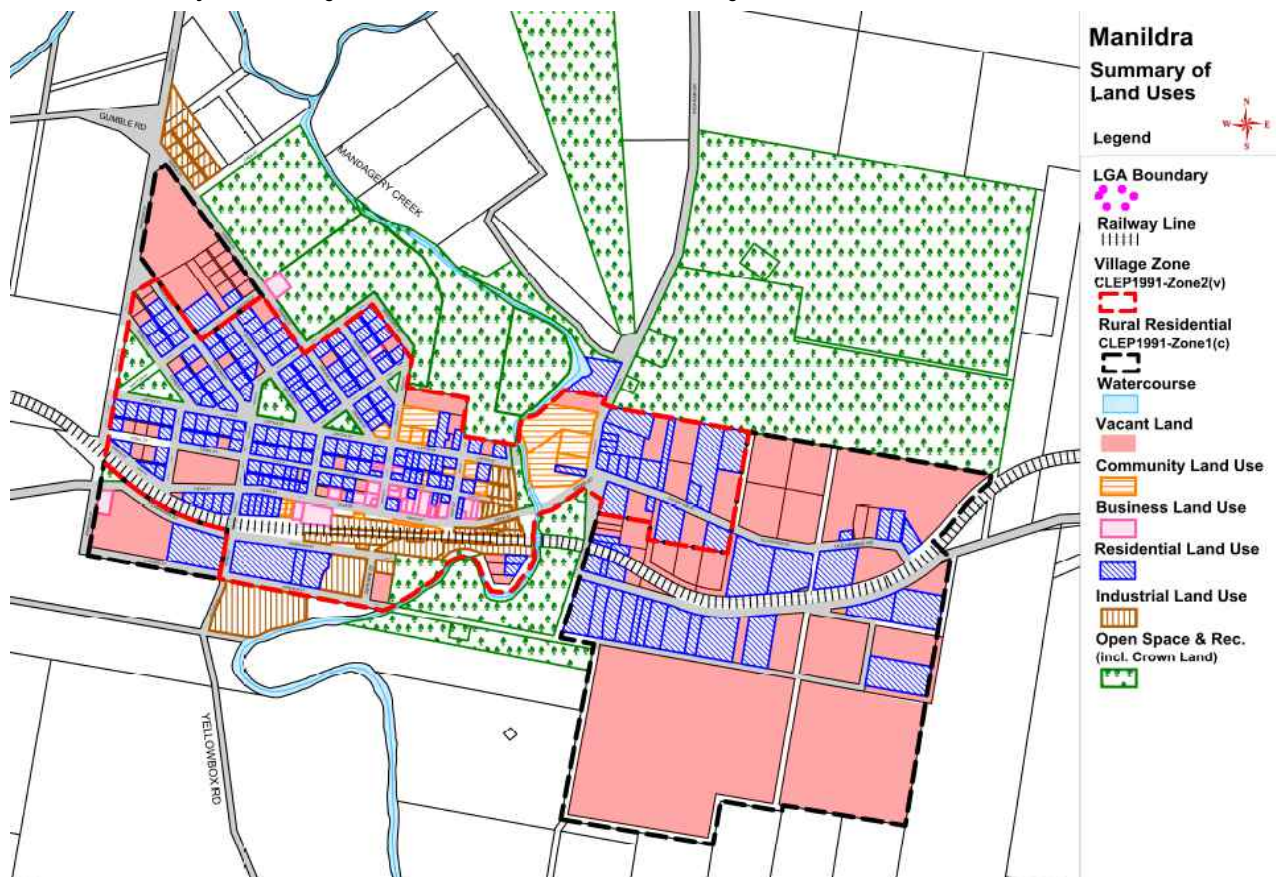


Figure 18: Location of major land uses in Manildra's urban area (as at Dec 2009) (Council GIS 2010 & site visits).

Existing Village Zone

The majority of lots are taken up by dwellings (63.5%). There are also a reasonable number of vacant lots (13.5%). Manildra is unique in having a reasonable number of lots for existing industry (7.6%).

Land Use	No. Lots	% of VZ Lots	Description
Total Lots – Village Zone	304	N/A	Includes Crown land & open space
Vacant Lots	41	13.5%	No existing dwelling or business on lot
Dwelling Land Use Lots	193	63.5%	Mostly detached housing except aged care housing
Business Land Use Lots	23	7.6%	Mostly retail & tourism services
Industrial Land Use Lots	23	7.6%	Utilised lots within an existing industrial area
Community Land Use Lots	17	5.6%	Health, Religious, Community, Emergency, Tourism etc
Open Space & Recreation	7	2.3%	Parks, Reserves & Crown land

Table 6: Number and percentage of each key land use in Manildra's Village Zone (as at December 2009).

Existing Rural Small Holdings Zone



The dominant amount of land in the Rural Small Holding Zone is vacant land (56.9%) followed by lots with dwellings (41.7%).

Land Use	North-West		South-West		East		Total		Description
	No. Lots	% of Lots	No. Lots	% of Lots	No. Lots	% of Lots	No. Lots	% of Lots	
Total Lots	14	N/A	3	N/A	55	N/A	72	N/A	Mostly vacant agricultural land
Vacant Lots	12	85.7%	1	33.3%	28	51%	41	56.9%	No existing dwelling or business
Dwelling Lots	2	14.3%	1	33.3%	27	49%	30	41.7%	Detached housing
Business Lots	0	0%	1	33.3%	0	0%	1	1.4%	Business / Light Industry

Table 7: Number and percentage of each key land use in Manildra's Rural Small Holdings Zones (as at December 2009).

6.15. Open Space & Recreation

Manildra has the following open space and recreation areas (Table 8):

Name/Owner	Activities	Owner / Lot/DP	Area	Photo
Railway Park Opposite Shops, Kiewa Street	Playground (shaded and fenced in) as well as toilets. In consultation with the Progress Society, the original Boree Shire constructed the park and the Lion's Club are responsible for the amenities.	Lions Park – Cabonne Lot 257 DP750155	1000m ²	
Griffith Memorial Park Swimming Pool Loftus St	Open grassed area with limited trees. External swimming pool with toilet and change-room facilities. New skate park built adjacent in 2011/2012.	MP Manildra Swimming Pool Griffith Lot 701 DP93129	0.42ha	

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Name/Owner	Activities	Owner / Lot/DP	Area	Photo
Reserve No.2016 Cnr Molong, Loftus & Boree Sts	Open grassed space with trees for passive recreation. It also has a BMX area.	Crown Lands Lot 701 DP93546	1.04ha	
Park Cnr Windeyer, Forbes & Whitton Sts Reserve No.2014 Cnr Whitton, Forbes & Loftus Sts	Two open grassed spaces with trees for passive recreation.	Cabonne Council Lot 701 DP93545 / Crown Lands	1.1ha 0.84ha	
Park Cnr Moura, George & Derowie Sts	Open grassed space with trees for passive recreation.	Crown Lands Lot 7300 DP1145082	0.11ha	
Manildra Showground Orange St	Track, horse arena, sheds, toilets and service areas. Campground with BBQ near Showground. (CMCA Campervan Motorhome Club of Australia)	A. & P. Society Lot 701 DP93128	13.66ha	
Manildra Golf Club Orange St	Golf club and golf course.	Manildra Golf Club Lot 221 DP750155	14.62ha	
Jack Huxley Oval Derowie St	The recreational grounds are located adjacent to Mandagery Creek and provide a range of recreational activities including tennis courts, and an oval for cricket, athletics and football. There is a grandstand / pavilion as well as toilets and other amenity blocks.	Lot 157 DP750155	5.73ha	
Park Cnr Kiewa and Henry Parkes Way	Open grassed areas with trees and Flash Jack Creek. It includes Honan Park and the picnic area.	Crown Lands Lot 184 DP750162 & Lot 7010 DP93555	1.65ha	

Table 8: Key open space and recreation areas both within and outside the Village Zone of Manildra.

Issues & Strategies

Open Space: A preliminary review suggests that Manildra has reasonably high levels of access to open space & recreation with a range of areas for both passive and active recreation spread throughout, or just outside, the Village Zone. However, some of these reserves or parks have very limited facilities and appear to be used relatively little. However, they do enhance the character of the village and provide passive areas for children to play as well as environmental benefits. They are unlikely to change use in the foreseeable future. At the Manildra Village Workshop the community raised the common issue of a lack of youth activities and places for children and young adults to socialise and entertain themselves. Council should review this issue further as it is outside the scope of this Strategy.

6.16. Vacant Land

6.16.1. Vacant Lots

Vacant lots are important as they can provide the potential for infill development within the existing Village Zone that may take up some of the projected future growth of each settlement. Vacant lots include lots that do not contain any significant building (dwelling or business/ active or vacant) any may be capable of supporting a dwelling. However, it may contain ancillary sheds, garages, gardens or septic systems on these lots and these lots may be held by an adjacent non-vacant lot. Table 9 shows that there are 376 vacant lots in the Village and Rural Small Holding Zones in Manildra (the majority of which are in the Village Zone).

Zone	Total Lots	Vacant Lots	% of Total Lots in Relevant Zone
Village Zone	304	41	13.5%
Rural Small Holdings Zone	72	41	56.9%
Total	376	82	21.8%

Table 9: Number of vacant lots in each zone (as at Dec 2009).

6.16.2. Vacant Lots and Natural Hazards or Constraints

Sometimes the historic pattern of subdivision has not taken into account the natural hazards or topography that may prevent a lot from being developed. Table 10 and Figure 19 set out the number of vacant lots in each zone that may be difficult or costly to develop due to a range of constraints including, but not limited to, flooding, lack of road access, lot size or slope (these lots are marked by black hatching).

This does not mean that these lots are incapable of development. Interested parties should consult with Council and conduct the necessary studies to determine how constraints may affect development potential. However, a key principle of this policy is to focus development on land that is easy and cheaper to develop, particularly as development cost is a key factor.

The remaining vacant lots have the potential to support a dwelling (subject to detailed studies and consent). As these lots are already subdivided, they could be put on the market at any time and a dwelling may be permitted (subject to consent). The supply / demand review is conducted in more detail in the sections below.

Zone	Vacant Lots	Vacant Lots More Expensive to Develop	Vacant Lots More Easy to Develop
Village Zone	41	13	28
Rural Small Holdings Zone	41	14	27
Total	82	27	55

Table 10: Summary of vacant lots in each zone affected by key constraints (as at Dec 2009).

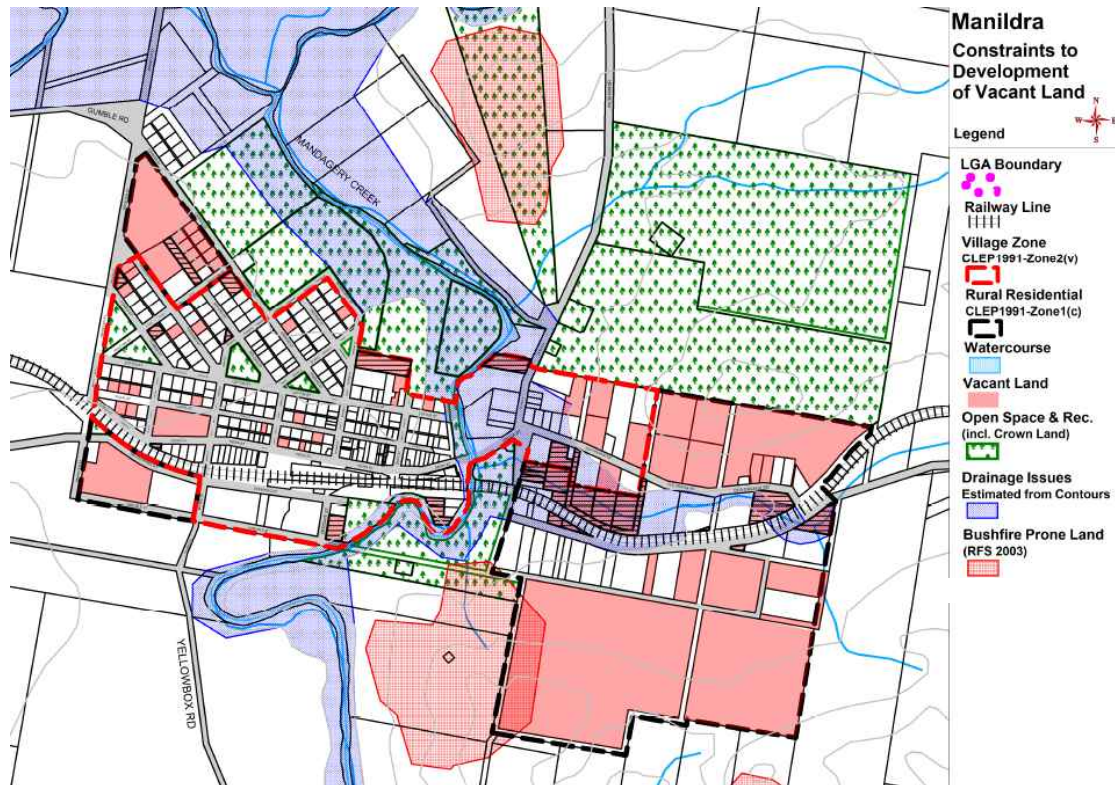


Figure 19: Vacant allotments and those affected by constraints to development in Manildra (as at Dec 2009) (from aerial photo and brief street analysis).

6.16.3. Likelihood of Development of Vacant Lots

It is important to note that the community often claims that the majority of vacant lots should not be counted for the purposes of infill development because the current owners are not interested in selling. However, this Settlement Strategy is looking to review land supply over the next 30 years and whilst the existing landholders may be reticent to make land available that could be expected to change over these lengths of time, particularly as land prices rise and people no longer need larger lots.

Council can only make a 'guesstimate' of what percentage of lots may become available for sale or development. Therefore, Council is proposing a very conservative estimate of 60% possible available vacant lots is a reasonable percentage over a 30 year period. The potential supply of land for dwellings (and the application of the 60% rule) is reviewed in more detail later in this Chapter.

6.17. Community Land Uses

Figure 18 shows the location of the key community land uses in Manildra. For the purposes of this Strategy, 'community uses' are defined as buildings, services, facilities and infrastructure that are not-for-profit and/or support the local community and provide essential services.

As stated in [Chapter 2- Cabonne Overview](#), community uses are permitted in a broad range of zones and, therefore, there is no need for a detailed analysis of supply and demand of land for these uses. However, community uses are often a vital service for the community and provide employment and social and economic support and growth. A more detailed review of access to community services for all of Cabonne's settlements is provided in [Section 2.10 – Services & Facilities](#).



6.18. Business Land Uses

Please note that services / facilities change regularly and this section and the following sections merely provide a 'snapshot' of key services / facilities in each settlement in 2010.

6.18.1. Existing Retail / Businesses (2010)

The retail service offering in Manildra provides access to essential goods and services including a post office, banking facilities, basic groceries and a limited number of specialised retail services.

The Manildra Store & Post Shop offers groceries, hot food (eat-in and take-away), drinks, sandwiches. It is also a licensed Australia Post office as well as an agent for First Choice Credit Union. A contractor provides mail delivery. The community appeared happy that the Post Office has moved to the store. The old post office building is currently vacant.

In the same block as the Manildra Store & Post Shop on Kiewa Street there is also the Health Centre, a butcher, a hair salon, a gift shop as well as an antiques shop. Further shops/businesses in Manildra include, but are not limited to: the CRT Rural Centre, a hairdresser, Duncan Smash Repairs, BP Service station & Newsagency (with ATM), and Natural Springs Water depot.



Issues & Strategies

Retail Services: The community were reasonably happy with the current level of retail services in Manildra and they are the best they have been for some time. However, there is a continuing concern that these are decreasing over time or becoming less viable (if the population continues to decrease). The mill employees and contractors continue to be a key driver for some of the businesses.

6.18.2. Tourism, Entertainment & Dining (2010)

Things to Do & See

Tourism is seen as one of the key opportunities for Manildra (33.3%) (Community Plan 2025 Survey). Manildra has several attractions including:

- The Amusu Theatre, Australia's oldest operating picture theatre which operates every third Saturday of the month or by appointment;
- The Mill & Rail Museum in Kiewa Street is open by appointment;
- The Manildra Craft Cottage is run by a Committee. It is open Wednesdays to Saturdays.
- There is a craft and antique store of interest.
- As stated above there are also a number of items of heritage interest in Manildra.

Tourist Accommodation

Manildra has two places for accommodation within the Village Zone including the Imperial Guesthouse, the original converted Imperial Hotel which has 8-9 rooms, the Royal Hotel which has 8 rooms, and the camping area at the Showground. In addition there are bed & breakfasts and farm-stays in the surrounding areas.

This provides a range of accommodation options (at different standards) but is limited in overall capacity (room numbers) and may be limited in ability to cater for any major events. Anecdotal evidence suggests the existing facilities are well used.

The community raised the issue of providing overnight stay campervan areas closer to the centre of Manildra because the showground is too distant. Previous approaches to Council to use Jack Huxley Oval have not been approved. There was some discussion about provision of waste water disposal sites and the ability to get funding for their provision.

Food & Drinks

The Manildra Store & Post Shop and the BP Service Station & Newsagency offers groceries, hot food (eat-in and take-away), drinks, and sandwiches. The Royal Hotel offers food and drinks. However, there are limited services available after-hours except the Royal Hotel.

Issues & Strategies

There is limited infrastructure to support tourism development in Manildra. There are a few heritage items and interesting things to do and see that would warrant tourism interest in Manildra but limited accommodation. There needs to be a clear tourism strategy for Manildra and Cabonne that integrates tourism infrastructure with tourism attractions and information.

6.18.3. Location and Zoning of Business Land Uses

Business land uses will generally be permissible under the new Standard LEP Template in the Village Zone (or its equivalent) which is likely to be retained for Manildra. Due to Manildra's limited size, growth and area of business land uses - there is no need to provide a specific zone for business land uses in the proposed new LEP. However, this Strategy recommends that key retail and commercial businesses should aim to be located in close proximity to Kiewa Street (where possible) to strengthen the village centre.

6.18.4. Supply & Demand

Existing & Future Demand

With an average projected population growth in Manildra of 0.3%/year, it is not expected that there will be a significant growth in business services in Manildra up to the year 2036 (unless there is a significant change in population growth estimated by this Strategy).

If Manildra starts growing in population significantly and there is less 'external expenditure' at nearby major centres such as Orange and Parkes then there is the potential to increase



demand for local shopping. Manildra could eventually require a stand-alone grocery store and some additional specialised services. However, higher level services will generally always be serviced elsewhere.

Existing & Future Supply

There are a number of existing vacant shop-fronts along Kiewa Street (between Derowie and Duff Streets) that would be able to support some limited growth in local businesses. Some of these have been vacant for some time and some are currently for sale. There are also a number of sites that are either vacant or under-utilised between Goimbla and Derowie Streets that could support new businesses and developments that fit within the existing streetscape.

Therefore, this Strategy assumes that there is sufficient building/land supply to support business development in the next 10 years. In general, business activities (other than home businesses) should be located along Kiewa Street between Goimbla Street and the Manildra Mill facility. The existing parking facility on Kiewa Street would assist growth in this area.

Issues & Strategies

Business Supply/Demand: There appears to be sufficient land and vacant buildings between Goimbla Street and Duff Street to support any likely growth in business needs in the next 10 years. If Manildra grows substantially then there may be a need for additional land in Cudal Street after 10 years.



6.19. Industrial Land Uses

6.19.1. Existing Industrial Land Uses

Manildra Flour Mill / Manildra Group

The largest industrial land use in the Village Zone is the Manildra Flour Mill owned by the Manildra Group. This is one of the largest flour mills in the southern hemisphere and produces wheat flour, wheat flour mixes and wheat based value added products.

The mill is the major employer in Manildra with approximately 180 staff (~60 on-site during peak hours). At the 2006 Census, 32.5% of Manildra's employees stated that they worked in the Grain Mill and Cereal Product Manufacturing. The mill operates 24 hours a day with rotational shifts of employees. Approximately 50% of the mill's employees live locally.

The industrial buildings are located on both sides of Kiewa Street (Figure 20). The primary flour mill and grain storage areas are located south of Kiewa Street on an area of approximately 0.73 hectares (with additional vehicle movement areas). These facilities have the greatest potential to impact on urban amenity with noise, dust and odour.

The packaging and distribution centre is located to the north of Kiewa Street and sits on an approximate area of 1.495 hectares (with nearly 90% site coverage). The primary impact of the warehouse area is truck movements in local streets. As the warehouse is located immediately adjacent to other village land uses such as churches, businesses, and dwellings, and it has lower impacts on amenity it may not need to sit in an industrial 'zoned' area. The aim would be to avoid growth of 'industrial' activities north of Kiewa Street to minimise impacts on sensitive uses.

Manildra Flour Mills is required to hold Environment Protection Licence No.916 (review due date 19/12/2013) which sets out a number of licence conditions relating to production rates, pollution of air and water, and dust and odour. This suggests that these activities are industrial in nature and ideally located in an industrial area. However, it is not currently economically viable to relocate these activities and create an improved buffer to Manildra's sensitive urban areas. There is some community perception that the amenity of living in Manildra is significantly lower than other settlements and this may affect its ability to attract new residents but others residents do not express an issue with the amenity in Manildra.





Figure 20: Location of the key industrial properties owned by Manildra Flour Mills as at 2010 (Source: Council GIS 2009).

Manildra Rail Container Terminal

Manildra Flour Mills also operates a rail container terminal accessed off Dederang Street with an approximate area of 0.8ha (Figure 21). This has approval for approximately 150 shipping containers per week to be loaded onto trains on the rail spur. Each container is road transported from the rail siding to the flour mill via Dederang Street for loading, then back to the container terminal via Dederang Street for dispatch by rail. This site is limited in size but it may have the ability to increase capacity to service a future industrial estate in Manildra (after discussion with the owners).

Canola Mill / MSM Milling

In 2008, Mac-Smith Manildra (MSM Milling) was formed to produce canola oils and high protein meal for sale into the industrial and retail market and across the Asia Pacific region (Figure 21). Originally it operated near the Monument on The Escort Way and then it relocated to Manildra. These oils are marketed under The Healthy Baker brand. In 2009 the Canola Mill applied to expand operations with the inclusion of a packing warehouse that will increase employment by 10-12 additional people and this has been approved.

This also allowed for an increase in processing operations to approximately 110,000 tonnes/annum which requires an Environment Protection Licence under the *Protection of the Environment Operations Act 1997*. This will provide on-site packaging to avoid seeking this higher level manufacturing occurring elsewhere. A bio-filter was fitted in March 2009 to treat all emission is aimed at reducing odour from the mill and has the capacity to allow for the increased processing quantities. There is potential to expand the current facility on the site.

GrainCorp

GrainCorp has the primary grain silos and loading facilities located adjacent to the Orange-Broken Hill Railway Line (approximate area 1 hectare) with 7,000 tonne of silo storage and 9,000 tonne of shed storage accessed off Dederang Street. There is also a grain storage area just outside the Village Zone on Yellowbox Road (approximate area 4.14 hectares) that has 42,000 tonne bunker storage accessed off Carlisle Street. All grain delivered to the bunkers is first run over the weighbridge near the silos then trucked back to the bunkers.



Seed Cleaners

There is also a facility for cleaning of seed at the corner of Dederang and Derowie Streets.

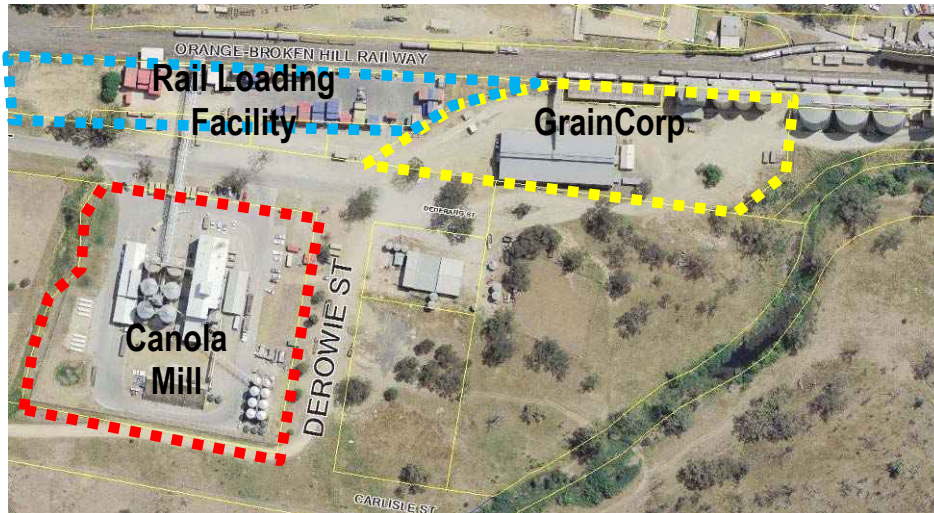


Figure 21: Location of the Canola Mill & freight interchange facilities (Source: Council GIS 2009).



6.19.2. Local Issues

One of the key issues in Manildra is impacts from industrial activities on the amenity of the urban areas. There is a history of odour and dust issues from the mills and heavy vehicle movements and parking continue to be a concern for the Manildra residents. The key reason for these impacts is that industrial uses have been based around historic sites along the railway line in close proximity to the existing urban areas, and with access provided down the main street, with no buffer zones to minimise these impacts. As the industrial facilities have grown, these impacts have become more apparent.

6.19.3. Need for an Industrial Zone

These impacts are some of the issues associated with having a Village Zone because industrial uses are theoretically permissible anywhere in the zone, subject to addressing key issues. This provides no certainty to someone buying a sensitive land uses - such as a dwelling – that an industrial land use may be placed adjacent or near to that use.

The key benefit of specifying an industrial area (and ensuring an appropriate buffer to existing urban areas) is that it can be located and designed to minimise land use conflicts, particularly with regards to sensitive residential land uses. It also should provide for expansion of industrial uses without any additional impact.



6.19.4. Sites for Small Scale (Home) Industry

The existing Village Zone does permit (with consent) small-scale light industry. Whilst most settlements retaining the Village Zone will need to maintain this permissibility to allow for industrial uses, Manildra will be the only settlement with a Village Zone and an industrial designated area. On this basis, Council will generally only support home-based light industries such as workshops and repair stations within the Village Zone. Any land uses that have any significant impact on residential or urban amenity should be located in the proposed industrial area to the south of the railway line.

6.19.5. Proposed Land Use Outcomes

On the basis of the above information, this Strategy recommends that existing significant industrial land uses should be included in a new industrial area as part of the new LEP in



accordance (Figure 22). This would include the existing Manildra Flour Mill, the GrainCorp silos and loading area, the container terminal, the Canola Mill, the mill manager's residence and associated industrial areas.

In addition, the proposed industrial area should include:

- The five (5) existing village zone lots that include the mill manager's residence (area ~ 1ha) as this is a heritage listed item and has no further development potential;
- The three (3) existing village zone lots south of the rail line and to the east of Boree Street between Dederang and Carlisle Streets that currently have three (3) dwellings. This picks up three lots ranging in size from 0.35 ha to 2.24 ha, resulting in an increase of approximately 3.45 ha in potential industrial land;
- The three (3) existing rural small holdings lots to the west of Boree Street between Dederang and Carlisle Streets that contain one dwelling and one shed. This picks up three lots ranging in size from 0.34 ha to 3.96 ha, resulting in an increase of approximately 6.38 ha in potential industrial land.

These area have been recommended for future industrial uses in the *Sub-Regional Rural and Industrial Land Use Strategy* (2008) ('Rural & Industrial Strategy'). As these are existing village or rural small holdings lands they have been partially developed and no local environmental study is required for their rezoning. This expansion of industrial land should meet short to medium term industrial growth (and attract/address the needs of new industrial operators) until such time as the larger investigation areas to the south are considered for rezoning (and possibly a light industrial area is considered to the north-west of Manildra based around the old piggery site).

The total area for industrial uses is ~22.4ha (incl. roads) and ~20ha (excl. roads). The existing large lots with dwellings that could be considered for redevelopment and industrial expansion total ~10 hectares. A 'general' industrial category that allows both light and heavier industrial uses is most likely to be suitable for this area in the Standard Instrument LEP. Having said this, there is less support for any 'heavy' industrial types in this area where an appropriate buffer cannot be provided to existing urban/residential areas and dwellings and appropriate environmental controls will be required.

The community and key industrial land owners were supportive of the opportunity to rezone the existing industrial areas to the south of Kiewa Street to an industrial classification as long as there were no additional impacts on Manildra's urban area and existing dwellings. However, there is likely to be less support for any industrial zone for the existing warehouse/packaging plant to the north of Kiewa Street due to the adjacent urban uses and sensitivities towards land use conflicts.



Figure 22: Proposed industrial area for the new LEP for Manildra (Source: Council GIS 2011).

6.19.6. Future Investigation Areas - Industry

South of Manildra

The *Sub-Regional Rural and Industrial Land Use Strategy* (2008) has been adopted by Council and Manildra is the only settlement in Cabonne that has been recommended for an expansion of large-scale industrial land uses. As Figure 23 shows, the area designed 'SA C Manildra' should be considered in the short to medium term (5-15 years) for investigation for industrial land uses. As there is very limited supplies of large-scale industrial land across Cabonne and Manildra then this future investigation area should be commence review as soon as possible.



Figure 23: Proposed future investigation area for increased industrial land in Manildra – Site SAC (Source: Excerpt from Figure 6.12 in Rural & Industrial Strategy).

The majority of the SA C area in the rural zone is characterised by medium range levels of constraint when assessed against the weighted criteria. This is the result of the relatively large holding sizes in this area, which in combination with the presence of Class 2 and 3 soils, suggests the possible agricultural value of this land. However, there has been considerable pressure for additional industrial development in Manildra, and this was echoed in the community consultation.

This Strategy has refined the investigation area in the following ways (Figure 24):

- Removal of the existing Village Zone and Rural Small Holdings land that is recommended for an industrial zone in the next LEP;
- Removal of Crown land that has environmental qualities;
- Removal of land within 30-60 metres of Mandagery Creek for environmental protection and a buffer for flooding.

The resulting area of land (including existing road reserves) is ~105 hectares. The land is located to the south of the Manildra urban area and would be separated from the proposed urban area by the Orange-Broken Hill Railway Line. It is intended that heavier industrial uses would be located further away from the existing area to ensure an appropriate buffer, whereas lighter industrial uses could be located right up to Dederang Street.

Unless there was an immediate requirement for heavier industrial land (which would be preferred to the south of the investigation area), the intent would be to stage release of industrial land in the order shown in Figure 24 commencing with locations along Carlisle Street and then the western side of the investigation area.

Development of lots adjacent to Mandagery Creek are likely to require much higher levels of environmental study and protections and are, therefore, likely to be utilised only when other land has already been consumed and more likely to only support light industry.

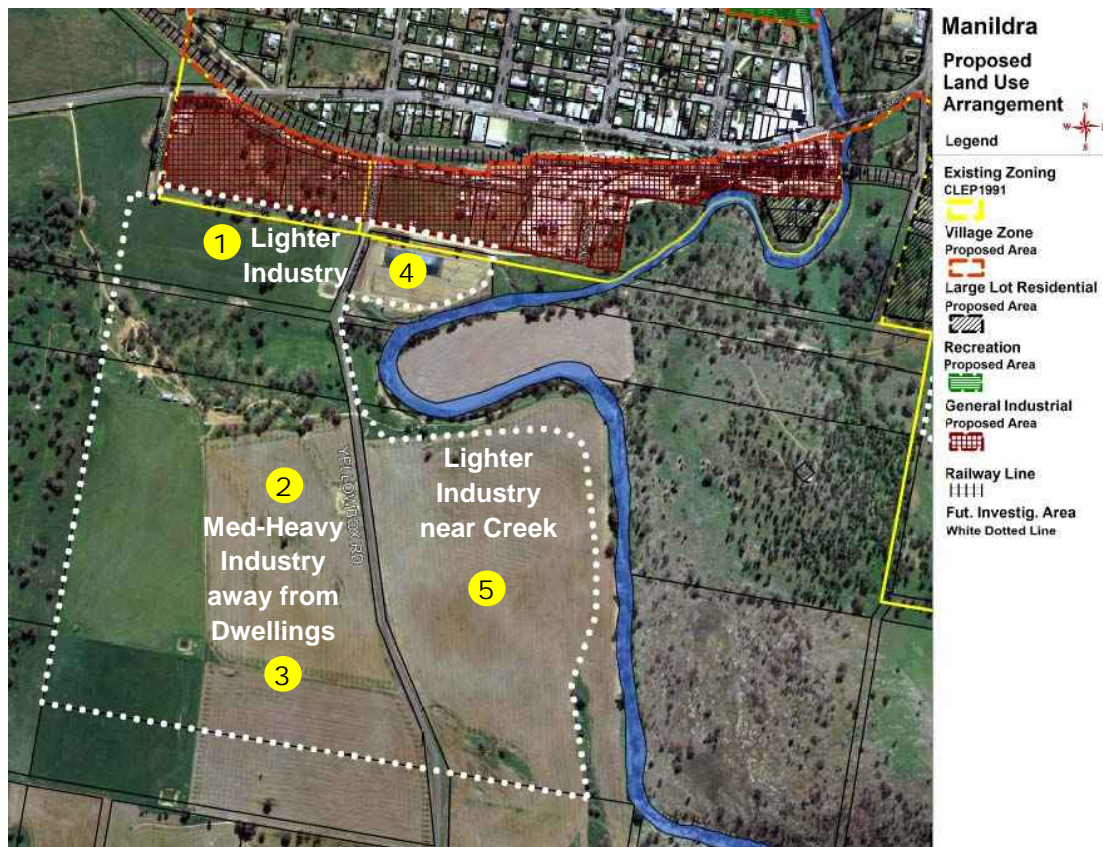


Figure 24: Preferred location for future investigation for industrial land uses to the south of Manildra based on the adopted recommendations of the Rural & Industrial Strategy (2008). A draft staging of land release is shown by the yellow circled numbers.

North-West of Manildra

In addition, it is recognised that Manildra Flour Mills Pty Ltd owns the old piggery site (which is no longer in operation) on Orange Road to the north-west of Manildra and has lodged a development application for the re-use of the site for storage, packaging and processing of materials (DA2012/112). As this application was not determined prior to public exhibition of this Strategy and the proposed Local Environmental Plan the site is still proposed to be included in the surrounding rural zone. However, in order to recognise the 'light industrial' use of this site it may be more suitable to consider a light industrial zone as part of a future amendment to the LEP (Figure 27).

In addition, Manildra Flour Mills also owns the opposite property (Lot 255 DP750155) that is currently/proposed to be in the large lot residential area. However, this isolated lot has only limited development potential for large lot residential purposes and is relatively free of constraints – so Council should consider future investigation to include this lot in either a further extended Village Zone (for urban residential or light industrial applications) or in a light industrial zone (to allow for further mill expansion) (Figure 27). Any light industrial zone would need to ensure it did not unduly impact on the adjacent proposed Village Zone. See also [Section 6.20.8 – Future Investigation Areas – Village Zone](#) below.

6.20. Residential Land Uses (Village Zone & Rural Small Holdings)

As stated in [Section 6.14 – Summary of Existing Land Uses](#), out of a total of 304 lots in the Village Zone, 193 lots (63.5% as at 2009) are used for dwellings. Site visits suggest that there are approximately 197 dwellings on these 193 lots.

In the Rural Small Holdings Zones there are approximately 30 dwelling lots / 30 dwellings across the three (3) areas. Therefore, there are a total of 227 dwellings in the urban areas of Manildra. This is the same as the total number of private dwellings indicated in the 2006 Census for Manildra. The number of unoccupied dwellings at the 2006 Census was 25 (11%).



6.20.1. Existing Dwelling Types & Character

As stated in [Section 6.9 – Demographics \(2006 Census\)](#), 93.6% of dwellings in Manildra are separate houses with only 6.4% as flat, units or apartments. The average household size is 2.4 people per dwelling compared to 2.6 in Cabonne and Australia. This may partly be caused by a higher proportion of lone-person households (31.2%) which may be attributed to the higher percentage of people over the age of 65 years (16.5%).

As stated in [Section 6.5 – Settlement Pattern](#), in general the dwelling lots in the area west of the creek in the Village Zone are generally 1,000m² to 2,000m² (with frontages of 20-40m and depths of 40-60m). Some are as low as 600-800m². To the west of the creek dwellings lots are generally larger. These lot sizes allow for a number of dwelling configurations on the lot and plenty of open space. In general dwellings adopt a minimal front setback of 6-8 metres and side setbacks of minimum 3-4 metres which allows for a larger rear yard and reasonable privacy. This decreases significantly for smaller lots. The rear yard often incorporates sheds and garages.



There are a large number of older dwellings, some of which have significant heritage value, and add to the character of the streets and the village. There are also a range of more recently constructed dwellings. In general, there are not a large number of dwellings where the design or style is totally out of character for Manildra.



Issues & Strategies

- **Housing Choice:** The majority of dwellings in Manildra are detached and there are no limited medium density housing types. Whilst part of the attraction of living in Manildra is to have a separate dwelling, with an increasingly larger older population and high percentage of lone-person households there is likely to be future demand for small or more compact housing that is lower in maintenance on smaller lots. There is currently a limited choice of housing types in Manildra to meet this future need.
- **Dwelling Controls:** There are no major issues with the character and design of dwellings in Manildra but there may need to be some controls to ensure that the character of Manildra is preserved. This may involve restrictions on the use of transportable/relocatable houses and shed-style homes to ensure that they are in keeping with the existing housing stock materials and sympathetic to heritage items.



6.20.2. Potential Dwelling Supply – Existing Village Zone

Infill Development – Small Vacant Lots – Village Zone

As stated in [Section 6.16 – Vacant Land](#), there are approximately 41 vacant lots in the Village Zone of which 13 are partially constrained and 28 would be easier/cheaper to develop for an additional dwelling (subject to consent). Of these lots six (6) are larger lots capable of subdivision and 22 are smaller lots that are likely to only support a single dwelling (subject to connection to reticulated sewerage).

Subdivision Potential – Vacant Lots - Village Zone

Of the developable vacant lots, approximately 6 lots are greater than 2,000m² and may be capable of further subdivision. One lot on Kiewa Street (West) is owned by Council and there are current proposals for its subdivision with an estimated of 16-18 lots. The other five (5) lots are east of the creek and may be capable of subdivision to sixteen (16) lots. Therefore, there is potential for the six (6) lots to increase to 34 lots, an addition of 28 lots in the Village Zone through subdivision.



Subdivision Potential – Dwellings Lots - Village Zone

In addition, there are existing dwellings on lots greater than 2,000m² that may also be capable of future subdivision. Lots south of the railway have been excluded on the basis they are likely to be incorporated in a future industrial area. The main source of these lots is east of Mandagery Creek. There are only 2-3 lots in this category and there may only be potential for an additional 8-10 lots to be created.



Centralised sewerage has only recently been provided to Manildra's Village Zone and this may allow lots to support a dwelling on a significantly lower area. There are a number of lots in Manildra of 1,000m² or less and this would suggest that smaller lots sizes may be in demand and are not contrary to the desired character of the village. If so, then the calculations above could result in infill development creating an additional 10-12 lots.



Total Potential Dwelling Supply

Table 11 summarises the above estimated supply of lots that could be created in Manildra's Village Zone to provide additional dwellings and applies a conservative rule that only 60% of potential lots would ever eventuate on the market by 2036 (assuming there is demand). This results in a potential supply of 30 additional dwellings / lots by 2036.

Method	No of Lots	Potential Lots	Additional Dwellings	60% Rule
Small Vacant Lots (~2,000m ²)	22	22	22	13
Subdivision Vacant Lots	6	34	28	17
Subdivision Large Dwelling Lots	3	11	8	5
Subdivision Small Dwelling Lots (~1,000m ²)	10	20	10	6
Total	41	87	68	41 Additional Dwellings

Table 11: Estimated number of additional dwellings that could be created through the existing supply of land within the Village Zone.

6.20.3. Potential Dwelling Supply – Existing Rural Residential Area

Number of Vacant Developable Lots

As stated in **Section 6.16 – Vacant Land**, there are approximately 41 vacant lots in the Rural Small Holdings Zone of which 14 are partially constrained and 27 would be easier/cheaper to develop for an additional dwelling (subject to consent). As both vacant lots and dwelling lots are likely to have some subdivision potential and supply is dependent more on desired lot size - it is easier to generalise by calculating how many standard lots would fit within the developable area rather than calculating the subdivision capacity of each lot.

Subdivision Potential - Rural Small Holdings Zones

Currently the minimum lot size for subdivision in the Rural Small Holdings Zone is 4,000m². However, based on the existing lot pattern it would appear that the demand is more likely to be for 1-2 hectare lots and this would account for variations in topography and other constraints.

There are 27 vacant lots that are developable in the Rural Small Holdings Zones as set out in Table 12. A conservative estimate is that at 1-2 hectares per lot (except for existing small lots) there would be 67 total lots (or 40 new lots) created by further subdivision (subject to consent).

from Council). Applying the rule that only 60% of these would be made available by the year 2036 – there should be 34 lots available in the Rural Small Holdings Zones.

Zone	Develop-able Vacant Lots	Develop-able Area (ha)	Existing Lot Size Range	Likely Desired Lot Size	Potential Lots Created	Additional Dwellings	60% Rule Dwellings by 2036
North-West	12	~10.4ha	0.2 - 5.33 ha	4,000m ²	26	24	14
South-West	1	~6.4ha	0.34 - 3.96 ha	N/A	N/A	N/A	N/A
East	14	~107.9ha	0.25 – 33.7 ha	1ha	108	81	49
Total	27	~125.7ha	N/A	N/A	134	105	63

Table 12: Estimated number of dwellings/lots that could be created by further subdivision in the Rural Small Holdings Zones.

6.20.4. Future Projections of Dwelling Demand

Section 6.7 – Summary of Opportunities & Constraints lists the key positive and negative factors for Manildra that also influence the demand for dwellings in Manildra's Village Zone. As the census data is for both the Village Zone and Rural Small Holdings Zones the demand will be calculated together. However, for the purposes of this Strategy it is assumed that 40% of the demand will be for village lots and 60% of the demand will be for rural residential lots.

The following set of tables provides a summary of some of the findings in the above sections relating to the projected population growth of Manildra and the assumptions behind the projected demand for dwellings which is a key driver for additional land for the village.

The aim is to test a range of methods for projecting estimated dwelling demand over the next 30 years. These methods include projections based on:

- Projected maximum population growth and occupancy rate (ABS data);
- Projected annual rates of approvals for new dwellings (Council records); and
- Known historical increases in dwellings / take up of vacant land (historical records).

Based on the positive and negative aspects that would support population growth in Manildra, it is assumed that there would be an average annual growth rate of 0.3% up to a maximum annual growth rate of 0.5%.

For the purpose of determining dwelling demand the maximum growth rate (0.5%/year) will ensure sufficient land supply. As a result the estimated population in 2036 is 598 (an additional 83 people over 30 years). This Strategy assumes a projected occupancy rate of 2.3 people per dwelling in 2036. The 2006 Census states there were 227 total dwellings and 202 occupied dwellings. Table 13 summarises the different methods for projecting dwelling demand for Manildra from the information above using a maximum growth rate of 0.5%.

Whilst the number of additional dwellings required by 2036 ranges from 33 to 50, the average of this is 50 new dwellings over the 30 year period. Based on current population growth rates it is likely to be at the lower end of this spectrum. However, over the next 10 years there would be an expected demand for up to 15-20 new dwellings.

Projected No. of Dwellings Required by 2036 with maximum annual growth rate of 0.5%	Calculation	Add. Dwellings needed by 2036
Projected add .2036 Pop./ Proj. Occupancy Rate	83 additional people / 2.3	~36
Projected 2036 Pop. / Proj. Occ. Rate – Existing Dwelling. VZ	598/2.3 = 260 - 227	~33
Projected 2036 Pop./ Proj. Occ. Rate – Existing Occ. Dw.	598/2.3 = 260 - 202	~58
DAs for Dwellings 99/00-03/04 (2005 Draft Village Strategy)	2 DAs / year	~60
DAs for Dwellings 1999-2009 (Fujitsu)	2 DAs / year	~60
AVERAGE	247 / 5 = 49.4	~50

Table 13: Projected dwelling demand to 2036 based on maximum growth rate projections from tables above.

6.20.5. Summary of Additional Dwellings Required by 2036

Table 14 shows how the estimated supply and demand for dwellings compares over a 30 year and 10 year period. In conclusion there is potentially a 60 year supply of dwellings and a significant oversupply of dwelling land needed over the next 10 years.

The dominant amount of that oversupply is in the Rural Small Holdings Zone, particularly with the large blocks to the south-east. However, in the short term there may be an issue with getting village lots released and attracting new buyers so some minor expansion of the Village Zone may assist with resolving this issue.

Supply/Demand	By 2016 (5-10 years)	By 2036 (30 Years)
Estimated Dwelling Demand (All Zones)	20	50
Estimated Supply (Village Zone)	41	41
Estimated Supply (Rural Small Holdings Zone)	63	63
Oversupply of Dwellings	84 Dwellings	54 Dwellings

Table 14: Total supply and demand for dwelling supply estimated over a 10 year and 30 year period.

Issues & Strategies

- **Village Zone Outcomes:** There is assumed to be a need to rezone some additional Village Zone land for dwellings in the next 10 years to meet the projected demand based on difficulties releasing land in this zone.
- **Large Lot Residential Outcomes:** There is a significant oversupply of large lot residential land in both the 10 and 30 year timeframes. In order to promote some consolidation of development it is worth considering some de-zoning of land, particularly where it has a dominant agricultural character.

6.20.6. Proposed Land Use Outcomes – Village Zone

As a result of the above supply/demand review, the following amendments to the existing Village Zone are proposed (Figure 25).

This Strategy recommends that the following areas are removed from the existing Village Zone:

- **Industrial:** The area noted above for industrial use (existing or proposed) should be removed from the existing Village Zone (or Rural Small Holdings Zone) – in total approximately 12.55 hectares (see [Section 6.19 – Industrial Land Uses](#) for more detail).
- **Mine Manager's Residence:** The five lots where the Manager's Residence for the Manildra Flour Mill is located. These should be included in the proposed industrial area. Since this is a heritage item there is no additional dwelling potential and no affect of the industrial zoning – Area approx. 1ha.

This Strategy recommends the areas to the north-west of Whitton Street between Orange and Toogong Streets (excluding the land owned by Manildra Flour Mills) is added to the proposed Village Zone. There is already an historical subdivision pattern of 2,000m² lots on the blocks adjacent to Orange Street on which one house is currently being constructed and the rest of the lots are for sale. The other two lots are capable of further subdivision. As these already have an urban residential character and access to utilities no additional studies are needed for this amendment. This in an additional area of ~5.05 hectares.

The total area removed from the existing Village Zone would be approximately 13.6 hectares. The total area added to the Village Zone is approximately 5 hectares. However, it is important to note that the area being removed has no additional dwelling potential, whereas the area being added has the potential for 15-18 additional dwellings for 2,000m² lots (or more for smaller lots). Therefore, there is a total increase in dwelling potential that will meet some of the demand in Manildra over the next 10 years.

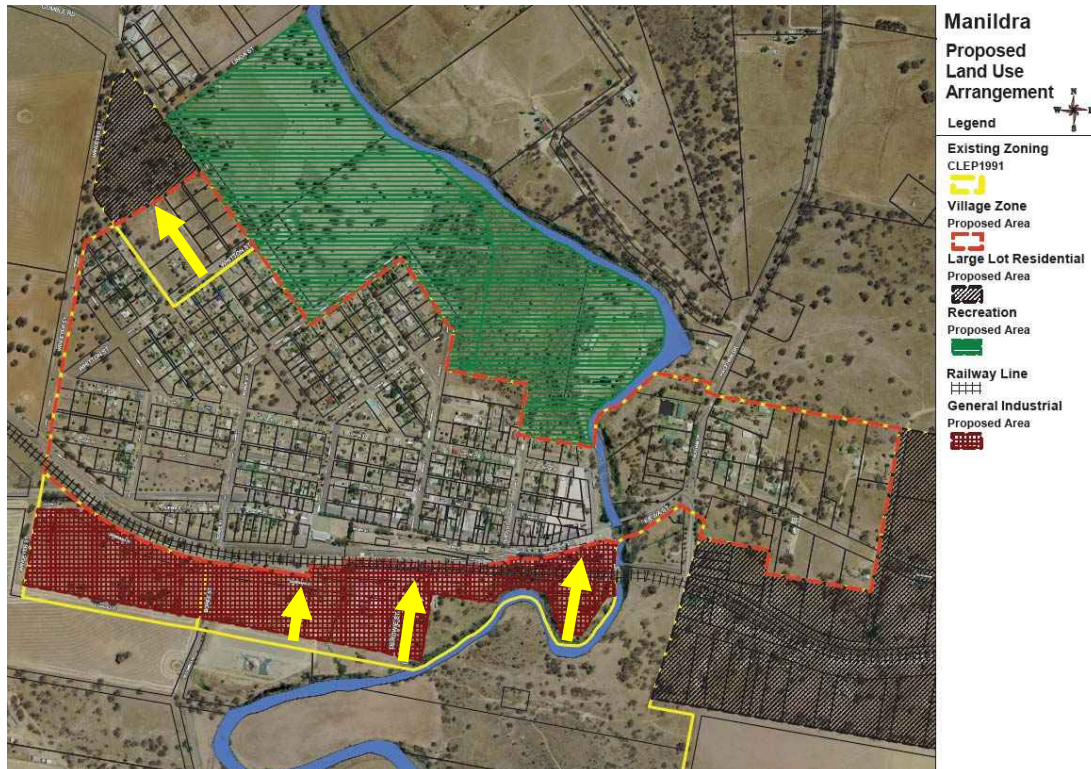


Figure 25: Proposed amendments to the existing Village Zone (yellow line) compared to the proposed Village Zone (dotted orange line) for the new LEP (Source: Council GIS 2011).

6.20.7. Proposed Land Use Outcomes – Large Lot Residential Area

On the basis that there is an oversupply of large lot residential land there is potential for Council to consider the following changes to the areas for large lot residential land uses (Figure 26):

- **Decrease - North-West:** As a result of the proposed extension to the Village Zone in the north-west of Manildra there would be a corresponding reduction in the large lot residential lands in this area. This would result in a reduction of approximately 4.85 hectares. The remaining Rural Small Holdings area is approximately 5.33ha and should have a minimum lot size of 4,000m²;
- **Decrease – South-West:** As a result of the proposed inclusion of this area in the new industrial area there would be a reduction of ~6.38ha of large lot residential land.
- **Decrease – South-East:** There is a proposal to remove Lot 106 DP750162 from the Rural Small Holdings Zone. This lot has an area of 33.7 hectares. This lot is currently solely used for agricultural purposes and would require substantial additional cost to provide road access for development that would not be warranted with the existing demand. There is also an issue with potential bushfire prone land in the south of the lot and existing native vegetation that could be protected. As the landholder owns the adjacent lot (Lot 104 DP750162) of area 17.16 ha there is sufficient area for development potential for this owner. This area could be considered for future growth if demand significantly increases. The remaining large lot residential area to the east of Manildra is approximately 90 hectares in size.

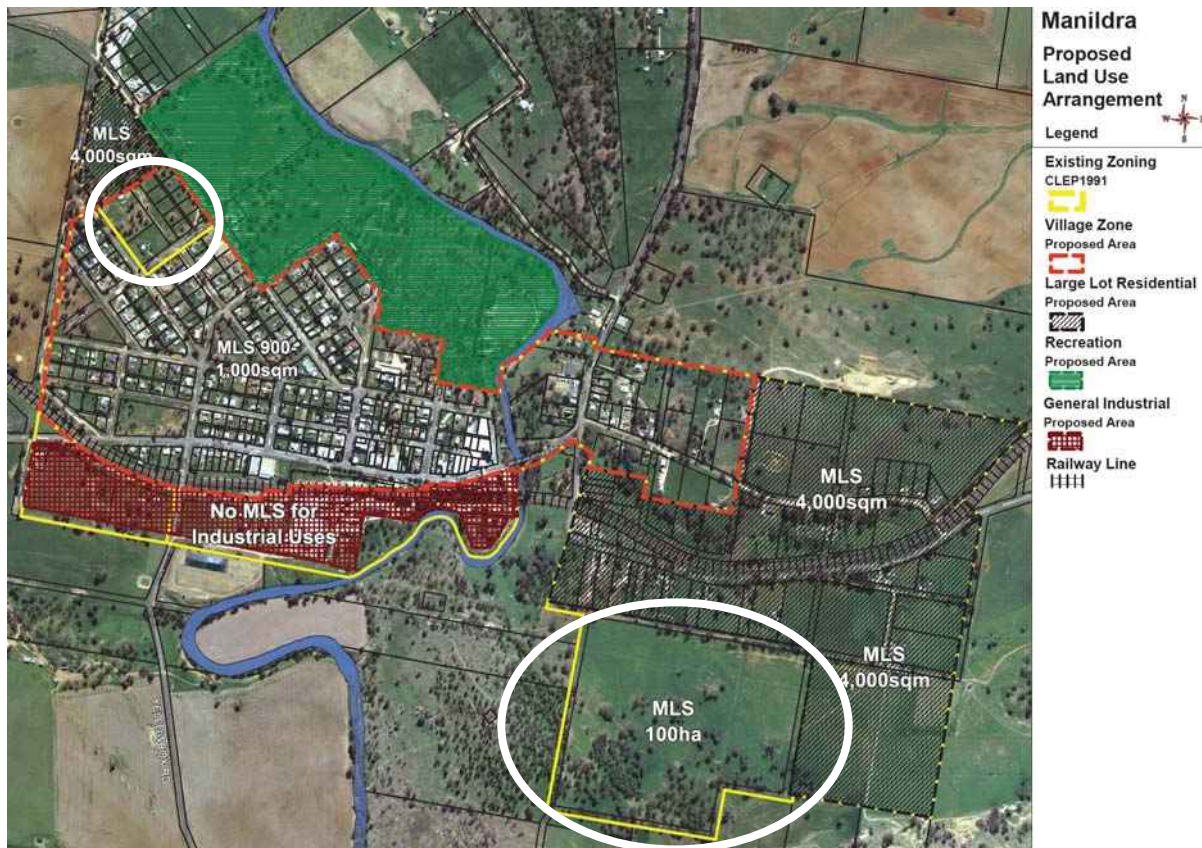


Figure 26: Proposed amendments to the large lot residential areas around Manildra recommended by this Strategy (Source: Council GIS 2012).

6.20.8. Future Investigation Areas – Village Zone

Now that centralised sewerage has been introduced then there is potential to subdivide a number of blocks in the Village Zone and create some infill development opportunities that should supply the short to medium term.

If the growth rates in this Strategy were to be exceeded in the next 10 year period and the supply of residential (Village Zone) land were to be reduced to less than 20 vacant lots then there should be investigation of further grow areas for the Village Zone.

The major proposed area for investigation is Lot 255 DP750155 owned by Manildra Flour Mills (as at 2010) (Figure 27). This lot is currently in Zone 1(c) (Rural Small Holdings). This lot has an approximate area of 5.3 hectares and may be capable of supporting an additional 15-18 lots (each roughly 2,000-3,000m²).

This would be a slight increase on its current estimated dwelling potential for rural residential blocks that have a minimum size of 4,000m². This extension would need to occur prior to any significant subdivision of this land for rural residential blocks.

This extension is supported by the fact that there is an existing water main and the proposed sewer line running along Orange Street that would make this lot far cheaper to service and develop than many others. It is also believed that this lot has not been used for any heavy industrial purpose and, therefore, should not have any significant contamination issues.

This represents a natural extension of the existing Village Zone in an area that has limited agricultural usage. One issue that would need to be addressed, however, is the future use of the old piggery on the other side of Orange Street (see [Section 6.19.6 – Future Investigation Areas – Industry](#)).

Alternatively, if significant dwelling land supply is needed then the primary direction for growth of Manildra should be to the west – but this is at the expense of prime agricultural land and only should be used as a last resort.

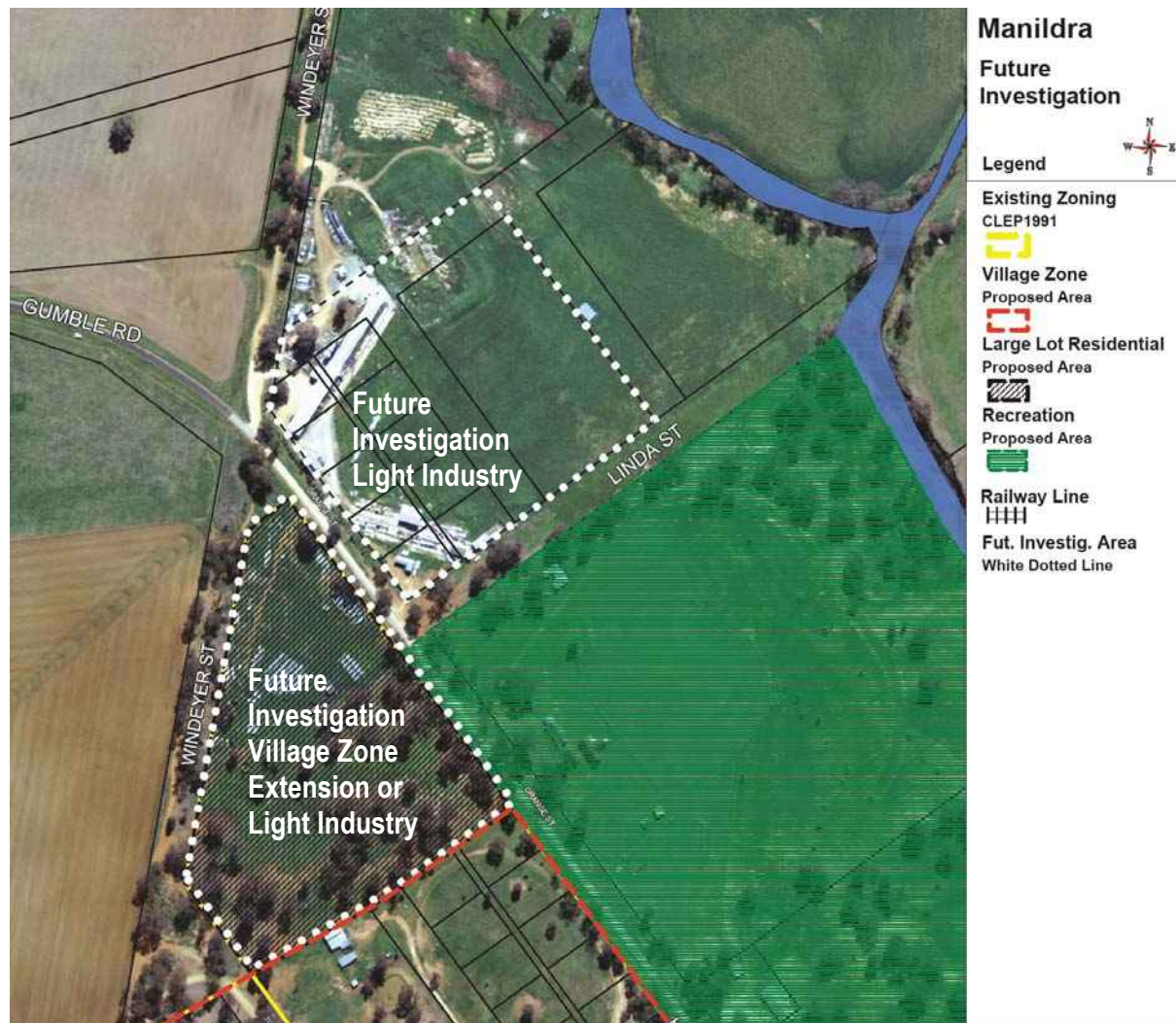


Figure 27: Proposed area for future investigation for an extension of the Village Zone (and light industry) should current residential land supply be taken up in the next 10-20 years (Source: Council GIS 2012).

6.20.9. Future Investigation Areas – Large Lot Residential Area

If the growth rates in the Strategy were exceeded, demand for large lot residential land uses consumes over 70% of the existing vacant large lot residential land, and there is limited subdivision potential then Council should consider an extension of the proposed new large lot residential area.

The natural extension would be to include some of the land that is proposed for removal from the large lot residential land use area but limit development to the northern and eastern sides of the lot to avoid any significant vegetation / bushfire prone land (Figure 28). This would provide an additional 18 hectares of developable land. Based on an average lot size of 1 hectare this would produce an additional 18 lots/dwellings (roughly equivalent to 10 years supply of dwellings).

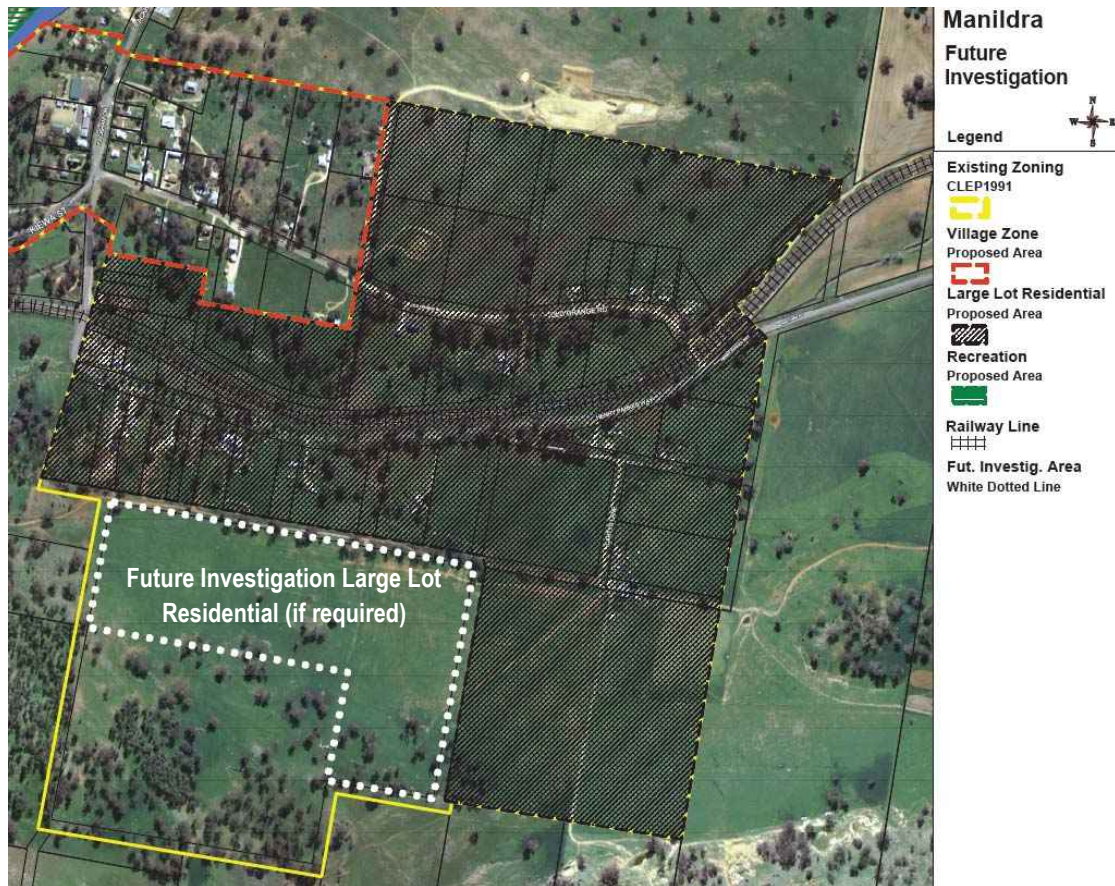


Figure 28: Future investigation area for rural residential land uses recommended by this Strategy (Source: Council GIS 2012).

6.21. Previous Land Use Strategies

It is important to conduct a review of all relevant previous studies as they can provide valuable information on key opportunities and constraints as well as key recommendations that have been put to the community. Where possible, this Strategy should be consistent with those recommendations (unless there are clear reasons to change recommendations).

6.21.1. Proposed Rezoning (2002)

Abacus Planning has prepared on behalf of Council an *Environmental Review in Support of Proposed Rezoning of land at Molong and Manildra* (April 2002). It is important to note this document because it sought to review a rezoning of land south of the railway station.

The proposed site included land in Zone 2(v) (Village), Zone 1(c) (Rural Small Holdings) and Zone 1(a) (General Rural) (Figure 29). The proposal was to rezone this to Zone 4(a) Industrial. This proposal was obviously not successful at the time but set the grounds for the decision in the GHD (2008) *Sub-Regional Rural and Industrial Land Use Strategy* which identified future industrial lands.

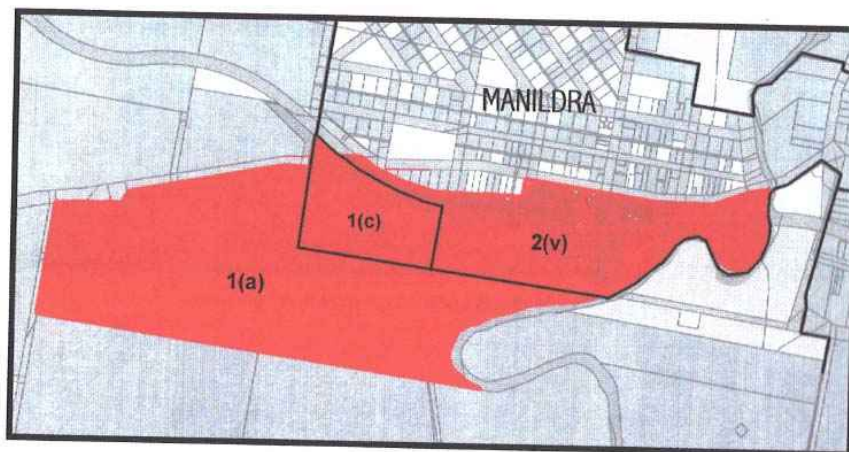


Figure 29: Diagram from Proposed Rezoning report showing land first proposed for an industrial zone in Manildra.

6.21.2. Draft Manildra Village Strategy (2005) ('2005 Strategy')

In 2005 a Draft Village Strategy was prepared by Habitat Planning (on behalf of Council) for Manildra and the other settlements. For a variety of reasons this Draft Strategy was never adopted and, due to the passage of time, it has had to be substantially redone as part of this Strategy. However, it is important to address the draft outcomes of the 2005 Strategy as it was the product of consultation with the community. These draft outcomes are illustrated by Figure 30.

This Strategy agrees with the 2005 Draft Strategy in the following ways:

- There is no need for additional Zone 1(c) (Rural Small Holdings) lands based on demand.
- Infill development should occur in a number of vacant lands through Manildra;
- Any future growth of Manildra (should it exceed the growth rates of this Strategy and the intended infill areas) should occur to the west of the settlement rather than to the east of Mandagery Creek.
- Commercial land should continue to be focussed along Kiewa Street (between Mandagery Creek and Goimbla Street) to enhance country town main street character.
- Suggestion that an industrial zone may be suitable for the Mill site(s) between Mandagery Creek and Kiewa Street.

- Now that Manildra has been provided with a reticulated sewerage system there are additional opportunities for subdivision and development of existing larger lots within the village (this may affect need to grow to west).

Areas where this Strategy disagrees with the 2005 Draft Strategy are as follows:

- The 2005 Strategy is now inconsistent with the approved GHD (2008) *Sub-Regional Rural and Industrial Land Use Strategy* – in particular, the proposed land uses south of the railway line which are intended for future industrial land uses. Upzoning of the existing south-western Rural Small Holdings area to Village Zone and future rural residential development to the south of the existing Village Zone as this will conflict with proposed industrial area in this Strategy.
- Infill development of a number of the Crown lands (parks) is required. This may be difficult with the current native title/land claims over these areas.
- Extension of the Village Zone to the west of Manildra as part of the next LEP. This may be considered in future revisions of this Strategy.
- The need for a Highway business zone along Kiwa Street to the west of the settlement in the General Rural Zone. Council requires further growth in the industrial sector before it would consider an application for bulky goods and highway services in this location.

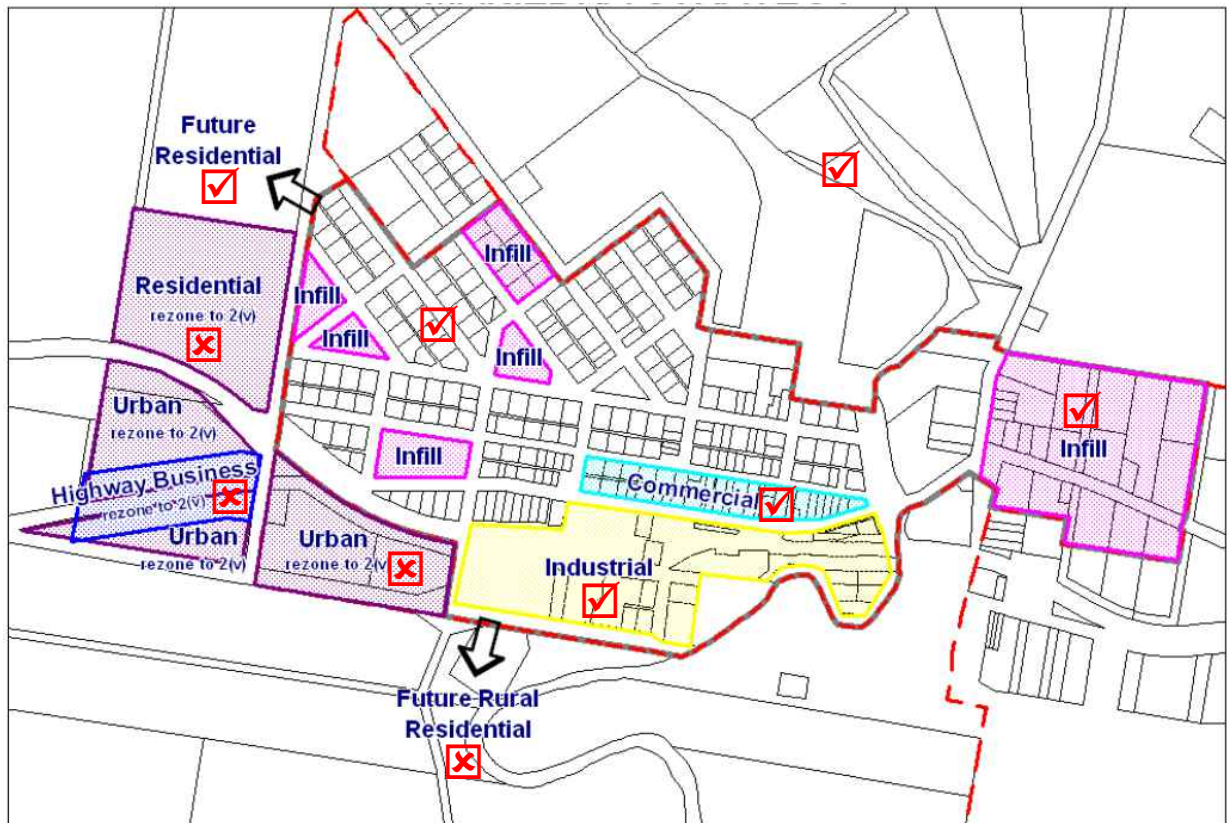


Figure 30: Proposal for growth in the Draft Manildra Village Strategy (2005) showing which recommendations were agreed by this Strategy.

6.21.3. Outcomes from Draft Subregional Rural and Industrial Strategy (2008)

This is addressed in [Section 6.19 - Industrial Land Uses](#) above.



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Document Control

Version	Date	Author	Summary	Reviewed
A	October 2011	A.Napier	Draft for Internal Review	DES
B	December 2011		Draft Final	DES
C	March 2012		Final for Public Exhibition	KB
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Final	August 2012		Amendments Incorporated	AN

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- Figure 6: Excerpt of Mineral Resource Audit of Cabonne Shire (Source: Department of Primary Industries, February 2010).
- Figure 7: Groundwater vulnerability & licences for Cudal (Source: NSW Office of Water 2011).
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- Figure 13: Location of key land uses in Cudal's Village Zone (as at 2010).
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7. Village of Cudal

Please note that **Chapter 7 – Village of Cudal** should be read with **Chapter 2 – Cabonne Overview** as some of the Issues and Strategies applicable to all settlements are not reproduced in this chapter.

7.1. Executive Summary & Proposed Land Use Arrangements

7.1.1. Historical population growth

The ABS Census District for the Village of Cudal includes the majority of the existing Village Zone and a small portion of Zone 1(c) (Rural Small Holdings) in the north-east and, therefore, provides a fairly good reflection of the statistics for the Village Zone but does not include additional dwellings and population in all of the surrounding Rural Small Holdings. As Table 1 shows, the population of Cudal's Village Zone peaked with 420 people in 1996 but there has been an overall decrease in the settlement population over the last 20 years but in general the population has stayed relatively stable between 350 and 420 people for the last 30 years.

Year	1976	1981	1986	1991	1996	2001	2006
Population	373	400	352	379	420	409	389
Av. Ann. Change from previous Census	N/A	+1.45%	-2.40%	+1.53%	+2.16%	-0.52%	-0.98%

Table 1: Summary of population statistics for Cudal (source: www.abs.gov.au).

7.1.2. Key Factors Influencing Population/Economic Growth

Cudal has a number of potential positive influences that could result in positive population and economic growth including, but not limited to, a relatively stable population of 350-420 people over the last 30 years, proximity to larger centres like Orange for higher level services and employment, location on a key transport route (The Escort Way) to promote business and providing reasonable public bus transport, opportunities for tourism with the Cultural Centre, a strong surrounding agricultural sector with potential for growth in wine and mining, the introduction of a centralised sewerage system in 2009 that allows reduced minimum lot sizes and improved residential amenity, a local health centre, local primary school and pre-school centre, some provision of aged care housing and a strong rural character and community spirit.

However, there are a number of potential negative influences that could hamper population and economic growth including, but not limited to, recent population decline, an ageing population with need for higher level health and aged care services, evidence of significant escape expenditure to larger centres and resulting loss of local shops and services, limited local employment and heavy reliance on a limited number of local employers, lack of a defined industrial area, and some flood potential along Boree Creek affecting urban areas, and concern about the cost of development across Cabonne.

7.1.3. Projected Population Growth

Based on the opportunities and constraints, Cudal's population is expected to grow at a projected annual rate ranging from -0.3%/year (minimum) through to +0.5%/year (maximum) with an average of +0.14%/year (the average growth rate of Cudal's Village Zone from 1976 to 2006)(Please note that growth rates will change over time and this is an estimated average growth rate over the 30 year period).

Based on the **maximum** growth rate of +0.5%/yr Cudal's population (Village Zone + Rural Small Holdings areas) will grow from an estimated population of 434 in 2006 to 504 people by 2036, an increase of 70 people over the 2006 population. This growth will create some limited additional demand for residential, business, community and open space/recreation land uses that will need to be provided in Cudal and the region.

7.1.4. Proposed Land Use Zone(s)

Good planning practice suggests that settlements above 1,000 in population that are experiencing higher growth should consider adopting specific zoning for each land use ('complex zoning') to minimise land use conflicts and maximise amenity and economic activity.

As the estimated 2006 population of Cudal's Village Zone + Rural Small Holdings is approximately 434 people (+/- 10-15 people), this Strategy recommends that Cudal retains a zone similar to the existing 'Village Zone' for the core urban area combined with areas for large lot residential uses (to replace the existing Zone 1(c) (Rural Small Holdings)). Therefore, there is not a major change in zoning categories proposed for Cudal.

7.1.5. Summary of Proposed Changes

There are changes proposed to both the 'zoned' areas and the subdivision potential of some lands in this Settlement. See the detailed land use sections of this chapter for more details.

The proposed land use arrangements for Cudal are summarised in Figure 1 and as follows:



Figure 1: Summary of proposed land use arrangements for Cudal (Source: Council GIS 2011).

a) Village Zone

Proposed Extensions to Existing Village Zone Area

The only minor extension to the existing Village Zone boundary would be the inclusion of all of Lot 3 DP978900 (Flood Street) to remove the split zoning across this lot that places the east half in the Village Zone and the west half in the large lot residential area.

Due to natural hazards and other environmental factors there are some areas where there should be a reduction of the Village Zone and this will partially reduce the possible over-supply of urban residential land as follows:

Existing Village Zone Transfer to Rural Zone

The following existing Village Zone areas should be designated for **rural uses**:

- The existing Village Zone includes a small strip of the Temporary Common to the south of Long Street (~1.3ha) (Corner Brown Street) that is not required for urban development and is Crown land and has a low likelihood of development at this time;
- Lot 100 DP1033337 (2 South Street) has a small area (~0.3ha) at the corner of South and Flood Streets that is part of a larger 4.5ha block in the rural zone;

Existing Village Zone Transfer to Large Lot Residential

The following existing Village Zone areas should be designated for **large lot residential uses**:

- Lots 143 & 180 DP750150 & Lot 7303 DP1152031 (West Cudal – South of The Escort Way) – This area consists of 3 privately held lots (~3.25ha) to the west of Boree Creek that have significant flood potential and very limited development potential with no direct road frontage for access. This area has one existing dwelling and may be able to support another – but the density is more suited to a large lot residential zone;
- Lot 4 DP584070 (Flood Street) has a small area (~0.12ha) of this lot fronting Flood Street in the Village Zone but the remainder of the lot adjacent to Boree Creek is in the Rural Small Holdings Zone. This lot would probably only support a single dwelling (1ha lot) so its removal from the Village Zone should not have a significant impact;
- Lot 1 DP854798 (1 Merga Street) / Lot 2 DP854798 (9 Merga Street) / Lot 9 DP854798 (11 Merga Street) have a small area (~0.2ha) of these lots fronting Merga Street in the Village Zone but this primarily acts as the access driveway for the existing dwellings on the remainder of these lots that is in the Rural Small Holdings Zone. Therefore, there is no significant impact from this partial lot removal;
- Lots 1-5 Section 5 DP758311 (Short Street) have the southern area of 4 out of 5 of these lots facing Short Street in the Village Zone and the northern area of the lots in the Rural Small Holdings Zone. However, the rear of these lots is likely to be flood prone and would support limited development. Therefore, the inclusion of all of these lots in the large lot residential area is unlikely to limit their development if the minimum lot size is larger than 4,000m² per lot;
- Lots 5-8 Section 4 DP1864 / Lots 7-12 Section 3 DP1864 / Lot 7-12 Section 2 DP1864 / Lots 7-12 Section 1 DP1864 (Naylor / Taylor / Nathan Streets) – These 22 lots are located in close proximity to Boree Creek and have a high likelihood of flooding that makes them unsuitable for intensive (small lot) development. Reclassification of these lots for large lot residential purposes with a minimum lot size of 4,000m² would recognise this development restriction;
- Lot 241 DP750137 (Boundary Street) – This large 2.34ha lot is within the Village Zone but Boundary Street is not fully formed and access comes off Creek Street. The northern portion of this lot is likely to be flood affected and the extension of utilities for intensive development of this area would be expensive. Therefore, it has been placed in the large lot residential area.

Minimum Lot Size for Proposed Village Zone

As Cudal had a centralised sewer introduced in 2009 it has the potential to allow for subdivision of serviced (Village Zone) lots down to 300-500m²/lot. However, the historical subdivision pattern consists of a majority of 2,000m² lots, some of which have been subdivided into 1,000m² lots with a 20m street frontage. Subdivision of these lots below 1,000m² is likely to require 'battleaxe' lots which would significantly impair the residential amenity and character of Cudal and are not warranted considering the low growth rate of the village. Therefore, this Strategy recommends that the minimum lot size for subdivision is between 900-1000m² per lot.

b) Large Lot Residential

As there is sufficient large lot residential land for at least the next 30 years there is the possibility of seeking to remove land from the large lot residential area that is currently used for agriculture, distant from the village centre and existing utilities/roads, and has a very low probability of development in the next 10-20 years.

The section above notes sections of the existing Village Zone that are recommended to be designated for large lot residential uses. This Strategy recommends the following reductions to the existing large lot residential area:

- **Temporary Town Commons (South of Cudal):** Removal of the Temporary Commons (~27.9ha) from the large lot residential area as this is Crown land and there are a number of environmental constraints to development of this land. In addition, this would preserve the land for a potential Village Zone extension to the south if required in the future;
- **Crown / Recreation Lands:** Removal of the Showground site (Lot 7008 DP1020069 ~36.14ha) and Crown Land to the west of Cudal (Lot 70 DP750150 & Lot 7005 DP1023274 ~8ha) that has a recreation purpose and is not suited to future redevelopment. This land may be placed in a recreation zone.
- **Agricultural Land (West of Cudal):** Removal of Lot 22 DP537766 (~20.74ha) (no dwelling) and part Lot 5 DP623569 that is included in the existing Rural Small Holding Zone (~19.4ha) (no dwelling). These lots would be placed in the surrounding rural zone. Both of these lots are held in the same ownership and form part of the 'Kraywood' property. They are currently used for agriculture and would require substantial extensions and upgrades of road and utility infrastructure for intensified development when there are other more appropriate locations and an over-supplied market. In addition, in 2008 the owner received approval for a 2 lot subdivision that produced an area of 8.1 hectares that has been included in the proposed large lot residential area giving this owner some development potential. The proposed minimum lot size for subdivision ('MLS') is 1 hectare/lot.
- **Isolated Lot (East of Cudal):** Removal of part of Lot 12 DP604376 (3598 The Escort Way) that is within the existing Rural Small Holdings Zone and placement in the surrounding rural zone (~4ha). This zoning was an addition in CLEP1991. The owner has recently received approval for a dwelling on this lot DA2012/15 and has therefore realised some development potential. However, this lot is significantly removed from Cudal village, the zoning only extends over part of the lot, it is adjacent to the old Cudal Airport and potential future land use conflicts, and it has limited development potential.

c) Industrial Land Uses

Whilst Cudal has some light industrial uses such as Snooze Ezy Ice and some engineering/transport related services there is not estimated to be a large demand for light industrial lands in Cudal due to economic and physical constraints to attract new industries to the area and competition with surrounding larger centres and Manildra (which has been nominated for larger scale industrial uses in the Rural & Industrial Land Use Strategy).

One anomaly is that Snooze Ezy Ice is currently (and proposed to be) located in the large lot residential area. Further consideration needs to be given to the appropriateness of including this existing industrial operation in the Village Zone to allow it to expand its operations (if required) rather than relying on existing use rights.

Whilst the proposed Village Zone will provide flexibility for home industry and some light industries to grow in Cudal where they can address issues of land use conflict with residential uses, it would be more ideal if future light industrial uses were located in an area where land use conflicts could be minimised and industrial uses could be co-located. One such potential area is along Boree Street (close to Brown Street) where there are few dwellings and it is adjacent to rural lands, it is relatively flat land, there are existing utilities, there is good vehicle

access down Brown Street to The Escort Way, and there is a large amount of vacant land with two (2) main land owners.

d) *Business Land Uses*

Whilst the proposed Village Zone will provide flexibility for local retail and commercial businesses to grow in Cudal there should be some attempt to consolidate stand-alone businesses along Main Street between Brown and Wall Streets, where possible to reinforce the character of Cudal's central business area, capture passing traffic, reutilise existing vacant business premises, and minimise conflicts with residential areas. However, home businesses with lower impacts are likely to be supportable across the village area.

e) *Community Land Uses*

There is no perceived need for specially designated land for community uses within the Cudal urban area or provide additional land for these purposes. If expansion is required this can generally be accommodated on existing community use sites or on vacant land in the urban area without substantial impact on residential amenity or supply.

7.1.6. Summary of Demand & Supply

Village Zone Areas

After the proposed changes to the Village Zone boundary that are recommended in this Strategy and the introduction of a minimum lot size for subdivision of 900-1,000m² it results in a total potential supply of 57 lots in the proposed Village Zone that are likely to support a dwelling (Table 2).

Proposed Village Zone	Existing Lots	Potential Lots	50% Rule
Lots < 1,800m ² (no subdivision)	31	31	16
Lots 1800m ² to 2,400m ² (subdiv. into 2 lots per lot)	36	72	36
Lots > 2,400m ²	2	10	5
TOTAL	69	113	57

Table 2: Potential future lots/dwellings in Cudal's proposed Village Zone.

As stated in [Section 7.19.2 – Projected Dwelling Demand](#), there is estimated to be a demand for ~43 new dwellings in Cudal's Village Zone by 2036. Therefore, the proposed new Village Zone boundary will still potentially provide nearly 40 years projected supply of dwellings at this rate of growth. So there is no need for identification of future investigation lands for Village Zone expansion for some time.

Large Lot Residential Areas

The proposed changes to the large lot residential areas in this Strategy will reduce the existing large lot residential area of ~320 hectares (~242 hectares (excluding roads, Crown land & recreation areas)) by approximately 28 hectares of private land and 65 hectares of Crown or recreational lands – a total reduction of 93 hectares to a new large lot residential area of ~227 hectares (of which ~210 hectares is likely to be developable once roads are excluded).

Of the remaining 210 hectares of land, 50.7ha has approval for 87-97 large residential lots (~4,000m²/lot) and 15.3ha has an approval for a retirement village. The remaining ~144 hectares is unlikely to be able to be developed to its full potential so this Strategy has estimated that between 70-90 additional dwellings are possible (averaging 1-2 hectares/lot). Even if only 50% of these possible dwellings are likely then this results in 35-45 dwellings. If a dwelling demand of 1 per year is assumed then this is over 35-45 years of supply. If demand exceeds this rate then the proposed minimum lot sizes for subdivision could be reviewed to provide additional demand before looking to expand the large lot residential boundaries into agricultural lands.

7.2. Regional Location

Cudal is located in the central/western area of Cabonne Shire (Figure 2).

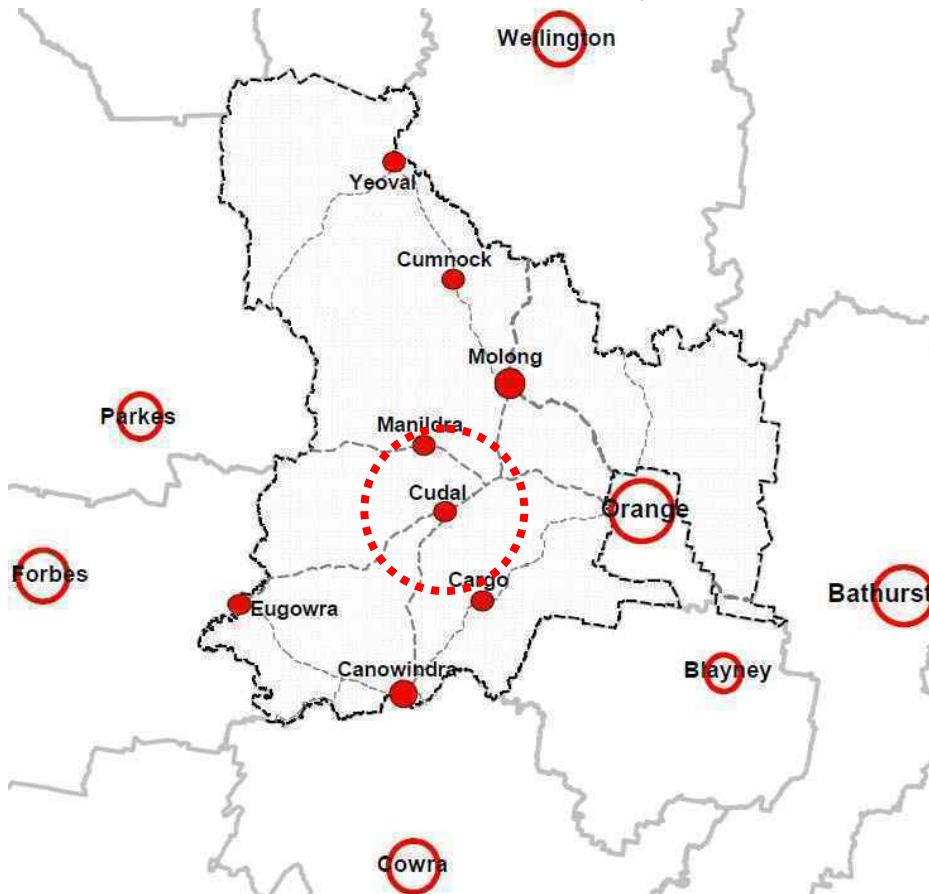


Figure 2: Location of Cudal and proximity to key regional centres and settlements (Source: Council GIS 2010).

Cudal is located approximately:

- 15km (10-15 minutes drive) to Manildra via Kurrajong Road;
- 29km (25-30 minutes drive) to Molong via The Escort Way and Peabody Road;
- 36km (25-30 minutes drive) to Canowindra via Canowindra Road (Route 81);
- 39km (30-35 minutes drive) to Orange via The Escort Way; and
- 42km (30-35 minutes drive) to Eugowra via The Escort Way.

It can be seen that Cudal is just outside the 'commuter zone' (25-30 minutes drive) of the City of Orange, and therefore, Orange is likely to be nearest major centre that can provide a higher level of services and retail to meet the needs of Cudal.

Issues & Strategies.

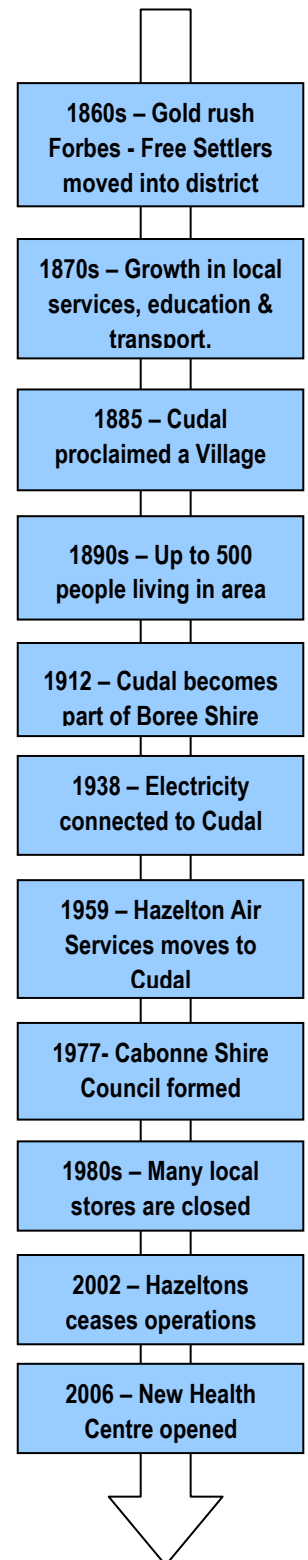
- **Proximity to Cabonne Settlements:** Cudal is within 30 minutes drive of Molong, Manildra and Cargo and less than 1 hours drive to Canowindra, Eugowra and Yeoval. In this way Cudal is relatively central to most of the key settlements in Cabonne. However, due to a lack of local services in Cudal it is reliant on many other settlements.
- **Proximity to Major Centres:** The proximity of Cudal to Orange can be a positive in terms of access to transport, services and retail in the higher level centre. However, it can also be a negative in that it can have the effect of encouraging 'escape' expenditure, investment and development away from Cudal that may result in less support for local businesses.

7.4. Settlement History

History is important because it explains why a settlement is located in its present location and how the settlement has changed over time. The Cudal area is part of the Wiradjuri nation and the town derives its name from an aboriginal word "Guddal" which has a variety of meanings attributed to it: "flat country", "foggy or misty waterhole", "land basin" or "place of many trees". The following are some key dates that influenced the growth of Cudal.

The primary sources for this information include: *Cudal Celebrates – Centenary of Federation 1901-2001*; Gosper, M. (2008) *A History of the E W Corden Store (Originally Caleb Parker's Commercial Exchange Store)*; and McKenzie, G. (1976) *Centenary of Public Education in Cudal 1876-1976*.

- 1835** Major Thomas Mitchell explored and surveyed the area;
- 1861** The Forbes-Bathurst mail was rerouted through Orange and Cudal found itself on the main road to the goldfields around Forbes. Free settlers moved into district in 1860s in response to the 'free selection' laws;
- 1867** Village of Cudal surveyed;
- 1872** Post Office established;
- 1875** Caleb Parker opened the 'Commercial Exchange' store in Main Street;
- 1876** First school in Cudal (Cudal Public School), privately established by parents. Major sale of lots in Cudal on 9 August (at Molong);
- 1878** Daily mail service provided by Cobb & Co.;
- 1878/79** 125 persons listed in Post Office Directory for Cudal;
- 1880** Telegraph Office commences operation;
- 1881** Sir Henry Parkes opened School of Arts;
- 1882** The village boasted 2 churches, a public school, commercial bank, 5 stores, one baker, 2 butchers, one shoemaker, one chemist, one saddler, 2 blacksmiths, one wheelwright, one flourmill and 3 hotels with forage stores attached;
- 1884** Construction of brick courthouse and lock up. Cudal permanent Common to the north dedicated on 5 May 1884;
- 1885** Cudal proclaimed a Village on 20 March 1885;
- 1889** Erection of first Post Office building;
- 1890** The Commercial Banking Company of Sydney moves into Main Street. There is evidence of up to 500 people living in the area;
- 1896** Butter Factory began. Village and suburban boundaries notified on 14 November. Temporary Common to south notified 31 July 1896;
- 1901** Parkers new store opened & second School of Arts;
- 1912** Municipality of Boree Shire reconstituted to incorporate former Cudal Shire;
- 1919** Public Recreation Reserve to east dedicated for Racecourse and Showground on 7 November 1919;
- 1925** Dr. Hurman set up a medical practice;
- 1928** Private Hospital established;
- 1936** Community Hospital opened;
- 1938** Electricity provided to Cudal;
- 1951** Cudal War Memorial Hospital opened;
- 1953** Hazelton Air Services began;
- 1959** Hazelton Air Services moved to Cudal;
- 1972** Homes for the aged opened;
- 1973** Preschool opened;



- 1975** Cudal school no longer has secondary classes;
- 1975** Hazelton Airlines began public passenger operations (Orange-Canberra);
- 1977** Boree Shire was amalgamated with surrounding shires to form Cabonne Shire;
- 1980** Bakery closed;
- 1989** CBC Bank closed;
- 1992** MacSmith family launched Australia Country Canola company;
- 1993** Butcher closed;
- 1995** Shannon family establish Cudal Lime products;
- 1999** Caltex self serve fuel station opened;
- 2000** Cabonne Winery opened – largest wine producer in the region at the time;
- 2000** Dairy closed;
- 2002** Cudal War Memorial Hospital closed and demolished to make way for new centre;
- 2002** Hazelton Airlines engineering base at Cudal closed. Airport closed;
- 2006** New Community Health Centre opened;
- 2009** “Beehive”, last grocery store with full range of products, closed.

It would appear that the peak periods for the growth of Cudal occurred between the late 1800s until the 1970s. Since that time there has been a gradual loss of local services and decrease in local population in the village. However, there have been several successful economic and agricultural ventures in the surrounding area that continue today but growth has been limited.

Issues & Strategies

Understanding the History: The history of Cudal and its surrounds is an important factor both in understanding the location of the settlement, how it grew, key opportunities and constraints to its growth, and as a fundamental building block for tourism and community spirit. Cudal should continue to build upon its history and protect and enhance the key heritage items and character. See [Section 7.13 – Heritage](#) for the proposed strategies for heritage items.

7.5. Settlement Pattern

7.5.1. Historical Subdivision Pattern

It is important to recognise that in most circumstances Council and the community are dealing with a historical subdivision pattern for many settlements that has often been in existence for over 100 years.

Without conducting a detailed historical study it has not been possible to pinpoint exactly when the current subdivision pattern came into being but the village was first surveyed in 1867 and plans in the late 1800s show most of the existing street and lot layout with only relatively minor additional expansion and subdivision in the last 100 years.

The vast majority of the historic subdivision patterns in settlements in Cabonne were based on a grid pattern with perpendicular streets and regular block sizes. In Cudal, to the west of Boree Creek the grid is mostly north-south/east-west whilst east of Boree Creek it is on a 55 degree west of north axis which responds to the alignment of the creek in this area.

It is important to note that at the time of these subdivisions a rear lane was incorporated through the middle of most blocks to allow the collection of sewage from the toilets at the backs of the blocks and many of these remain on the titles today. However, the rear lanes are rarely fenced off from private property and have been incorporated into the adjacent allotments in most cases in Cudal.

7.5.2. Street Dimensions

Most of the streets in Cudal are approximately 30 metres in width. This allows for a road with a lane in each direction and substantial on-road parking areas and kerb/pedestrian areas. A 30 metre road width also allows the potential for incorporation of street trees in the road corridor with minimal impact on parking / pedestrian areas. There are also 6-7 metre wide rear lanes through most of the blocks with some being sealed or gravelled but many not formed or used.

7.5.3. Block Sizes

Figure 4 shows some of the indicative block lengths and widths in Cudal. Due to the modifications to the grid pattern the block dimensions are variable – but in general are approximately 106 by 200 metres in dimension (incorporating a 6 metre wide rear lane) resulting in blocks of approximately 2.12 hectares in area.

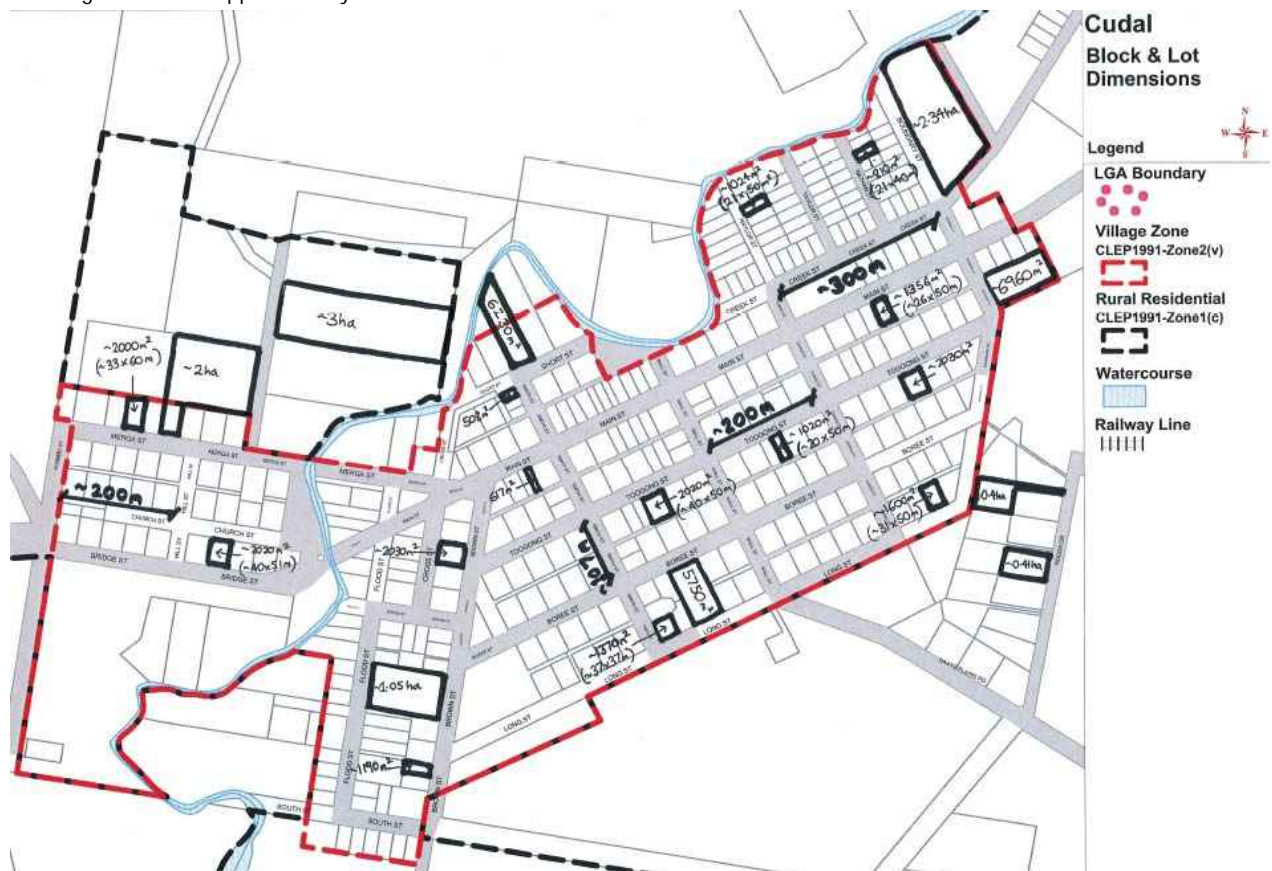


Figure 4: Indicative street, block and lot lengths, widths and areas in Cudal (Source: Council GIS 2011).

7.5.4. Lot Sizes

Lot sizes are reasonably consistent across Cudal but due to different block sizes they do range from as little as 500m² up to 2.34ha in the Village Zone. The historical subdivision pattern is likely to have been based on a standard 2,000m² lot which makes up the majority of lots. Over the last 100 years there has been some subdivision of these lots into two 1,000m² lots but this has only occurred in limited circumstances, mostly due to the need for larger lot sizes to support a dwelling and septic system.

Most of the 2,000m² lot have a dimension of approximately 40m by 50m which provides a generous village lot with good setbacks for a dwelling. The 1,000m² lots have a dimension of 20m by 50m which results in reduced side setbacks but retain the existing front and rear setbacks (in general).

Issues & Strategies

- **Rear Lanes:** Council and the Department of Lands need to conduct an assessment of all of the public mid-block rear lanes and determine whether anything will be done to protect their public nature and whether they will be preserved or released for sale to the adjacent land owners.
- **Lot Sizes (Village Zone):** Whilst the provision of centralised sewerage to Cudal would allow for lot sizes to reduce down to approximately 500m², the character and historical subdivision pattern would lend itself to a minimum subdivision lot size of 900-1000m². This is more likely to produce larger lots desired by the market whilst allowing substantial subdivision potential of the larger 2,000m² lots without producing 'battleaxe' lots.

7.6. Historic Population

7.6.1. Census Area

The Australian Bureau of Statistics (ABS) Census Collection District ('CD') is the area that ABS uses to calculate the population and demographics for an area. As Figure 5 shows, there is one CD (yellow line) that encloses the majority of the existing Village Zone (red line) (except 2 dwellings) but excludes the majority of the Zone 1(c) (Rural Small Holdings) areas (except a small area to the north-east that includes about 7-8 dwellings). Therefore, the ABS results for Cudal can be utilised as a reasonably accurate measure of the population in the Village Zone but not the total population of the Village Zone and Rural Small Holding areas.

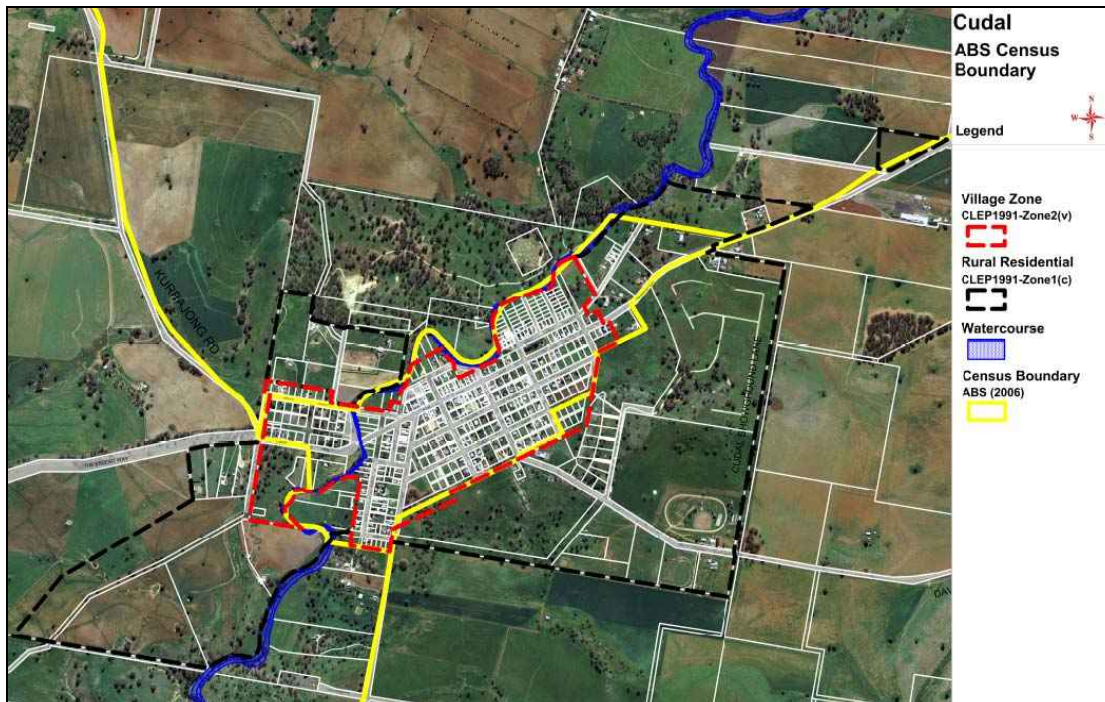


Figure 5: Alignment of the ABS Census Collection Districts in relation to Cudal's urban zones (Source: Council GIS 2010 using ABS CD boundaries www.abs.gov.au).

Issues & Strategies

Measuring the Catchment: The Cudal Collection District ('CD') includes the majority of the Village Zone plus a handful of dwellings in the north-east large lot residential area. Therefore, the census figures do not include all of the additional dwellings in the large lot residential area or the surrounding rural catchment that utilises Cudal as its primary service centre. This additional population will need to be estimated and added to the census population.

7.6.2. ABS Census Population of Cudal (Village Zone)

Table 3 shows that the historical ABS population for the Cudal CD (Village Zone) has varied from a low of 352 people in 1986 to a high of 420 people in 1996 and a slight decrease to 389 people in 2006. The average annual population change over time has varied significantly from negative growth periods of -2.4%/year (1981-1986) to positive growth rates of +2.16%/year (1991-1996). On average the growth rates have been +0.14% (1976-2006), +0.53% (1986-2006), -0.74% (1996-2006), and -0.98% (2001-2006). The total population has generally stayed relatively stable between 350 and 420 people over the last 30 years but there is a risk that recent negative population growth may continue for some time and affect the economic growth of the village.

Year	Population (Quickstats)	Change	% Change from Previous Period	Average Annual % Change
1976	373	N/A	N/A	N/A
1981	400	+27	+7.24%	+1.45%/yr
1986	352	-48	-12.00%	-2.40%/yr
1991	379	+27	+7.67%	+1.53%/yr
1996	420	+41	+10.82%	+2.16%/yr
2001	409	-11	-2.62%	-0.52%/yr
2006	389	-20	-4.89%	-0.98%/yr
1976-2006		+16	+4.29%	+0.14%/yr
1986-2006		+37	+10.51%	+0.53%/yr
1996-2006		-31	-7.38%	-0.74%/yr

Table 3: Census population counts and population change for the Cudal Collection District (Source: www.abs.gov.au).

Issues & Strategies

Population Growth Rate: Cudal has retained a fairly steady population between 350 and 420 people over the last 30 years with periods of growth and contraction. Therefore, the average growth rate has been relatively small at +0.14%/year (1976-2006) but has been as high as +0.53% (1986-2006). However, there has been a strong decrease in population from 1996 onwards that would need to be turned around in order to maintain economic growth and local services and opportunities.

7.6.3. Estimated Population of Cudal (Village Zone + Large Lot Residential)

As noted above, the Census District for Cudal does not include all of the dwellings in a small section of Village Zone and the majority of the surrounding Zone 1(c) (Rural Small Holdings) areas that contribute to the population of Cudal.

Based upon a review of 2009 aerial photos and street visits it has been estimated that there are approximately 19 additional dwellings in the Zone 1(c) areas outside the Census District. Based on a 2006 dwelling occupancy rate of 2.4 people per dwelling this would result in an additional 46 people (assuming that all dwellings are occupied).

Therefore, the total estimated population for Cudal's Village Zone and large lot residential areas is 389 (Census District for Village Zone) + 46 (from additional dwellings in Rural Small Holdings Areas) = 434 people and this will be used as the base 2006 population by this Strategy for future projections.

7.7. Summary of Opportunities & Constraints

It is important to try and summarise the potential for Cudal's population and economic growth in the future. Please note that more detail is provided on each of these issues in the subsequent sections of this Chapter.

7.7.1. Positive Factors

The key **POSITIVE** influences that may assist growth include:

- **Population:** Cudal has maintained its population over the period from 1976 to 2006 in the range of 350-420 people. This may indicate that the population is likely to remain stable or grow in the future;
- **Proximity to Larger Centres:** Cudal is on the boundary of the Orange Commuter Zone (~30 minutes drive from Orange). This provides some opportunities for people to commute to live in Cudal for the rural lifestyle but commute to Orange for employment and higher level services as well as flow on effects in economic growth. It is also close to Manildra and industrial employment opportunities in that settlement;
- **Location:** Cudal's location on a key transport route (The Escort Way) between Orange and Cowra/Forbes could provide service and transport related employment;
- **Transport (Bus):** There is a reasonable level of public bus access to connect to Orange (and further east), Canowindra and Eugowra that improves access to higher level services;
- **Tourism:** Some potential for tourism due to Cudal being on the main road route between Orange and Canowindra/Cowra/Eugowra though this would need to be supported by significant improvements in tourist infrastructure and activities. Cudal is fortunate to have the Cabonne Food Wine & Cultural Centre;
- **Employment:** The region around Cudal has a strong agricultural base of lucerne, wheat, wool and fat lamb production with growth in new areas of viticulture and canola. Agriculture is a key employer for the area. In addition, anecdotal evidence suggests some employees of Manildra Mill live in Cudal. Cudal also has the Engineering Department for Cabonne Council which is a key employer in the village. There is also significant mineral potential in the area that may create future employment;
- **Sewer:** The provision of a centralised sewerage system to Cudal was finalised in 2009 and allows for greater subdivision of land and improved amenity and land values;
- **Affordability:** Attraction of a reasonable supply of affordable land;
- **Education:** Access to a successful local primary school and pre-school services makes it attractive for families with younger children;
- **Health Care:** Whilst the original Cudal hospital has since closed, in 2006 the Cudal War Memorial Health Service was opened that provides a degree of health services suited to a small village;
- **Aged Care:** There are some limited examples of aged care units in Cudal that (combined with the health centre) can allow older citizens to remain in Cudal. Council has also approved a development called 'Cudal Gardens' rural retirement development with potential for 200 units and 60 care beds. However, as at 2011 this development has not commenced and there are some queries as to its economic viability. However, if it did commence (even in a staged manner) it would have the potential to significantly increase the local population, employment and demand for services and facilities;
- **Recreation:** Access to a good range of recreation facilities including both passive and active recreation areas and sporting facilities, particularly with school sports;
- **Community Spirit:** Good community associations that can foster community spirit and local solutions to community needs.

7.7.2. Negative Factors

The potential **NEGATIVE** influences on growth include:

- **Historic Population Growth:** Historic growth rates show that there has been a decreasing population in Cudal since 1996. If this pattern continues then it may be difficult to sustain existing services and facilities;
- **Ageing Population:** Over 32.6% of the population of Cudal is over the age of 55 years with an average age of 44 years compared to 37 for Australia. With an increasing aged population there will be significant increased demand for aged care and health services which are limited in Cudal (but can be sourced from nearby Orange). There may be some loss of this large segment of the population if they need to relocate to centres with higher level services.
- **Health Care:** The loss of the hospital may make it more difficult to attract aged care facilities and existing senior citizens may need to move to regional centres for care. There is also evidence of a withdrawal of some health services (e.g. pathology) that may affect retention of population and vice-versa;
- **Location:** Cudal is just on the boundary of the 'commuter zone' of Orange and, therefore, is less likely to grow substantially as Orange grows or to act as a 'dormitory' suburb for employment in these larger centres. On the other hand it appears to suffer from 'escape-expenditure' to Orange due to the proximity as it is difficult to sustain local shops when many shop in Orange with its broader range of services and choice;
- **Retail & Entertainment:** There are limited local retail services and entertainment options that may affect tourism and the attraction of youth and young families to the area.
- **Flooding:** There is some limited flooding along Boree Creek which does impact on urban areas and may affect property values and development opportunities.
- **Industry:** There is no designated area for industry, limited existing industry and challenges attracting new industries to Cudal which may impact on growth and employment;
- **Cost of Development:** The community have repeatedly blamed the high cost of development making property development not economically viable. This is a consistent issue across Cabonne due to lower property values;
- **Employment:** There is a heavy reliance on the limited number of key employers such as Cabonne Council, the school, and surrounding agriculture. Whilst the government employment is relatively stable, this is not a robust employment base to weather economic instability, particularly with a focus on agricultural.

Issues & Strategies

Population Growth: In conclusion, the positives for Cudal tend to outweigh the negatives and suggest that Cudal has the potential to exhibit low population growth over the next 10 to 30 years within some limited increasing demand for land and/or services. However, there are a number of challenges to growth and land supply that will need to be addressed.

7.8. Projected Future Population

Warning: The estimated population in 2036 is only an estimate based on the factors considered in this chapter and it may be affected by future changes in growth potential.

For all of the above reasons, it is estimated that the projected growth rate for Cudal is likely to be in the range of -0.3 % to +0.5%/year with an average annual growth of 0.14%.

Table 4 shows how the existing and projected rates of population growth for Cudal fit with other growth rates in the area and the resulting population projections (based on an estimated 2006 population of 434 – including both the Village Zone and Rural Small Holdings Zones).

Range of Potential Average Annual Pop. Growth Rates	Av. Ann. Growth Rate	Projected Population						Δ in pop. 2006-2036
		2011	2016	2021	2026	2031	2036	
MAJOR NEG. GROWTH Cudal Decline 2001-2006	-1.00%	413	393	373	355	338	321	-113
MINOR NEG. GROWTH <u>Projected Growth Rate Min.</u>	-0.30%	428	421	415	409	403	397	-37 Minimum
LOW GROWTH Cudal Growth 1976-2006 <u>Projected Growth Average.</u>	+0.14%	437	440	443	446	449	453	+19 Average
LOW-MEDIUM GROWTH	+0.30%	441	447	454	461	468	475	+41
MEDIUM GROWTH <u>Projected Growth Rate Max.</u> ABS 1986-1996 Cabonne	+0.50%	445	456	468	480	492	504	+70 Maximum
MEDIUM-HIGH GROWTH ABS 1996-2001 Cabonne	+0.70%	449	465	482	499	517	535	+101
HIGH GROWTH	+1.00%	456	479	504	530	557	585	+151

Table 4: Projected population growth for Cudal to 2036 based on a variety of growth scenarios.

Please note that if the population of the Village Zone was calculated to be 389 people in 2006 (based on the Census data) then the projected population in 2036 in the Village Zone based on +0.5%/year growth (maximum) is 452 people – an increase of 63 people over 30 years.

Issues & Strategies

- **Regular Review:** The growth rate for Cudal should be reviewed every census period (5 years) to see whether it accords with the estimated rates of growth and, if not, then growth projections and the supply of land may need to be modified.
- **Negative Growth:** There is a low but real possibility that Cudal may experience a significant negative growth over the next 30 years consistent with its decline from 2001-2006. However, this has been discounted at this time due to the number of positive growth factors present and recent growth rates.
- **Average Growth:** Assuming an average projected population growth rate for Cudal at the low-medium rate of 0.14%/year to 2036 there will be an increase in population of an additional 16 people, resulting in a total population of 453 people.
- **Maximum Growth:** Assuming a maximum projected population growth for Cudal in the medium range of 0.5%/year there will be an increase in population by 2036 of an additional 59 people, resulting in a total population of 504 people.
- **Unsustainable Growth:** If Cudal were to grow at a very high growth rate above 1.0%/year then this would place great pressures on housing, employment, services, utilities, transport and facilities and is likely to be unsustainable under existing conditions.
- **Supply & Demand:** The estimated increase in population will result in a slight increase in demand for additional housing, employment, services, and facilities.

7.9. Demographics

Warning: The demographic information in this chapter is only valid on the Census night in 2006 and due to the small census population it is subject to significant change over time.

The following provides a short summary of the demographics for Cudal's Collection District in 2006 that are relevant to this Strategy and/or different from the demographics for Cabonne. Please see [Section 2.6 – Demographics](#) for a comparison of all of the settlements and Cabonne.

- a) **Age:** 18.8% of Cudal's population were over the age of 65 years of age and 32.6% of the population was over the age of 55 years of age. The median age of Cudal was 44 years compared with 41 for Cabonne and 37 years for Australia.
- b) **Labour Force:** 4.9% of the labour force in Cudal (8 people) were unemployed compared to 3.7% for Cabonne and 5.2% for Australia. 137 people over the age of 15 were not in the labour force.
- c) **Occupation:** 19.2% of employed people were labourers; 14.1% managers; 14.1% clerical and administrative workers; 13.5% technicians and trades workers; 13.5% machinery operators and drivers; 10.9% professionals; 6.4% sales workers; and 1.9% community and personal service workers.
- d) **Employers:** 14.1% Local Government Administration, 7.1% Road Passenger Transport; 5.8% Sheep, Beef Cattle and Grain Farming; 5.1% Hospitals; and 4.5% Other health care services.
- e) **Income:** The median individual income (\$343), median household income (\$690), and median family income (\$972) were slightly less than the Australian averages (\$466, \$1,027, \$1,171 respectively).
- f) **Family Characteristics:** 44.2% were couple families with children (C=45.2%; A=45.3%); 41.3% are couple families without children (C=43.2%; A=37.2%); and 14.4% are one parent families (C=10.6%; A=15.8%).
- g) **Dwelling Characteristics:** There were 173 private dwellings (of which 158 were occupied) on the night of the census. 90.5% were separate houses; and 3.8% flat, unit or apartment (with 5.7% 'other dwellings'). The average household size was 2.4 people per dwelling compared to 2.6 in Cabonne and Australia.
- h) **Household Composition:** 67.7% were family households (C=73.4%; A=67.4%); 27.2% were lone person households (C=22.3%; A=22.9%); and 0% were group households (C=1.5%; A=3.7%).

Issues & Strategies

- **Age:** Cudal has a high percentage of older citizens compared to the Australian average and other settlements in Cabonne. This ageing population will place increasing pressure and demand for aged care and health services and a corresponding lack of younger / employment aged people to provide economic growth in Cudal. Cudal may lose a percentage of its older population if it does not have the health and aged care services to support this group.
- **Employment:** Cudal does not have a robust mix of employment types with high reliance on government departments, road transport, and agriculture. If there were to be economic, social or political circumstances that resulted in the reduction or loss of these employment options then it would have a significant impact on Cudal.
- **Income:** Cudal has a slightly lower median income than the Australian average.
- **Dwelling Characteristics:** The dominance of detached housing combined with an ageing population may indicate a need for greater housing choice in the future.
- **Household Composition:** The high percentage of lone person households (27.2%) may reflect the older age but also supports demand for smaller houses in the future.

7.10. Environment & Natural Hazards

7.10.1. Topography

Understanding the topography is important to understanding potential restrictions on settlement growth, appropriate locations for key land uses, and key natural hazards (e.g. slope) and opportunities (e.g. views) for each settlement. The urban area of Cudal is only lightly undulating lands between approximately 480 metres and 500 metres above sea level.

Issues & Strategies

Cut and Fill: Where possible, land uses should be located so as to minimise the need for cut and/or fill of land to create a suitable construction site. Sites with any significant slope should be avoided or require larger lot sizes for a wider choice of dwelling/building locations. This may restrict growth of the Village Zone in close proximity to Boree Creek but there are few other constraints as the topography is not steep.

7.10.2. Geology & Mineral Potential

Cudal has had a long history of mining in the areas surrounding the settlement including marble deposits. The Department of Primary Industries (as of 2011) has provided Council with a Mineral Resource Audit of Cabonne Shire dated February 2010 (Figure 6). Please note that this is based on existing information and there may be additional mineral resources not identified on this map as there are exploration licences across a significant percentage of Cabonne.

The Mineral Resource Audit shows that whilst there are no areas within the existing Village Zone with identified or potential mineral resources, there is the Bowan Park & Fairbridge South Potential Resource Areas to the south-east (including the Cudal Lime Products Mine) and Gordon's Pit to the east (road base). This is unlikely to have any significant affect on the direction of growth for Cudal but this is subject to further mineral potential review.

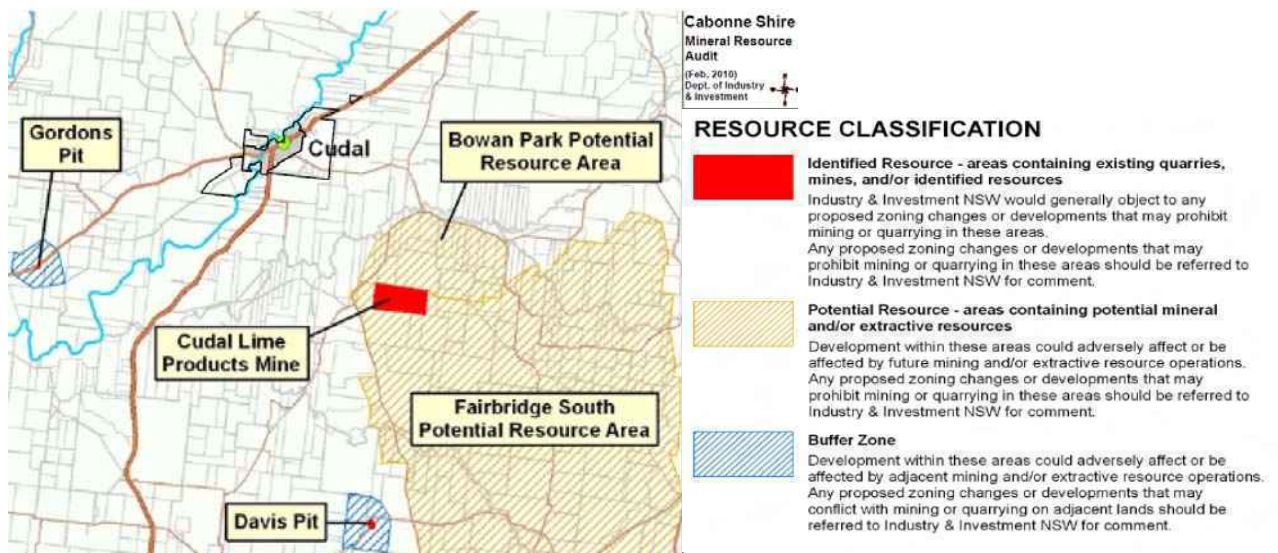
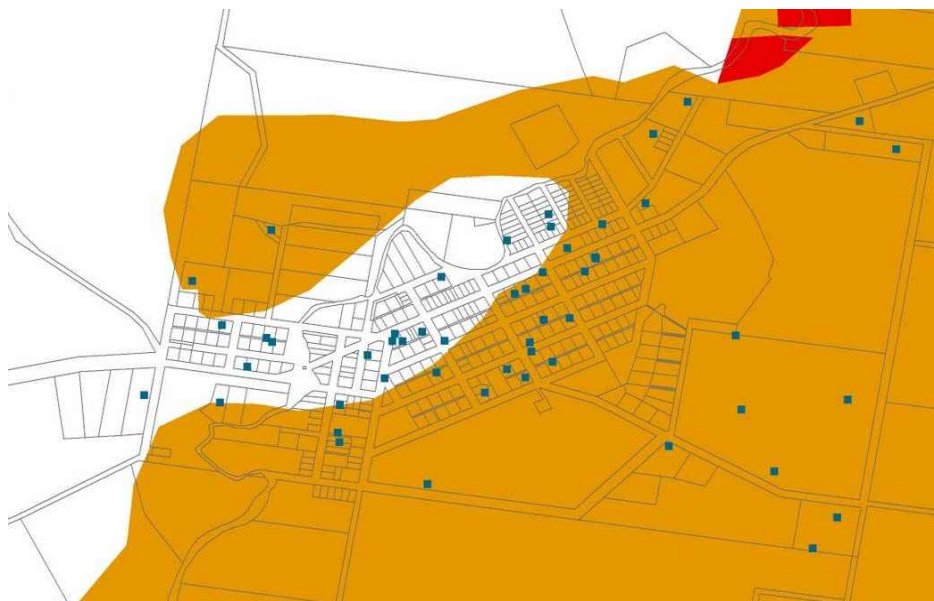


Figure 6: Excerpt of Mineral Resource Audit of Cabonne Shire (Source: Department of Primary Industries, February 2010).

7.10.3. Groundwater

Figure 7 illustrates that the lands to the south and east of Cudal's Village zone is in a moderately high groundwater vulnerability area (as identified by NSW Office of Water). There are also a reasonably high number of bore licences throughout the village and surrounds that may be placing pressure on groundwater supplies.



Legend

- Groundwater Licences
- High GW Vulnerability
- Moderately High GW Vulnerability

Figure 7: Groundwater vulnerability & licences for Cudal (Source: NSW Office of Water 2011).

Issues & Strategies

Groundwater Vulnerability: There is a moderately high groundwater vulnerability affecting a significant proportion of the Cudal urban area and therefore Cudal would not be suitable for land uses with potential for significant contamination of groundwater sources (potentially including heavier industries or intensive animal agriculture). There may also be limitations to growth of large lot residential development that may be reliant on groundwater for a secure water supply.

7.10.4. Watercourses & Flooding

Water management is an important aspect of land use planning. The general aim is to minimise impacts on natural water systems from development and manage local drainage and flooding issues. Biodiversity is addressed in more detail below. The key watercourse in and around Cudal's Village Zone is Boree Creek (Figure 8).

No formal flood study has been prepared for Cudal to date so there is no documented flood planning level for Cudal. However, historical evidence shows that there is some land along Boree Creek that is flood liable and in general, people have not developed land in these areas. The flood prone land is estimated in Figure 8 based partly on an old flood plan (*Cudal Village and Environs – Proposal to Prepare a Development Control Plan* (August 1990)). Boree Creek can rise quickly with little or no warning causing significant damage.

In addition, there are overland flooding issues associated with ancillary drainage channels that run into Boree Creek through the Village Zone with particular problems associated with the channel that connects through the Cudal Gardens land in proximity to the new Community Health Centre and the Caravan Park which has the effect of making development more difficult on a number of vacant lots to the north-east of the village.

The existing Clause 22 of CLEP1991 requires development in flood affected land to demonstrate it is not likely to impede the flood waters, imperil the safety of persons, aggravate the consequences of flood waters, or have an impact on the water table. For this reason it is preferable to exclude all flood liable land when identifying infill development sites or areas for future development.



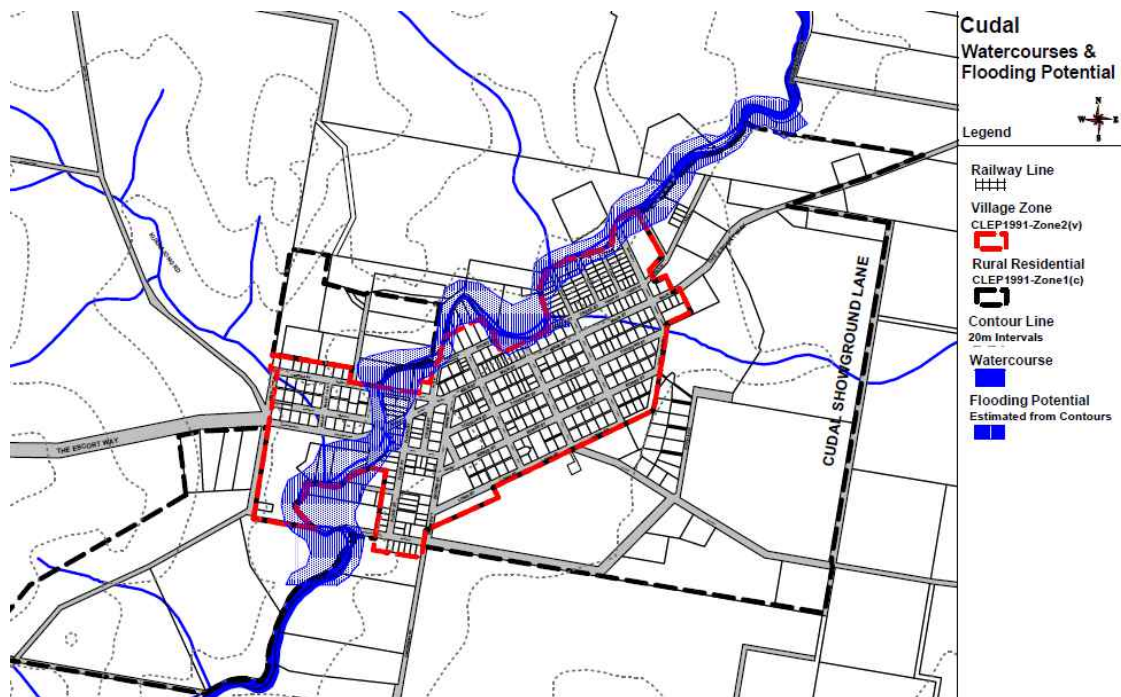


Figure 8: Watercourses and indicative flood prone lands (from contours and historical information)
(Source: Council GIS 2011).

Issues & Strategies

Flood Prone Lands: There is a potential for flooding along the low-lying areas close to Boree Creek as well as major drainage channels through the village that does make some land more expensive or less suitable to develop. This may also limit expansion of the village to the north and east of Cudal.

7.10.5. Biodiversity & Vegetation

As Figure 9 shows, most of the environmentally sensitive areas associated with significant vegetation and biodiversity in and around Cudal are outside the Village Zone except for open space areas and areas of Crown Land. The Commons to the north and south of the village are key areas of biodiversity potential (though the area to the south may require further review).

Vegetation is scattered through the Rural Small Holdings areas that are currently used for agricultural purposes. In addition, there is some significant vegetation located along Boree Creek and adjacent lands with some additional vegetation in reserves, recreation areas and as street trees. There is an opportunity to strengthen the ecological connections along the existing creek and drainage lines and connect these to the stands of significant vegetation outside the Village Zone (where possible).

A list of threatened, endangered and/or vulnerable species in Cabonne can be found on the website for DECCW. There are no known threatened species and/or endangered ecological communities under the *Threatened Species Conservation Act* in the Village Zone at Cudal, however, this does not mean that there are not any in existence. Each development application will need to address this issue.

The 2001 Cudal Street Tree Masterplan adopts a theme of predominantly deciduous trees on east-west oriented streets (including Main Street) to reduce the risk of shading on the south side of streets during winter and evergreen trees on north-south streets. Evergreen native trees have been proposed for the streets on the outskirts of the village so the edge of the village blend into the surrounding landscape. In addition native trees indicate the town entrances.

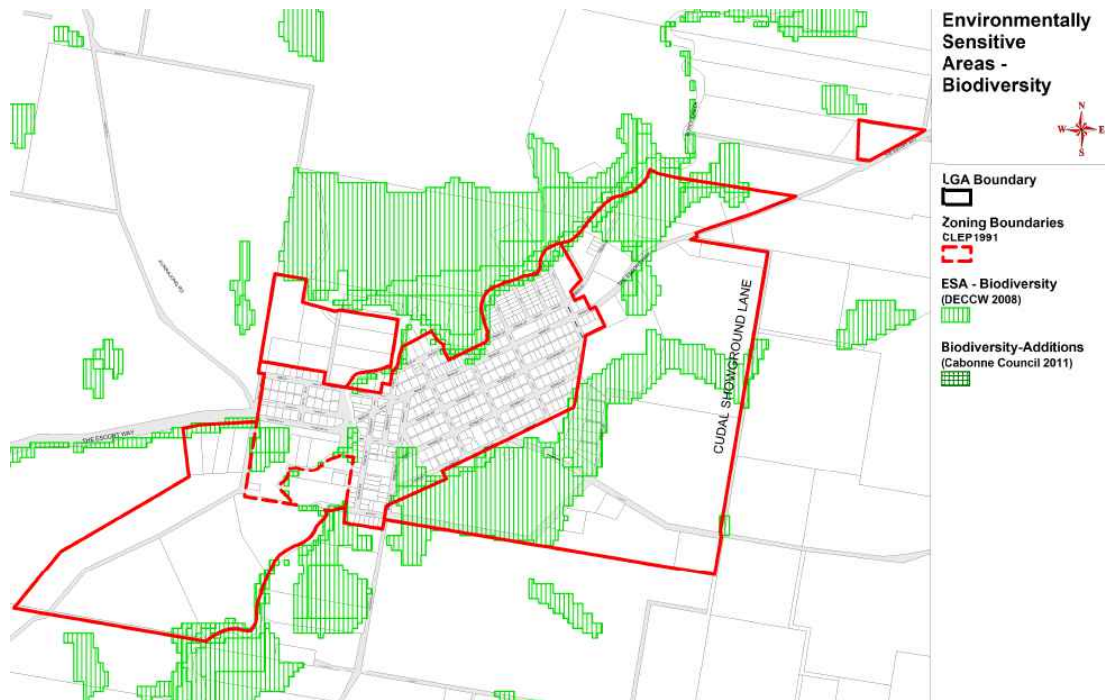


Figure 9: Map of Environmentally Sensitive Areas - Biodiversity for Cudal and surrounds (Source: DECCW 2008/Council GIS 2011).

Issues & Strategies

- **Ecological Corridors:** There is a need to protect and enhance remaining significant remnant or native vegetation in or around Cudal. Attempts should be made, where possible, to plant native vegetation and enhance ecological corridors, particularly along the watercourses, drainage lines and adjacent allotments. This may necessitate the removal of non-native or invasive species and sourcing of native seeds from the local area. The Temporary & Permanent Commons provide significant areas of vegetation and should be protected from development.
- **Street Tree Planting:** There is potential to enhance street tree planting in Cudal. Whilst urban areas do not necessarily require native species in gardens and streets, Cudal may be suited to native street tree planting in accordance with the Cudal Street Tree Masterplan (2001).

7.10.6. Bushfire Hazard

There are only small areas of bushfire prone lands in or around Cudal located to the north on the Village Common that affect the north-western rural small holdings area but do not in general affect village zoned land and are considered to pose a low risk. However, there should still be asset protection zones around existing stands of significant vegetation and along creek boundaries. This will not affect the growth of the village.

7.11. Access, Transport & Parking

7.11.1. Air Transport

Please see summary in Cabonne Chapter [Section 2.7.1 – Air Transport](#). In general public air transport access is considered low to medium for Cudal with a 40-45 minute drive to Orange Airport or 45-50 minute drive to Parkes Airport the nearest available.

Cudal airport used to be the base for Hazelton Airlines from the 1970s until early 2000s when Hazeltons ceased operations. Whilst the Cudal Airport is no longer used as an airport and is now used for agricultural machinery sales, Council would like to see the airport remain available for future aircraft / airport uses (for further detail see [Section 7.18.3 - Supply & Demand for Industrial Land Uses](#)). There are also some private rural based landing fields that surround Cudal.



7.11.2. Rail

Cudal is not located on a rail line so there is no rail passenger or freight services available. The nearest passenger station would be in Orange. The nearest freight interchanges are in Manildra (private), Parkes or Dubbo.

Issues & Strategies

Rail Access: The lack of rail transport creates a high reliance on road transport for movement of agricultural products/goods as well as the public and reduces the opportunities for growth in Cudal, particular for larger-scale industries.

7.11.3. Road Hierarchy & Vehicle Traffic Impacts

Please see [Section 2.7.3 – Road Hierarchy](#) for more details. The key road passing through Cudal is The Escort Way which connects Cudal to Orange and Eugowra (through parts of Main and Bridge Streets). Another important road is Canowindra Road that connects Cudal to Canowindra. The remaining roads are generally local roads. The pattern of local roads in Cudal generally follows a grid-pattern which assists with navigation except where broken by topography and watercourses. Most local roads within the Village Zone are formed and paved but there are some roads that are gravel or unformed.



Issues & Strategies

Road Access: The Escort Way is an important arterial route and result in heavier vehicles and numbers of traffic passing along Main and Bridge Street to the Escort Way. This can impact upon residential amenity and safety along these routes, particular where it passes key community facilities such as schools so some pedestrian safety features may be required. The survey for the Community Plan 2025 indicates that roads are a very important priority (62.5%) (No.1), a key concern 29.2% (No.2) and a key infrastructure issue 8.3% (No.3) for the Cudal Community. This would partly result from the need to access employment and other services outside of Cudal and the lack of other transport solutions.

7.11.4. Bus

Please see [Section 2.7.4 – Bus](#) for more details. Cudal has access to Countrylink Services that provide connections from Parkes/Forbes to Orange (and Bathurst/Lithgow) daily or twice daily in each direction. In addition there are school bus services that bring children from the surrounding rural areas to Cudal's primary schools and also connect to schools in Orange and Canowindra.

Issues & Strategies

Bus Access: Public bus transport is available for people living in Cudal for connections to Parkes/Forbes and Orange. This enables trips to key regional centres and provides some mobility for those without access to private transport. However, there are limited public bus transport connections between Cudal and other settlements in Cabonne (except for Canowindra and Eugowra), other than the school bus network. This may affect those seeking to work or shop in other settlements and live in Cudal (particularly Molong and Manildra).



7.11.5. Parking

There were very few Community responses in the *Community Plan 2025* Survey suggesting that there is insufficient parking in Cudal so parking does not seem to be a key concern within the Cudal Village. Most business parking would be on-street but some off-street parking may be required if there are larger numbers or sizes of vehicles. Council staff parking is provided along Smith Street to reduce the parking pressure on Main Street (assuming this is utilised).



7.11.6. Pedestrian Access

Pedestrian footpaths are provided in Cudal only in the key pedestrianised areas close to the business centre along Main Street. A large area of Cudal does not have fully formed footpaths and these are unlikely to be provided in the short to medium term. Council's *Pedestrian Accessibility and Mobility Plan* ('PAMP') includes, but is not limited to, new footpaths, drop kerbs and refuges along parts of Toogong, Main, Wall and Cargo Streets to a total of \$191,000. Council is currently acting on this work program. No works have been completed at this stage. There have been concerns raised about the key connections across Cudal, for example, between the area west of the creek and the village centre and the difficulty for pedestrians and those with accessibility issues.

7.11.7. Cycle Access & Facilities

Council's *Bicycle Plan* (2005) (see [Section 2.7.6 – Cycling](#) for more details) recommends the following improved connections as follows:

- First Stage (Year 1) – Link from School down Smith Street and along Main Street to Pool then Boundary Street to Oval
- Second Stage (Year 4) – From School along Main Street heading west to Merga Street
- Third Stage (Year 5) – Along Wall Street and out to Showground.

The Main Street section from School to Pool has been completed.

7.12. Utilities & Infrastructure

7.12.1. Water Supply

Cudal's water is supplied by Central Tablelands Water from Lake Rowlands (in Blayney Shire). Lake Rowlands is expected to provide a reasonably secure supply of water (assuming growth across the network occurs as predicted) to meet the growth needs of Cudal.

Water is pumped from a pipeline near Canowindra through to Cudal and onto Manildra. There is Cudal reservoir (0.23ML) & Cudal Booster Pump Station (2.1ML/day) + Grays Hill Pump Station (2.1ML/day). Also an additional Cudal Bore – but this is a stand-by resource and is not normally used but is maintained in operating condition (Capacity of 4L/s (0.35ML/day) – Volume Extraction Licence 100ML/annum). For more details please see Hydro Science Consulting (2009) Joint Integrated Water Cycle Management (JIWCM) Evaluation Study.

As Figure 10 shows, there are water supply lines present along most major streets in Cudal's Village Zone that would enable connection for urban growth but very limited access in the adjacent rural residential zones.

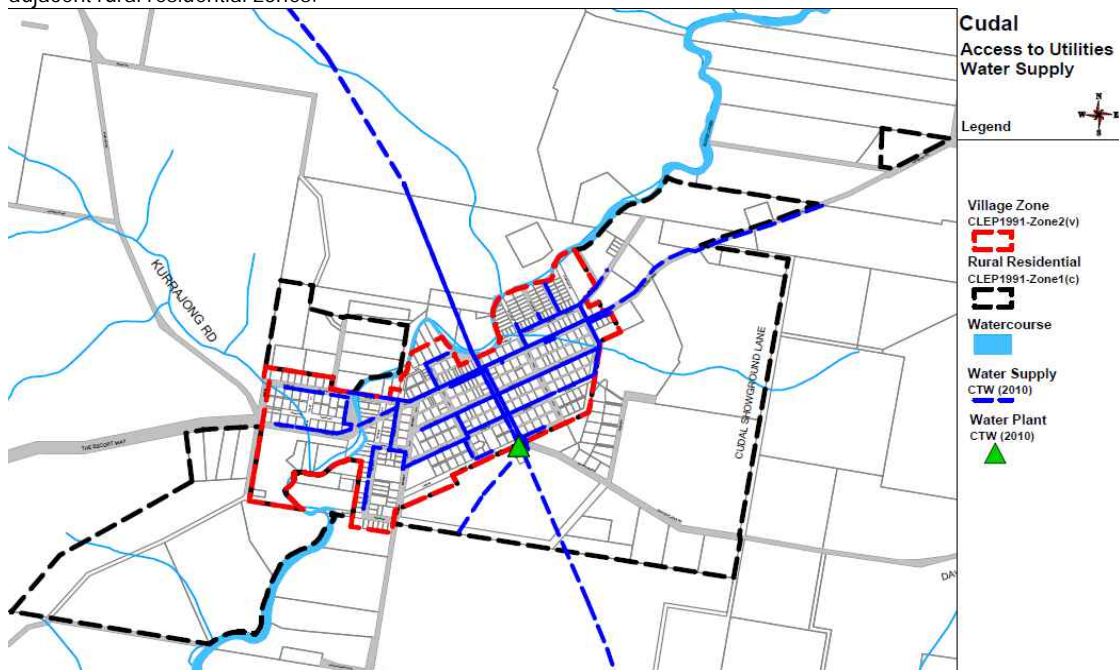


Figure 10: Location of existing water supply lines in Cudal (Source: Council GIS / Central Tablelands Water 2010).

Issues & Strategies

Water Supply: There are no major issues associated with water supply in Cudal based on a relatively low growth scenario in the Village Zone. However, there are no current proposals to extend reticulated water to the large lot residential areas so these areas need to ensure alternative sources for water supply.

7.12.2. Stormwater & Drainage

As Figure 11 shows, kerb and gutters are not provided to all of the streets within the Cudal Village Zone but are limited primarily to parts of Toogong and Main Streets in proximity to the village centre where pedestrian traffic is likely to be highest. The remaining streets utilise grass swales for drainage, except for the odd under-road pipe for cross street drainage.

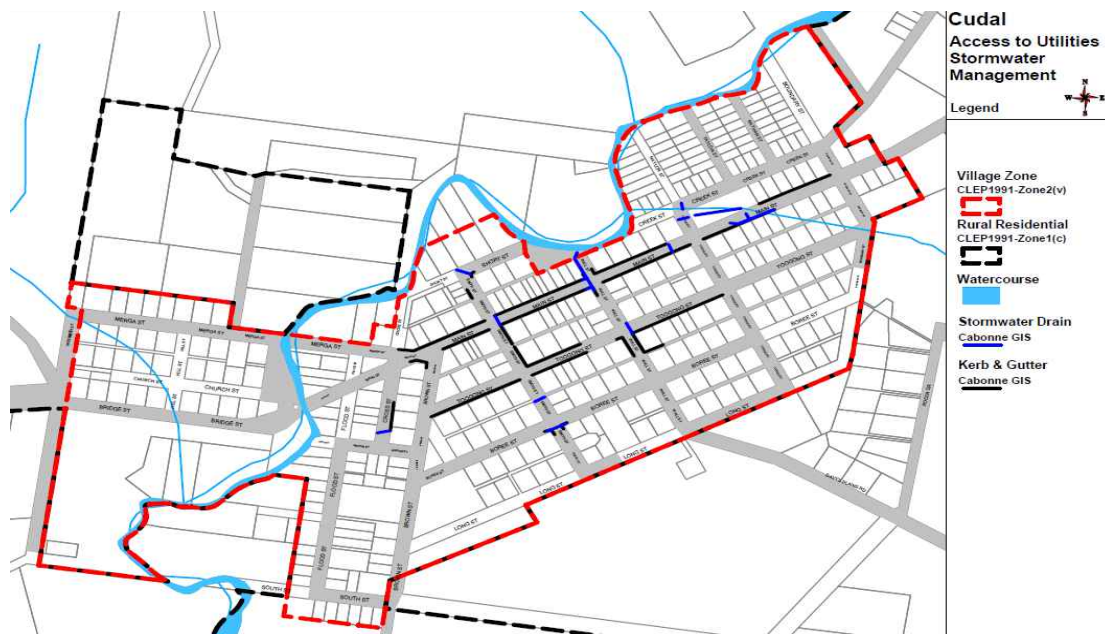


Figure 11: Stormwater infrastructure in the Village Zone of Cudal (Source: Council GIS 2010).

Issues & Strategies

Stormwater & Drainage: The predominant issues with drainage in Cudal are associated with overland flows during peak rainfall events, particularly across the east of the village through the Caravan Park. . Drainage and flooding issues are dealt with in more detail in [Section 7.10.4 – Watercourses & Flooding](#).

7.12.3. Sewerage

Until 2009 Cudal did not have a reticulated sewerage system and was reliant on on-site effluent management systems (predominantly septic systems with absorption/evaporation trenches). However, Cudal is one of the four villages identified by the community and Council for construction of a new reticulated sewerage system under the Four Town Sewerage Scheme.

The new sewerage system was opened in 2009. The Sewerage Treatment Plant ('STP') is located on Lot 61 DP1119744 to the south of Davys Plains Road and the Showground and adjacent to the existing Zone 1(c) (Rural Small Holdings) area to the east of the village. All dwellings are required to be connected to this new system and no longer can rely on on-site sewerage management schemes (such as standard septic systems) within the Village Zone.

The Cudal Sewerage Treatment Plant ('STP') has a design loading of 494 to 550 Equivalent Persons ('EP') (Source: Letter from Council to Dept. of Water & Energy dated 23/24 October 2007) with an estimated growth for design life of 75 EP.

Comparing this to [Section 7.8 – Projected Future Population](#) it can be seen that the current STP would have the capacity to allow for up to between +0.5% to 0.7% population growth per year up until the year 2036 (a total population of 504 to 535 people) which is consistent with the maximum growth projections of this Strategy for Cudal. Therefore, the current STP may need to be expanded by the year 2036. Council has ensured sufficient land area at the Cudal STP site to allow for such an expansion.

Provision of a reticulated sewerage system has the potential to allow a reduction in the lot size necessary to support a dwelling as land is no longer required for septic systems and absorption / evaporation trenches. The majority of existing Village Zone lots are either 1,000m² or 2,000m² in size. This Strategy would suggest that whilst lot sizes needed to support a dwelling (that is connected to reticulated sewer) could be as low as 500m², the rural village character of Cudal would suggest that a minimum lot size for subdivision should be approximately 900 to 1000m².

Therefore, some of the larger existing lots (in excess of 1,800m²) may be suitable for further subdivision.

Issues & Strategies

- **Constraints to Growth:** The current STP is suitably sized to allow for between 0.5% to 0.7% growth per year in population up to the year 2036 but would need to be enlarged after that time or if the growth rate in this Strategy was exceeded.
- **Minimum Lot Size:** The minimum lot size in Cudal is recommended to be 900-1000m² per lot. Whilst smaller sizes could be permissible with reticulated water and sewer this is more consistent with the historical subdivision pattern and character of the village but allows some subdivision potential.

7.12.4. Electricity

As Figure 12 shows, access to electricity lines is readily available along most of the key streets in the Cudal Village Zone and along the main roads adjacent to the Rural Small Holdings areas except for the issues noted below. There is anecdotal evidence from the community that Cudal has historically had a number of power outages but the energy authority was proposing to do upgrades as part of the Cumulus Wine facility near Cudal. It has not been confirmed if these upgrades have occurred. However, Cudal does not appear to have access to high voltage electricity line networks.

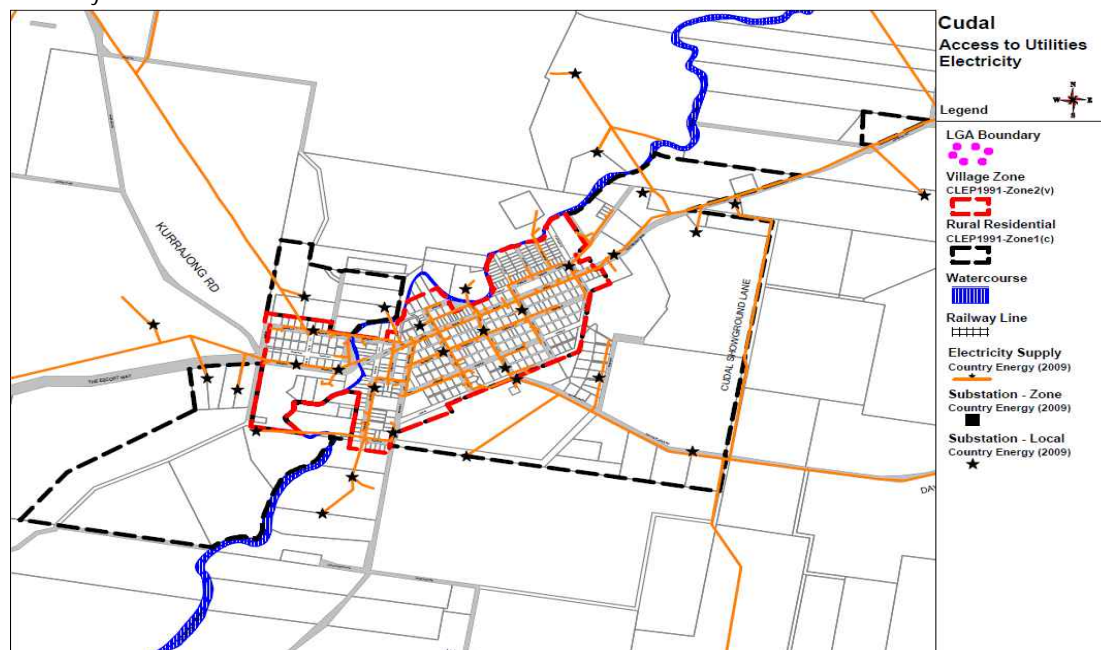


Figure 12: Location of electricity supply lines (orange) and substations (stars) in Cudal (Source: GIS file from Country Energy (2009) – not confirmed as accurate).

Issues & Strategies

Electricity Access: Electricity access is not known to be a significant constraint to growth in Cudal. However, there may be substantial costs with extending the electricity network to the two Rural Small Holding / large lot residential areas surrounding Cudal that may constrain development in these areas. Significant growth may also have implications for the capacity of the local network, particularly if there are large energy consumers such as some industrial land uses. Based on the fact that there is only low voltage electricity network in Cudal this would not make it ideal for larger-scale industrial uses that need access to higher voltage networks or are high energy consumers/producers. This may limit the growth of industrial uses in Cudal.

7.12.5. Telecommunications

Please see [Section 2.8.5 – Telecommunications](#) for a review of access to fixed, mobile and broadband telecommunication services in Cudal and across Cabonne's settlements.

Issues & Strategies

Telecommunications: In general there are reasonable levels of telecommunication access in Cudal that should support growth of business, industrial and residential needs but a more ore detailed study is required. Improvements in internet access speeds (ADSL2+) and mobile reception may improve opportunities for business and residential growth. Cudal may have future high speed internet access with the introduction of the National Broadband Network in the next 3-5 years but it may be limited to wireless or satellite.

7.12.6. Waste Management

Please see [Section 2.8.6 – Waste Management](#) for a review of access to waste management services in Canowindra and across Cabonne's settlements.

Issues & Strategies

Waste Management: Cudal does not have a waste depot in close proximity to the village. The closest facility is located at Manildra, where most non-recyclable waste is likely to be sent. This is unlikely to affect the growth of Cudal but may affect the sustainability of waste management if waste needs to be transported.

7.13. Heritage

7.13.1. Heritage Items

Currently under CLEP1991 there are only three (3) listed heritage items for Cudal including the former CBC Bank, former EW Gordon Stores, and the Roman Catholic Church. As a result, there are also a number of important buildings that do not have the protection of heritage listing under the LEP.

Council is currently finalising the *Community Heritage Study* building upon work that was conducted in 2003 and 2006. There are numerous items of heritage interest listed in the Cudal's Village Zone in the 2003 Draft Inventory that may be considered for listing as future heritage items. At the time of writing, there were fourteen (14) proposed items recommended for immediate listing in the LEP but this will be finalised as part of the Heritage Study and new LEP. This is a significant increase in items identified for heritage protection but may increase with further review of items in the heritage study inventory.

7.13.2. Heritage Conservation Area

There is no existing Heritage Conservation Area ('HCA') in Cudal under the current CLEP1991 and there is no proposal to introduce a HCA in Cudal as no particular streetscapes warrant this level of protection at this time.



7.14. Summary of Existing Land Uses (Village Zone & Rural Small Holdings)

A summary of the existing land uses within the Village Zone of Cudal is shown both graphically (Figure 13) and in a table (Table 6).



Figure 13: Location of key land uses in Cudal's Village Zone (as at 2010).

Existing Village Zone (Zone 2(v))

Land Use	No. Lots	% of VZ Lots	Description
Total Lots – Village Zone	355	100%	
Vacant Lots	143	40.3%	No existing dwelling or business on lot
Residential Land Use Lots	164	46.2%	Mostly detached housing except aged care housing
Business Land Use Lots	10	2.8%	Mostly retail & tourism services
Industrial Land Use Lots	7	2.0%	Utilised lots within an existing industrial area
Community Land Use Lots	22	6.2%	Health, Religious, Community, Emergency, Tourism etc
Open Space & Recreation	9	2.5%	Parks, Reserves & Crown land

Table 5: Summary of key land uses in Cudal's Village Zone (as at July 2010).

Existing Rural Small Holdings Zones (Zone 1(c))

	West	North-West	East	Far East	Description
Area	~90ha	~23ha	~125ha	~4ha	Excluding roads & open space
Total Lots	12	7	40	1	Mostly vacant agricultural land
Vacant Lots	6	2	28	0	No existing dwelling or business
Dwelling Lots	6	5	12	1 Approval	Detached housing
Open Space	0	0	2	0	

Table 6: Summary of key land uses in Cudal's Rural Small Holdings Zones (as at July 2010).

Issues & Strategies

- **Supply & Demand:** The aim of this Strategy is to review the supply of land for each land use in the urban area of each settlement and determine the estimated future demand for each land use to ensure there is sufficient supply of urban land for the growth of the settlement.
- **Residential Demand:** Residential land uses are the greatest consumer of Village zoned land and take up 46.2% of the Village Zone Lots.
- **Vacant Infill Development:** A significant proportion of existing total Village Zoned lots are currently vacant (40.3%) and may be able to support some of the additional growth of this settlement, subject to these lots being suitable for development.
- **Land Use Areas:** This Strategy seeks to identify appropriate areas in Cudal for specific land uses such as industry, business, residential, open space and recreation, and environmental outcomes that seek to minimise land use conflicts and maximise accessibility.



7.15. Open Space & Recreation

7.15.1. Open Space & Recreation

There are several existing open space and recreation areas in Cudal as follows:

- Park (Public Reserve), Corner of Main Street and Brown Street – Area ~0.17ha (passive recreation) with toilet block;
- Cudal Bowling Club, Brown Street – Bowling green area – ~0.2ha (active recreation);
- Dean Park – sportsground with toilet facilities with pedestrian bridge over Boree Creek – ~3.42ha (active & passive recreation);
- Park (pocket park on Post Office Site) (passive recreation);
- Park (Cabonne Council), Corner of Brown and Boree Streets - ~0.3ha with children play equipment (passive & active recreation);
- Ruby Whalan Memorial Swimming Pool - ~0.27ha (active recreation);
- Tennis Courts, Toogong Street - ~0.4ha (active recreation);
- Showground and horse sports area (Trustees – Cudal AP&H Society) - ~36.14ha (active & passive recreation);
- Commons (north of Cudal) - ~66.75ha (passive recreation);
- Temporary Commons (south of Cudal) - ~27.9ha (passive recreation).

As a result, Cudal is generally well serviced for open space and recreation but there is a need to retain a reasonable population to ensure these facilities can be sustained and maintained.

Issues & Strategies

Open Space: There is reasonably good level of open space per person in Cudal and a range of recreational opportunities (both passive and active) for the current population. No changes are proposed or needed at this time but the Temporary Common to the south is probably additional to Cudal's needs and could be considered for investigation for future industrial / urban expansion when demand requires this. However, there would appear to be a need for upgrades and repairs to a range of existing facilities to improve their usage including the tennis courts, sportsground and showground.

7.16. Vacant Land

Vacant lots are important as they can provide the potential for infill development within the existing Village Zone that may take up some of the projected future growth of each settlement.

7.16.1. Total Vacant Lots and Development Constraints (Village Zone)

A vacant lot is any lot that does not currently contain any significant building (dwelling or business - active or vacant) and may be capable of supporting a dwelling. However, it may contain ancillary sheds, garages, gardens or septic systems on these lots and these lots may be held by an adjacent non-vacant lot. Figure 14 shows that there are approximately 143 total vacant lots in the Village Zone of Cudal.

However, this Strategy recognises that sometimes the historic pattern of subdivision has not taken into account the natural hazards or topography that may prevent a lot from being developed. Figure 14 shows that there are 49 vacant lots in the Village Zone that may be difficult or costly to develop due to a range of constraints including, but not limited to, flood prone land, lack of road access, lot size or slope, significant vegetation / biodiversity or existing development on the lot. As a result there are approximately 94 vacant lots remaining that have a higher development potential (or are less expensive to develop). As these lots already have their own titles they could be sold any time.

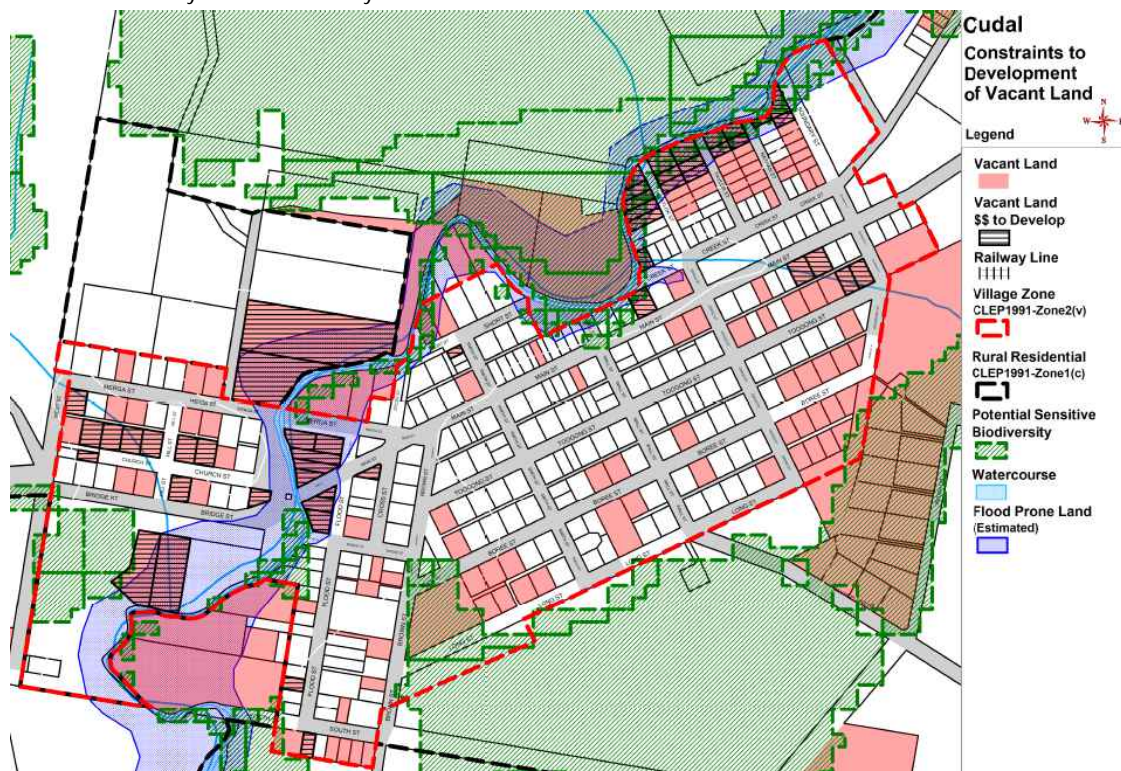


Figure 14: Vacant allotments and those affected by constraints to development in Cudal (as at 2010) (from aerial photo and brief street analysis).

7.16.2. Likelihood of Development of Vacant Lots

It is important to note that the community often claims that the majority of vacant lots should not be counted for the purposes of infill development because the current owners are not currently interested in selling or they are not on the market. However, this Settlement Strategy is looking to review land supply over the next 30 years and whilst the existing landholders may be reticent to make land available that could be expected to change over these lengths of time, particularly as land prices rise and people no longer need larger lots.

Council can only make a 'guesstimate' of what percentage of lots may become available for sale or development. Therefore, Council is proposing a very conservative estimate of 50% possible available vacant lots is a reasonable percentage over a 30 year period. This is taken into account below.

7.16.3. Development Potential of Vacant Land (Village Zone)

Since 2009 Cudal has had a reticulated sewerage system installed to which all existing and proposed properties are required to connect within the Village Zone. As a result the former minimum lot size for subdivision of 2,000m² (predicated on lots needing to support a septic system and absorption trenches) is no longer relevant.

Whilst lots as small as 300m² could theoretically support a dwelling with centralised sewerage, this Strategy assumes that an appropriate minimum lot size that is consistent with the character and growth rate of Cudal would be 900-1000m² lots in the Village Zone. This is consistent with existing subdivision patterns where houses sit on lots of this size and is consistent with the ability to subdivide the majority of lots which are in the range of 1800m² to 2,400m² per lot.

In Cudal there are approximately:

- ~50 small vacant lots of size < 1,800m² that are less likely to be capable of subdivision and more likely to be only able to support one dwelling;
- ~41 vacant lots of size 1800m² to 2,400m² capable of subdivision into two lots resulting in 80 potential dwellings;
- ~3 lots of size > 2,400m² that may have potential for subdivision into approximately 12 additional dwelling lots.

Therefore, as Table 7 shows, there is a potential for a total of 144 future lots in the existing Village Zone in Cudal but applying the 50% rule suggests that only 72 new lots are likely to result in the next 30 years (if demand is present).

Village Zone	Existing Lots	Potential Lots	50% Rule
Lots < 1,800m ² (no subdivision)	50	50	25
Lots 1800m ² to 2,400m ² (subdiv. into 2 lots per lot)	41	82	41
Lots > 2,400m ²	3	12	6
TOTAL	94	144	72

Table 7: Potential future lots/dwellings in Cudal's Village Zone.

7.16.4. Development Potential of Vacant Land (Rural Small Holdings Zone)

In the Rural Small Holdings Areas it is not suitable to merely do a vacant lot count and more relevant to look at development potential in terms of different lot sizes. Not all large lot residential supply is likely to be the minimum size of 4,000m² and there is likely to be some demand for blocks of 1-2 hectares. Table 8 shows different lot potential based on different possible lot sizes.

Large Lot Residential Area	Area	Potential Lots@4,000m ²	Potential Lots@1ha	Potential Lots@2ha
West	~90ha	~225 Lots	~90 Lots	~45 Lots
North-West	~23ha	~58 Lots	~23 Lots	~12 Lots
East	~125ha	~313 Lots	~125 Lots	~62 Lots
Far East	~4ha	~10 Lots	~4 Lots	~2 Lots
TOTAL	~242ha	~ 606 Lots	~242 Lots	~ 121 Lots
50% Rule	--	~ 303 Dwellings	~ 121 Dwellings	~ 61 Dwellings

Table 8: Potential future lots/dwellings in the Rural Small Holdings Zones based on different average lot sizes.

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Therefore, depending on lot size the total number of lots from the existing zoned land could range from 121 Lots to 606 Lots and 61 to 303 dwellings (based on only 50% going ahead). Currently there are only 23 dwellings (+1 dwelling approval) in the Rural Small Holdings Zones. Therefore, there is significant dwelling potential in these lands that is likely to represent an over-supply of land for large lot residential dwelling purposes.

Whilst there is already a mix of 4,000m² lots on the market and some much larger lots, for the purpose of this Strategy an average lot size of 1ha is assumed that would result in potentially 242 lots or, if only 50% are likely to be developed, ~121 dwellings.

7.16.5. Total Potential Supply of New Lots

Therefore, based on the above methodology the total potential lots that is likely to be redeveloped (assuming that each has a single dwelling) would be 193 lots / dwellings over the next 30 years (from 2006 to 2036) as summarised in Table 9.

Source of New Lots for Dwellings	Vacant Lots with Development Potential	Likely Number to be Available in next 30 years (50% Rule) (subject to demand)
Village Zone	144	72
Rural Small Holdings Zones	242	121
TOTAL	386 Lots	193 Lots/Dwellings

Table 9: Summary of total potential lot / dwelling yield in Cudal over the next 30 years (subject to demand and supply).



7.17. Community Land Uses

Figure 13 shows the location of the key community land uses in Cudal. For the purposes of this Strategy, 'community uses' are defined as buildings, services, facilities and infrastructure that are not-for-profit and/or support the local community.

As stated in [Chapter 2- Cabonne Overview](#), community uses are permitted in a broad range of zones and, therefore, there is no need for a detailed analysis of supply and demand of land for these uses. However, community uses are often a vital service for the community and provide employment and social and economic support and growth. A more detailed review of access to community services for all of Cabonne's settlements is provided in [Section 2.10 – Services & Facilities](#).

7.18. Business & Industrial Land Uses

Warning: Please note that services/ facilities change regularly and this section merely provides a 'snapshot' of key services/ facilities to assess issues in each settlement in 2010/11.

7.18.1. Existing Businesses & Industries

As shown in Figure 13, in 2012 the following businesses/ light industries were present in Cudal:

- Cudal Post Office (bill payment & small business);
- Cabonne Food Wine & Cultural Centre (tourist information, craft & history);
- Venture Inn Café, Main Street;
- Cudal Caravan Park, Main Street (accommodation);
- Cudal Motel, Main Street (accommodation);
- Cudal Bowling Club, Brown Street (recreation, entertainment, meals);
- Royal Hotel, Main Street (accommodation, meals, entertainment);
- Garage sale shop, Main Street (antiques and preloved goods);
- 24hr petrol station, Naylor Street (building also houses cabinetry maker);
- Whiting Service Centre, Main Street (vehicle repairs);
- JW & LA Dean Transport, Cargo Street (vehicle repairs);
- Ryan's bus depot.

At the time of writing (2011) the following businesses may or may not be closed / for sale:

- Cudal Minimart, Main Street;
- Angela's Anglicare Op-Shop, Main Street (preloved goods).

Outside the Village Zone, but in proximity to Cudal were the following businesses/industries:

- Cobbs Machinery, The Escort Way (farm machinery and vehicles);
- Snooze Ezy Ice, 17 Long Street (ice product manufacture & distribution);
- Cumulus Winery, Davys Plains Road (winery & distribution);
- Egg Farm, The Escort Way (up to 240,000 chickens approved 2010).

There are other home based businesses in Cudal that provide vehicle related services.

Issues and Strategies

- **Business Services:** Cudal has experienced a loss of local businesses in the last few years. With the closure of the minimart, Cudal does not have any local grocery store so people need to travel to other centres for food and a range of essential services. A big issue is proximity to Orange that results in 'escape expenditure' to cheaper stores where local shops cannot compete. There is also a lack of local employment in Cudal though there are some new rural industries in surrounding areas and some people commute to Manildra, Molong and Orange for employment. Over the years some of the big employers (hospital, Hazeltons, bank etc) have closed. The community recognises that without local employment/services there is less likely to be dwelling demand/growth.
- **Tourism Services:** Cudal is fortunate to provide tourist information and a cafe in the Cabonne Food Wine & Cultural Centre. Cudal also has a range of accommodation options including the caravan park, Royal Hotel and Motel. It is sometimes considered a good stopping point as it is 3 hours drive from Canberra heading north and it has some regular festivals and activities that attract visitors including the pony club and camp-draft. However, there are limited entertainment and meal options, particularly after hours, other than the Food Wine & Cultural Centre, Royal Hotel, Bowling Club and recreation areas.
- **Rural Services:** Unlike many other settlements it also lacks rural supplies other than farm machinery repairs so it does not act as a rural service centre. Even though it is located on a major transport route between Orange and Cowra/Canowindra/Forbes it does not appear to attract a lot of passing trade or vehicle / tourism related services.



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- **Industrial Services:** There is a limited range of light industrial uses and employment generally associated with light manufacturing and vehicle repair. Snooze Ezy Ice is the main manufacturer.

7.18.2. Supply & Demand for Business Land Uses

Business land uses will generally be permissible under the new Standard LEP Template in the Village Zone (or its equivalent) which is likely to be retained for Cudal. Due to Cudal's limited size, growth and area of business land uses - there is no need to provide a specific zone for business land uses in the proposed new LEP.

Whilst the proposed Village Zone will provide flexibility for local retail and commercial businesses to grow in Cudal there should be some attempt to consolidate stand-alone businesses along Main Street between Brown and Wall Streets, where possible to reinforce the character of Cudal's central business area, attract passing trade on the main transport route, and minimise conflicts with residential areas.

This defined 'business' area would also hopefully result in adaptive re-use of existing vacant buildings and restoration of original business premises for this purpose to provide an area of higher activity that will assist in attracting passing tourist trade and business and restore these existing premises to contribute to the streetscape. There are at least 4-5 existing buildings along Main Street that were previously used for small businesses and would ideally be re-used. There are also a few vacant sites along Main Street that could accommodate new larger format businesses.

Historically there has been a falling demand for new businesses in Cudal and there has been regular opening and closing of existing businesses. However, future demand for business growth may be estimated to allow for a new business opening every 5 or so years. Therefore, there is not a high level of demand for large areas of business land.

Issues and Strategies

Business Land Supply & Demand: There are sufficient vacant businesses / lots to support a growth of a new business every few years for the foreseeable future. In addition, home businesses with lower impacts are likely to be supportable across the village area.

7.18.3. Supply & Demand for Industrial Land Uses

The key benefit of creating an industrial area is that it can be located and designed to minimise land use conflicts, particularly with regards to sensitive residential land uses. It also should provide for expansion of industrial uses without any additional impact.

The current Village Zone makes this difficult because industrial uses are theoretically permissible anywhere in the zone, subject to addressing key issues. This provides no certainty to someone buying a sensitive land use - such as a dwelling - that an industrial land use may be placed adjacent or near to that use. There has never been an Industrial 'Zone' under CLEP1991 in Cudal.

Cudal has some light industrial uses such as Snooze Ezy Ice, and the Storage/Joinery/Fuel/Engineering Centre at the fuel station on Naylor Street and these provide some existing industrial building/land supply. There are also some home business vehicle repair centres.

However, there is not estimated to be a large demand for industrial lands in Cudal in the short to medium term (5-10 years) unless there is a significant change in exploration of mineral potential in the area or growth of the village.

Cudal is less suited to larger-scale industries as there is a lack of utilities and infrastructure (particularly for industries with larger energy & water needs), there is no rail line/freight access, and there is competition with other preferred industrial areas in the region, particularly nearby



Manildra, Parkes, Forbes and Orange. For this reason, the Rural & Industrial Strategy has not classified Cudal as a suitable location for larger-scale or heavier industries in Cabonne.

If industries were to locate in Cudal they are most likely to be associated with the transport industry, vehicle repairs and heavy haulage associated with passing traffic on The Escort Way / Canowindra Road or if the Bowan Park Potential Resource Area to the south-east of Cudal is subsequently opened up for mining/extractive industries and there is a need for support / engineering services (see [Section 7.10.2 - Geology & Mineral Potential](#)).

Whilst the proposed Village Zone will provide flexibility for home industry and some light industries to grow in Cudal where they can address issues of land use conflict with residential uses, it would be more ideal if future light industrial uses were located in an area where land use conflicts could be minimised and industrial uses could be co-located.

This Strategy suggests that the only vacant land in the Village Zone that is away from flood prone areas, relatively flat, with good transport access/sealed roads, and away from most residential properties industries would be the vacant land on Boree Street (near Brown Street). Vacant land in this location is in excess of 2.76 hectares and is predominantly held by two land-holders, the largest lot of which is owned by the Orange Local Aboriginal Land Council (assuming there are no heritage/archaeological issues with this site). It is immediately opposite an existing bus/vehicle repair depot and part of the vacant land is used for industrial storage. Should there be significant increase in demand for industrial expansion then there is potential to expand to the south into the existing Temporary Commons.

The 2005 Draft Cudal Village Strategy suggests (See [Section 7.21 – Previous Land Use Strategies](#)) that the area around the old Cudal Airport (approximately 120-150 hectares) would be suitable for investigation for future industrial uses. This is likely to have been premised on the airport being reopened in the future which is a possibility for private air uses but limited as a future public airport.

There would not appear to be sufficient demand to justify establishment of such a large industrial area at this time, particularly since Council's Rural & Industrial Strategy (See [Section 7.21 – Previous Land Use Strategies](#)) recommends that larger industrial uses should be located south of Manildra. In addition, industrial uses in this location may take up valuable agricultural land and are adjacent to a proposed rural residential area that could result in land use conflicts. For this reason, the 2005 Strategy recommendations are not supported by this Strategy at this time. The existing concrete batching facility to the west of The Escort Way does not require an industrial zoning to continue operations. Other industrial facilities in the rural zones would need to be consistent with the Rural & Industrial Strategy.

Having said this, Council is likely to consider any use that can reactivate the airport site with air transport related uses to reuse this significant piece of infrastructure. However, re-use of the airport would require ensuring that adjacent land uses do not conflict with the airport operations, particularly relating to building heights (Obstacle Limitation Surfaces) and noise (Australian Noise Exposure Forecasts). The land surrounding the airfield is most suited to rural and agricultural uses at this time.

Issues and Strategies

Industrial Land Supply & Demand: There is not estimated to be a large demand for industrial lands in Cudal due to economic and physical constraints to attract new industries to the area. However, it is estimated that small local industries may require 2,000m² to 4,000m² of land every 5 or more years for new operations.

This Strategy recommends that industries are located on flat vacant land away from the main street and residential areas and Boree Street (west) may offer one location for future investigation. It is not the intent of this Strategy that an area is zoned for industrial use in any LEP but future applications for industrial uses should take into consideration these factors and this Strategy and seek to minimise land use conflicts with sensitive land uses.



One anomaly is that Snooze Ezy Ice is currently (and proposed to be) located in the large lot residential area. Further consideration needs to be given to the appropriateness of including this existing industrial operation in the Village Zone to allow it to expand its operations (if required) rather than relying on existing use rights.

7.19. Residential Land Uses (Village Zone)

7.19.1. Existing Residential Character

Number of Dwellings / Occupancy Rate

As of December 2009, there were 164 lots used for dwellings in Cudal's Village Zone (46.2% of the total lots - with an estimate of 156 dwellings) plus approximately 23 existing dwellings in Cudal's four Rural Small Holding Areas (according to a count from aerial photo and street analysis).

This is consistent with the ABS 2006 Census (Quickstats) that recorded 173 private dwellings in the Census Collection District with 15 vacant private dwellings (8.7% of total private dwellings) and 158 occupied private dwellings. The average household size in 2006 was 2.4 people per dwelling compared to 2.6 in Cabonne and Australia even though 43 (27.2%) of households were lone person households.

Dwelling Types

Whilst there are some examples of dwellings from the late 1800s through to mid 1900s, most of the existing housing stock is from the mid to late 1900s. Newer housing is interspersed with some of the older housing stock. Some housing is reaching the end of its life and will need to be replaced where it is not nominated as a heritage item. The dominant dwelling type in Cudal is the detached or separate dwelling (90.5%) but 3.8% are flat/unit/apartments and 5.7% are classified as 'other dwellings'.

Lot Sizes

As stated in [Section 7.5 – Settlement Pattern](#), the majority of lots in the Village Zone range from 900m² to 2,200m² generally with 20 to 40 metre frontages. For lots of size greater than 900m² the lot depth and width is generally sufficient to allow the placement of a dwelling with good side setbacks and a good rear yard. For lots less than 900m² there may be need for clear controls to guide setbacks and ensure good house and building design on these narrower lots. This will be guided by current state government initiatives to allow complying development within residential zones on smaller lots.

There may be some opportunities for consolidation and subdivision to provide for medium density in close proximity to the village centre in the future.

Dwelling Densities

The density of housing in Cudal ranges from as low as 1-2 dwellings/hectare to a high of 5 to 6 dwellings/ hectare (excluding roads) which is a very low density of housing in accordance with its rural village character. There is very limited medium density development. There is generally a large yard attached to each dwelling which has historically allowed for on-site effluent management systems, landscape and private open space.

Rental Rates

Out of 158 occupied private dwellings in Cudal, 28 dwellings are rental properties (17.7% of occupied dwellings) (Source ABS 2006) which may not be sufficient to meet demand.

Issues & Strategies

- **Density / Character:** A combination of larger lot sizes and a dominance of detached dwellings means that the dwelling densities in Cudal are relatively low in accordance with its rural village character. Increased densities may offer an alternative to consumption of more land for growth and improved sustainability but are less likely to be desirable in the current market.



- **Housing Types:** The majority of dwellings in Cudal are detached and there are very limited medium density housing types. Whilst part of the attraction of living in Cudal is to have a separate dwelling, with an increasingly larger older population and high percentage of lone-person households there is likely to be future demand for small or more compact housing that is lower in maintenance on smaller lots. There is currently a limited choice of housing types in Cudal to meet this future need. There may also be demand for large numbers of compact dwellings or serviced units for mining related employees if surrounding mineral potential areas go into production.
- **Rental Supply:** There may be an issue with the provision of rental properties and affordable housing in Cudal to meet the needs of lower socio-economic groups and itinerant workers, particularly for mining related employees if this increases in the area.
- **Development Controls:** There are no major issues with the character and design of dwellings in Cudal but there may need to be some controls to ensure that the character of key streetscapes in Cudal is preserved. This may involve restrictions on the use of transportable/relocatable houses and shed-style homes to ensure that they are in keeping with the existing housing stock materials and sympathetic to heritage items.

7.19.2. Projected Dwelling Demand

Dwelling Occupancy Rate

The occupancy rate is the number of people that will live in each house. **Local Profile Paper – Table 2.12**, notes that for Cabonne, the average household size has decreased from 2.9 (1991), to 2.8 (1996), to 2.7 (2001), to 2.6 (2006). Therefore, average household sizes have decreased over the last 15 years and this is also occurring in neighbouring Shires.

The occupancy rate for Cudal (ABS data) is also expected to remain low over the next 10-30 years, especially if there are increases in aged care housing (senior citizens living alone); families having less children (smaller family sizes); and greater variety of housing types which attracts younger people to live independently. On this basis it is assumed that the estimated occupancy rate in Cudal in the year 2036 will average 2.3 people per dwelling (down from 2.4 in 2006). This is consistent with the Rural & Industrial Strategy which projects an occupancy rate in Cabonne Part C (including Cudal) of 2.3 people per dwelling (**Local Profile Paper – Table 8.16**).

Dwelling Demand from Projected Population Growth

As stated in **Section 7.8 – Projected Future Population**, the projected annual population growth rate for Cudal ranges from -0.3%/year (minimum) to +0.5%/year (maximum) with an average of +0.14%/year. As this Strategy needs to cater for the greatest potential land demands, dwelling demand will be based on a **maximum** annual population growth rate of +0.5%/year, even if this rate is never achieved.

Method	Calculation	Projected Demand for New Dwellings by 2036
Dwellings required by <u>Additional</u> Population	63 / 2.3 per dwelling	~27
Dwellings required by <u>Total</u> Population minus <u>Total</u> Dwellings	452 / 2.3 per dwelling (197) minus existing total dwellings (173 ABS)	~24
Dwellings required by <u>Total</u> Population minus <u>Occupied</u> Dwellings	452 / 2.3 per dwelling (197) minus existing occupied dwellings (158 ABS)	~39
Average Dwelling Demand to 2036	27 + 24 + 39 (90) / 3	~30

Table 10: Calculation of projected dwelling demand from estimated population growth to 2036 for Cudal's Village Zone (Source: ABS data www.abs.gov.au).

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With an estimated 2006 population of 389 people in Cudal's Village Zone, the projected population of Cudal by the year 2036 based on a maximum growth rate of 0.5%/year is 452 people, an additional 63 people over the 2006 Census figure. Table 10 shows the different ways in which dwelling demand can be estimated from this estimated population increase – resulting in an average additional dwelling demand by 2036 of 30 dwellings.

Dwelling Demand Projected from Historical Growth in Dwellings

An alternative method to estimate dwelling demand is to project from historical growth of dwellings based on ABS Census data (Table 11). Census information provides the number of total private dwellings and number of occupied dwellings in the Cudal ABS Census District since 1976.

ABS Census	Total Dwellings		Occupied Dwellings	Unoccupied Dwellings	% Unocc. Dwellings	
1976	110		105	5	4.6%	
1981	124		117	7	5.7%	
1986	131		124	7	5.3%	
1991	149		137	12	8.1%	
1996	Census data not accessible					
2001	170		150	20	11.8%	
2006	173		158	15	8.7%	
	Total Dwellings			Occupied Dwellings		
Average	△	%△	Av. Ann. %△	△	%△	Av. Ann. %△
1976-2006	63	57.3%	+1.9%	53	50.5%	+1.7%
1986-2006	42	32.1%	+1.6%	34	27.4%	+1.4%
2001-2006	3	1.8%	+0.4%	8	5.3%	+1.1%

Table 11: Change in occupied and total private dwellings 1976-2006 in Cudal (Source: ABS Census).

It can be seen over a variety of periods the rate of growth of both total and occupied dwellings averages at approximately 1.3%/year. Based on this rate of growth continuing for the next 30 years, in 2036 there is estimated to be 255 total dwellings (an increase of 82 dwellings) and 233 occupied dwellings (an increase of 75 dwellings). Therefore, an average of an additional 79 dwellings is estimated to be needed in Cudal by 2036 based on this method.

Dwelling Demand Projected from Development Applications

An alternative method to estimate dwelling demand is based on the historical number of dwelling applications approved each year by Council for new dwellings in Cudal (Table 12). Please note that this has limited accuracy as development approval does not necessarily ensure that these new dwellings were built. On this basis it could be projected that there could be demand for approximately 19 dwellings over 30 years in Cudal's Village Zone (based on a continuation of current approval rates).

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	Av.
DAs	1	0	1	1	1	1	1	0	0	0	1	7	0.64 dwellings/yr OR 19 dwellings in 30yrs

Table 12: Total number of dwelling applications approved 1999-2010 (financial years) in Cudal's Village Zone (Source: Council records - Fujitsu Database).

Dwelling Demand - Summary Table

Table 13 summarises the finding above to suggest that approximately 43 additional (new) dwellings will be required in Cudal's Village Zone by 2036 compared to the 2006 figure.

Projected No. of Dwellings Required by 2036 based on following calculation method	Increased No. of Dwellings from 2006
Projected Population Growth (Max. 0.5%/year)	~30
Projected Development Applications	~19
Projected Historical Dwelling Growth (Max. 0.6%/year)	~79
Average $30 + 19 + 79 = 128 / 3$	43 Additional Dwellings over 30 years

Table 13: Projected additional dwellings needed by 2036 in Cudal's Village Zone based on a variety of projection methods.

7.19.3. Total Potential Supply of New Lots

As stated in [Section 7.16 – Vacant Land](#) the total potential supply of lots that are likely to be redeveloped (assuming that each has a single dwelling) in Cudal's Village Zone would be 72 new lots / dwellings over the next 30 years (from 2006 to 2036) as summarised in Table 14.

Village Zone	Existing Lots	Potential Lots	50% Rule
Lots < 1,800m ² (no subdivision)	50	50	25
Lots 1800m ² to 2,400m ² (subdiv. into 2 lots per lot)	41	82	41
Lots > 2,400m ²	3	12	6
TOTAL	94	144	72

Table 14: Potential future lots/dwellings in Cudal's Village Zone.

7.19.4. Comparison of Supply & Demand for Dwellings to 2036

Summarising all of the above sections there is a projected demand for 43 additional dwellings in Cudal over the next 30 years and a potential for approximately 72 small vacant lots in this area (after subdivision). Therefore, the total supply of land available in Cudal's Village Zone compared to the demand is shown below:

$\frac{72 \text{ (potential dwelling lots available)}}{43 \text{ (projected demand for new dwellings)}} \times 30 \text{ years} = \sim 50 \text{ years supply.}$

Issues & Strategies

Need for Rezoning in Next LEP: This Strategy recommends that there is no need to rezone any additional urban residential land in Cudal in the next LEP as there is sufficient land to provide well in excess of 10 years supply based on the projected growth rates. Even if there is a change in the growth rate of Cudal then there is sufficient 'buffer' in the existing supply to provide sufficient land for at least 30 years. Anecdotal evidence at the Community Workshop stated that 10-12 properties have been on the market for some time and they are not selling so there is limited growth/demand at this time. The community also recognises that there will be limited demand for dwellings if there is no local employment.

7.19.5. Proposed Village Zone Areas

As a result of the above analysis, the proposed land use arrangements for Cudal are set out in Figure 15 and summarised as follows.

Extension of the Village Zone

The only minor extension to the existing Village Zone boundary would be the inclusion of all of Lot 3 DP978900 (Flood Street) to remove the split zoning across this lot that places the east half in the Village Zone and the west half in the large lot residential area.

Reduction of the Village Zone

However, due to natural hazards and other environmental factors there are some areas where there should be a reduction of the Village Zone and this will partially reduce the supply of residential land as follows:

Village Zone to Rural Zone:

- The existing Village Zone includes a small strip of the Temporary Common to the south of Long Street (~1.3ha) (Corner Brown Street) that is not required for urban development and is Crown land;
- Lot 100 DP1033337 (2 South Street) has a small area (~0.3ha) at the corner of South and Flood Streets that is included in the Village Zone that is not required for urban development;



Figure 15: Summary of proposed land use arrangements for Cudal's proposed Village Zone (Source: Council GIS 2011).

Village Zone to Large Lot Residential Area:

- Lots 143 & 180 DP750150 & Lot 7303 DP1152031 (West Cudal – South of The Escort Way) – This area consists of 3 privately held lots (~3.25ha) to the west of Boree Creek that have significant flood potential and very limited development potential with no direct road frontage for access. This area has one existing dwelling and may be able to support another – but the density is more suited to a large lot residential zone;
- Lot 4 DP584070 (Flood Street) has a small area (~0.12ha) of this lot fronting Flood Street in the Village Zone but the remainder of the lot adjacent to Boree Creek is in the Rural Small Holdings Zone. This lot would probably only support a single dwelling (1ha lot) so its removal from the Village Zone should not have a significant impact;
- Lot 1 DP854798 (1 Merga Street) / Lot 2 DP854798 (9 Merga Street) / Lot 9 DP854798 (11 Merga Street) have a small area (~0.2ha) of these lots fronting Merga Street in the Village Zone but this primarily acts as the access driveway for the existing dwellings on the remainder of these lots that is in the Rural Small Holdings Zone. Therefore, there is no significant impact from this partial lot removal;

- Lots 1-5 Section 5 DP758311 (Short Street) have the southern area of 4 out of 5 of these lots facing Short Street in the Village Zone and the northern area of the lots in the Rural Small Holdings Zone. However, the rear of these lots is likely to be flood prone and would support limited development. Therefore, the inclusion of all of these lots in the large lot residential area is unlikely to limit their development if the minimum lot size is larger than 4,000m² per lot;
- Lots 5-8 Section 4 DP1864 / Lots 7-12 Section 3 DP1864 / Lot 7-12 Section 2 DP1864 / Lots 7-12 Section 1 DP1864 (Naylor / Taylor / Nathan Streets) – These 22 lots are located in close proximity to Boree Creek and have a high likelihood of flooding that makes them unsuitable for intensive (small lot) development. Reclassification of these lots for large lot residential purposes with a minimum lot size of 4,000m² would recognise this development restriction;
- Lot 241 DP750137 (Boundary Street) – This large 2.34ha lot is within the Village Zone but Boundary Street is not fully formed and access comes off Creek Street. The northern portion of this lot is likely to be flood affected and the extension of utilities for intensive development of this area would be expensive. Therefore, it has been placed in the large lot residential area.

Minimum Lot Size (Village Zone)

As Cudal had a centralised sewer introduced in 2009 it has the potential to allow for subdivision of serviced (Village Zone) lots down to 300-500m²/lot. However, the historical subdivision pattern consists of 2,000m² lots, some of which have been subdivided into 1,000m² lots with a 20m street frontage. Subdivision of these lots below 1,000m² is likely to result in 'battlexe' lots which will significantly impair the residential amenity and character of Cudal and are not warranted considering the low growth rates of the village. Therefore, this Strategy recommends that the minimum lot size for subdivision is between 900-1000m² per lot.

7.19.6. Future Investigation Areas

This Strategy suggests that there is well in excess of 30 years supply of land to meet the growth of Cudal's Village Zone within the existing and proposed boundary. One anomaly is that Snooze Ezy Ice is currently (and proposed to be) located in the large lot residential area. Further consideration needs to be given to the appropriateness of including this existing industrial operation in the Village Zone to allow it to expand its operations (if required) rather than relying on existing use rights.

However, should the growth calculations in this Strategy be exceeded in the medium to long term then the proposed land use arrangements in this Strategy may need to be amended to expand the urban area of Cudal.

If Cudal did need to grow then the most effective and logical way would be to rezone some of the existing large lot residential lands for urban residential purposes (most likely in a Village Zone) (assuming they were not developed for large lot residential purposes). This would include the large lot residential land to the east of Cudal – particularly those lots that form part of the approved retirement village on Lot 20 DP1135607 and Lot 3 DP1094619 (subject to this project not proceeding and detailed environmental studies).

If the retirement village project went ahead then the next best alternative for expansion would be a small extension into the Temporary Commons land to the south of Cudal along Long Street – though there are likely to be a number of environment constraints affecting development including drainage, rocky outcrops, existing vegetation, and topography.

7.20. Residential Land Uses (Rural Small Holdings)

7.20.1. Land Uses (& Existing Population)

Figure 16 shows the land uses for Cudal's Rural Small Holdings in 2010/2011. There is over 320 hectares of land in the existing Rural Small Holdings Zones surrounding Cudal (including roads) and only 22-24 existing dwellings in this area with many lots either vacant or used for agricultural purposes.

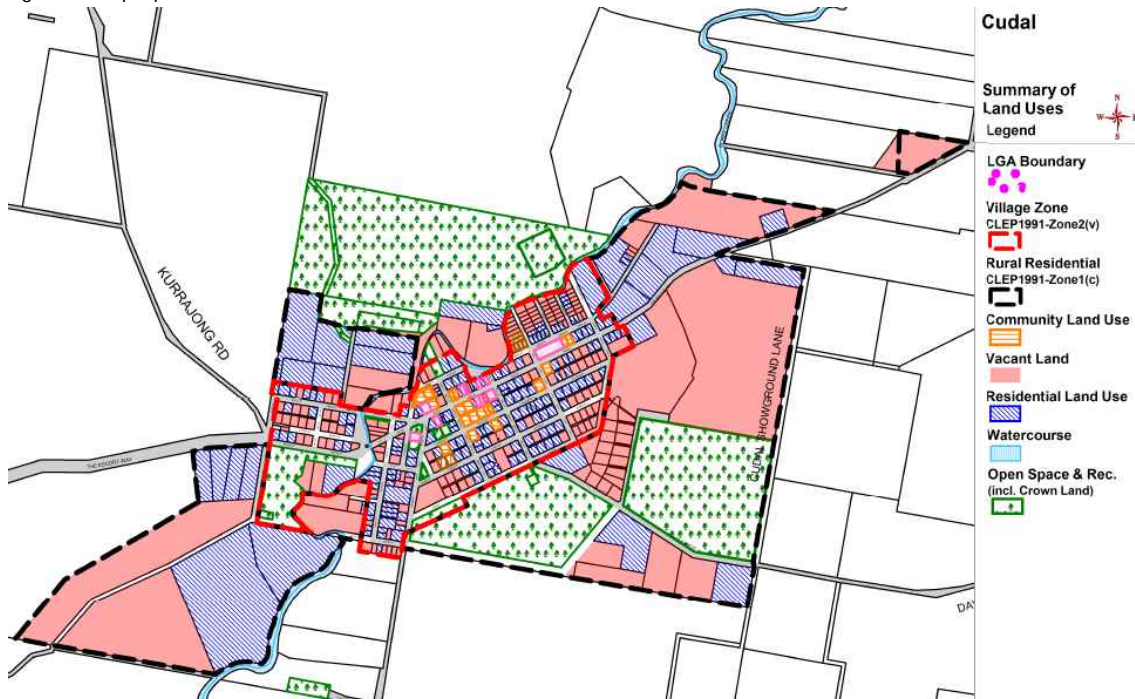


Figure 16: Land uses in Cudal Rural Small Holdings in 2010 (Source: Council GIS 2011 & site visits).

Issues & Strategies

Existing Large Lot Residential: There is over 320 hectares of zoned land for large lot residential uses (of which ~242 hectares is currently developable) supporting only 22-24 dwellings with many vacant lots and some capable of further subdivision. There is a significant under-utilisation of existing zoned land which would suggest an over-supply for large lot residential purposes.

7.20.2. Key Constraints & Opportunities

The primary environmental constraint affecting large lot residential land is flood potential along Boree Creek that may limit development within 50-100m of the creek. The other significant issue is that some of these lands are currently used for or surrounded by agricultural uses and there is concern that intensified residential development may conflict with these agricultural practices.

Issues & Strategies

Opportunities & Constraints: There are some environmental and agricultural constraints that may limit development of some large lot residential land. However, this can be addressed by appropriate siting and building design in accordance with State Policy.

7.20.3. Existing Supply & Demand

Existing supply shows a range of lot sizes ranging from 4,000m²/lot for the Cudal Gardens project on Davys Plains Road to 2 hectares/lot to the west along The Escort Way and up to 6 hectares/lot along Merga Street. Some lots within the existing Rural Small Holdings Zone are

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up to 20-30 hectares in size but are predominantly used for agricultural purposes. Therefore, there are differing markets/demands for large lot residential sizes.

As shown in [Section 7.16.4 - Development Potential of Vacant Land \(Rural Small Holdings Zone\)](#) and Table 15 there is potential for between 120-600 lots in this zoned area depending on the average lot size.

Large Lot Res. Area	Zoned Area (incl. roads)	Area (excl. roads/ Crown/Rec.)	Potential Lots@4,000m ²	Potential Lots@1ha	Potential Lots@2ha
West	94.05ha	~90ha	~225 Lots	~90 Lots	~45 Lots
North-West	23.45ha	~23ha	~58 Lots	~23 Lots	~12 Lots
East	199.1ha	~125ha	~313 Lots	~125 Lots	~62 Lots
Far East	4.01ha	~4ha	~10 Lots	~4 Lots	~2 Lots
TOTAL	~320ha	~242ha	~ 606 Lots	~242 Lots	~ 121 Lots
50% Rule	--	--	~ 303 Dwellings	~ 121 Dwellings	~ 61 Dwellings

Table 15: Potential future lots/dwellings in the existing Rural Small Holdings Zones based on different average lot sizes.

It is interesting to note that there is a development approval in 2006 for 200 self care units and 60 assisted care beds for a retirement village on Lot 20 DP1135607 (Area ~15.2ha) to the east of Cudal that has activated their approval by substantial road works. However, there is a significant query whether this project will be economically viable in current market conditions or whether a smaller staged facility may result.

There has already been the approval and construction of Stage One (1) of 'Cudal Gardens' large lot residential release (with access from Davys Plains Road) that has provided 17 lots for sale (Total area ~9.834ha) (Approved in 2004 DA No.65). However, this has been on the market since the subdivision certificate was approved in late 2008 and has sold 5-6 lots to a single investor but no new dwellings having been built by late 2011.

In addition Stage Two (2) of 'Cudal Gardens' is approved that provides another 70-80 new lots on Lot 3 DP1094619 (Area ~40.83ha) (as an extension of Cudal Gardens with access back to Davys Plains Road) and the local streets have already been partially constructed but lots are not currently on the market.

Therefore, in total there would be a potential 87-97 lots that are approved and could be available in the next 10 years. The lack of take-up and new dwelling application in the Cudal Gardens project would suggest that the market for large lot residential dwellings is relatively low at this time. This view is supported by the low number of development applications for dwellings in the Rural Small Holdings Zone around Cudal in the last 10 years.

In summary, excluding the potential development of the retirement village lands, this Strategy suggests that future demand for large lot residential dwellings/lots would be in the order of 1-5 every 5 years (maximum 1 per year). Based on this estimate there would be a need for an additional 30 large lot dwellings in the next 30 years. There is more than sufficient existing zoned land for this purpose. In fact, there is such an oversupply that it warrants consideration of a removal of some land from the large lot residential areas that is predominantly used for agriculture and with a low potential for development in the next 10-20 years.

Issues & Strategies

Supply & Demand: This Strategy has estimated that over the next 30 years on average there will be a new dwelling built every 1 year in this area or a total of thirty (30) dwellings over 30 years. Therefore, if there is an average lot size of 1-2ha the existing zoned area could support up to 100-200 years supply of large lot residential dwellings which is a significant oversupply.

7.20.4. Proposed Land Use Outcomes

As there is sufficient large lot residential land for at least the next 30 years there is the possibility of seeking to remove land from the large lot residential area that is currently used for agriculture, is distant from the village centre and existing utilities/roads, and has a very low probability of development in the next 10-20 years.

This Strategy recommends the following amendments to the existing zoning:

- **Temporary Town Commons (South of Cudal):** Removal of the Temporary Commons (~27.9ha) from the large lot residential area as this is Crown land and there are a number of environmental constraints to development of this land. In addition, this would preserve the land for a potential Village Zone extension to the south if required in the future;
- **Agricultural Land (West of Cudal):** Removal of Lot 22 DP537766 (~20.74ha) (no dwelling) and part Lot 5 DP623569 that is included in the Rural Small Holding Zone (~19.4ha) (no dwelling). Place these lots in the surrounding rural zone. Both of these lots are held in the same ownership and form part of the 'Kraywood' property. They are currently used for agriculture and would require substantial extensions and upgrades of road and utility infrastructure for intensified development when there are other more appropriate locations and an over-supplied market. In addition, in 2008 the owner received approval for a 2 lot subdivision that produced an area of 8.1 hectares that has been included in the proposed large lot residential area giving this owner some development potential.
- **Isolated Lot (East of Cudal):** Removal of part of Lot 12 DP604376 (3598 The Escort Way) that is within the existing Rural Small Holdings Zone and placement in the surrounding rural zone (~4ha). This zoning was an addition in CLEP1991. The owner has recently received approval for a dwelling on this lot DA15/2012 and has therefore realised some development potential. However, this lot is significantly removed from Cudal village, the zoning only extends over part of the lot, it is adjacent to the former Cudal Airport and potential future land use conflicts, and it has limited development potential.
- **Crown / Recreation Lands:** Removal of the Showground site (Lot 7008 DP1020069 ~36.14ha) and Crown Land to the west of Cudal (Lot 70 DP750150 & Lot 7005 DP1023274 ~8ha) that has a recreation purpose and is not suited to future redevelopment. This land may be placed in a future recreation zone.

7.20.5. Proposed Supply & Demand

The proposed changes to the large lot residential areas in this Strategy will reduce the existing large lot residential area of ~320 hectares (~242 hectares - excluding roads, Crown land & recreation areas) by approximately 28 hectares of private land and 65 hectares of Crown or recreational lands. This is a total reduction of 93 hectares to a new large lot residential area of ~227 hectares (of which ~210 hectares is likely to be developable once roads are excluded).

Of the remaining 210 hectares of land, 50.7ha has approval for 87-97 large residential lots (~4,000m²/lot) and 15.3ha has an approval for a retirement village. The remaining ~144 hectares is unlikely to be developed to its full potential so this Strategy has estimated that between 70-90 additional dwellings are possible (averaging 1-2 hectares/lot).

Therefore, the total number of potential large lot residential dwellings is 157-187. Even if only 50% of these possible dwellings are likely then this results in ~80-90 dwellings. If a dwelling demand of 1 per year is assumed then this is over 80-90 years of supply. If demand significantly exceeds this rate then the proposed minimum lot sizes for subdivision could be reviewed to provide additional demand before looking to expand the large lot residential boundaries into agricultural lands.

7.21. Previous Land Use Strategies

7.21.1. Previous Studies

It is important to conduct a review of all relevant previous studies as they can provide valuable information on key opportunities and constraints as well as key recommendations that have been put to the community. Where possible, this Strategy should be consistent with those recommendations (unless there are clear reasons to change recommendations).

Key studies relevant to the land uses of Cudal include:

- Cabonne Council (1990) *Cudal Village & Environs – Proposal to Prepare a Development Control Plan* (Shire Planner – G.Barry) ('1990 Draft DCP');
- Habitat Planning (2005) *Draft Cudal Village Strategy* ('2005 Strategy');
- GHD (2008) *Subregional Rural and Industrial Strategy* ('R&I Strategy').

7.21.2. Cudal Village & Environs – Proposal to Prepare a Development Control Plan ('1990 Draft DCP')

The 1990 Draft DCP set out objectives, preliminary controls, and a set of sub-zones specifying areas for particular land uses within the Village Zone. It was intended that specific DCPs would exist for each village under CLEP1991 but it was never adopted by Council. Key objectives included reducing land use conflicts, provision of land for urban/ industrial / commercial development, efficient use of infrastructure, heritage and landscape conservation, and avoidance of environmentally constrained lands. All of these objectives continue to apply today to this Strategy.

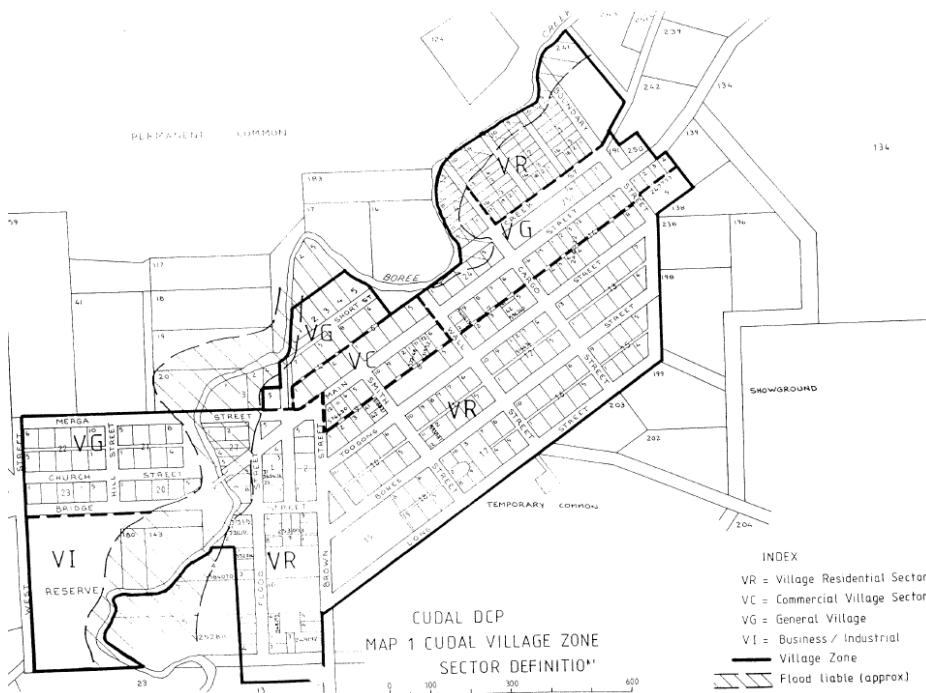


Figure 17: 1990 Draft Structure Plan for Cudal (Source: 1990 Draft DCP- Map 1).

This Strategy agrees with parts of the recommendations of the draft Structure Plan from 1990 in that the Village centre (Commercial Sector) should be concentrated along Main Street (between Wall and Brown Streets). However, this Strategy disagrees that industrial uses should be located in the Crown lands to the west of Boree Creek as this area has important environmental, recreational and gateway values that would not be compatible with industry.

7.21.3. Draft Cudal Village Strategy (2005)

In 2005 draft Village Strategies were prepared by a consultant but these were also not subsequently adopted by Council so act as a reference only. The key features and major strategic directions identified in Cudal are shown in Figure 18 and Table 16 and addressed as follows:

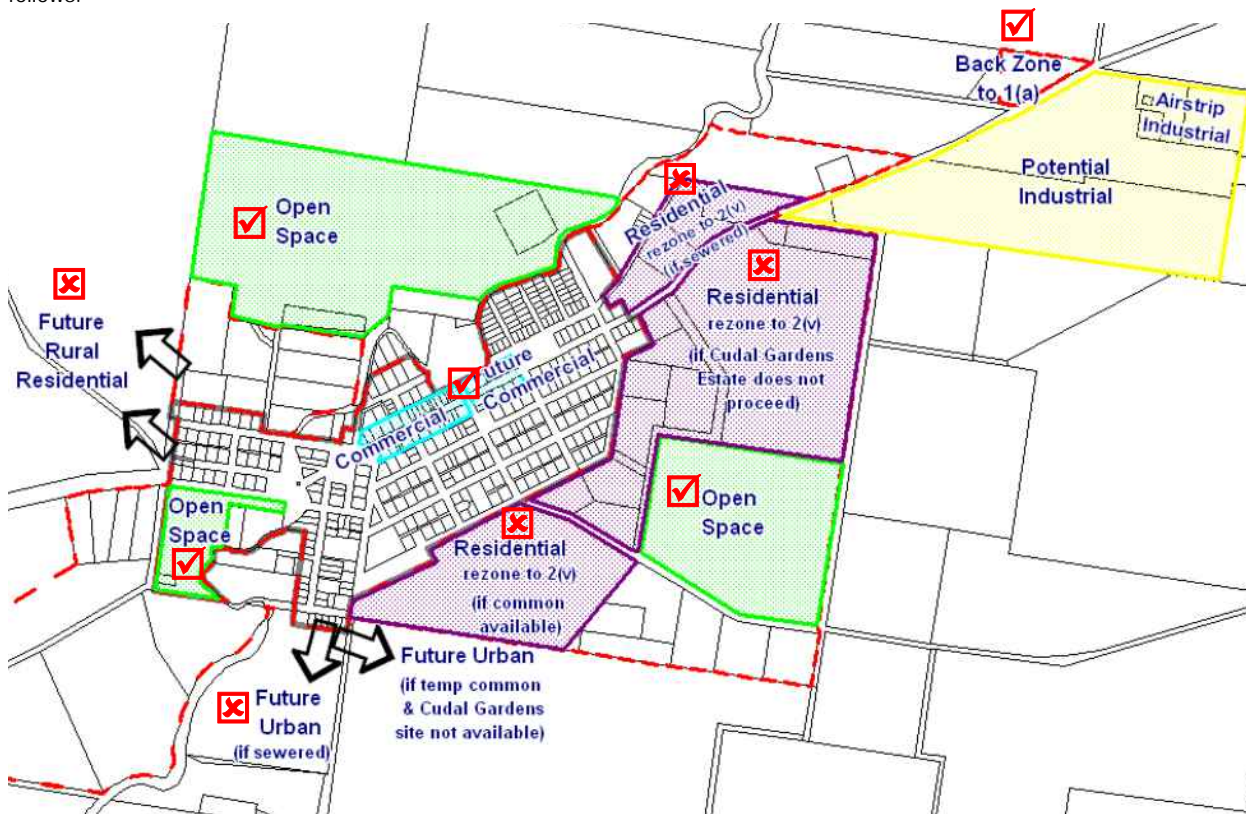


Figure 18: Proposal for growth of Cudal in the Draft Cudal Village Strategy (2005) with mark-ups suggesting whether these proposals are supported by this Strategy.

Recommendations of the 2005 Draft Strategy	Response in 2011 Strategy
Commercial Uses: <i>The preferred commercial activity area to be in Main Street between Brown and Wall Streets.</i>	Agreed. The preferred commercial area should run along Main Street between Brown and Wall Street but may extend out to Cargo Street as shown on the diagram.
Village Expansion: <i>The 2(v) zone to be extended into the existing 1(c) zoned land proposed to be taken up by the Cudal Gardens Estate (if it doesn't proceed).</i>	Disagree in short to medium term. There is no need to upzone any additional land for the foreseeable future for urban uses unless growth rates significantly increase. The Cudal Gardens Estate area will remain for large lot residential uses but may be investigated in the long term for village growth if Cudal Gardens does not proceed and there has been infill development in the Village Zone.
Village Expansion: <i>The Reserve for Temporary Common between the Eugowra and Cargo Roads to be zoned 2(v) and made available for sale.</i>	Disagree in short to medium term. There is no need to upzone any additional land for the foreseeable future for urban uses unless growth rates significantly increase. The Reserve should be retained in an agricultural zoning as this will not change its current use but may be investigated in the future for growth.
Village Expansion: <i>If provided with sewer, the 2(v) zone to be extended along the Boree Creek to the northeast and south of the village.</i>	Disagree. There is no need to upzone any additional land for the foreseeable future for urban uses unless growth rates significantly increase. This area should be retained for large lot residential uses but may be investigated in the future for growth.

7. Village of Cudal

Cabonne Settlement Strategy

Recommendations of the 2005 Draft Strategy	Response in 2011 Strategy
Industrial Uses: <i>An area centered on the former Hazelton's Airlines site to be the preferred [area] for substantial and associated industrial development.</i>	Disagree. The Rural & Industrial Strategy suggests that large-scale industrial uses should be located south of Manildra. There is no apparent demand for this amount of land supply at this time even if the airport were to reopen for private uses. Cudal is more likely to require local industrial land options and this Strategy suggests investigation of land on Boree Street (near Brown Street) for local light industrial growth.
Flood Mapping: <i>The 1 in 100 year flood level of the Boree Creek to be accurately mapped and the 2(v) zone boundary adjusted accordingly.</i>	Agreed. This is an outstanding matter that should be pursued when there is funding. However, this Strategy recommends a reduction in the Village Zone in lands that have a high likelihood of flooding.
Large Lot Residential Expansion: <i>Subject to demand, consideration be given to the provision of additional 1(c) zoned land to the west of the village along the Cudal Road if the existing 1(c) zoned land between the village and the showgrounds reserve is rezoned for urban purposes.</i>	Disagree. There is a significant over-supply of large lot residential lands. Therefore, this Strategy proposes a reduction in the area of these lands where agricultural uses are dominant.

Table 16: Review by this Strategy of the 2005 Draft Cudal Village Strategy recommendations.

7.21.4. Sub-Regional Rural and Industrial Strategy (2008)('R&I Strategy')

The R&I Strategy was adopted by the Blayney, Cabonne and Orange City Councils and Department of Planning & Infrastructure as the key strategy for rural and large-scale industrial uses for the sub-region. There were no outcomes from the R&I Strategy that were particularly applicable to Cudal in anything other than general terms, as follows:

- **Large Lot Residential** - The Final Strategy - Section 6.4.3 (Table 6.2) shows that the R&I Strategy considered the need for additional large lot residential at Cudal but discounted it on the basis that there is "Prevalence of large holdings (200 hectares or greater in the area); Class 2 and 3 soils; and Adequate existing supply of Rural 1(c) zoned land."
- **Industrial** - The R&I Strategy only identified larger format and heavier industrial lands around Manildra of sub-regional importance in the Cabonne Shire. Therefore, it did not look at industry at the settlement level. This Strategy seeks to supplement the R&I Strategy with a local industrial strategy for Cudal.



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Document Control

Version	Date	Author	Summary	Reviewed
A	November 2011	A.Napier	Draft for Internal Review	DES
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- Figure 5: Alignment of the Australian Bureau of Statistics Census Collection Districts in relation to Yeoval's Village Zone (Source: www.abs.gov.au & Council GIS 2010).*
- Figure 6: Excerpt of Mineral Resource Audit of Cabonne Shire (Source: Department of Industry & Investment, February 2010).*
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- Figure 12: Location of each key land use in Yeoval's urban zones (as at 2011).*
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8. Village of Yeoval

Please note that **Chapter 8 – Village of Yeoval** should be read with **Chapter 2 – Cabonne Overview** as some of the Issues and Strategies applicable to all settlements are not reproduced in this chapter.

8.1. Executive Summary & Proposed Land Use Arrangements

8.1.1. Historical population growth

The ABS Census District for the Village of Yeoval includes all of the existing Zone 2(v) (Village Zone) and Zone 1(c) (Rural Small Holdings) area so it is a good representation of the urban population of Yeoval. However, it does not represent the surrounding rural population that utilises Yeoval as its primary centre including the population of North Yeoval in the Wellington local government area (that may contain a population of up to 80 people).

As Table 1 shows, the population of Yeoval peaked with 317 people in 1996 but there has been a minor overall decrease in the settlement population over the last 20 years (-0.15%/yr from 1976-2006 and -0.79%/yr from 1996 to 2006). The population has generally remained between 252 and 317 people over the last 30 years.

Year	1976	1981	1986	1991	1996	2001	2006
Population	306	252	293	297	317	313	292
Av. Ann. Change from previous Census	N/A	-3.5%	+3.3%	+0.3%	+1.4%	-0.3%	-1.3%

Table 1: Summary of population statistics for Yeoval (source: www.abs.gov.au).

8.1.2. Key Factors Influencing Population/Economic Growth

Yeoval has a number of influences that could result in potential positive population and economic growth including, but not limited to, its separation from larger regional centres (that promotes local shopping & services), its location at the intersection of two key regional roads (Renshaw McGirr Way & Banjo Paterson Way/Obley Road), its population size and stability, its lifestyle and rural character, the presence of affordable housing, access to both primary and secondary education facilities, access to community health services, good tourism opportunities, good recreation opportunities, a commitment from Council to construct a new reticulated sewerage system, and a strong community spirit.

However, there are a number of potential negative influences that could hamper population and economic growth including, but not limited to, distance from key regional centres (where the majority of regional growth and employment is occurring), lack of major highways or rail access, limited public transport, an ageing population which is historically decreasing (slowly), limited local employment and retail options, lack of a secure and potable water supply, lack of a reticulated sewerage system (until it is constructed – and in the interim there is a barrier to additional development), flood prone lands constraining growth, a lack of tourism infrastructure, and difficulty getting finance from banks and high costs of development.

8.1.3. Projected Population Growth

Based on the opportunities and constraints above, Yeoval's population is expected to grow at a projected annual rate ranging from -0.1%/yr (minimum) through to +0.3%/yr (maximum) with an average of +0.1%/yr (*Please note that growth rates will change over time and this is an estimated average growth rate over the 30 year period*).

Based on the **maximum** growth rate of +0.3%/yr Yeoval's population will grow to 319 people by 2036, an increase of 27 people over the 2006 population. This growth will create some limited additional demand for residential, business, community and open space/recreation land uses that will need to be provided in Yeoval and the region. (Note: As Yeoval has a smaller population there is likely to be significant percentage changes over time so this Strategy has only estimated the average population growth over 30 years).

8.1.4. Proposed Land Use Zone(s)

Good planning practice suggests that settlements above 1,000 in population that are experiencing higher growth should consider adopting specific zoning for each land use ('complex zoning') to minimise land use conflicts and maximise amenity and economic activity.

As Yeoval's 2006 Census population was 292 people this Strategy recommends that Yeoval retains a zone similar to the existing 'Village Zone' for the core urban area combined with areas for large lot residential uses (to replace the existing Zone 1(c) (Rural Small Holdings)). Therefore, there is not a major change in zoning categories proposed for Yeoval.

8.1.5. Summary of Proposed Changes

There are minor changes proposed to both the 'zoned' areas and the subdivision potential of some lands in this Settlement. See the detailed land use sections of this chapter for more details.

The proposed land use arrangements are set out in Figure 1 and summarised as follows:



Figure 1: Summary of proposed land use arrangements for Yeoval (Source: Council GIS 2011).

a) Village Zone

Proposed Village Zone

In general the proposed Village Zone boundary is effectively the same as the Village Zone in CLEP1991 except for the following amendments:

- a) **Crown Land along Sandy Creek:** The Crown land (Lot 7001 & 7002 DP1020557) and 2 private lots (Lot 7003 DP1032709 + Lot 154 DP753223) along Sandy Creek is located in an area which has high flood potential and significant established vegetation and would not be suitable for any additional development. Therefore, this Strategy recommends it is removal from the Village Zone and placement in the background rural zone.
- b) **Banjo Paterson Park/Showground:** Lot 116 DP753223 is run by the Trustees of Yeoval Showground but the land that is to the east of the bridge over the Buckinbah Creek is used as part of Banjo Paterson Park. This area is not suitable for additional development other than for recreation purposes and is more suited to a recreational zone than a Village Zone.
- c) **Crown Land at Eastern Gateway:** The Crown land (Lot 7301 DP1144905) at the eastern gateway to Yeoval on Banjo Paterson Way (corner Myrangle and Molong Streets) should be utilised for landscaping at the gateway to Yeoval and is not suitable for future development so it is removed from the Village Zone. Part of this is road reserve.

Therefore, except for one private lot the land that has been removed from the existing Village Zone is Crown land or recreation land that had no current development potential so the changes will have a minimum impact on future dwelling potential and growth.

Minimum Lot Size for Subdivision

As of 2012, Yeoval is in the process of having a new reticulated sewerage system constructed. However, until all properties are connected they will be reliant on existing on-site effluent management systems (usually standard septic systems and absorption trenches).

Until the new system is connected, Yeoval should retain the current minimum lot size for subdivision of 2,000m² to provide sufficient lot size to support a dwelling and on-site effluent management system. There are very few lots in the Village Zone significantly larger than 2,000m² that would be affected by this subdivision control. Applications for dwellings on existing lots below 2,000m² may be permissible subject to consent where they can meet other controls.

Properties that have been connected to the new system may be suitable for a reduced minimum lot size for subdivision down to 900-1000m² per lot and this would potentially allow additional subdivision and infill development of lots greater than 1,800m². A lot size of 900-1000m² is consistent with some of the existing smaller historical lots in Yeoval and is unlikely to impact on the desired streetscape character and layout of the village.

b) Large Lot Residential

Proposed Large Lot Residential Area & Minimum Lot Size for Subdivision

It is intended to retain the existing Zone 1(c) (Rural Small Holdings) area to the south-west of Yeoval for large lot residential uses. The only amendment is that the road reserve of Myrangle Street would be removed from this zone and the road reserve of Obley, Lucknow and Cobar Streets will be included in this zone (this would not change the development potential of this area). The existing minimum lot size for subdivision of 4,000m² per lot should also be retained, however, larger lot sizes may be required in proximity to Sandy Creek to enable setbacks from the flood prone lands for dwellings and applicants will need to prove that the lot size can support a dwelling and effluent management system.

Future Investigation

If the lots in the Village Zone south of Myrangle Street are not taken up for a significant number of dwellings in the next 5-10 years then it may be worth considering rezoning this area (and perhaps some additional adjacent rural lands) for large lot residential expansion as this would provide a 'buffer' to the adjoining rural lands and may be more in demand than village lots in this location. It may also reduce the cost of development of these lots because they would not necessarily need to connect to reticulated water and sewer and it may affect the road standard required.

c) Industrial Land Uses

Proposed Industrial Area

The proposed Village Zone will provide flexibility for home industry and some light industries to grow in Yeoval (where they can address issues of land use conflict with residential uses). Therefore, no specific industrial area needs to be created in the new local environmental plan.

Whilst Yeoval has some light industrial uses it is predicted that Yeoval will not attract a large number of new larger-scale industrial uses due to economic and physical constraints and competition with surrounding larger centres and Manildra (which has been nominated for larger scale industrial uses in the Rural & Industrial Land Use Strategy).

Future Investigation

However, it would be better if future light industrial uses were located in an area where land use conflicts could be minimised and industrial uses could be co-located. In the Draft 2005 Yeoval Village Strategy it was recommended that light industrial uses were located along Short Street and Buckinbah Street in the north-west of Yeoval where there are a number of vacant blocks. However, the presence of 2-3 large newer dwellings in this location and some flooding issues along Buckinbah Street may make this less suitable.

An alternative location for future investigation would be along Cobar Street (particularly the large vacant area to the rear of the hotel lot and adjacent to the Council depot). This would have similar potential land use conflicts with adjacent dwellings on Obley Street but has the advantage of potential future expansion into the large lot residential lands to the south of Cobar Street (if these are not developed for dwellings) as well as closer proximity to the main road system for truck movements. If industrial uses needed to expand then this may be able to occur in the future if some of the large lot residential area to the south of Cobar Street is rezoned for this purpose (but not before the area to the north of Cobar Street is utilised).

d) Business Land Uses

Whilst the proposed Village Zone will provide flexibility for local retail and commercial businesses to grow in Yeoval there should be some attempt to consolidate stand-alone businesses along Forbes Street between Obley Street and Lucknow Street, where possible, to reinforce the character of Yeoval's central business area, capture passing traffic, reutilise existing vacant business premises, and minimise conflicts with residential areas. There is no need to identify future business lands as there is sufficient growth potential along the main street for the foreseeable future. However, home businesses with lower impacts are likely to be accepted across the village area.

e) Community Land Uses

The proposed Village Zone will provide flexibility for community uses so no specific area needs to be designated for these uses. There is no perceived need for significant additional land for community uses within the Yeoval urban area at this time. If expansion is required this can generally be accommodated on existing community use sites or on vacant land in the urban area without substantial impact on residential amenity.

8.1.6. Dwelling Supply & Demand

As there are no significant changes from the existing zoning or minimum lot size arrangements between the current controls (CLEP1991) and the proposed land use arrangements then the vacant land analysis and development potential will remain similar (whilst there is no reticulated sewer in Yeoval). Based on the findings in this chapter there is potential for approximately 18 (unsewered - MLS 2,000m²) or 32-33 (sewered - MLS subdivision 900-1000m²) small vacant lots in Yeoval to be developed for single dwellings. As the projected dwelling demand until 2036 is for an additional 14 dwellings, the proposed supply will meet either 39 years (unsewered) or 69 years (sewered). Therefore, there is sufficient land supply to meet at least the next 10 years if not longer. If growth rates exceed the projections in this Strategy there is time to review the proposed future investigation areas for additional growth.

8.2. Regional Location

The Village of Yeoval is located in the northern area of Cabonne on the local government boundary with Wellington Council that runs along the Buckinbah Creek (Figure 2).

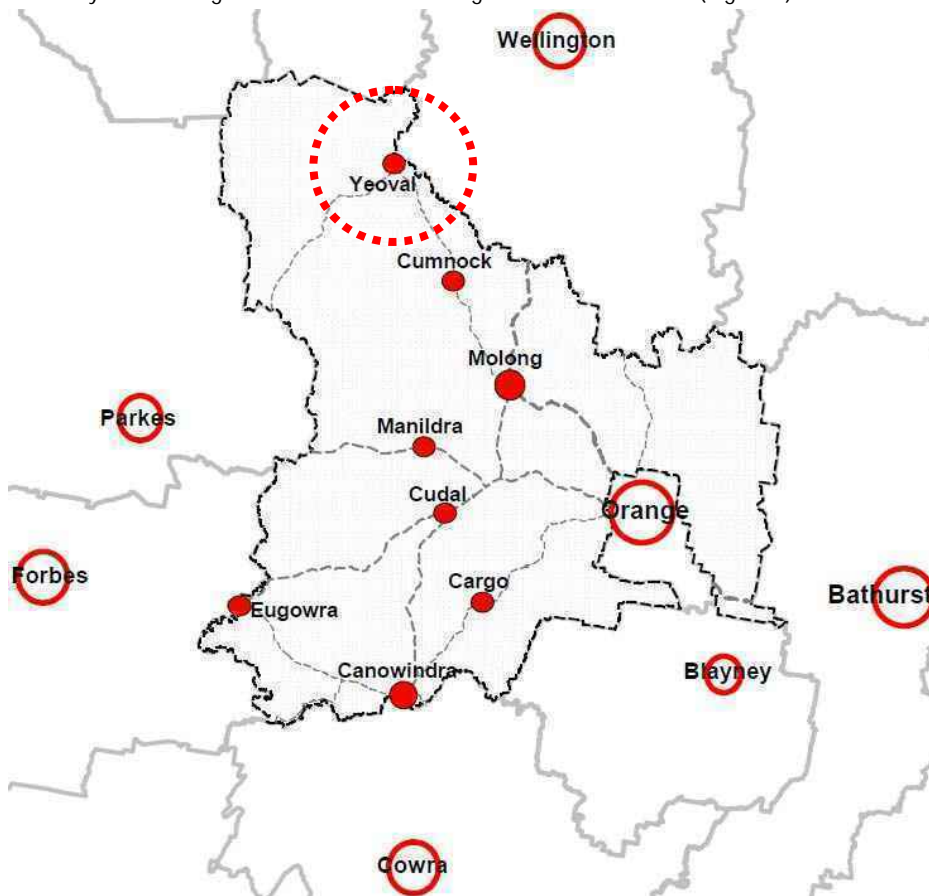


Figure 2: Location of the Village of Yeoval and proximity to key regional centres and settlements (Source: Council GIS 2010).

Yeoval is located approximately:

- 24km (15-20 minutes drive) from the Village of Cumnock via Banjo Paterson Way;
- 41km (35-40 minutes drive) from the Town of Wellington via Renshaw McGirr Way;
- 47km (40-45 minutes drive) from the Town of Molong via Banjo Paterson Way;
- 69km (50-55 minutes drive) from the City of Dubbo via Obley Road;
- 70km (1 hour 15 minutes drive) from the Town of Parkes via Renshaw McGirr Way;
- 82km (1 hour 15 minutes drive) from the City of Orange via Banjo Paterson Way and the Mitchell Highway.

Yeoval is outside the 'commuter zone' (25-30 minutes drive) of the nearest major centres including Orange, Parkes, Wellington and Molong. The closest major settlement is Wellington which is likely to provide weekly shopping needs, or alternatively Molong, Parkes or Dubbo. The Renshaw-McGirr way is now nearly totally sealed from Parkes through to Wellington and offers an alternative route between Melbourne and Brisbane which may have tourism benefits.

Issues & Strategies.

- **Proximity to Cabonne Settlements:** Yeoval is within 20 minutes drive of Cumnock but it is 40 minutes to Molong and more to other Cabonne Settlements. In this way Yeoval is more likely to seek higher level services in Molong or other regional cities.
- **Proximity to Major Centres:** The travel distances of Yeoval to Wellington, Parkes and Dubbo can be a positive in terms of increasing reliance on local shops and services but it can also be a challenge in terms of limited local employment and need to access higher level services and facilities.



8.3. Existing Zoning

Figure 3 illustrates the existing zoning pattern in and around Yeoval under CLEP1991 including:

- **Zone 2(v) (Village Zone)** - The core urban area of the Village of Yeoval (pink on map) (Total area ~71ha including roads etc);
- **Zone 1(c) (Rural Small Holdings)** - Large lot residential (orange on map) (Area~8.17ha);
- **Zone 1(a) (General Rural)** for all other surrounding areas (red on map).

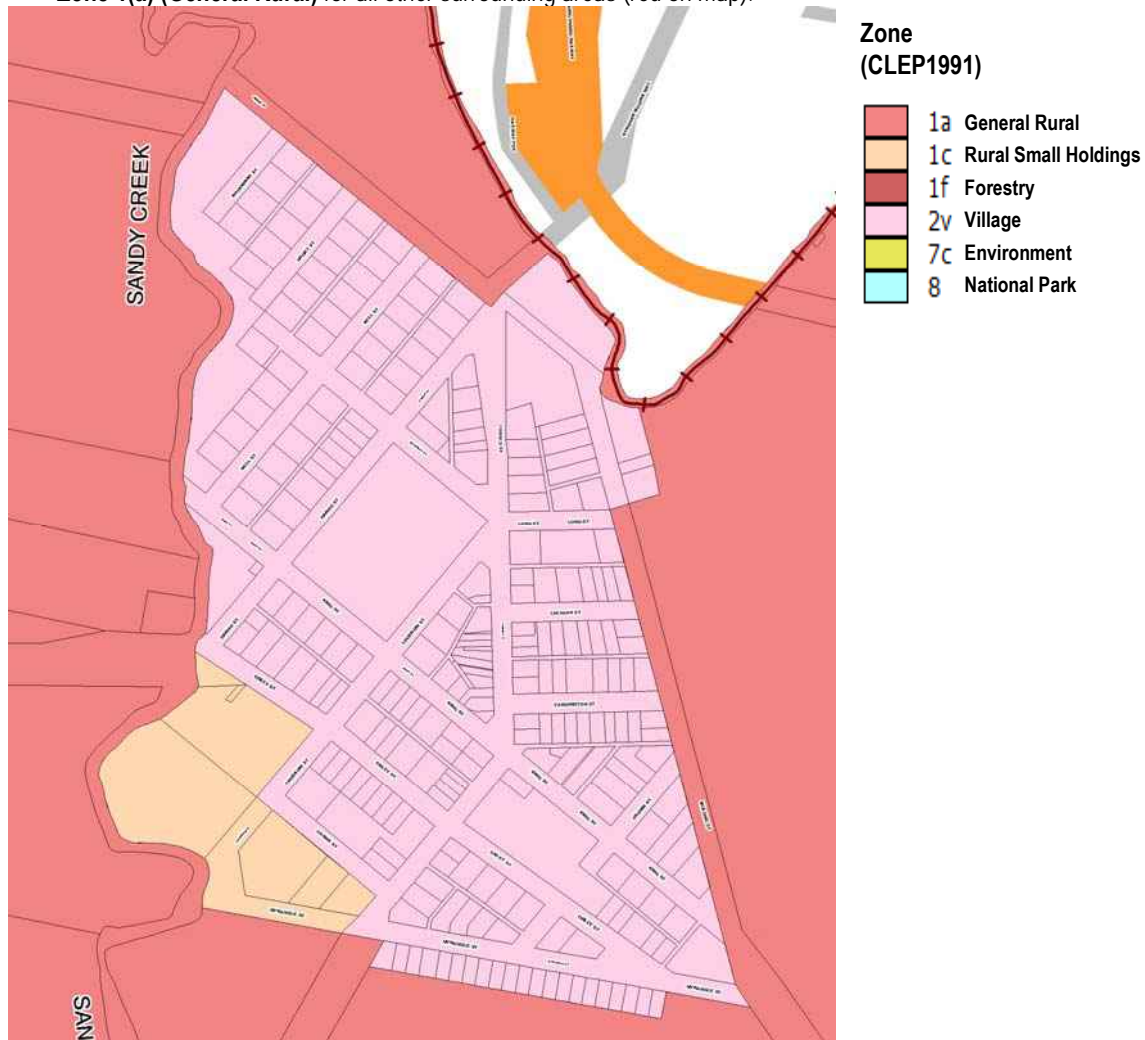


Figure 3: Existing zoning for the Village of Yeoval and surrounds (Source: CLEP1991 / Council GIS 2010).

The 'urban' boundary of Yeoval has remained relatively static over time. The most significant changes to the Village Zone boundary in the last 70-80 years is the addition of the lots to the south of Myrangle Street and the couple of dwelling lots the the north-east of Molong Street (ignoring development in North Yeoval in Wellington LGA). This would suggest that Yeoval has mostly relied upon infill development for quite some time.

Issues & Strategies

Review of Zoning Boundaries: It is the role of this Strategy to define appropriate areas for each land use within the urban areas of each settlement to ensure sufficient supply of land for the next 5-10 years. This will then inform the preparation of new zoning boundaries under the proposed new Cabonne Local Environment Plan. It is also important for the community to understand where the existing zoning boundaries are located because this may affect their perception of where development may occur (for example, not many people at the Yeoval Village Workshop were aware that the land south of Myrangle Street was in the Village Zone). Any expansion of the urban area of a settlement into the surrounding rural lands needs to be justified as it may take up prime agricultural land that is important to the Cabonne economy.

8.4. Settlement History

History is important because it explains why a settlement is located in its present location and how the settlement has changed over time. Some key settlement dates are as follows:

- 1840s** - The early records of settlement in the Yeoval area show that after the Squatters' Act of 1846-47 there were several leases taken out in the area including land fronting onto Buckinbah Creek.
- 1860s** - Village known as Buckinbah ("the bend in the river"). Gold, silver & copper were discovered at the nearby Obley goldfields in the late 1860s.
- 1864** - Andrew Barton "Banjo" Paterson lived with his parents at 'Buckinbah Station' near Yeoval as a young boy.
- 1880s** - The small village called Buckinbah boasted a post office, hotel and several stores.
- 1882** - Village name changed from 'Buckinbah' to 'Yeoval'.
- 1883** - Yeoval Central School opened.
- 1884** - Yeoval Post Office opened on 1 November 1884.
- 1886** - 22 May - Village boundaries notified including creation of key public reserves and recreation areas, water supply areas, and camping areas.
- 1890** - Yeoval proclaimed a village on 4 October 1890.
- 1914** - Public School Site (Yeoval Central School) dedicated 8 April 1914 with addition to school site on 24 August 1917.
- 1925** - Yeoval Railway Station opened. The railway was extended to Dubbo that year. Original Post Office site (Corner Forbes and King Streets) acquired by Commonwealth on 11 June 1925. St. Luke's Anglican Church opened.
- 1971** - Goodrich Mine (copper, gold & silver) near Yeoval operated until 1971.
- 1974** - Railway passenger service ends. Subsequently the Yeoval Railway Station was closed and the Molong-Dubbo rail line is no longer used and is cut at the Mitchell Highway.
- 1988** - Yeoval Public Hospital closed by the NSW Government.
- 1989** - The Yeoval Community Hospital Co-operative Ltd was formed and the Multi Purpose Health Centre opened in July with a seven bed hospital, accident assessment unit, and seven bed nursing home.
- 1992** - A new nine bed hostel was added to the Multi Purpose Health Centre.
- 1999** - A new eight bed special care unit for dementia residents was opened at the Health Centre. Subsequently a new doctor's residence was built but never occupied.
- 2007** - Yeoval Community Hospital converted to a low-care aged care facility owned by United Protestant Association due to financial difficulties.

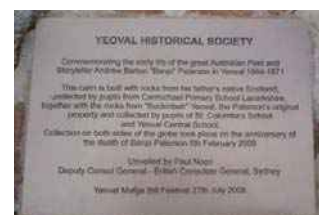
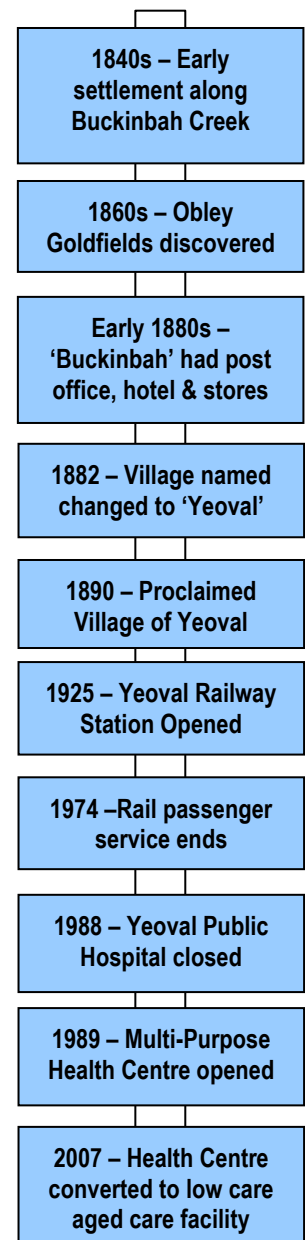
It would appear that the peak periods for the growth of Yeoval occurred between the late 1800s until the 1970s. Since that time there has been a gradual loss of local services and decrease in local population in the village. However, there have been several successful economic and agricultural ventures in the surrounding area that continue today but growth has been limited.

This information was sourced from the following publications:

- Coleborne, J. (1983) *Sharing 100 years of memories on the banks of the Buckinbah* (Celebrating One Hundred Years of Yeoval Central School);
- Times Past Productions (2002) *A Big Country - A Contextual History of Cabonne*;
- Rutherford, D.A. (1979) *One Hundred Years of Local Government in Molong*;
- Marriott, J. (1993) *The Crossroads - the History of Cummock*;
- Yeoval's website (www.yeoval.com.au);
- NSW rail website (www.nswrail.net).

Issues & Strategies

Understanding the History: The history of Yeoval and its surrounds is an important factor both in understanding the location of the settlement, how it grew, key opportunities and constraints to its growth, and as a fundamental building block for tourism and community spirit. Yeoval should continue to build upon its history and protect and enhance the key heritage items and character. See **Section 8.13 - Heritage** for the proposed strategies for heritage items.



8.5. Settlement Pattern

8.5.1. Historical Subdivision Pattern

It is important to recognise that in most circumstances Council and the community are dealing with an historical subdivision pattern for many settlements that has often been in existence for over 100 years. Without conducting a detailed historical study it is has not been possible to pinpoint exactly when the current subdivision pattern came into being but it is likely to have occurred in the early 1900s. Historical maps suggest that Yeoval has exhibited very little change in its urban boundaries in the last 60-80 years except for some limited subdivision.

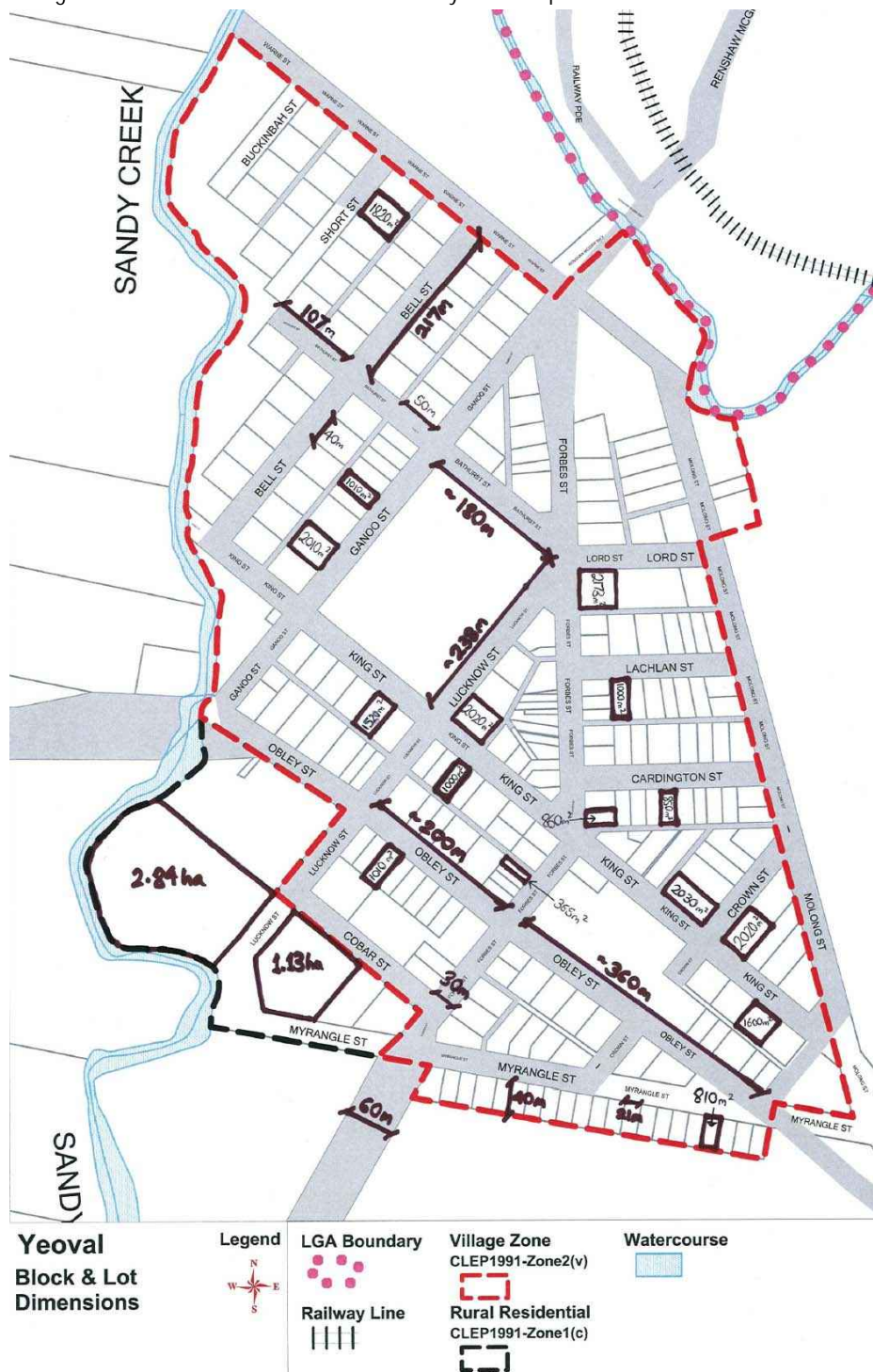


Figure 4: Indicative street, block and lot lengths, widths and areas in Yeoval (Source: Council GIS 2011).



The vast majority of the historic subdivision patterns in settlements in Cabonne were based on a grid pattern with perpendicular streets and regular block sizes. In Yeoval, the blocks are generally oriented with the streets running roughly north-east/south-west or north-west/south-east (except for streets east of Forbes Street which are often oriented east-west).

It is important to note that at the time of these subdivisions a rear lane was incorporated through the middle of most blocks to allow the collection of sewage from the toilets at the backs of the blocks and many of these remain on the titles today. However, the rear lanes are rarely fenced off from private property and have been incorporated into the adjacent allotments in most cases in Yeoval.

8.5.2. Street Dimensions

Most of the streets in Yeoval are approximately 30 metres in width (except for the Renshaw McGirr Way outside of the settlement that is 60 metres wide). A 30 metre road allows for a lane in each direction and substantial on-road parking areas and kerb/pedestrian areas. A 30 metre road width also allows the potential for incorporation of street trees in the road corridor with minimal impact on parking / pedestrian areas. There are also 6-7 metre wide rear lanes through most of the blocks with some being sealed or gravelled but many not formed or used.

8.5.3. Block Sizes

Figure 4 shows some of the indicative block lengths and widths in Yeoval. Due to the modifications to the grid pattern the block dimensions are variable – but in general are approximately 106 by 200 metres in dimension (incorporating a 6 metre wide rear lane) resulting in blocks of approximately 2 hectares in area (excluding irregular blocks and Yeoval Park). In addition, there are a large number of irregular blocks of different sizes. However, there is relatively good permeability and pedestrian connections through Yeoval as most roads lead towards the village centre.

8.5.4. Lot Sizes

Historically most lots used to be fairly regular in size and dimension (approximately 40m by 50m, area = 1,995m²), but over time there have been subdivisions and amalgamations which have increased the irregularity of lots with a range of lot sizes from 850m² to 2,020m². However, there are still a large number of lots of size 1,600m² to 2,000m². There are also a limited number of lots that are as small as 300m².

The lot depth and width of the lots greater than 900m² is sufficient to allow the placement of a dwelling with good side setbacks and a good rear yard. However, until the proposed centralised sewerage system in Yeoval is connected to all properties, a lot size in excess of 1,600m² may be required to support a standard on-site septic system (subject to specific site geo-technical studies) (see [Section 8.11 – Utilities & Infrastructure](#) for more detail). Smaller lots sizes are likely to be more acceptable once the new centralised sewerage system is completed in Yeoval.

Issues & Strategies

- **Rear Lanes:** Council and the Department of Lands need to conduct an assessment of all of the public mid-block rear lanes and determine whether anything will be done to protect their public nature and whether they will be preserved or released for sale to the adjacent land owners.
- **Lot Sizes (Village Zone):** Currently the minimum lot size needs to be sufficient large to support a dwelling and on-site sewerage systems (up to 2,000m²). However, once centralised sewerage is constructed in Yeoval in the next few years this may allow for lot sizes to reduce down to approximately 900-1000m² which is consistent with the character and historical subdivision pattern (see below for more details).

8.6. Historic Population

8.6.1. Census Area

The Australian Bureau of Statistics (ABS) Census Collection District ('CD') is the area that ABS uses to calculate the population and demographics for an area. As shown by Figure 5, the Yeoval CD (yellow line) incorporates nearly all of the existing Village Zone (red dotted line) and Rural Small Holdings Zone (black dotted line) in Cabonne except for a couple of dwellings south of Myrangle Street. Therefore, the ABS results for Yeoval can be utilised as a reasonably accurate measure of the Village of Yeoval's urban population.

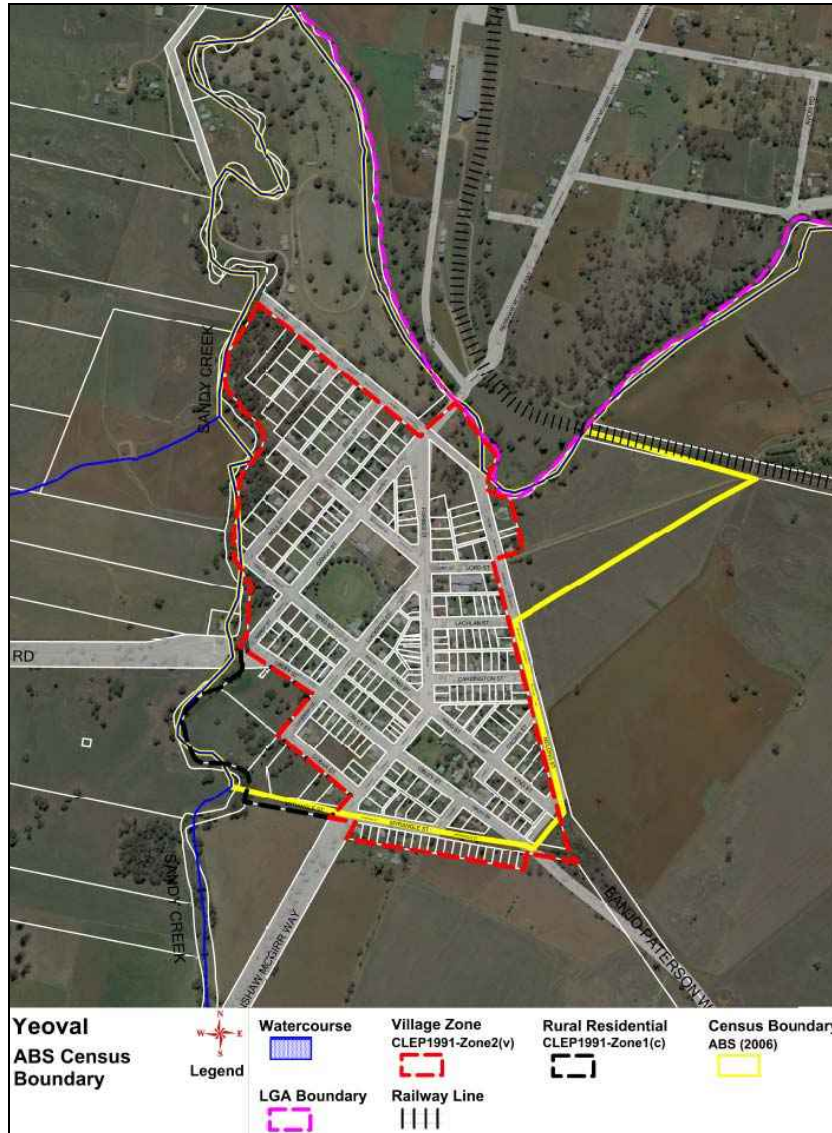


Figure 5: Alignment of the Australian Bureau of Statistics Census Collection Districts in relation to Yeoval's Village Zone (Source: www.abs.gov.au & Council GIS 2010).

Please note that North Yeoval is in the Wellington LGA (and outside the Yeoval ABS Collection District) and does support some additional dwellings that would utilise Yeoval as their local centre with an estimated population of 80 people that is not included in the ABS figures below.

Issues & Strategies

Measuring the Catchment: The Yeoval Collection District ('CD') includes the majority of the Village Zone and Rural Small Holdings Zones but does not include some of the Village Zone along Myrangle Street. Future Census calculations may enable this to be included. This Strategy is based only on the Census figures. This Strategy does not take into account the surrounding rural catchment that utilises Yeoval as its primary service centre, particularly the large rural residential area that is located in North Yeoval in Wellington local government area.

8.6.2. ABS Census Population of Yeoval Village

Table 2 shows that the historical ABS population for Yeoval (Village Zone + Rural Small Holdings – excluding North Yeoval) has varied from a low of 252 people in 1981 to a high of 317 people in 1996 and a slight decrease to 292 people in 2006.

The average annual population change over time has varied significantly from negative periods of -3.5%/year (1976-1981) to positive growth rates of +3.3%/year (1981-1986). On average the growth rates have been negative 0.15% (1976-2006), negative 0.02% (1986-2006), negative 0.79% (1996-2006), and negative 1.34% (2001-2006).

In general the total population has generally stayed relatively stable between 252 and 317 people over the last 30 years but there is a risk that negative growth may continue for some time and affect the economic growth of the village.

Year	Population	Change	% Change from Previous Period	Average Annual % Change
1976	306	N/A	N/A	N/A
1981	252	-54	-17.65%	-3.53%
1986	293	+41	+16.27%	+3.25%
1991	297	+4	+1.37%	+0.27%
1996	317	+20	+6.73%	+1.35%
2001	313	-4	-1.26%	-0.25%
2006	292	-21	-6.71%	-1.34%
1976 - 2006		-14	-4.58% (30 years)	-0.15%
1986 - 2006		-1	-0.34 (20 years)	-0.02%
1996 - 2006		-25	-7.89% (10 years)	-0.79%

Table 2: Census population counts and population change for the Yeoval Collection District (Source: www.abs.gov.au).

The community workshop noted that significant population loss has often been associated with a decline in local industry and employment including the closure of Archway Industries (23 employees) and the reduced staff at the hospital when it transitioned to an aged care facility.

Issues & Strategies

Population Growth Rate: Yeoval has retained a fairly steady population between 252 and 317 people over the last 30 years with periods of growth and contraction. Therefore, the average growth rate has been slightly negative at -0.15%/year (1976-2006). However, there has been a decrease in population from 1996 onwards that would need to be turned around in order to maintain economic growth and local services and opportunities.

8.6.3. Population of North Yeoval

There is no ABS data specifically for the North Yeoval area but it does fall within ABS Census Collection District No.1032207 (which takes up the south-west corner of the Wellington Shire). A population estimate can be gained from an extrapolation from the number of existing dwellings (approximately 36 in 2010) minus an assumed 10% of vacant dwellings (resulting in 32 occupied dwellings) multiplied by the average household size of 2.5 people/dwelling in that Collection District - an estimate of approximately 80 people.

A review of the statistics for this Collection District shows that the population changed from 317 (2001) to 314 (2006) so there has been a slight population decline of negative 0.19%/year in this Collection District.

Issues & Strategies

North Yeoval Residential Area: The Yeoval Collection District ('CD') does not include the rural residential population of North Yeoval. However, the additional ~80 people in this area are likely to use Yeoval for local services and rely partly on Yeoval's infrastructure (including water supply). The population in North Yeoval is assumed to have not changed significantly from 2001-2006 but Cabonne needs to liaise with Wellington Council to confirm future development potential of this area.

8.7. Summary of Opportunities & Constraints

It is important to try and summarise the potential for Yeoval's population and economic growth in the future. Please note that more detail is provided on each of these issues in the subsequent sections of this Chapter.

8.7.1. Positive Factors

The key **POSITIVE** influences that may assist growth include:

- **Proximity to Regional Centres:** A travel time of greater than 50 minutes to key regional centres is one factor that may decrease reliance on regional centres and increase reliance on local shopping which promotes the local economy and employment. As a result, some services / assets are better in Yeoval than many other settlements of a similar size. Similarly, Yeoval is well placed in terms of proximity to a range of regional tourism attractions including Dubbo Zoo, Parkes Telescope, Wellington Caves, Goobang National Park, Cummoock and the 'Animals on Bikes' public art exhibition etc.
- **Rural Service Centre:** The distance to regional centres and Yeoval's location also means it has a broad rural catchment for services which supports the settlement. The community has stated that the rural population in the surrounding appears to be growing (to be confirmed);
- **Transport:** Location at the intersection of the Renshaw-McGirr Way and Banjo Paterson Way. The Renshaw-McGirr Way is a significant regional road that provides a 'short-cut' scenic route from Parkes through to Newcastle (Melbourne to Brisbane) and is a key tourist route;
- **Population:** The current population in the Yeoval Village Zone (292 people in 2006 - excluding the additional 80 people in North Yeoval) is high enough to support a range of local services and facilities (assuming this population is sustained). The population has generally remained in the 250-300 people range over the last 30 years and shows some resilience;
- **Rural Character:** Attraction of the rural character, landscape and village lifestyle supplemented by heritage buildings and streetscapes. There is evidence of a number of 'tree changers' moving to Yeoval;
- **Affordability:** Attraction of a reasonable supply of affordable land;
- **Sewer:** Council has made a commitment to provide a centralised sewage system to Yeoval shortly and this will improve amenity, environmental outcomes, and release land for further subdivision/development;
- **Education:** Access to both local primary and secondary schools makes Yeoval attractive for families;
- **Health:** Access to a multi-purpose health centre (now predominantly aged care) that is serviced by doctors, aged-care services, and some community health services is an attraction for the whole community, but particularly for retaining older citizens in the community;
- **Tourism:** Significant potential for increased tourism due to its location on the Renshaw-McGirr Way, the village's character and heritage, its community spirit and range of things to do and see;
- **Recreation:** Yeoval has access to a good range of recreation facilities including both passive and active recreation areas and sporting facilities, particularly with school sports;
- **Community Spirit:** Good community associations foster community spirit and local solutions to community needs.

8.7.2. Negative Factors

The potential **NEGATIVE** influences on growth include:

- **Proximity to Regional Centres:** Yeoval is outside the 'commuter zone' (30 minutes drive) of Dubbo, Orange & Parkes where most significant growth and demand is occurring. Therefore, it is unlikely to act as a commuter suburb or benefit substantially from 'flow-on' effects from growth of regional centres. Limited access to local employment and services in Yeoval and distances to key regional centres may inhibit growth;
- **Transport:** Yeoval is not located on a major highway and does not have an active rail transport link that would generate substantial passing trade or economic growth (other than tourism);
- **Public Transport:** Very limited public transport opportunities may limit access to services / facilities / employment in regional centres to those without access to private vehicles;
- **Population:** There have been some significant variations in population over the last 30 years and this suggests that economic and social changes have a significant impact on retaining a sustainable population. With an ageing population there is a real risk of continued population decline unless local health services allow citizens to remain in Yeoval. An ageing population may also affect the number of school age children / families to support the local schools;
- **Employment:** Limited existing local employment or nearby major employers to create a sustainable economic environment and attract working age people. Loss of one or two key employers could have substantial flow-on effects to the population/growth;
- **Retail:** Limited local retail services with only local groceries and limited range. This necessitates travel to regional centres which is not always possible or affordable;
- **Water Supply:** The current water supply is unable to sustain any additional significant growth in Yeoval as there is no secure supply in case of drought and the current water system is not potable/drinkable, requiring reliance on rainfall/tank water;
- **Sewerage:** Whilst a centralised sewerage system is likely to be implemented shortly, in the interim there will be reliance on septic systems and larger lots are required. In the interim period there may be some reticence to build new dwellings due to the cost of a septic system that will shortly be replaced. The additional sewerage charges may also affect the affordability of dwellings/rentals in Yeoval;
- **Flooding:** The village is enclosed to the north and west by a number of intermittent watercourses that create potential drainage, inundation and overland flow issues during heavy rainfall events that affect some of the Village Zone and constrain further subdivision and development in these areas;
- **Tourism:** Limited items of tourist interest compared to some other settlements in Cabonne (that warrant more than passing tourist trade) and limited tourist infrastructure or services to maintain more than short stays so economic growth from tourism may be limited unless the community continues to innovate;
- **Finance:** Difficulty getting finance from banks as they will only provide a loan based on a lower percentage of property value in this area and the costs of development are high and not offset by the lower property values.

Issues & Strategies

Population Growth: In conclusion, the positives for Yeoval tend to slightly outweigh the negatives and suggest that Yeoval has the potential to exhibit low population growth over the next 10 to 30 years within some limited increasing demand for land and/or services. However, there are a number of challenges to growth and land supply that will need to be addressed.

8.8. Projected Future Population

Warning: The estimated population in 2036 is only an estimate based on the factors considered in this chapter and it may be affected by future changes in growth potential.

For all of the above reasons, it is estimated that the projected growth rate for Yeoval is likely to be in the range of -0.1 % to +0.3% with an average annual growth of +0.1%.

Table 3 shows how the existing and projected rates of population growth for Yeoval fit with other growth rates in the area and the resulting population projections (based on a 2006 population of 292 – including both the Village Zone and Rural Small Holdings Zones but excluding North Yeoval).

Range of Potential Average Annual Pop. Growth Rates	Av. Ann. Growth Rate	Projected Population						
		2011	2016	2021	2026	2031	2036	Δ in pop. 2006-2036
Village of Yeoval Pop. Change 2001-2006	-1.342%	273	255	238	223	208	195	-97
NEGATIVE GROWTH Aged Population Relocates	-0.50%	285	278	271	264	258	251	-41
MINOR NEG. GROWTH Projected Growth Rate Min. Proj. Growth Cabonne Pt.C	-0.10%	291	289	288	286	285	283	-9 Minimum
LOW GROWTH Projected Growth Average	+0.10%	293	295	296	298	299	301	9 Average
LOW-MEDIUM GROWTH Projected Growth Rate Max.	+0.30%	296	301	305	310	315	319	27 Maximum
MEDIUM GROWTH ABS 1986-1996 Cabonne	+0.50%	299	307	315	323	331	339	47
VERY HIGH GROWTH	+1.5%	315	339	365	393	424	456	164

Table 3: Projected population growth for Yeoval based on a variety of growth scenarios.

Issues & Strategies

- **Regular Review:** The growth rate for Yeoval should be reviewed every census period (5 years) to see whether it accords with the estimated rates of growth and, if not, then growth projections and the supply of land may need to be modified.
- **Negative Growth:** There is a low but real possibility that Yeoval may experience a significant negative growth over the next 30 years consistent with its decline since 1996. However, this has been discounted at this time due to the number of positive growth factors present and recent growth rates.
- **Average Growth:** Assuming an average projected population growth rate for Yeoval at the low rate of 0.1 %/year to 2036 there will be an increase in population of an additional 9 people, resulting in a total population of 301 people.
- **Maximum Growth:** Assuming a maximum projected population growth for Yeoval in the low-medium range of 0.3%/year there will be an increase in population by 2036 of an additional 27 people, resulting in a total population of 319 people.
- **Unsustainable Growth:** If Yeoval were to grow at a very high growth rate above 1.0%/year then this would place great pressures on housing, employment, services, utilities, transport and facilities and is likely to be unsustainable under existing conditions (particularly with security of water issues).
- **Supply & Demand:** The estimated increase in population will result in a slight increase in demand for additional housing, employment, services, and facilities.

8.9.

Demographics

Warning: The demographic information in this chapter is only valid on the Census night in 2006 and due to the small census population it is subject to significant change over time.

The following provides a short summary of the demographics for Yeoval's Collection District in 2006 that are relevant to this Strategy and/or different from the demographics for Cabonne.

Please see [Section 2.6 – Demographics](#) for a comparison of all of the settlements and Cabonne.

- a) **Age:** 29.8% of Yeoval's population is over the age of 65 years of age and 40.8% of the population is over the age of 55 years of age. The median age of Yeoval was 47 years compared with 37 years for persons in Australia.
- b) **Labour Force:** 7.4% of the labour force in Yeoval (94 people) are unemployed compared to 5.2% in Australia. 113 people over the age of 15 are not in the labour force.
- c) **Occupation:** 21.8% of employed people are labourers, 16.1% professionals, and 16.1% community and personal service workers. Yeoval's work force has a reasonable mix of occupations but relies more heavily on lower-paid occupations.
- d) **Employers:** 19.5% are employed in sheep, beef cattle and farming, 14.9% in hospitals, and 10.3% in school education.
- e) **Income:** In Yeoval, the median household income (\$592) and median family income (\$875) are significantly less than the Australian averages (\$1,027 / \$1,171 respectively).
- f) **Family Characteristics:** 38.8% are couple families with children (A=45.3%); 40.3% are couple families without children (A=37.2%); and 14.9% are one parent families (A=15.8%).
- g) **Dwelling Characteristics:** Yeoval had 125 private dwellings (of which 111 were occupied) on the night of the census. 95.5% were separate houses and 4.5% semi-detached or terrace houses. The average household size was 2.3 people per dwelling compared to 2.6 in Australia.
- h) **Household Composition:** 55% were family households and 33.3% were lone person households.

Issues & Strategies

- **Age:** With such a high percentage of older citizens and a higher median age in Yeoval than Australia there will be significant increased pressure and demand for aged care and health services and a corresponding lack of younger / employment aged people to provide economic growth. If Yeoval is not able to provide the requisite health services then there could be a significant loss of older people away from Yeoval over time.
- **Employment:** There is a low mix of employment types in Yeoval and heavy reliance on the surrounding farming areas, the hospital and the school for local employment. If there were to be economic circumstances or changes in demand resulting in the loss of any of these employers then it would have a significant impact on Yeoval.
- **Income:** Yeoval has a low median income which may affect economic growth and investment in the village.
- **Family Characteristics:** A reduction in families with children may result in less support for the local schools. One parent families also require additional assistance
- **Dwelling Characteristics:** The dominance of detached housing combined with an ageing population may indicate a need for greater housing choice in the future to meet the needs of an ageing population.
- **Household Composition:** The high percentage of lone person households (33.3%) may reflect the older age but also supports demand for smaller houses in the future.

8.10. Environment & Natural Hazards

8.10.1. Topography

The village area of Yeoval lies between approximately 370 metres and 400 metres above sea level. The low lying areas (370-380m) are along the western and northern sides of the village where Sandy Creek and Buckinbah Creek run. There is a slight rise to the south-east of town along Banjo Paterson Way at this key entrance. Most of the rest of Yeoval is flat to lightly undulating. Other than for reasons of flooding, topography is not a significant constraint to the development of Yeoval.

Issues & Strategies

Cut and Fill: Where possible, land uses should be located so as to minimise the need for cut and/or fill of land to create a suitable construction site. Sites with any significant slope should be avoided or require larger lot sizes for a wider choice of dwelling/building locations. This may restrict growth of the Village Zone in close proximity to Sandy and Buckinbah Creeks but there are few other constraints as the topography is not steep in Yeoval.

8.10.2. Geology & Mineral Potential

The former Department of Industry & Investment (now DTIRIS) has provided Council with a Mineral Resource Audit of Cabonne dated February 2010 (Figure 6). Please note that this is based on existing information and there may be additional mineral resources not identified on this map as there are exploration licences across a significant percentage of Cabonne.

The Mineral Resource Audit shows that the entire urban area of Yeoval and much of the surrounds is within the Naringla Potential Resource area (which has potential for copper, gold, molybdenum, and silver) which suggests that there could be future mining/extractive industry potential and this would need to be taken into account prior to any rezoning of land.

In addition, there is the existing identified resource of Yeoval Mine to the north of Yeoval. Whilst a buffer to this mine is not represented on this map it could be expected that development within 1km of the mine would need to be referred to the Department. Therefore, growth of North Yeoval may result in potential increased land use conflicts.

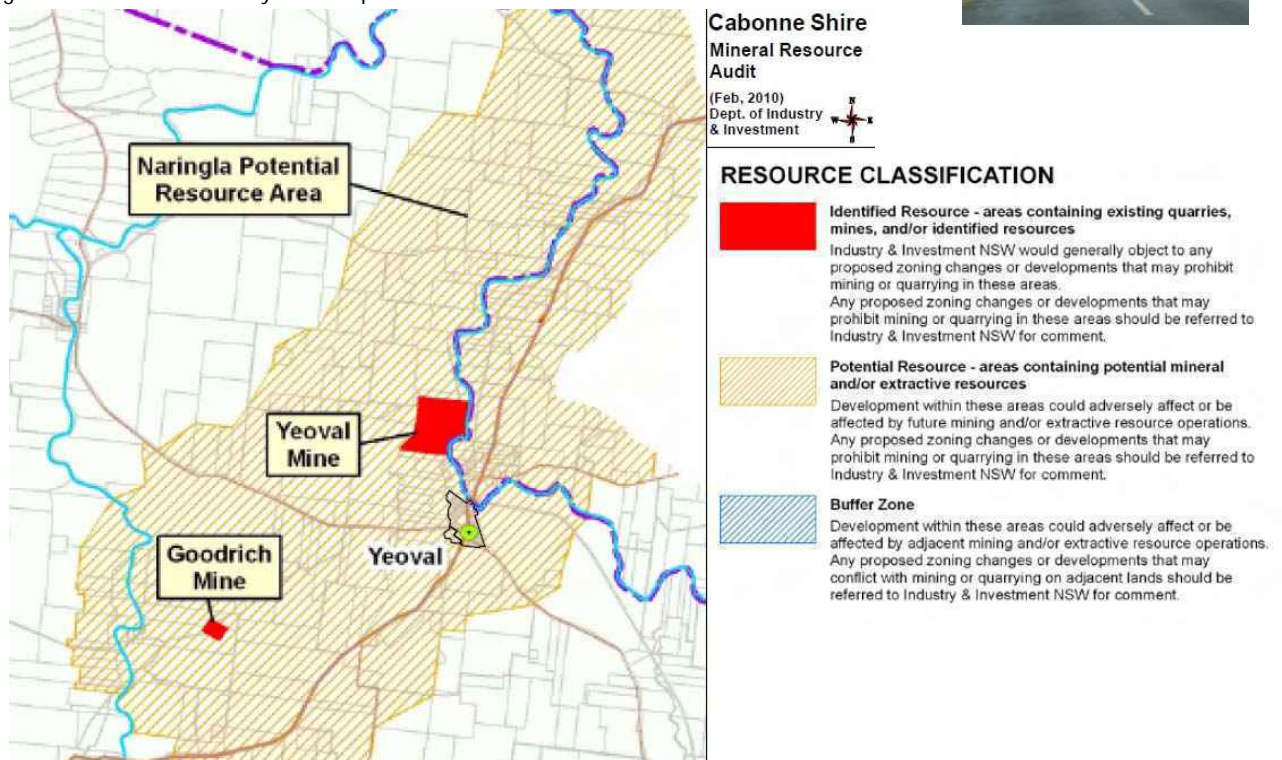


Figure 6: Excerpt of Mineral Resource Audit of Cabonne Shire (Source: Department of Industry & Investment, February 2010).



8.10.3. Groundwater

Figure 7 illustrates that all of the Village Zone and Rural Small Holdings area at Yeoval (including the majority of North Yeoval in Wellington Council) is classified as having high groundwater vulnerability (as identified by NSW Office of Water). There are also a reasonably high number of bore licences throughout the village and surrounds that may be placing pressure on groundwater supplies and these should be limited were not essential for water supply.

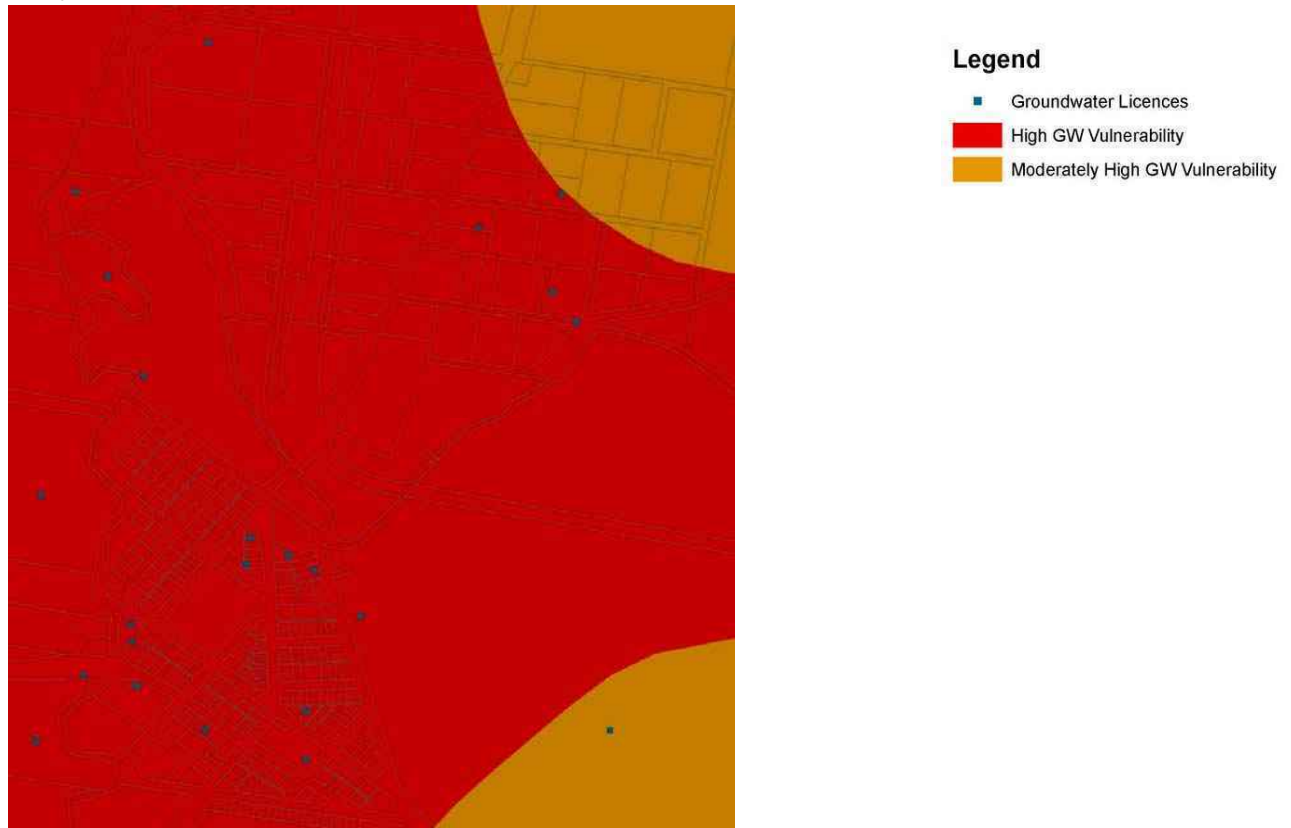


Figure 7: Groundwater vulnerability & licences for Yeoval (Source: NSW Office of Water 2011).

Issues & Strategies

Groundwater Vulnerability: There is a high groundwater vulnerability affecting all of the Yeoval urban area and therefore Yeoval would not be suitable for land uses with potential for significant contamination of groundwater sources (potentially including heavier industries or intensive animal agriculture). There may also be limitations to growth of large lot residential development that may be reliant on groundwater for a secure water supply.

8.10.4. Watercourses & Flooding

Watercourses

Water management is an important aspect of land use planning. The general aim is to minimise impacts on natural water systems from development and manage local drainage and flooding issues. There are two key watercourses in proximity to Yeoval (Figure 8) – Buckinbah Creek and Sandy Creek. Historically, Buckinbah Creek only rarely runs dry but Sandy Creek is generally intermittent but both are subject to flash flooding during heavy rainfall events in the catchment.



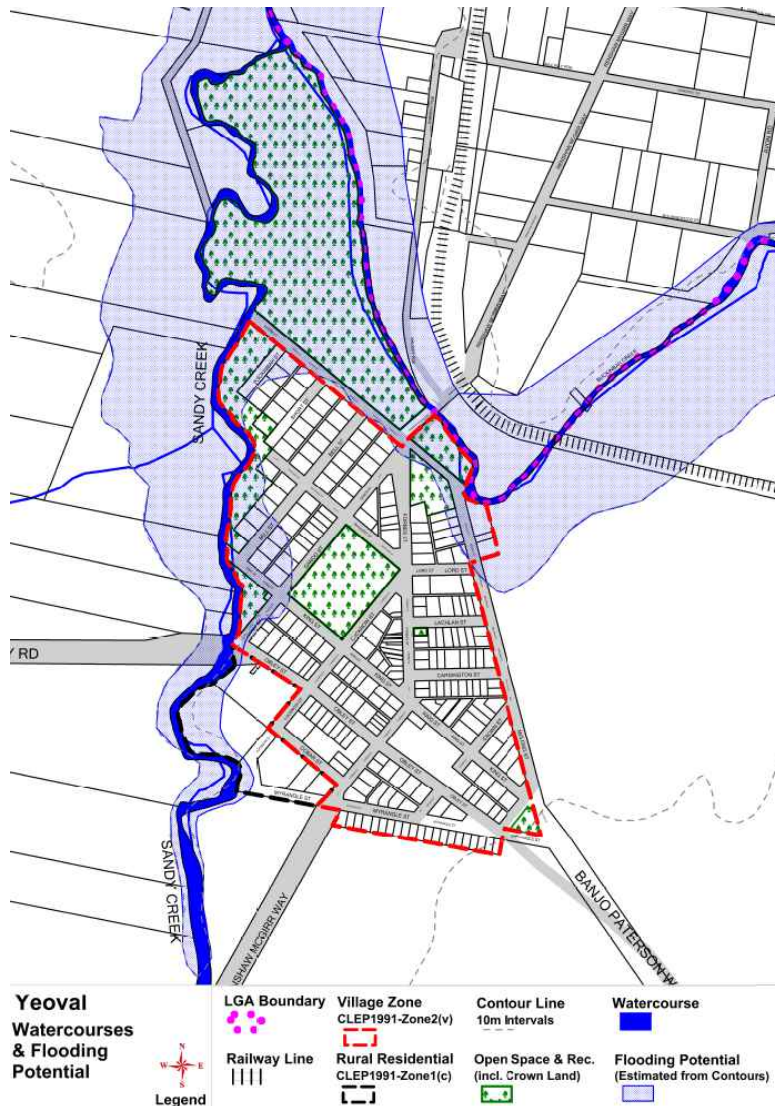


Figure 8: Key watercourses in Yeoval and the estimated flood/drainage affected land (based on topography only) (Source: Council GIS 2010).

Flooding Issues

There is no accurate flood study for Yeoval at this time, except for an estimated flood line shown in Draft Yeoval DCP (1990) which mostly affects low-lying land along Sandy Creek. The flood parameters of Buckinbah Creek are less well known. However, one of the biggest floods on record was in 1941/42 where there was loss of life and dwellings (particularly in the north-west of Yeoval). For the purposes of this Strategy an area of flood or drainage affected land has been approximated in Figure 8 (light blue shading). The area of potential overland flows or inundation affects mostly low-lying land along Sandy Creek and Buckinbah Creek and a small but significant percentage of Yeoval's Village Zone. As a result, low-lying lands to the west and north of Yeoval near both creeks are likely to be subject to inundation and 'flash flooding' and are not appropriate for further urban development.

Issues & Strategies

Flood Prone Lands: There is a potential for flash flooding along the low-lying areas close to Sandy Creek and Buckinbah Creek. The 1% AEP flood line is not known due to a lack of a formal flood study so there is a limit to the accuracy with which current land uses can be planned in these areas. The potential for flooding will limit expansion of Yeoval to the west and north of the village, including existing vacant lots in these areas (see details below). Known flood affected lands should be avoided for any urban land uses. At this time this will include any lands affected by the flood line in the 1990 Draft Yeoval DCP. If, and when, funding is available then a flood study should be conducted for Yeoval to establish the 1% AEP flood line to assist with future land use and emergency planning.

8.10.5. Biodiversity & Vegetation

As Figure 9 shows, most of the significant vegetation in and around Yeoval is located along the key watercourses of the Buckinbah and Sandy Creeks and adjacent lands with some additional vegetation in reserves, recreation areas and key road corridors. There is an opportunity to strengthen the ecological connections along the existing creek and drainage lines and connect these to the stands of significant vegetation outside the Village Zone (where possible).

A list of threatened, endangered and/or vulnerable species in Cabonne can be found on the website for DECCW. There are no known threatened species and/or endangered ecological communities under the *Threatened Species Conservation Act* in the Village Zone at Yeoval, however, this does not mean that there are not any in existence. Each development application will need to address this issue.

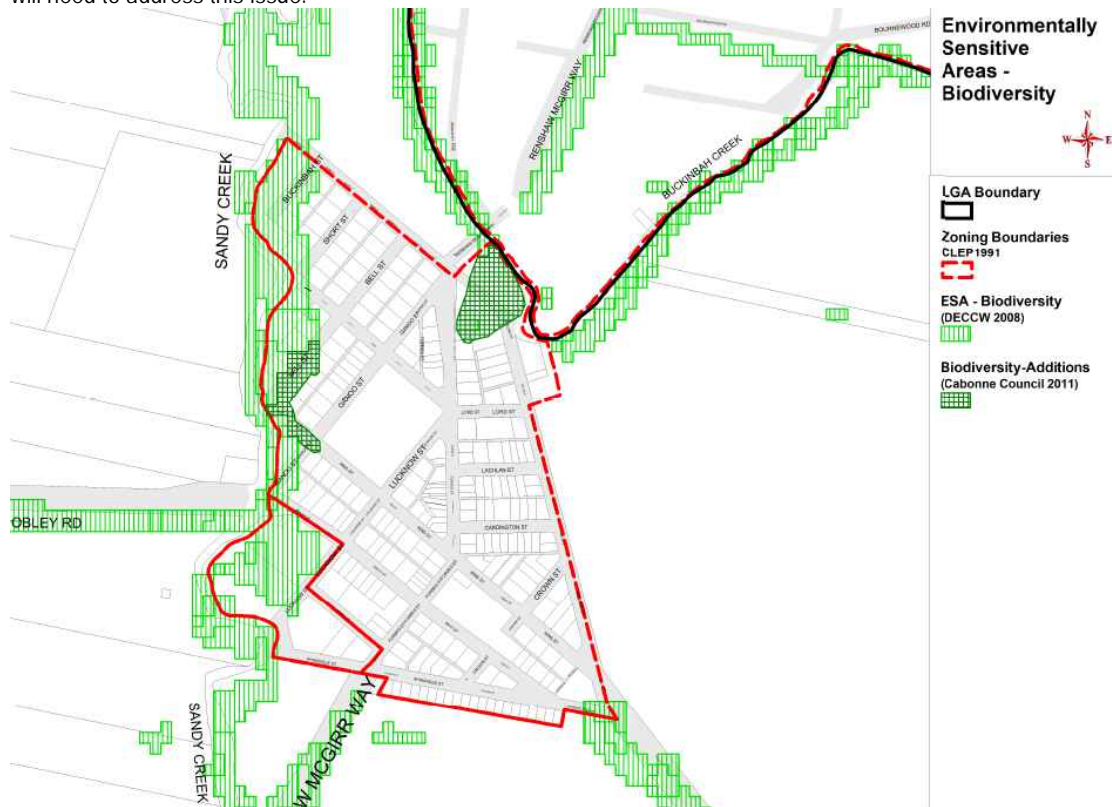


Figure 9: Map of Environmentally Sensitive Areas - Biodiversity for Yeoval and surrounds (Source: DECCW 2008/Council GIS 2011).

Issues & Strategies

- **Ecological Corridors:** There is a need to protect and enhance remaining significant remnant or native vegetation in or around Yeoval. Attempts should be made, where possible, to plant native vegetation and enhance ecological corridors, particularly along the watercourses, drainage lines and adjacent allotments. This may necessitate the removal of non-native/invasive species and sourcing of native seeds from the local area.
- **Street Tree Planting:** There is potential to enhance street tree planting in Yeoval. Whilst urban areas do not necessarily require native species in gardens and streets, Yeoval may be suited to native street tree planting in accordance with the Yeoval Street Tree Masterplan (2001).



8.10.6. Bushfire Hazard

There are only small areas of bushfire prone lands in or around Yeoval located to the east along Buckinbah Creek in the rural area and none that specifically affects any urban land. Therefore, bushfire is considered to pose a low risk to development and growth. However, there should still be asset protection zones around existing stands of significant vegetation and along creek boundaries. This will not affect the growth of the village.

8.11. Access, Transport & Parking

8.11.1. Air Transport

Please see summary in Cabonne Chapter [Section 2.7.1 – Air Transport](#). In general public air transport access is considered low to medium for Yeoval with a 50-55 minute drive to Dubbo Airport the nearest available. However, Dubbo Airport does generally provide a greater range of flights, flight times and sometimes cheaper flights.

8.11.2. Rail

The rail line Molong to Dubbo (via Yeoval) is currently not utilised and is actually cut between Molong & Yeoval. Therefore, it is highly unlikely to ever function as an active railway again, except as a spur line to Dubbo. There have been historic proposals to adapt the rail corridor as a regional cycleway network but this would be expensive (see below).

Issues & Strategies

Rail Transport: The lack of rail transport creates a high reliance on road transport for movement of agricultural products/goods as well as the public and reduces the opportunities for growth in Yeoval, particular for larger-scale industries.

8.11.3. Road Hierarchy & Vehicle Traffic Impacts

Please see [Section 2.7.3 – Road Hierarchy](#) for more details. Yeoval is situated at the intersection of the Renshaw-McGirr Way (Regional road connecting Parkes and Wellington) and Banjo Paterson Way / Obley Road (Regional road connecting Dubbo, Obley, Yeoval, Cumnock and Molong). The Renshaw-McGirr Way becomes Forbes Street as the main street of Yeoval. It has recently been resurfaced and provides a sealed road alternative connection for vehicles travelling from Melbourne to Newcastle/Brisbane (alternative to the Newell Highway). The remaining streets are local roads and are generally aligned in a rough grid pattern (except where broken by Forbes Street and surrounding watercourses).

Issues & Strategies

Road Access: Renshaw McGirr Way and Banjo Paterson Way/Obley Road provide regional road access to surrounding larger centres but as they are lower order roads there is limited passing traffic to support business and industrial growth. There is an opportunity for increased tourism traffic along the Renshaw-McGirr Way now that it is fully sealed as an alternative scenic route to the Newell Highway. The community is generally concerned about the quality of road surfaces, particularly between Yeoval and Molong. Without rail there are increased heavy vehicles transporting goods by road which results in increased road damage.

8.11.4. Bus

Please see [Section 2.7.4 – Bus](#) for more details. Yeoval does not currently have access to any Countrylink or other regular public bus services except for a community bus service between Yeoval and Orange twice monthly. On this basis there is a very low level of public transport accessibility, particularly for those without access to private vehicles and including the elderly, youth and lower socio-economic groups. In addition there are school bus services that bring children from the surrounding rural areas to Yeoval's primary and secondary schools and also connect to schools in Molong and Orange.

Issues & Strategies

Bus Access: There is very limited public bus transport available in Yeoval except for community bus services and school bus services. This is a significant constraint to growth and economic activity, particularly for those without regular access to private transport such as the elderly, teenagers, and those in a lower socio-economic bracket. The poor level of bus services may also be impacting on accessibility for tourists to Yeoval, particularly those without private vehicles such as backpackers. The community would particularly like to see Countrylink connections from Yeoval to Wellington for shopping but Countrylink have stated that the roads/bridges do not support the buses even though trucks obviously use these routes.



8.11.5. Parking

Parking is not currently an issue for Yeoval as there are no major retail, commercial or tourist facilities in Yeoval that would generate requirements for anything more than the existing on-street or off-street parking.

8.11.6. Pedestrian Access

Pedestrian footpaths are provided in Yeoval only in the key pedestrianised areas close to the business centre along Forbes Street. A large area of Yeoval does not have fully formed footpaths and these are unlikely to be provided in the short to medium term. Council's Pedestrian Accessibility and Mobility Plan ('PAMP') (see [Section 2.7.5 – Pedestrians](#) for more details) includes, but is not limited to, new footpaths, drop kerbs and refuges along Forbes Street (between Obley & Lucknow Streets & the Catholic School), new footpath for Bathurst Street, and new footpath and drop kerbs for Lucknow Street and King Street (see Figure.18 in report) with an estimated cost of \$126,000. The works have been prioritised. In 2008 the RTA Road Pedestrian Safety Program resolved some of the pedestrian /cycleway issues on the bridge over Buckinbah Creek.

8.11.7. Cycle Access & Facilities

Council's Bicycle Plan (2005) (see [Section 2.7.6 – Cycling](#) for more details) recommends the following improved connections as follows:

- Forbes Street / King Street link (year 1);
- Yeoval Park/Sportsground to King Street (year 4);
- Yeoval Park/Sportsground to Banjo Paterson Ruins (year 5)
- Ganoo Street and Molong Street routes (potential future).

The cycle track connecting Yeoval to Cumnock has been commenced with the final nine (9) kilometres to be finished in 2011.

8.12. Utilities & Infrastructure

8.12.1. Water Supply

Yeoval is not connected to the Central Tablelands Water supply system that is sourced from Lake Rowlands in Blayney Shire. Instead, Yeoval's water supply is provided by Council from a combination of the Buckinbah Creek and bore water, with private rainwater from individual building collection as the primary potable (but untreated) water source. It is important to note that the Cabonne water supply not only services the Village of Yeoval but also some of the large lot residential are in Wellington LGA ('North Yeoval') (see water supply lines in Figure 10).

The water from Buckinbah Creek is chlorinated and pumped into a reticulation network throughout the village. Surplus is pumped up to the service reservoir on a hill to the south-east of the village. This water is considered non-potable as the water quality depends on the water quality in Buckinbah Creek and chlorination is only one stage of purification.

However, during summer the creek supplies are unreliable (stopped flowing in 2006/07 and prior to that there were algae blooms). There has been previous discussion to enlarge the reservoir but this has not occurred at this time and is still being considered by Council. The CENTROC report (August 2009) recommends enhancement of storage solutions.

Council has previously topped up the water supply in summer from bore water. One or two previous bores have failed so two new bores were prepared in 2008/2009. However, this water is 'hard water' and generally can only be used in the bathroom / laundry. Therefore, the primary water source for the kitchen sink and drinking is rain / tank water. This is limited to the catchment surface of each building.

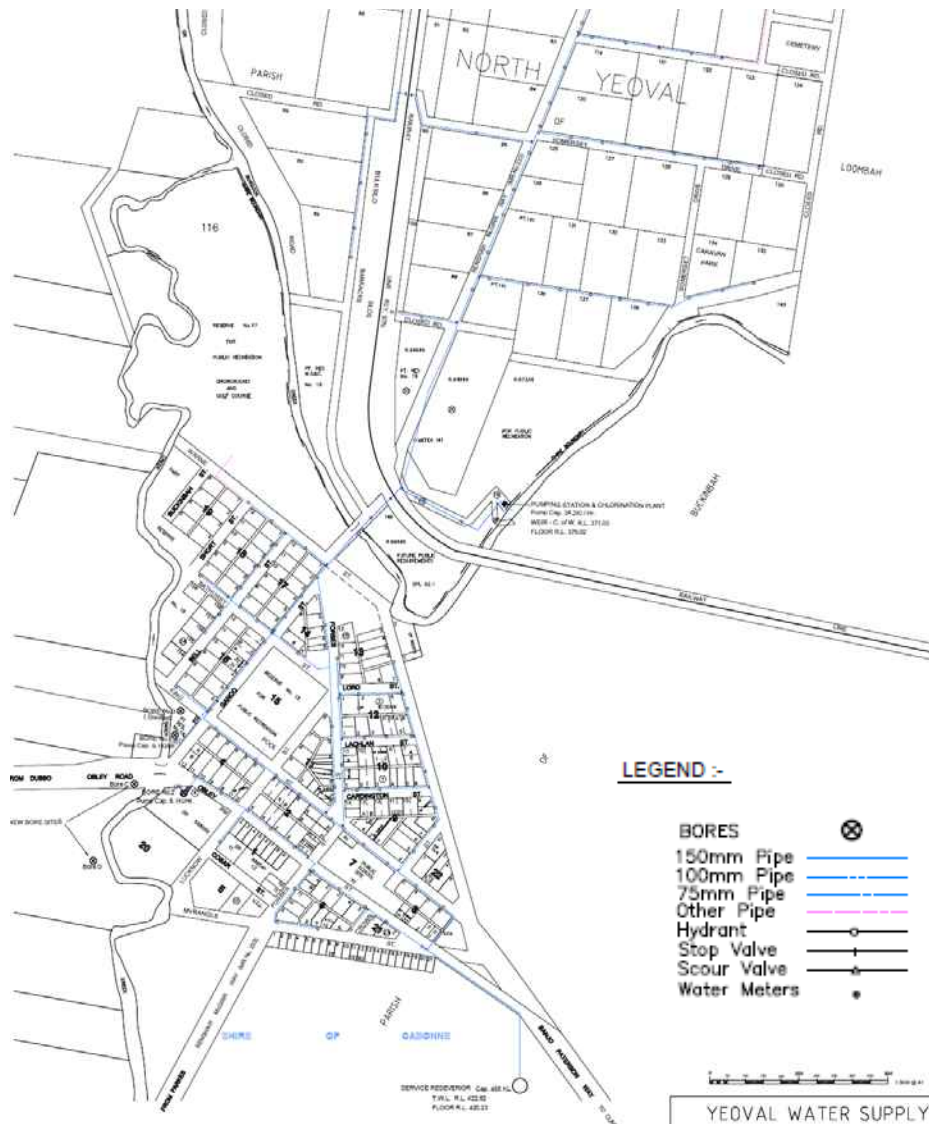


Figure 10: Location of existing water supply lines in Yeoval (Source: Council Engineers 2010).

Water restrictions have been in place during summer months to restrict water usage for gardens and non-domestic uses. There is no intention to increase daily consumption capacities. Council's primary aim is to 'drought-proof' Yeoval so that water supply does not run totally out (with water restrictions) rather than to provide for additional growth – so water supply is a critical inhibitor to growth of Yeoval.

The CENTROC Report suggests enhancement of water storage but not connection to Lake Rowlands but this is currently under review. Council is committed to providing a potable water source to Yeoval.

Issues & Strategies

- Water Security:** Yeoval does not have a secure water supply that would ensure sufficient water to meet the needs of current residents in a worst case scenario – yet alone water to meet the needs of any significant population growth. Whilst current studies have suggested a range of solutions these are still been reviewed and costed. It is not possible to rely on additional bores and new dwellings will need to ensure sufficient catchment and storage of rainwater for the short to medium term.
- Water Quality:** Yeoval does not have a 'potable' treated drinking water supply and this would constrain its suitability for sensitive or immuno-compromised residents. There is a heavy reliance on rainwater for drinking needs.

8.12.2. Stormwater & Drainage

Kerb and gutters are not provided to all of the streets within the Yeoval Village Zone but are limited primarily to Forbes Street and parts of Obley, King, Cardington, Lachlan, Lucknow, Bathurst, Lord and Ganoo Streets. This generally correlates with the key pedestrianised streets. The remaining streets utilise grass swales for drainage, except for the odd under-road pipe for cross street drainage.

There are no known significant drainage issues noted in this Strategy. Council should review whether there are any stormwater or drainage issues that require further stormwater works in Yeoval. Full kerb and guttering of Yeoval's streets is unlikely in the foreseeable future. Drainage and flooding issues are dealt with in more detail in [Section 8.10.4 – Watercourses & Flooding](#).

8.12.3. Sewerage

Yeoval is in the process of having a centralised / reticulated sewerage system constructed as one of four towns in Cabonne to receive a sewerage system. The predicted site for the Sewage Treatment Plant ('STP') would be alongside the Yeoval Waste Depot off Banjo Paterson Way approximately 4-5 kilometres south-east of the village.

The design loading for the Yeoval STP is for 428 Equivalent Persons ('EP') (325 residential / 38 commercial / 65 growth) (Source: Letter from Council to Dept. of Water & Energy dated 23/24 October 2007). Comparing this to [Section 8.8 – Projected Future Population](#) it can be seen that the proposed STP capacity would only be exceeded by the year 2036 if a population growth of 1.5%/year was maintained over this period. This is highly unlikely and the projected maximum growth in this Strategy of 0.3%/year results in 319 people by 2036 which is well below the maximum EP for the proposed STP. Therefore, the proposed STP capacity will not inhibit any predicted growth in Yeoval. However, the centralised sewerage program will result in one sewerage rate being charged for all four villages. As at June 2009, the rate was \$595 per residential property with each lot paying \$500 per year as a pre-construction charge.

As stated above, provision of a reticulated sewer has the potential to allow a reduction in the lot size necessary to support a dwelling as land is no longer required for septic systems and absorption/evaporation trenches. The majority of existing Village Zone lots are 1,000m² to 2,000m² in size. Whilst lot sizes needed to support a dwelling connected to reticulated sewer and water could be as little as 500m², the rural village character of Yeoval (and property demand estimates) would suggest a minimum lot size for subdivision should be approximately 900-1,000m². Therefore, some of the larger existing lots (in excess of 1,800m²) may be suitable for further subdivision once reticulated sewer is available (assuming demand).

Issues & Strategies

- **Sewerage & Growth:** As Yeoval will shortly receive a centralised sewerage system sewerage management is not limiting growth. However, in the interim period there is likely to be some reticence for new development as it would require an on-site system that would then be superseded with the new system which adds cost to any development. In addition, the new sewerage charges will increase living costs in Yeoval. Introduction of a sewerage system as quickly as possible is the aim of Council.
- **Minimum Lot Size:** The minimum lot size in Yeoval for subdivisions should be retained at 2,000m² for lots in the Village Zone until reticulated sewer is available when it can be reduced to a minimum lot size of 900 to 1,000m².

8.12.4. Electricity

As Figure 11 shows, access to electricity lines is readily available along most of the key streets in the Yeoval Village Zone except for the issues noted below.

Issues & Strategies

Electricity Access: Electricity access is not known to be a significant constraint to residential growth in Yeoval that only requires low voltage. There may, however, be some added expenses with connecting houses along the western side of Ganoo Street, along Bell Street (south) and properties south of Myrangle Street. Yeoval does not have access to higher voltage electricity networks that would be desirable to support larger energy consuming industries and businesses so this may limit the growth of these uses in Yeoval.

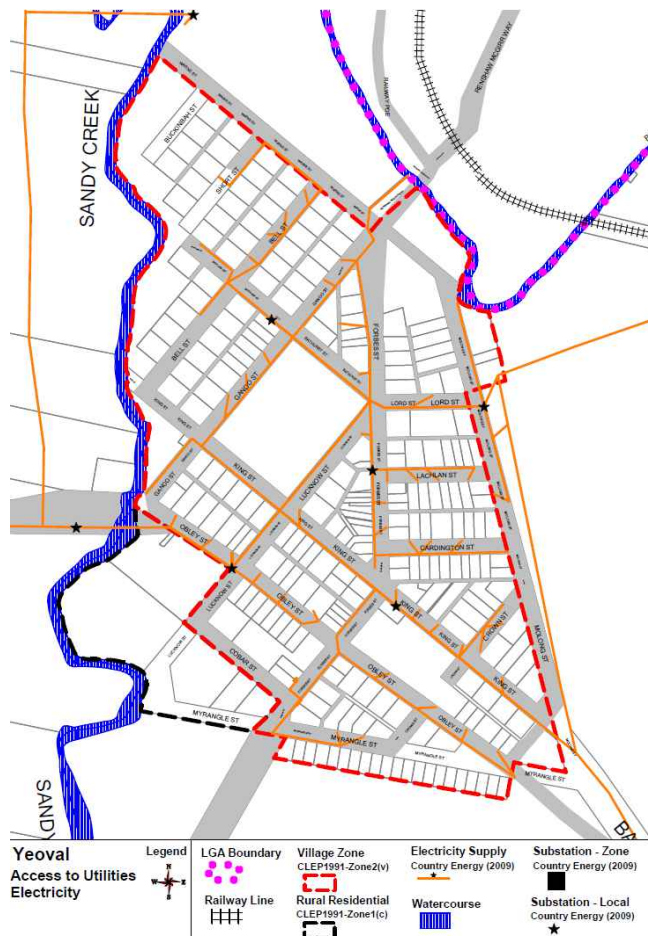


Figure 11: Location of electricity supply lines (orange) and substations (stars) in Yeoval. (Source: GIS file from Country Energy (2009) – not confirmed as accurate).

8.12.5. Telecommunications

Please see [Section 2.8.5 – Telecommunications](#) for a review of access to fixed, mobile and broadband telecommunication services in Yeoval and across Cabonne's settlements.

Issues & Strategies

Telecommunications: In general there are reasonable levels of telecommunication access in Yeoval that should support growth of business, industrial and residential needs but a more detailed study is required. Improvements in internet access speeds (ADSL2+) and mobile reception may improve opportunities for business and residential growth. Yeoval is less likely to receive the benefits of high speed internet access under the National Broadband Network in the next 5-10 years but this requires further review.

8.12.6. Waste Management

Please see [Section 2.8.6 – Waste Management](#) for a review of access to waste management services in across Cabonne's settlements. Yeoval has a Waste Depot located just off Banjo Paterson Way to the south-west of the village. The depot is open twice weekly and it operates as a recycling, bulk material storage and processing and waste transfer facility but is no longer operated as a landfill for general waste and waste is transferred to Cumnock waste depot.

Issues & Strategies

Waste Management: Currently the Yeoval waste depot does not accept waste for landfill and it must be transferred to Cumnock waste depot. When Cumnock reaches capacity then Yeoval's waste will need to be transferred to Manildra. This is unlikely to affect the growth of Yeoval but may affect the sustainability of any substantial increases in development. However, it is also expensive and has environmental effects to operate a number of small landfill sites so consolidation may be more effective.

8.13. Heritage

8.13.1. Heritage Items

Currently under CLEP1991 there are no listed heritage items in the Village Zone of Yeoval and there are no items listed on the NSW State Heritage Register or as items in the National Trust. As a result, there are also a number of important buildings and places that do not have the protection of heritage listing under the LEP.

Council is currently finalising the *Community Heritage Study* building upon work that was conducted in 2003 and 2006. There are 25-30 items of heritage interest listed in the Yeoval Village Zone in the 2003 Draft Inventory that may be considered for listing as future heritage items. At the time of writing, there were ten (10) proposed items recommended for immediate listing in the LEP but this will be finalised as part of the Heritage Study and new LEP. This is a significant increase in items identified for heritage protection but may increase with further review of items in the heritage study inventory.

8.13.2. Heritage Conservation Area

There is no existing heritage conservation area in Yeoval under the existing planning controls and no heritage conservation area is proposed for Yeoval due to the limited number of heritage items, their spacing in the street, and their limited contribution to the streetscape qualities. Other streetscape qualities could potentially be protected by urban design controls in the new DCP.

8.14. Summary of Existing Land Uses (Village Zone & Rural Small Holdings)

The Village Zone of Yeoval has approximately 250 lots (including Crown land) with an additional six (6) lots in the Rural Small Holdings Zone. The 250 Village Zone lots have the following land uses (as at 2011) (Figure 12 & Table 4):

Existing Village Zone

Land Use	No. Lots	% of VZ Lots	Description
Total Lots – Village Zone	250	100%	Includes Crown land & open space
Vacant Lots	65	26.0%	No existing dwelling or business on lot
Dwelling Land Use Lots	134	53.6%	Mostly detached housing except aged care housing Estimate of 133 dwellings in the Village Zone
Business Land Use Lots	16	6.4%	Mostly retail & tourism services 4-6 vacant / 2-3 businesses for sale / 1-2 opening soon
Community Land Use Lots	27	10.8%	Health, Religious, Community, Emergency, Tourism etc
Open Space & Recreation	8	3.2%	Parks, Reserves & Crown land

Table 4: Summary of land uses in Yeoval's Village Zone (as at 2011).

Existing Rural Small Holdings Zone

There are six (6) existing lots in Zone 1(c) (Rural Small Holdings) to the south-west of Yeoval's Village Zone in proximity to Sandy Creek with a total area of 8.18 hectares (including road reserves) or 6.56 hectares (excluding road reserves). In 2011, four (4) of the lots were vacant but there is a high risk of flooding in proximity to Sandy Creek which is likely to reduce development potential. There was one (1) lot with an existing dwelling and shed. There was also one (1) lot with a pump house for water supply.

It is also important to be aware that in the adjacent Wellington local government area (North Yeoval) there are also a range of large lot residential dwellings that form part of the residential opportunities in Yeoval. These are currently within a rural zone under *Wellington Local Environmental Plan 1995* but they may be considered in the future for large lot residential purposes.



Figure 12: Location of each key land use in Yeoval's urban zones (as at 2011).

Issues & Strategies

- **Supply & Demand:** The aim of this Strategy is to review the supply of land for each land use in the urban area of each settlement and determine the estimated future demand for each land use to ensure there is sufficient supply of urban land for the growth of the settlement (a minimum of 10 years).
- **Residential Demand:** Residential land uses are the greatest consumer of Village zoned land and take up 53.6% of the Village Zone Lots.
- **Vacant Infill Development:** A significant proportion of existing total Village Zoned lots are currently vacant (26%) and may be able to support some of the additional growth of this settlement, subject to these lots being suitable for development.
- **Land Use Areas:** This Strategy seeks to identify appropriate areas in Yeoval for specific land uses such as industry, business, residential, open space and recreation, and environmental outcomes that seek to minimise land use conflicts and maximise accessibility.

8.15. Open Space & Recreation

8.15.1. Open Space & Recreation

There are several existing open space and recreation areas in and around Yeoval as follows:

- Yeoval Park** incorporates Yeoval pool and sportsground and the Yeoval bowling club and is included in the block surrounded by Ganoo, Bathurst, Lucknow and King Streets. This includes the main sportsground (cricket / football), swimming pool, tennis courts, children's playground and bowling club;
- Banjo Paterson Bush Park** located to the east of Forbes Street and running down to the Buckinbah Creek includes Crown lands utilised as an open park suitable for passive recreation with art exhibits, memorials, walking trails (Poets walk to Paterson homestead ruins), toilets, and picnic facilities;
- Yeoval Central School** has a small recreation areas for the school off Obley and Forbes Streets (not available to general public);
- Yeoval Showground and Golf Club** to the north of Warne Street and adjacent to the Buckinbah Creek provides a 9 hole golf course and showground area for key events;
- Buckinbah Park** is a small park located next to the museum that has public art, history and seating areas for passive recreation and picnics;
- Passive recreation areas** along Sandy Creek & Buckinbah Creek that is made up of Crown land and significant vegetation that is likely to be flood prone.

As a result, Yeoval is generally well serviced for open space and recreation but there is a need to retain a reasonable population to ensure these facilities can be sustained and maintained.



Issues & Strategies

Open Space: There is reasonably good level of open space per person in Yeoval and a range of recreational opportunities (both passive and active) for the current population. No changes are proposed or needed at this time but ongoing maintenance will be important. Continual improvements in recreational opportunities are likely to act as an ongoing attraction for passing tourism that will promote short stops/stays and support the local economy. The community has invested a great deal of time, energy and resources in improving its parks with additional plantings, signage, walking trails and public art and this should continue to be supported.



8.16. Vacant Land

Vacant lots are important as they can provide the potential for infill development within the existing urban area that may take up some of the projected future growth of each settlement.

8.16.1. Total Vacant Lots and Development Constraints

A vacant lot is any lot that does not currently contain any significant building (dwelling or business - active or vacant) and may be capable of supporting a dwelling. However, it may contain ancillary sheds, garages, gardens or septic systems on these lots and these lots may be held by an adjacent owner. Figure 13 shows that there are approximately 65 existing vacant allotments in the Village Zone (as at October 2011) out of a total of 250 lots (26% of all lots).

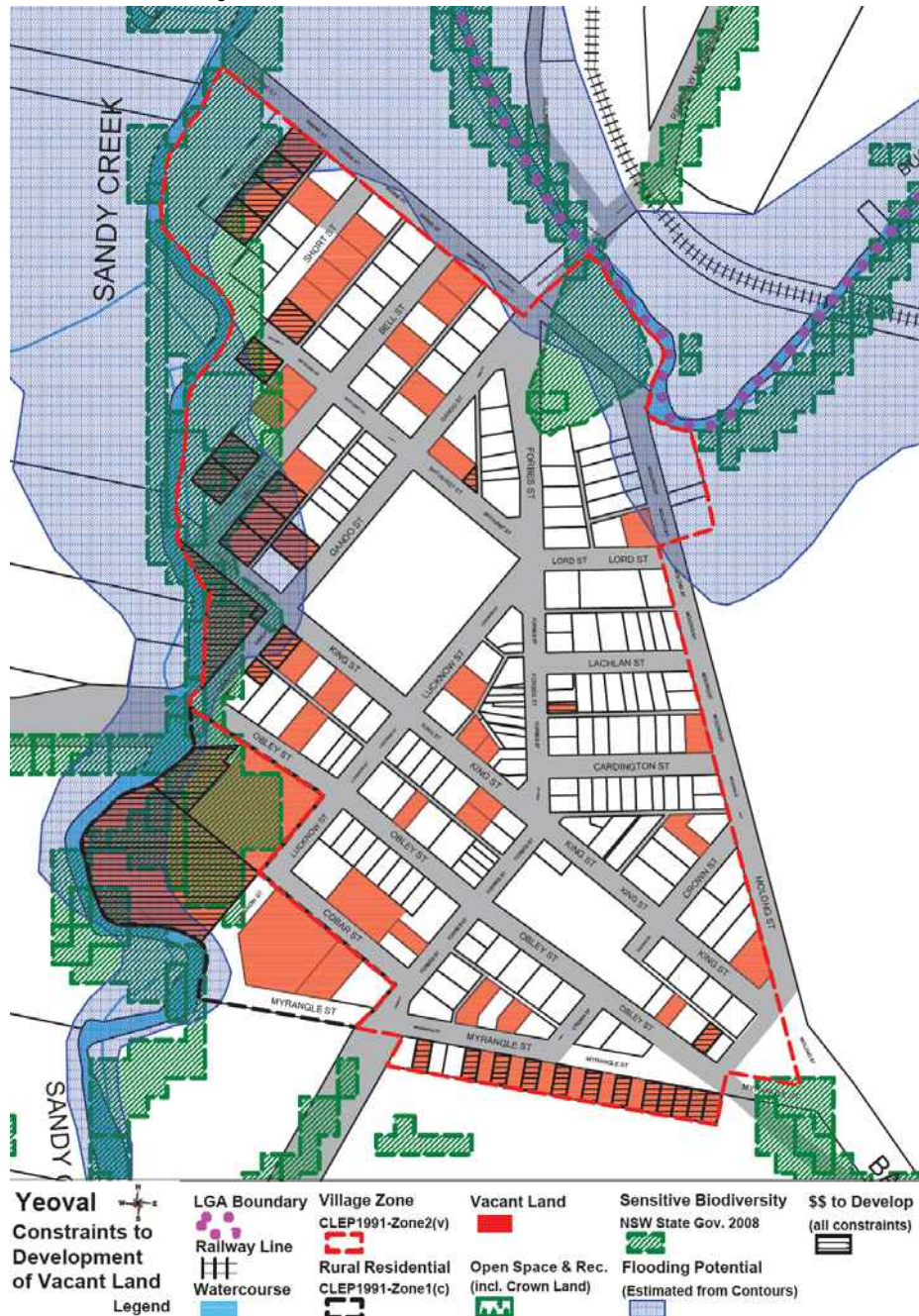


Figure 13: Vacant allotments and those affected by constraints to development in Yeoval (as at 2011) (from aerial photo and brief street analysis).

Sometimes the historic pattern of subdivision has not taken into account the natural hazards or topography that may prevent a lot from being developed. Figure 13 shows that there are 19-20 vacant lots in the Village Zone that may be difficult or costly to develop due to a range of constraints including, but not limited to, flooding, lack of road access or slope.

In addition, until there is a reticulated sewerage system in Yeoval lots below 1,200m² are less likely to be able to support a dwelling (subject to geotechnical reports). For example, the lots along Myrangle Street are generally 810-820m² in size so they may require consolidation of at least two adjacent lots to create lots at least 1,800m² in size. Until reticulated sewerage is provided this could make development of another 10-12 lots difficult or more expensive.

As a result, the total number of vacant lots (65) is reduced down to approximately 34 lots (until such time as a centralised sewerage system is available) or 46 vacant lots in the Village Zone (once a centralised sewerage system is available). As these lots are already subdivided, they could be put on the market at any time and a dwelling application could be lodged with Council.

In addition, five (5) of the six (6) existing rural small holdings lots are vacant but at least two of these would have low development potential due to potential flood issues.

8.16.2. Likelihood of Development of Vacant Small Lots

It is important to note that the community often claims that some of these vacant small lots should not be counted for the purposes of infill development because the current owners are not interested in selling. For example, the 2005 Draft Yeoval Village Strategy comments that residents thought there were no more than 10 vacant lots available in Yeoval at that time.

However, this Settlement Strategy is looking to review land supply over the next 30 years and whilst the existing landholders may be reticent to make land available in the short term (5-10 years), this may change over a period of 30 years, particularly as land prices rise and people no longer need larger lots.

Council can only make a 'guesstimate' of what percentage of lots may become available for sale or development. Therefore, Council is proposing a very conservative estimate of 50% developable vacant lots is a reasonable percentage over a 30 year period. On this basis of the 34 (unsewered) or 46 (sewered) developable Village Zone lots, approximately 17 (unsewered) or 23 (sewered) existing vacant lots could be developed over the coming 30 years (assuming proposals meet the development controls). In addition, at least 2-3 rural small holdings lots may be developed in this period.

The greatest issue is the cost of development and ensuring that the market price for lots makes it profitable to develop land. Currently the cost of servicing new lots with road access, water connections and future sewerage charges is perhaps the greatest barrier to getting people to place land on the market.

8.16.3. Subdivision of Larger Lots for Potential Redevelopment

Existing Village Zone

There is only one large vacant lot within the Village Zone (the Royal Hotel site) that may have additional potential for subdivision for development along Cobar Street (unless this lot is used for light industry). It is assumed that once reticulated sewerage is provided to Yeoval that subdivision down to 900 to 1,000m² blocks would be suitable. This would generate an additional 4-5 new dwelling lots.

In addition there are five existing dwelling lots greater than 1,800m² in size with potential for subdivision (once reticulated sewerage is available) to produce an additional five (5) new dwelling lots. Therefore, in total there is potential for approximately ten (10) new lots from subdivision of existing lots in the Village Zone (once reticulated sewerage is available).

Existing Rural Small Holdings Zone

In addition, there are another 4 (large) vacant lots in the Rural Small Holdings Zone. However, due to their proximity to Sandy Creek it is assumed that there are limitations to the subdivision potential of this land due to the likelihood of flooding / inundation / drainage issues. The main land available is that owned by Yeoval School as well as two private landholders. Assuming that alternative land could accommodate the school's livestock program then there is

approximately 3.47 hectares of land that could produce potentially 6-8 additional dwellings (at 4,000m² to 5,000m² in lot size).

Total Potential New Dwelling Lots

On this basis there may be future potential within the current urban zone boundaries for subdivision of larger allotments to produce an additional 16-18 lots (subject to addressing any constraints on that land). However, the owners of these lots may not wish to subdivide these lands. Council assumes that of this total only 50% will potentially be made available in the next 30 years. This equates to 8-9 lots (once reticulated sewerage is available).

8.16.4. Total Potential Supply of New Lots in the Existing Villages Zone

Therefore, a summary of the potential total lots that could be redeveloped (assuming that each has a single dwelling) would be 32 lots / dwellings over the next 30 years (from 2006 to 2036) as shown in Table 5.

Source of New Lots for Dwellings	Vacant Lots Development Potential	Likely Number to be Available in next 30 years (50% Rule)
Small Vacant Lots Unaffected by Natural Hazards (Village Zone)	34 (unsewered) 46 (sewered)	17 (unsewered) 23 (sewered)
Subdivision of Larger Allotments (Village Zone & Rural Small Holdings)	2 (unsewered) 16-18 (sewered)	1 (unsewered) 8-9 (sewered)
TOTAL	36 (unsewered) 62-64 (sewered)	18 dwellings (unsewered) 31-32 dwellings (sewered)

Table 5: Estimated number of potential developed lots / dwellings that is available for redevelopment in Yeoval over the next 30 years (subject to demand and supply).

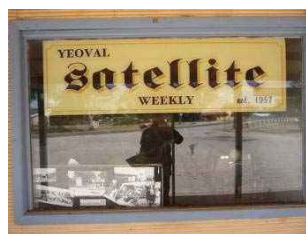


8.17. Community Land Uses

Figure 12 shows the location of the key community land uses in Yeoval. For the purposes of this Strategy, 'community uses' are defined as buildings, services, facilities and infrastructure that are not-for-profit and/or support the local community.

As stated in [Chapter 2 - Cabonne Overview](#), community uses are permitted in a broad range of zones and, therefore, there is no need for a detailed analysis of supply and demand of land for these uses. However, community uses are often a vital service for the community and provide employment and social and economic support and growth. A more detailed review of access to community services for all of Cabonne's settlements is provided in [Section 2.10 - Services & Facilities](#).

The proposed Village Zone will provide flexibility for community uses so no specific area needs to be designated for these uses. There is no perceived need for significant additional land for community uses within the Yeoval urban area at this time. If expansion is required this can generally be accommodated on existing community use sites or on vacant land in the urban area without substantial impact on residential amenity.



8.18. Business & Industrial Land Uses

Warning: Please note that services / facilities change regularly and this section merely provide a 'snapshot' of key services / facilities to assess issues in each settlement in 2010/11.

8.18.1. Existing Businesses (2011)

Figure 12 shows the majority of existing businesses are located along Forbes Street including:

- **Billabong Takeaway** at 5 Forbes Street provides a range of facilities including, Australia Post Office, simple banking facilities, a petrol station, Centrelink access, Council payments, internet café and limited groceries;
- **Yeoval General Store** ('The Trading Post') at 9-11 Forbes Street provides a range of services including a small grocery, dry cleaning, prescriptions/chemist, cosmetics etc. It also provides visitor information, maps and brochures and bike hire;
- **Gift & Homeware House** at 23 Forbes Street provides a range of services including DVD hire, home hardware, gifts, coffee shop, and West Business Solutions (computer assistance);
- **Yeoval Newsagency** located at 27 Forbes Street provides a newsagency, take away food/café, and Cabonne visitors information centre;
- **Ag n Vet Services** at 18 Forbes Street provides rural services and supplies;
- **J&K Christie Mechanical Repairs** at 14 Forbes Street provides mechanical repairs;
- **Royal Hotel** is at 13 Obley Street;
- **Yeoval Bowling Club** on Bathurst Road.

Issues and Strategies

Business Services: Yeoval has a limited range of businesses to meet the needs of the local population. Key issues include the limited local grocery and essential shopping services, banking facilities and specialised retail providers. However, there has been a loss of local businesses over the last 30 years (as with most smaller settlements) and an increased reliance on larger centres for higher level services. Yeoval is extremely dependent on co-location of services into single operations such as the Billabong Takeaway, Yeoval General Store, Gift & Homeware House and Yeoval Newsagency. It is vital that these stores and the essential services are retained locally to support growth.

8.18.2. Existing Tourism Facilities

Yeoval's attractions lie in its history, heritage buildings and streetscapes, the museum, its public art, its recreation areas and facilities, local walking and bicycle trails, its community spirit, and key yearly events, as well as some surrounding attractions such as nearby Cumnock, Goobang National Park, Wellington Caves, Obley goldfields and the 'Animals on Bikes' displays between Molong and Dubbo on Banjo Paterson Way / Obley Road.

The community has spent a lot of time, money and energy on making Yeoval an attractive place to visit including the public art in the Banjo Paterson Bush Park. It also has several yearly events at the showground and in association with nearby Cumnock that attract visitors to the area including the Yeoval Golf Club, Swimming Pool and Yeoval Bowling Club for recreation.

Yeoval is within 40km of Wellington on the Renshaw-McGirr Way which is now totally sealed and offers an alternative route between Melbourne and Brisbane which may have tourism benefits. Yeoval has been getting busier since the road to Parkes was sealed. As a result, Yeoval has potential to increase tourism, especially from caravans. Yeoval is well placed for day trips to Wellington, Orange, Parkes and Dubbo.

The primary accommodation in Yeoval is the Royal Hotel or the camping ground at the Yeoval Showground where toilets and power are provided. Supporting tourism services include a limited range of takeaway and food/beverages at the Royal Hotel, Bowling Club, Take Away/Newsagency, Billabong Takeaway and Gift & Homeware House.

Issues and Strategies

- **Tourism Attractions:** Yeoval has steadily improved its range of tourist attractions predominantly targeted at the passing tourists on the Parkes to Wellington/Dubbo Route and limited to short stays or passing visits (other than for major events). Therefore, it is



important that Yeoval leverage off passing tourism traffic and its character and events for peak periods. Previous community workshops have recognised the need to have tourism attractions with presence to get people to stop in Yeoval and improved tourism support services. This may require improved signage at the Mitchell Highway near Molong and in Wellington, Parkes and Dubbo. However, Yeoval has certainly been more successful than some settlements in utilising its community spirit to create a clear sense of identity and attraction through its yearly festivals, public art, museum and parks.

- **Tourist Accommodation:** The limited range of accommodation options and rooms may limit the size of local events. Due to a number of tourists passing through with their own mobile home / camping set-ups there may be a need for improved camping and caravanning facilities. Whilst the Showground meets some of this need it is located away from services in the village. There have been queries about the potential for limited over-night mobile home places with electricity closer at or near Yeoval Sportsground.

8.18.3. Proposed Business Land Uses Outcome

Business land uses will generally be permissible under the new Standard LEP Template in the Village Zone (or its equivalent) which is likely to be retained for Yeoval. Due to Yeoval's limited size, growth and area of business land uses - there is no need to provide a specific zone for business land uses in the proposed new LEP.

Whilst the proposed Village Zone will provide flexibility for local retail and commercial businesses to grow in Yeoval there should be some attempt to consolidate stand-alone businesses along Forbes Street between Obley and Lord Streets, where possible to reinforce the character of Yeoval's central business area, reutilise existing vacant business premises, attract passing trade on the main transport route, and minimise conflicts with residential areas.

This defined 'business' area would also hopefully result in adaptive re-use of existing vacant buildings and restoration of original business premises for this purpose to provide an area of higher activity that will assist in attracting passing tourist trade and business and restore these existing premises to contribute to the streetscape. There are at least 4-6 existing buildings along Forbes Street that were previously used for small businesses and would ideally be re-used. There are also a few under-utilised or vacant sites along Forbes Street that could accommodate new businesses.

Historically there has been a falling demand for new businesses in Yeoval and there has been regular opening and closing of existing businesses. However, future demand for business growth may be estimated to allow for a new business opening every 5 or so years. Therefore, there is not a high level of demand for large areas of business land.

Issues and Strategies

Business Land Supply & Demand: There are sufficient vacant businesses / lots along Forbes Street to support a growth of a new business every few years for the foreseeable future. In addition, home businesses with lower impacts are likely to be supportable across the village area.

8.18.4. Proposed Industrial Land Uses Outcome

The key benefit of creating an industrial area is that it can be located and designed to minimise land use conflicts, particularly with regards to sensitive residential land uses. It also should provide for expansion of industrial uses without any additional impact. The current Village Zone makes this difficult because industrial uses are theoretically permissible anywhere in the zone, subject to addressing key issues. This provides no certainty to someone buying a sensitive land uses - such as a dwelling - that a light industrial land use may be placed adjacent or near to that use. There has never been an Industrial 'Zone' under CLEP1991 in Yeoval.

Yeoval has very limited businesses that would be classed as 'light industrial' in character. This would include J&K Christie Mechanical Repairs on Forbes Street and the GrainCorp facility to the north of Yeoval (in Wellington LGA). There is not estimated to be a large demand for industrial lands in Yeoval in the short to medium term (5-10 years) unless there is a significant change in exploration of mineral potential in the area or growth of the village.

Yeoval is less suited to larger-scale industries as there is a lack of utilities and infrastructure (particularly for industries with larger energy & water needs), there is no active rail line/freight



access, and there is competition with other preferred industrial areas in the region, particularly nearby Manildra, Parkes, Wellington and Dubbo. For this reason, the Rural & Industrial Strategy has not classified Yeoval as a suitable location for larger-scale industries in Cabonne.

If industries were to locate in Yeoval they are most likely to be associated with the transport industry, vehicle repairs and heavy haulage associated with passing traffic on the Renshaw-McGirr Way or Obley Road or if the Naringla Potential Resource Area surrounding Yeoval is subsequently opened up for mining/extractive industries and there is a need for support / engineering services (see [Section 8.10.2 - Geology & Mineral Potential](#)).

Whilst the proposed Village Zone will provide flexibility for home industry and some light industries to grow in Yeoval where they can address issues of land use conflict with residential uses, it would be more ideal if future light industrial uses were located in an area where land use conflicts could be minimised and industrial uses could be co-located. Originally there was an intention to utilise vacant land near Warne and Short Streets (See [Section 8.20.3 – Draft Yeoval Village Strategy \(2005\)](#)) – but this land has already has 2-3 new dwellings built in the last few years, there are some flood prone lands, and it is more distant from the major roads - so it is now less suitable.

This Strategy suggests that the only vacant land in the Village Zone that is relatively flood free, flat, with reasonable transport access, and away from most residential properties would be the vacant land on Cobar Street including the old Shell Depot and vacant land behind the Royal Hotel with an area of approximately 0.84 hectares.

Should there be significant increase in demand for industrial expansion then there is potential to expand to the south into the existing Zone 1(c) (Rural Small Holdings) area (if these are not developed for dwellings). The alternative area would be lands in proximity to the existing GrainCorp facility but this is within the Wellington LGA and further from key services.

Issues and Strategies

Industrial Land Supply & Demand: There is not estimated to be a large demand for industrial lands in Yeoval due to economic and physical constraints to attract new industries to the area. However, it is estimated that small local industries may require 2,000m² to 4,000m² of land every 5 or more years for new operations. This Strategy recommends that industries are located on flat vacant land away from the main street and residential areas and Cobar Street (west) may offer one location for future investigation. It is not the intent of this Strategy that an area is zoned for industrial use in any LEP but future applications for industrial uses should take into consideration these factors and this Strategy and seek to minimise land use conflicts with sensitive land uses.

8.19. Residential Land Uses (Village Zone & Rural Small Holdings)

Number of Dwellings / Occupancy Rate

As at 2011, there were 134 lots used for dwellings in Yeoval's Village Zone (53.6% of the total lots - with an estimate of 133 dwellings) plus 1 dwelling in the Rural Small Holding Area to the south (according to a count from aerial photo and street analysis).

This is relatively consistent with the ABS 2006 Census (Quickstats) that recorded 125 private dwellings in the Census Collection District with 14 vacant private dwellings (11.2% of total private dwellings) and 111 occupied private dwellings. The average household size in 2006 was 2.3 people per dwelling compared to 2.6 in Cabonne and Australia that may reflect the fact there were 37 lone person households compared to 61 family households.

Dwelling Types

Whilst there are some examples of dwellings from the late 1800s through to mid 1900s, most of the existing housing stock is from the mid to late 1900s. Newer housing is interspersed with some of the older housing stock. Some housing is reaching the end of its life and will need to be replaced where it is not nominated as a heritage item. The dominant dwelling type in Yeoval is the detached or separate dwelling (95.5%) but 4.5% are semi-detached, row or terrace houses (e.g. aged care housing on Lord Street).

Lot Sizes

As stated in [Section 8.5 – Settlement Pattern](#), the majority of lots in the Village Zone range from approximately 800m² to 2,100m² generally with 18 to 40 metre frontages. For lots of size greater than 900m² the lot depth and width is generally sufficient to allow the placement of a

dwelling with good side setbacks and a good rear yard (but it may not be able to support a standard septic system).

For lots less than 900m² there may be need for clear controls to guide setbacks and ensure good house and building design on these narrower lots. This will be guided by current state government initiatives to allow complying development within residential zones on smaller lots. There may be some opportunities for consolidation and subdivision to provide for medium density in close proximity to the village centre in the future.

Dwelling Densities

The density of housing in Yeoval ranges from as low as 2-3 dwellings/hectare to a high of 10 dwellings/ hectare (excluding roads) which is a low density of housing in accordance with its rural village character. There is very limited medium density development. There is generally a large yard attached to each dwelling which has historically allowed for on-site effluent management systems, landscape and private open space.

Rental Rates

Out of 106 occupied separate private dwellings in Yeoval, 24 dwellings are rental properties (21.6%), 60 (54.1%) are fully owned, 15 (13.5%) are being purchased, and 7 were not stated.

Issues & Strategies

- **Density / Character:** A combination of larger lot sizes and a dominance of detached dwellings means that the dwelling densities in Yeoval are relatively low in accordance with its rural village character. Increased densities may offer an alternative to consumption of more land for growth and improved sustainability but are less likely to be desirable in the current market and subject to introduction of centralised sewerage.
- **Housing Types:** The majority of dwellings in Yeoval are detached and there are very limited medium density housing types. Whilst part of the attraction of living in Yeoval is to have a separate dwelling, with an increasingly larger older population and high percentage of lone-person households there is likely to be future demand for small or more compact housing that is lower in maintenance on smaller lots. There is currently a limited choice of housing types in Yeoval to meet this future need.
- **Development Controls:** There are no major issues with the character and design of dwellings in Yeoval but there may need to be some controls to ensure that the character of key streetscapes in Yeoval is preserved. This may involve restrictions on the use of transportable/relocatable houses and shed-style homes to ensure that they are in keeping with the existing housing stock materials and sympathetic to heritage items.

8.19.1. Projected Dwelling Demand

Dwelling Occupancy Rate

The occupancy rate is the number of people that will live in each house. The [Rural & Industrial Land Use Strategy - Local Profile Paper – Table 2.12](#), notes that for Cabonne, the average household size has decreased from 2.9 (1991), to 2.8 (1996), to 2.7 (2001), to 2.6 (2006). Therefore, average household sizes have decreased over the last 15 years and this is also occurring in neighbouring Shires.

The occupancy rate for Yeoval (ABS data) is also expected to remain low over the next 10-30 years, especially if there are increases in aged care housing (senior citizens living alone); families having less children (smaller family sizes); and greater variety of housing types which attracts younger people to live independently. On this basis it is assumed that the estimated occupancy rate in Yeoval in the year 2036 will average 2.3 people per dwelling (as it was 2.3 in 2006). This is consistent with the Rural & Industrial Strategy which projects an occupancy rate in Cabonne Part C (including Yeoval) of 2.3 people/dwelling ([Local Profile Paper – Table 8.16](#)).

Dwelling Demand from Projected Population Growth

As stated in [Section 8.8 – Projected Future Population](#), the projected annual population growth rate for Yeoval ranges from -0.1%/year (minimum) to +0.3%/year (maximum) with an average of +0.1%/year. As this Strategy needs to cater for the greatest potential land demands, dwelling demand will be based on a **maximum** annual population growth rate of +0.3%/year, even if this rate is never achieved.



With a 2006 population of 292 people, the projected population of Yeoval by the year 2036 based on a maximum growth rate of 0.3%/year is 319 people, an additional 27 people over the 2006 Census figure. At a projected rate of 2.3 people per dwelling in 2036 there is an average demand for an additional 18 dwellings over 30 years (to 2036) (Table 6).

Method	Calculation	Projected Demand for New Dwellings by 2036
Dwellings required by Additional Population	27 / 2.3 per dwelling	~12
Dwellings required by Total Population minus Total Dwellings	319 / 2.3 per dwelling (139) minus existing total dwellings (125 ABS)	~14
Dwellings required by Total Population minus Occupied Dwellings	319 / 2.3 per dwelling (139) minus existing occupied dwellings (111 ABS)	~28
Average Dwelling Demand to 2036	12 + 14 + 28 (54) / 3	~18

Table 6: Calculation of projected dwelling demand from estimated population growth to 2036 for Yeoval (Source: ABS data www.abs.gov.au).

Dwelling Demand Projected from Historical Growth in Dwellings

An alternative method to estimate dwelling demand is to project from historical growth of dwellings (ABS Census -Table 7). Census information provides the number of total private dwellings and number of occupied dwellings in the Yeoval ABS Census District since 1976.

ABS Census	Total Dwellings		Occupied Dwellings	Unoccupied Dwellings	% Unocc. Dwellings	
1976	112		103	9	8.0%	
1981	111		99	12	10.8%	
1986	122		112	10	8.2%	
1991	128		110	18	14.1%	
1996	Census data not accessible					
2001	133		114	19	14.3%	
2006	125		111	14	11.2%	
	Total Dwellings			Occupied Dwellings		
Average	△	%△	Av. Ann. %△	△	%△	Av. Ann. %△
1976-2006	13	11.6%	+0.4%/yr	8	7.8%	+0.3%/yr
1986-2006	3	2.5%	+0.13%/yr	-1	-0.9%	-0.05%/yr
2001-2006	-8	-6.0%	-1.2%/yr	-3	-2.6%	-0.5%/yr

Table 7: Change in occupied and total private dwellings 1976-2006 in Yeoval (Source: ABS Census).

It can be seen over a variety of periods the rate of growth of both total and occupied dwellings ranges from +0.4%/year to -1.2%/yr – indicating a general negative trend in growth – and suggesting more dwellings are being demolished than built. Assuming a maximum rate of dwelling growth at +0.3%/year for the next 30 years, in 2036 there is estimated to be 137 total dwellings (an increase of 12 dwellings) and 121 occupied dwellings (an increase of 10 dwellings). Therefore, an average of an additional 11 dwellings is estimated to be needed in Yeoval by 2036 based on this method.

Dwelling Demand Projected from Development Applications

An alternative method to estimate dwelling demand is based on the historical number of dwelling applications approved each year by Council for new dwellings in Yeoval (Table 8). Please note that this has limited accuracy as development approval does not necessarily ensure that these new dwellings were built. On this basis it could be projected that there could be demand for approximately 6 dwellings over 30 years in Yeoval (based on a continuation of current approval rates).

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	Av.
DAs	0	0	1	1	1	2	0	0	0	0	0	5	0.5 dwellings/yr OR 14 dwellings in 30yrs

Table 8: Total number of dwelling applications approved 1999-2010 (financial years) in Yeoval (Source: Council records - Fujitsu Database) (Note there are inconsistencies with the 2005 Draft Yeoval Strategy).

Dwelling Demand - Summary Table

Table 9 summarises the finding above to suggest that approximately 14 additional (new) dwellings will be required in Yeoval's Village Zone by 2036 compared to the 2006 figure.

Projected No. of Dwellings Required by 2036 based on following calculation method	Increased No. of Dwellings from 2006
Projected Population Growth (Max. 0.3%/year)	~18
Projected Development Applications	~14
Projected Historical Dwelling Growth (Max. 0.6%/year)	~11
Average $18 + 14 + 11 = 43 / 3$	~14 Additional Dwellings over 30 years

Table 9: Projected additional dwellings needed by 2036 in Yeoval urban area based on a variety of projection methods.

8.19.2. Total Potential Supply of New Lots

As stated in [Section 8.16 – Vacant Land](#) the total potential supply of lots that are assumed to be likely to be redeveloped (assuming that each has a single dwelling) in Yeoval would be 18 new lots / dwellings (if unsewered) or 32-33 new lots / dwellings (if sewerred) over the next 30 years (from 2006 to 2036) (Table 10).

Source of New Lots for Dwellings	Vacant Lots Development Potential	Likely Number to be Available in next 30 years (50% Rule)
Small Vacant Lots Unaffected by Natural Hazards (Village Zone)	34 (unsewered) 46 (sewered)	17 (unsewered) 23 (sewered)
Subdivision of Larger Allotments (Village Zone & Rural Small Holdings)	2 (unsewered) 16-18 (sewered)	1 (unsewered) 8-9 (sewered)
TOTAL	36 (unsewered) 62-64 (sewered)	18 dwellings (unsewered) 31-32 dwellings (sewered)

Table 10: Estimated number of potential new dwellings in Yeoval over the next 30 years (subject to demand and supply).

8.19.3. Comparison of Supply & Demand for Dwellings to 2036

Summarising all of the above sections, the total supply of land available in Yeoval compared to the demand is shown below:

Unsewered: $\frac{18 \text{ (potential dwelling lots available)}}{14 \text{ (projected demand for new dwellings)}} \times 30 \text{ years} = \sim 39 \text{ years supply.}$

Sewered: $\frac{32 \text{ (potential dwelling lots available)}}{14 \text{ (projected demand for new dwellings)}} \times 30 \text{ years} = \sim 69 \text{ years supply.}$

Please note that this supply/demand equation assumes that the development costs will not exceed the value of the land for development. If the cost of providing road access, electricity, and access to water and sewer exceeds the value and makes development unprofitable then land owners are unlikely to develop or sell any land on the market. Council may need to consider concessions either in terms of road or water/sewer contributions to prompt additional development or wait until demand increases prices to the point where development is viable.

Issues & Strategies

Need for Rezoning in Next LEP: This Strategy recommends that there is no need to rezone any additional urban residential land in Yeoval in the next LEP as there is sufficient land to provide approximately 40 years (unsewered) or 70 years (sewered) supply based on the projected growth rates (subject to existing land being released).

Even if there is a change in the growth rate of Yeoval then there is sufficient 'buffer' in the existing supply to provide sufficient land for at least 20-30 year period to enable Council to amend this Settlement Strategy and consider amending the Local Environmental Plan to rezone more land (if appropriate). However, if Council's strategy is to provide an incentive for growth then additional land release may be required in the future.

8.19.4. Proposed Village Zone Outcomes

As a result of the above analysis, the proposed outcomes for Yeoval's Village Zone are set out in Figure 14 and summarised as follows.

Proposed Village Zone

In general the proposed Village Zone boundary is effectively the same as the Village Zone in CLEP1991 except for the following amendments:



Figure 14: Summary of proposed land use arrangements for Yeoval (Source: Council GIS 2011).

- Crown Land along Sandy Creek:** The Crown land (Lot 7001 & 7002 DP1020557) and 1 private lot (Lot 7003 DP1032709) along Sandy Creek is located in an area which has high flood potential and significant established vegetation and would not be suitable for any additional development. Therefore, this Strategy recommends it is removal from the Village Zone and placement in the background rural zone. Please note that the affected private landholder would have 1 lot (Lot 154 DP753223 corner King and Ganoo Streets) that would be retained in the Village Zone to allow an application for a dwelling in this location if required so that they are not unduly affected by this amendment.

- **Banjo Paterson Park/Showground:** Lot 116 DP753223 is run by the Trustees of Yeoval Showground but the land that is to the east of the bridge over the Buckinbah Creek is used as part of Banjo Paterson Park. This area is not suitable for additional development other than for recreation purposes and is more suited to a recreational zone than a Village Zone.
- **Crown Land at Eastern Gateway:** The Crown land (Lot 7301 DP1144905) at the eastern gateway to Yeoval on Banjo Paterson Way (corner Myrangle and Molong Streets) should be utilised for landscaping at the gateway to Yeoval and is not suitable for future development so it is removed from the Village Zone. Part of this is road reserve.

Therefore, except for one private lot the land that has been removed from the existing Village Zone is Crown land or recreation land that had no current development potential so the changes will have a minimum impact on future dwelling potential and growth.

Minimum Lot Size for Subdivision

As of 2011, Yeoval does not have a reticulated sewerage system and it is reliant on on-site effluent management systems (usually standard septic systems and absorption trenches). On this basis it should retain the current minimum lot size for subdivision of 2,000m² to provide sufficient lot size to support a dwelling and on-site effluent management system and protect the rural qualities of the village.

There are very few lots in the Village Zone significantly larger than 2,000m² that would be affected by this subdivision control. Applications for dwellings on existing lots below 2,000m² may be permissible subject to consent where they can meet other controls.

Council is proposing to introduce a new reticulated sewerage system to Yeoval shortly. Properties that have been connected may be suitable for a reduced minimum lot size for subdivision down to 900-1000m² per lot and this would potentially allow additional subdivision and infill development of lots greater than 1,800m². A lot size of 900-1,000m² is consistent with some of the existing smaller historical lots in Yeoval and is unlikely to impact on the desired streetscape character and layout of the village.

8.19.5. Proposed Large Lot Residential Outcomes

As Figure 14 shows, it is intended to retain the existing Zone 1(c) (Rural Small Holdings) area to the south-west of Yeoval for large lot residential uses. The only amendment is that the road reserve of Myrangle Street would be removed from this zone and the road reserve of Obley, Lucknow and Cobar Streets will be included in this zone (though this would not change the development potential of this area). The existing minimum lot size for subdivision of 4,000m² per lot should also be retained. However, larger lot sizes may be required in proximity to Sandy Creek to enable setbacks from the flood prone lands for dwellings.

8.19.6. Large Lot Residential in Wellington LGA ('North Yeoval')

It is important to note that to the north of Buckinbah Creek there are a number of dwellings on smaller lots in the Wellington Local Government Area ('LGA') in the area known as North Yeoval (extending up to Tobins Road and the Cemetery). This area appears to have approximately 36-38 existing dwellings (from 2009 aerial photograph). Based on an average occupancy of 2.5 people per dwelling (and assuming up to 10% vacancy) there is an estimated population of up to 80 people.

The majority of these lots are 1-2 hectares in size and do not have any dominant agricultural use. Therefore, there is potential for Wellington Council to consider rezoning of this area for large lot residential uses in the future and potentially maintain a minimum lot size for subdivision of 2 hectares. There are at least 6-8 large lots that are still vacant – so if this rezoning were to proceed then this would create some additional dwelling opportunity.

However, there are a number of issues that would need to be addressed before this rezoning could occur including, but not limited to, the lack of a secure water supply (and the provision of water by Cabonne to many of these lots) and the proximity of this area to the existing Yeoval Mine and inclusion in the Naringal Potential Resource Area that may make it unsuitable for any additional intensification of development. However, considering there are already 36-38 existing dwellings in this area then an additional 6-8 new dwellings are unlikely to make a significant difference if they provide their own water supplies and on-site sewerage. This would be subject to agreement between Cabonne and Wellington Councils and the Department of Planning & Infrastructure.

8.19.7. Future Investigation Areas

This Strategy suggests that there is well in excess of 30 years supply of land to meet the growth of Yeoval's Village Zone within the existing and proposed boundary. However, should the growth calculation in this Strategy be exceeded in the medium to long term then the proposed land use arrangements in this Strategy may need to be amended to expand the urban area of Yeoval.

Investigation to the East of Yeoval

If Yeoval did need to grow then one way would be to incorporate some of the rural land that forms part of the 'Buckinbah' property along the Molong Street frontage (to the east of Yeoval) into a large lot residential area (Figure 15). The property owners have in past years expressed an interest in rezoning and this land is flood free and free of any significant vegetation. It also has good road access and proximity to existing utilities.

The main issue is that the rear of these lots would be immediately adjacent to rural lands that are used for cropping and grazing and there is potential for land use conflicts. Smaller village lots often cause conflicts with adjacent rural lands due to dogs & stock, spraying and cropping activities, etc.

Therefore, larger lot residential uses (with lots up to 100 metres in depth) are more likely to allow suitable setbacks between dwellings and agricultural uses. The impact of development on the heritage values of this important property should also be considered. This would require further investigation and the supply / demand for dwellings in the entire village would need to be addressed before any rezoning could be accepted.

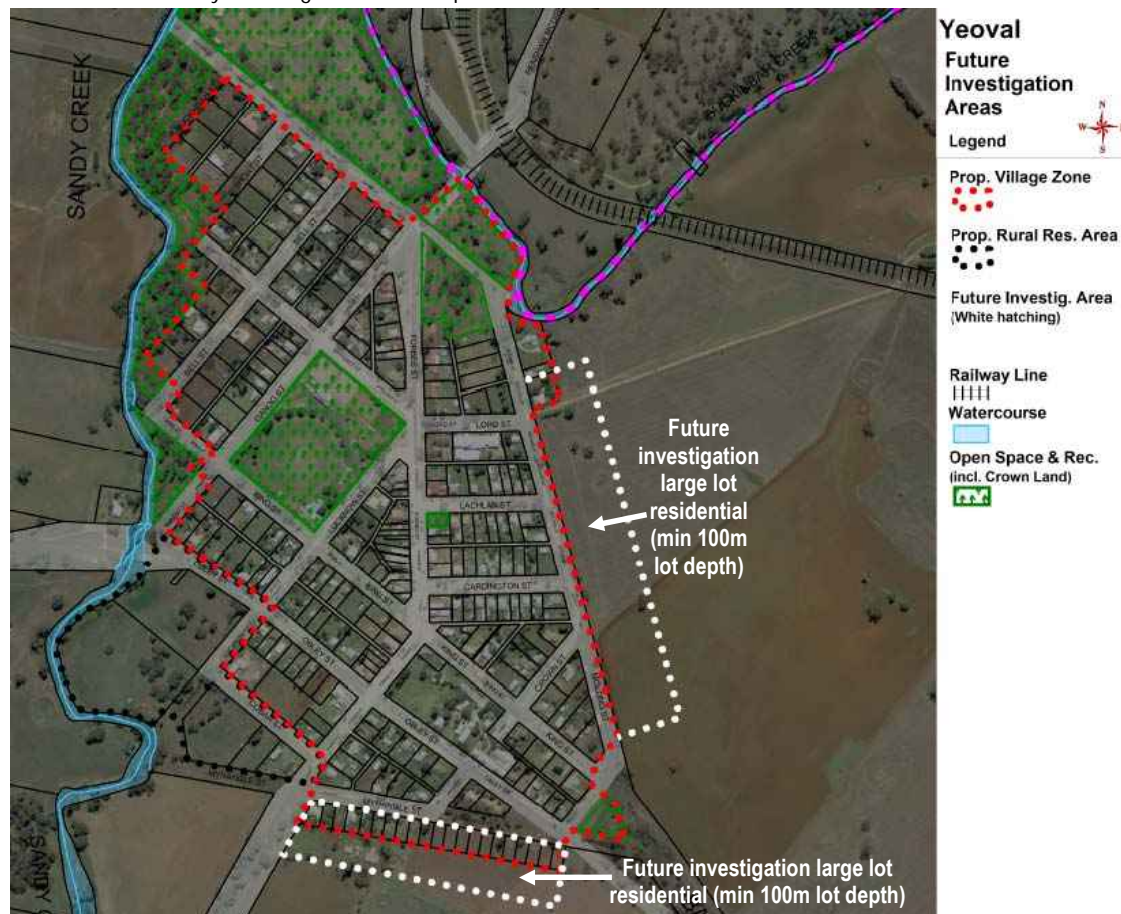


Figure 15: Future investigation areas for urban expansion in Yeoval.

Investigation to the South of Yeoval

The alternative to development to the east is development to the south of Yeoval (Figure 15). All but two (2) of the lots to the south of Myrangle Street in the existing Village Zone are held by one land owner and this owner also owns the adjacent rural lands between Renshaw-McGirr and Banjo Paterson Ways.

The lots are generally of 810-820m² in size and are not sufficiently large to support a dwelling and on-site sewerage (septic) system. In addition, the old homestead is located on one of these lots and the remaining lots form a visual buffer to the old homestead and an active part of the adjacent farm. Therefore, to-date they have not been placed on the market. The land owner has also expressed an issue with the cost of connection to services and roads that would make it expensive to develop these lots.

One potential way forward may be to look at rezoning the small lots south of Myrangle Street as large lot residential in the future with a possible extension into the adjacent rural lands. This would reduce the number of possible dwellings but would address some of the land holder concerns by providing a buffer to the old homestead and creating lots of sufficient size to support on-site sewerage management systems to avoid the cost of connection to reticulated sewer. It would also provide a better buffer between dwellings and the active agricultural area to minimise village/rural land use conflicts. This will also require further investigations and discussions with the landholder(s).

Note: If the eastern investigation area were to be considered for rezoning then it may be advisable to downzone the southern area (including those undeveloped lots in the existing Village Zone) back to rural uses.

8.20. Previous Land Use Strategies

8.20.1. Previous Studies

It is important to conduct a review of all relevant previous studies as they can provide valuable information on key opportunities and constraints as well as key recommendations that have been put to the community. Where possible, this Strategy should be consistent with those recommendations (unless there are clear reasons to change recommendations).

Key studies relevant to the land uses of Yeoval include:

- Cabonne Council (1990) *Yeoval Village & Environs – Proposal to Prepare a Development Control Plan* (Shire Planner – G.Barry) ('1990 Draft DCP');
- Habitat Planning (2005) *Draft Yeoval Village Strategy* ('2005 Strategy');
- GHD (2008) *Subregional Rural and Industrial Strategy* ('R&I Strategy').

8.20.2. Yeoval Village & Environs – Proposal to Prepare a Development Control Plan

The 1990 Draft DCP set out objectives, preliminary controls, and a set of sub-zones specifying areas for particular land uses within the Village Zone. Key objectives included reducing land use conflicts, provision of land for urban/ industrial / commercial development, efficient use of infrastructure, heritage and landscape conservation, and avoidance of environmentally constrained lands. All of these objectives continue to apply today to this Strategy.

This Strategy agrees with parts of the recommendations of the draft Structure Plan from 1990 including:

- **Flood Prone Lands:** The approximate line for flood prone lands in the 1990 plan would appear to be relatively correct based on anecdotal data but still requires a detailed study;
- **Commercial (VC):** The Village centre (Commercial Sector) should be concentrated along Forbes Street (between Obley and Lord Streets);
- **Industrial (VI):** As stated above, the nominated industrial area along Buckinbah and Short Streets would have been ideal – but now there are two new dwellings in this area that may conflict with industrial uses (depending on the impacts). Council should conduct further investigations on this area as well as the area around Cobar Street for light industrial uses.
- **Large Lot Residential:** This Strategy agrees that the proposed Zone 1(c) area should remain for large lot residential uses until a detailed flood study is completed.

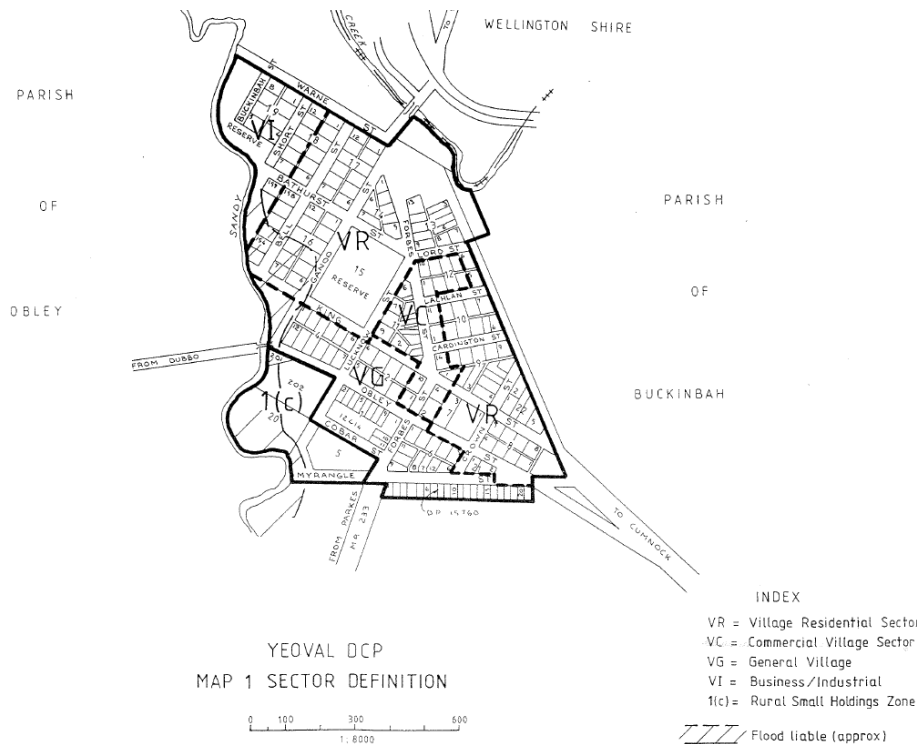


Figure 16: 1990 Draft Structure Plan for Yeoval (Source: 1990 Draft DCP- Map 1).

8.20.3. Draft Yeoval Village Strategy (2005)

The key features and major strategic directions identified in Yeoval are shown in Figure 17 and Table 11 and addressed as follows:

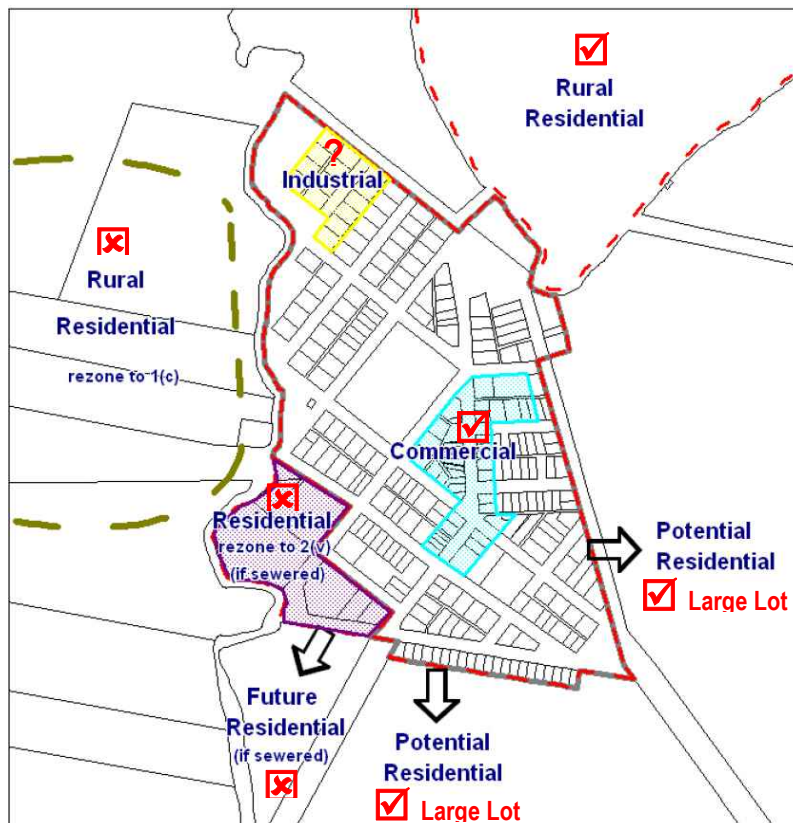


Figure 17: Proposal for growth of Yeoval in the Draft Yeoval Village Strategy (2005) with mark-ups suggesting whether these proposals are supported by this Strategy.

Recommendations of the 2005 Draft Strategy	Response in 2011 Strategy
Commercial Uses: <i>The preferred commercial activity area to be in Forbes Street between Obley and Lord Streets.</i>	Agreed. The preferred commercial area should run along Forbes Street between Obley and Lord Street but may extend out to Lucknow Street if required. Applications in the Village Zone will be considered on their merits.
Industrial Uses: <i>The preferred industrial precinct to be in Warne Street.</i>	Possible but requires more investigation. There is only likely to be demand for low-scale light industrial or home industrial activities. Warne Street would have been ideal except that development of several lots for dwellings has increased the risk of land use conflicts in this area but this could be managed depending on the use and its design. An alternative area could be along Cobar Street adjacent to the Council depot and behind the hotel but this also poses issues for conflicts with adjacent residences.
Village Expansion: <i>The existing 1(c) zoned land between Obley and Myrangle Streets to be rezoned to 2(v).</i>	Disagree in short to medium term. Possible in long term but requires more investigation. There is no current need for additional village zoned land. A significant portion of the land adjacent to Sandy Creek is likely to be flood prone and best suited to large lot residential uses. The land between Lucknow Street and Forbes Street may be suitable for future inclusion in the Village zone, particularly if there is a need for additional industrial land.
Village Expansion: <i>Seek expressions of interest from landowners on the eastern and southern fringes of the village to coordinate the release [of] land for urban residential development.</i>	Disagree in short to medium term. There is no need to upzone any additional land for the foreseeable future for urban uses unless growth rates significantly increase. However, in the long term this is the direction that Yeoval should grow if additional supply is required.
Village Expansion: <i>Rezoned rural land to the west of Sandy Creek to 1(c).</i>	Disagree. There is no need to upzone any additional land for the foreseeable future for large lot residential uses unless growth rates significantly increase. This area should be protected for agricultural uses. If any large lot residential growth occurs then North Yeoval should be favoured.
Village Expansion: <i>If provided with sewer, the 2(v) zone to be extended south between Sandy Creek and the Parkes Road.</i>	Disagree. Whilst sewerage may address issues of septic systems in proximity to the creek this Strategy does not recommend intensification of development along the creek frontages, particularly when there is no immediate demand. Centralised sewerage is more likely to create infill opportunities in the existing urban area.
Flood Mapping: <i>The 1 in 100 year flood level of the Buckinbah and Sandy Creeks to be accurately mapped.</i>	Agree. This should be completed as soon as there is funding to conduct the study. This should inform this Strategy and future development applications.

Table 11: Review by this Strategy of the 2005 Draft Yeoval Village Strategy recommendations.

8.20.4. Outcomes from Draft Subregional Rural and Industrial Strategy (2008)

There were no outcomes from the R&I Strategy that were particularly applicable to Yeoval in anything other than general terms, as follows:

- **Large Lot Residential** - The **Final Strategy - Section 6.4.3 (Table 6.2)** shows that the R&I Strategy considered the need for additional large lot residential at Yeoval but discounted it on the basis that there is *"Poor accessibility and significant road distance to nearest essential services. Adequate supply of zoned land for foreseeable growth."*
- **Industrial** - The R&I Strategy only identified larger format and heavier industrial lands around Manildra of sub-regional importance in Cabonne. Therefore, it did not look at industry at the settlement level. This Strategy seeks to supplement the R&I Strategy with a local industrial strategy for Yeoval.

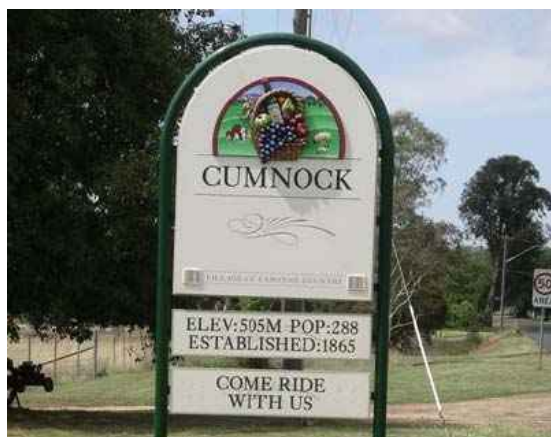


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Document Control

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9. Village of Cumnock

Please note that **Chapter 9 – Village of Cumnock** should be read with **Chapter 2 – Cabonne Overview** as some of the Issues and Strategies applicable to all settlements are not reproduced in this chapter.

9.1. Executive Summary & Proposed Land Use Arrangements

9.1.1. Historical population growth

The ABS Census District for the Village of Cumnock partially includes surrounding Zone 1(c) Rural Residential Lands and part Zone 1(a) General Rural, but does not include all village lots in the east of the village. There are approximately 4 dwellings in the existing Village Zone that have not been included. Therefore, the census data is considered a reasonable representation of the settlement's population.

As Table 1 shows, the population peaked with 297 people in 1996 but there has been a minor overall decrease in the settlement population over the last 20 years. Please note that Cumnock supports surrounding rural population and these are not included in the following population statistics.

Year	1976	1981	1986	1991	1996	2001	2006
Population	259	252	236	266	297	270	288
Av. Ann. Change from previous Census	N/A	-0.54%	-1.27%	+2.54%	+2.33%	-1.825%	+1.33%

Table 1: Summary of population statistics for Cumnock (Source: www.abs.gov.au).

9.1.2. Key Factors Influencing Population/Economic Growth

Cumnock has a number of positive influences that could result in potential positive population and economic growth including, but not limited to, its rural character and efforts in attracting tourism that are supported by a strong community spirit, its affordability and access to primary education that may attract young families, a strong rural sector and local rural services, local initiatives such as the rent-a-farmhouse program, and proximity to larger centres such as Molong, Wellington and Orange.

However, there are a number of potential negative influences that could hamper population and economic growth including, but not limited to, a heavy reliance on the rural sector for employment and limited other local employment solutions, a lack of regular public transport connections to other centres, an ageing population and limited local health services, issues with water security, and some flood prone lands.

9.1.3. Projected Population Growth

Based on the opportunities and constraints, Cumnock's population is expected to grow at a projected annual rate ranging from +0.3%/yr (minimum) through to +0.7%/yr (maximum) with an average of +0.5%/yr (*Please note that growth rates will change over time and this is an estimated average growth rate over the 30 year period*).

Based on the **maximum** growth rate of +0.7%/yr Cumnock's population will grow to 355 people by 2036, an increase of 67 people over the 2006 population. This growth will create some limited additional demand for residential, business, community and open space/recreation land uses that will need to be provided in Cumnock and the region.

9.1.4. Proposed Land Use Zone(s)

Good planning practice suggests that settlements above 1,000 in population that are experiencing higher growth should consider adopting specific zoning for each land use ('complex zoning') to minimise land use conflicts and maximise amenity and economic activity.

As the estimated 2006 population of Cumnock's population is 288 people (+/-10-15 people) (excluding the rural catchment), this Strategy recommends that Cumnock retain a zone similar to the existing 'Village Zone' for the core urban area combined with areas for large lot residential uses (to replace the existing Zone 1(c) (Rural Small Holdings). Therefore, there is not a major change in zoning categories proposed for Cumnock.

9.1.5. Summary of Proposed Changes

There are changes proposed to both the 'zoned' areas and the subdivision potential of some lands in this Settlement. See the detailed land use sections of this chapter for more details.

The proposed land use arrangements for Cumnock are set out in Figure 1 and summarised as follows:



Figure 1: Summary of Proposed Land Use Arrangements for Cumnock (Source: Council GIS 2012).

a) Village Zone

Extension of Village Zone

The only minor extension would be the inclusion of all of the Department of Education lands associated with the Cumnock Public School into the zone (rather than split across the Village Zone and large lot residential area).

Reduction of Village Zone

Due to natural hazards and other environmental factors there are some areas where there should be a reduction of the Village Zone:

- **Village Zone to Non-Urban Zone:** The lands along Doughboy Creek that are west of the unformed Mill Street south of Cudumbe Road have a high likelihood of flooding and low potential for redevelopment and they should be returned to a non-urban zone. The primary buildings for the existing business in this area would be retained within the proposed Village Zone.
- **Village Zone to Large Lot Residential Area:** The lands along Doughboy Creek to the west of Obley Street but north of Cudumbe Road have the same flooding potential that limits development potential on part of these lots such that development is generally restricted in close proximity to Obley Street. These are more suited to a large lot residential classification.
- **Village Zone to Large Lot Residential Area:** The three large lots to the east of Obley Street between Black Street and Googodery Road have constraints from flood potential along Ironbark Gully as well as heritage constraints and access issues. These lots have a reduced development potential and are more suited to a large lot residential classification.

Minimum Lot Size

As Cumnock does not currently have a centralised sewer it should retain the current restriction on minimum lot size for subdivision of 2,000m² per lot. However, when the Four-Towns Sewer Program is completed at Cumnock in the coming years then the minimum lot size for subdivision could be reduced down to 900-1000m² per lot (when connected to reticulated sewerage), consistent with some of the existing pattern of development and historical lot sizes.

b) Large Lot Residential

The existing two Rural Small Holding Zone areas are both relatively undeveloped and historically there has been limited demand for development in these areas resulting in a slight over-supply of land for this purpose. The following changes are proposed to the large lot residential boundaries:

West Large Lot Residential Area

This area is predominantly in the ownership of two major land holders and only contains 1-2 dwellings. There is a historical subdivision and unformed street pattern over much of this area but it effectively acts as agricultural land. The proposal is to remove the larger western lots and return them to a rural zone. In addition, the area to the south covered by significant vegetation should be removed from the zone for protection. This is likely to necessitate a new subdivision and road pattern to develop this area to its full potential in the future.

East Large Lot Residential Area

This area is in the ownership of one land-holder and does not contain any dwellings (as at 2011). The existing Rural Small Holdings boundary is also not aligned with the existing cadastre and forms an upside down 'L' shape running along Keay Street and Cudumbe Road. During the exhibition there was a submission by this land owner to align the new large lot residential boundary with the lot boundary (Lot 83 DP220716) to avoid split zoning and maximise the use of this site for large lot residential growth. As the remaining 'rural' zoned land on this lot is isolated and only ~5.2ha in size it is unlikely to be able to support viable agriculture. This was agreed to by the Cabonne Councillors. Therefore, the existing large lot residential area (~14 hectares) has been increased to ~19 hectares.

In addition, there is a corresponding increase in the large lot residential areas where the Village Zone has been replaced with this classification as listed above.

c) *Industrial Land Uses*

Whilst Cumnock has some light industrial uses such as Bundella Group and trucking operations at Hogans, there is not estimated to be a demand for larger-scale industrial lands in Cumnock due to economic and physical constraints to attract new industries to the area.

Whilst the proposed Village Zone will provide flexibility for home industry and some light industries to grow in Cumnock where they can address issues of land use conflict with residential uses, it would be more ideal if future light industrial uses were located in an area where land use conflicts could be minimised and industrial uses could be co-located.

One such potential area is along Haig Street adjacent to the railway corridor where there are few dwellings and a good setback to existing residential areas. Another location for consideration would be along Googodery Road between Obley Street and the unformed Priddle Street. However, this area has a much higher potential for existing and future land use conflicts with dwellings in the area.

d) *Business Land Uses*

Whilst the proposed Village Zone will provide flexibility for local retail and commercial businesses to grow in Cumnock there should be some attempt to consolidate stand-alone businesses along Obley Street between Googodery Road and Black Street, where possible to reinforce the character of Cumnock's central business area and minimise conflicts with residential areas. However, home businesses with lower impacts are likely to be supportable across the village area.

e) *Community Land Uses*

There is no perceived need for additional land for community uses within the Cumnock urban area. If expansion is required this can generally be accommodated on existing community use sites or on vacant land in the urban area without substantial impact on residential amenity. No specific area needs to be designated for these uses as they are permissible with consent across the Village Zone.

9.1.6. Dwelling Supply & Demand

This chapter has found that the existing zoned areas could produce ~62 new dwellings in the Village Zone and ~18 new dwellings in the Rural Small Holdings Zones – a total of 80 lots/dwellings up to the year 2036 (assuming connection to reticulated sewerage and a reduce minimum lot size for subdivision of 900-1000m² in the Village Zone).

The projected demand for the next 30 years is for an additional 38 dwellings in both the Village and Rural Small Holdings Zones so the existing supply significantly exceeds (~63 years) the projected demand. Based on the proposed new land use arrangements a rough estimate of dwelling potential is 80 new dwellings which is exceeds the 38 dwellings potentially required over the next 30 years (Table 2) but is similar to the existing likely supply and ensures sufficient land supply for growth.

Area	Potential New Dwellings	50% Rule
Village Zone	125	62
Large Lot Residential (former Village & Rural)	10-12	5-6
Large Lot Residential (West)	10 (@1ha) -20 (@4000m ²)	5-10
Large Lot Residential (East)	19 (@1ha) -36 (@4000m ²)	10-18
TOTAL	164-193	82-96

Table 2: Potential future lots/dwellings in Cumnock based on the proposed new land use arrangements by the year 2036.

9.2. Regional Location

The Village of Cumnock is located in the northern area of Cabonne on the Banjo Paterson Way in proximity to the boundary with Wellington local government area (Figure 2).

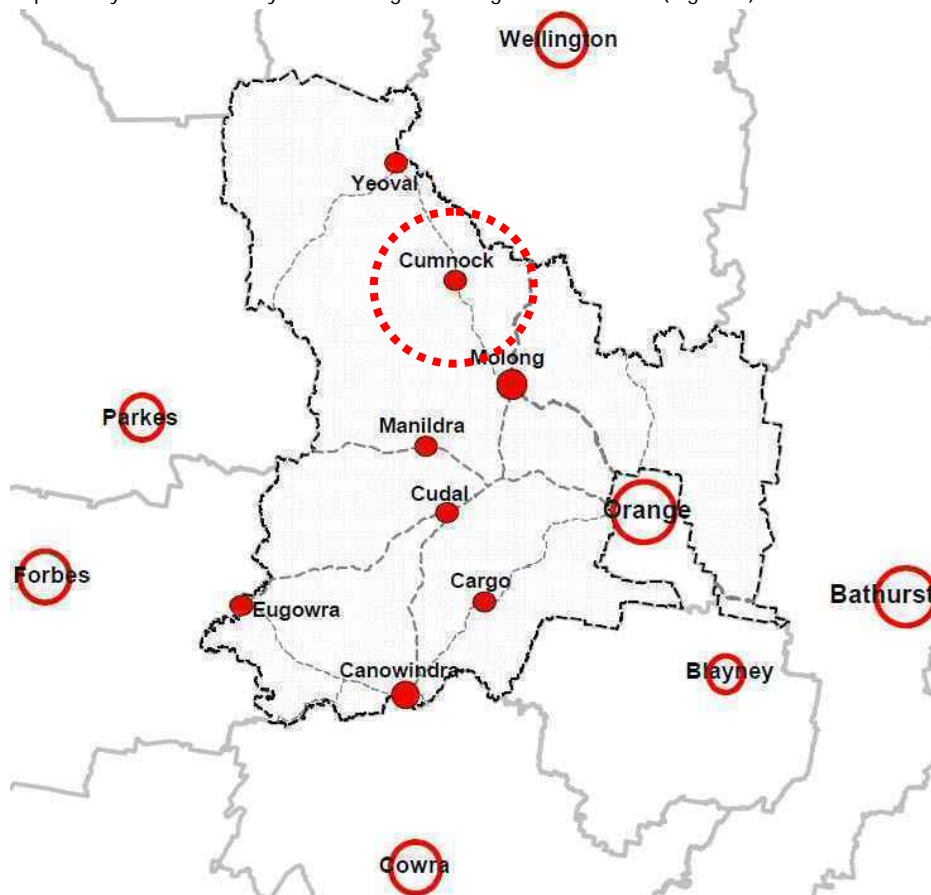


Figure 2: Location of Cumnock in Cabonne and proximity to key regional centres and settlements (Source: Council GIS 2010).

Cumnock is located approximately:

- 23 km (20-25 minutes drive) from Molong via Banjo Paterson Way;
- 24km (20-25 minutes drive) from Yeoval via Banjo Paterson Way;
- 55 km (50-55 minutes drive) from Orange via Banjo Paterson Way and the Mitchell Hwy;
- 56km (40-45 minutes drive) from Wellington via Eurimbla Road and Mitchell Highway;
- 73km (55-60 minutes drive) from Parkes via Banjo Paterson and Renshaw McGirr Ways;
- 93 km (65-70 minutes drive) from Dubbo via Banjo Paterson Way/Obley Road.

Issues & Strategies

- **Proximity to Cabonne Settlements:** Cumnock is within a 20-30 minutes drive of Molong, Manildra and Yeoval and 50-60 minutes drive to Canowindra, Eugowra, Cudal and Cargo. Whilst Cumnock has its own local services it is likely to utilise Molong for slightly higher level shopping and services.
- **Proximity to Major Centres:** Cumnock is within a 1 hour drive of both Wellington and Orange. Orange offers a much higher level of services and facilities or the alternative would be Dubbo. However, the travel distance would suggest that Cumnock is not within the 'commuter zone' (25-30 minutes drive) of either of these centres and this may limit its potential as a commuter area.



9.3. Existing Zoning

Figure 3 illustrates the existing zoning pattern in and around Cumnock under CLEP1991 including:

- **Zone 2(v) (Village Zone)** with the core of the Village of Cumnock (Pink on Map) (Total area ~79.74ha);
- **Zone 1(c) (Rural Small Holdings)** (Orange on map) (Total area ~36.8ha) including:
 - West Cumnock ~22.38ha;
 - East Cumnock ~13.46ha;
- **Zone 1(a) (General Rural)** for all surrounding areas (Red on map).

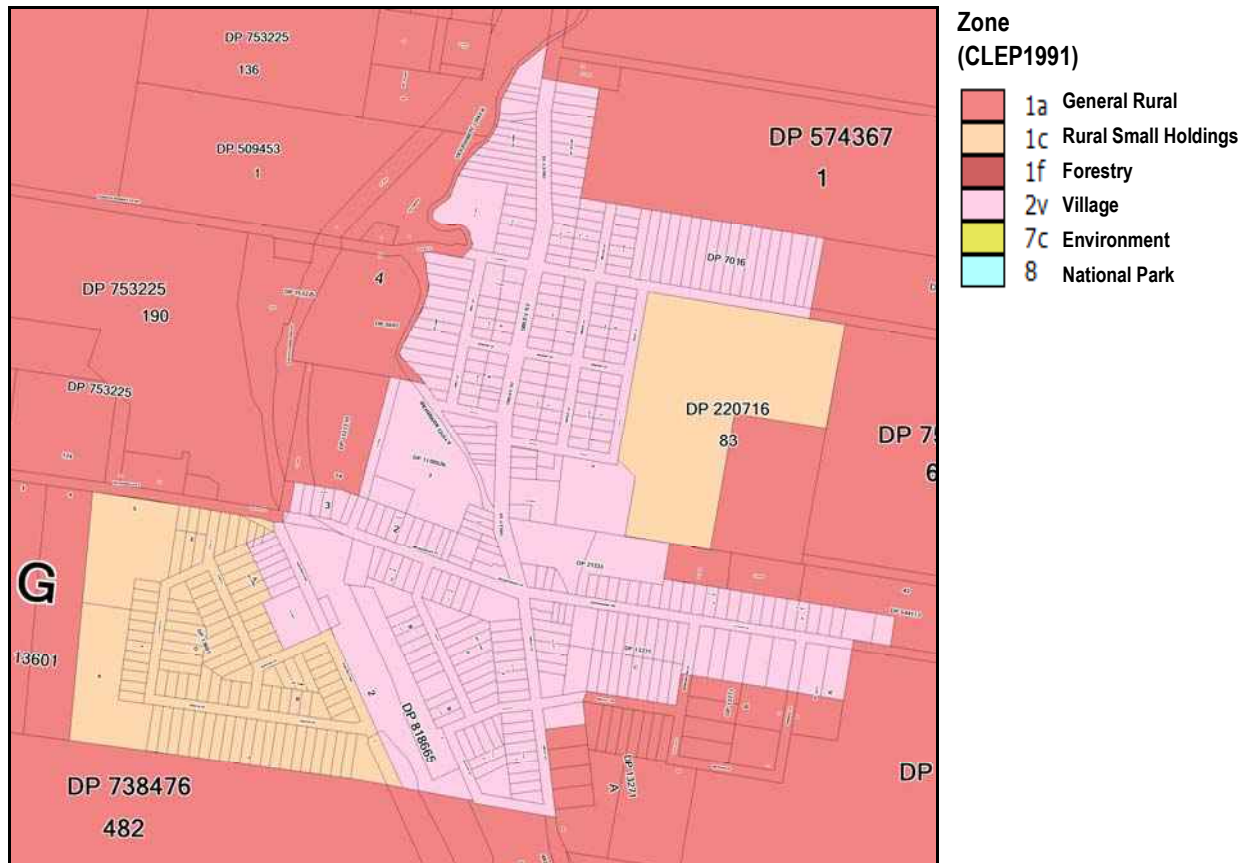


Figure 3: Existing zoning for Cumnock and surrounds (Source: CLEP1991 / Council GIS 2010).

In CLEP1991 the key amendment to the Village Zone from the previous planning instrument was the inclusion of land along Googodery Road (to the east of Burrawong Street) and the extension of Zone 1(c) (Rural Small Holdings) to the east of the Village. There has been little new development in these areas introduced over 20 years ago.

Issues & Strategies

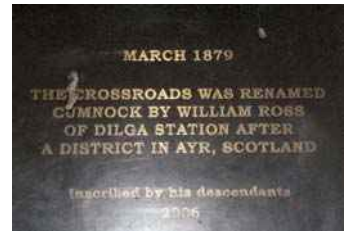
Review of Zoning Boundaries: It is the role of this Strategy to define appropriate areas for each land use to ensure sufficient supply of land for the next 5-10 years. This will then inform the preparation of new zoning boundaries under the proposed new Cabonne Local Environment Plan.

Cumnock's Village Zone is relatively compact but broken by watercourses. However, there would appear to be a large amount of Rural Small Holdings land that is under-utilised and may not be required in the short to medium term. Any expansion of the urban area of a settlement into the surrounding rural lands needs to be justified as it may take up prime agricultural land that is important to the Cabonne economy.

9.4. Settlement History

History is important because it explains why a settlement is located in its present location and how the settlement has changed over time. Much of this history is sourced from Joan Marriott (1993) *The Crossroads: The History of Cumnock*.

- **1839** - European settlers started arriving along Doughboy Creek.
- **1862** - Settlement began along Doughboy Creek, as it was a halt for the mail coach that ran between Molong and Obley. Also known as Burrawong Crossroads, the village centred about the junction of surveyed roads to Cardington, Dilga, Molong and Obley.
- **1867** - First permanent building – a mail depot and hotel erected – crude structure of bark and saplings on corner of Owens Lane and Obley Street. It was at this time that Doughboy Creek became the village known as 'The Crossroads'.
- **1875** - John Robertson Lands Act introduced that attracted people to the area due to grants available.
- **1879** – Town of Cumnock proclaimed named after a small town in Ayr Shire in Scotland. Postal facilities are introduced and Provisional school operational.
- **1880s** - Courthouse and police station built.
- **1881** - School House built.
- **1882** - The Black Bros. General Store was built, and would be the most prominent business for more than 60 years.
- **1891** - First telephone installed at the post office and telegrams could be received.
- **1890s** - First bank established in Obley Street, the Australian Joint Stock Bank and the Royal Hotel established.
- **1895** - St Mathews Church of England erected.
- **1903** - Denominational School begins at Catholic Church.
- **1906** - Amaro Shire Council formed.
- **1907** - Council headquarters established in Cumnock as geographical centre of Shire.
- **1913** - Hospital built, and run by Dr Ivie Aird.
- **1925** - Arrival of first train to Cumnock, and track extended to Yeoval and Dubbo.
- **1937** - Electricity connected to Cumnock homes.
- **1937** - Radio transmitter for radio station ABC/2CR (Orange) erected at Cumnock and provided radio reception to the Central West region.
- **1951** - Molong Municipality and Amaro Shire were amalgamated to form Molong Shire.
- **1954** - Shire headquarters moved to Molong.
- **1964** - First formal newspaper published, the *Cumnock Progress Review*.
- **1970** - Water Supply connected to township from Bell River and bores.
- **1974** - Rail Passenger Service ceased.
- **1977** - Tourist brochure produced entitled 'The Rural Way: Molong, Cumnock and Yeoval'.
- **1989** - All rail services suspended.



It would appear that the peak periods for the growth of Cumnock occurred in the late 1880s and early 1900s culminating in Cumnock becoming the Council headquarters for the Amaro Shire in 1907 and rail arriving in 1925. However, since the creation of the Molong Shire and relocation of the Council headquarters to Molong in 1954 there has been limited growth.

Issues & Strategies

Understanding the History: The history of Cumnock and its surrounds is an important factor both in understanding the location of the settlement, how it grew, key opportunities and constraints to its growth, and as a fundamental building block for tourism and community spirit. A comprehensive history of Cumnock should be prepared and/or collected by the local historical society and/or Council to allow Cumnock to appreciate and build on its history and protect and enhance the key heritage items and character. See [Section 9.13 – Heritage](#) for the proposed strategies for heritage items.

9.5. Settlement Pattern

9.5.1. Historical Subdivision Pattern

It is important to recognise that in most circumstances Council and the community are dealing with an historical subdivision pattern for many settlements that has often been in existence for over 100 years. Without conducting a detailed historical study it has not been possible to pinpoint exactly when the current subdivision pattern came into being but it is likely to have occurred in the late 1800s and early 1900s. Council mapping suggests that there have been relatively small amounts of additional subdivision in Cumnock's Village Zone since the early to mid 1900s.

The vast majority of the historic subdivision patterns in settlements in Cabonne were based on a grid pattern with perpendicular streets and regular block sizes. In Cumnock, the blocks are generally oriented with the streets running roughly north-east/south-west or north-west/south-east but this is broken by the railway line and Doughboy Creek. There are no historic rear lanes in Cumnock (in contrast to many other Cabonne settlements).



9.5.2. Street Dimensions

Most of the streets in Cumnock are approximately 20 metres in width except for Obley Street which is 30 metres in width. A 20 metre wide roads allow for a road with a lane in each direction and on-road parallel parking areas and kerb/pedestrian areas and also allows for the incorporation of street trees in either footpath or blister formation on-road with minimal impact on parking / pedestrian areas. A 30 metre road width (Obley Street) allows the potential for incorporation of street trees in the road corridor with minimal impact on parking / pedestrian areas. This provides opportunities for street landscaping and urban design upgrades.



9.5.3. Block Sizes

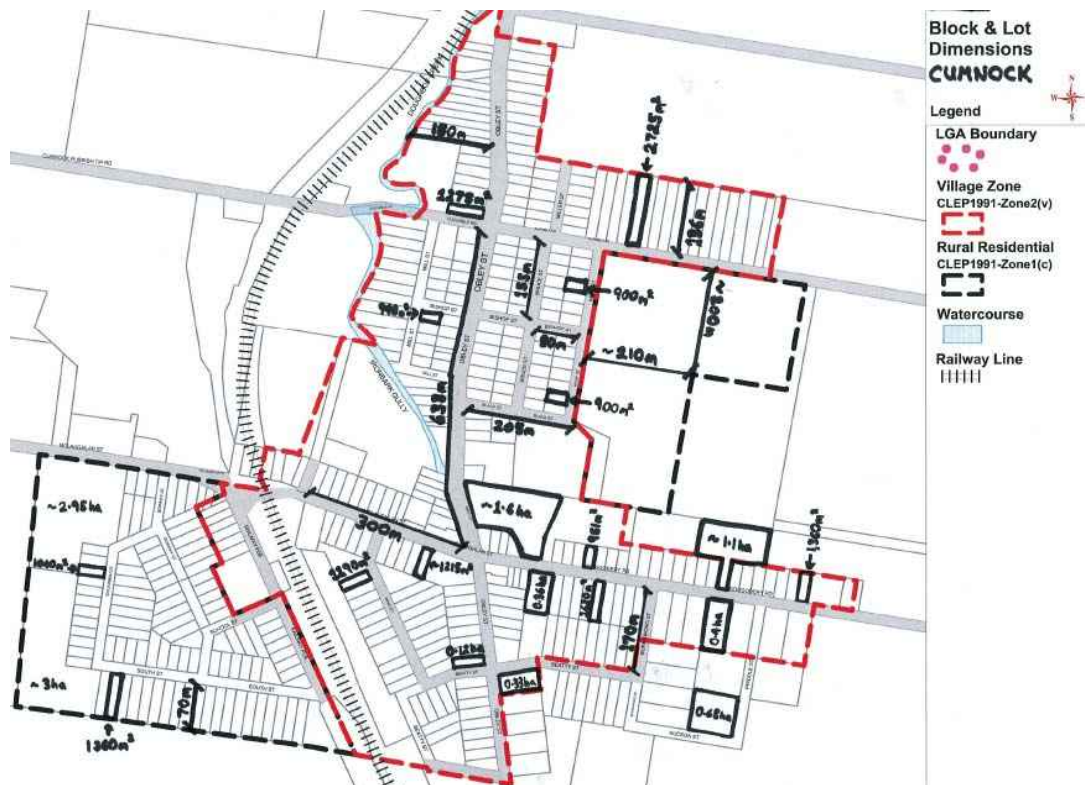


Figure 4: Indicative street, block and lot lengths, widths and areas in Cumnock (Source: Council GIS 2011).

Figure 4 shows some of the indicative block areas, lengths and widths in Cumnock. There are very limited standardised blocks as most of the village is focussed on Obley Street, Googodery Road/McLaughlan Street, and Eurimbla/Cudumple Roads. This does result in a relatively spread out development pattern with distances of 1 to 1.5km from the edge to the centre of the village.

9.5.4. Lot Sizes

As Figure 4 shows, there are a range of lot sizes in Cumnock. There are several very small lots less than 500m² that may or may not be developable depending on the size of the building and the effluent system used. The majority of lots in the Village Zone range from 900m² to 1,300m² generally with 20 metre frontages. There are also a number of medium sized lots ranging from 2,000m² to 4,000m², predominantly along Eurimbla Road (east) and Googodery Road (east). There are also much larger lots around 1-2 hectares in size.

What is interesting is that the western Zone 1(c) (Rural Small Holdings) area already has a subdivision pattern of lots ranging from 1,000m² to 1,400m². This is in contrast to the general principle that large lot residential lots are usually in excess of 4,000m² in size and is a product of recent zoning over a historical subdivision pattern for a much larger town size.

The lot depth and width is generally sufficient to allow the placement of a dwelling with good side setbacks and a good rear yard on all lots larger than 1,000m². However, in order to be able to support a standard on-site septic system with absorption trenches lot sizes may need to increase in excess of 2,000m² (subject to specific site geo-technical studies) (see [Section 9.11 – Utilities & Infrastructure](#) for more detail).

Issues & Strategies

- **Lot Sizes (Village Zone):** Some of the lots that are below 900m² in size are unlikely to be suitable to support a dwelling in Cumnock whilst there is no reticulated sewerage system and the character of the village and residential lends itself to lots in excess of 900m². However, this may change with the introduction of a reticulated sewerage system in the future and future demand for smaller lot / dwelling sizes.
- **Lot Sizes (Rural Small Holdings):** There is an issue with a historical subdivision pattern in the western Rural Small Holdings area where lot sizes range from 1,000m² to 1,400m² when in this type of zone a lot/dwelling is generally required to have a minimum lot size of 4,000m². This subdivision pattern may need to be investigated for amalgamation and/or redesign unless it is included in the Village Zone in the future.

9.6. Historic Population

9.6.1. Census Area

The Australian Bureau of Statistics (ABS) Census Collection District ('CD') is the area that ABS uses to calculate the population and demographics for an area. As Figure 5 shows, there is one primary CD (yellow line) that encloses nearly all of the existing Village Zone (except for 23 lots on Googodery Road (east of Burrawong Street)) and the majority of the existing Rural Small Holdings areas. It also extends out slightly to the north-east to include some agricultural land. Of the 23 Village Zone lots that are not included in this CD, there are only approximately 4-5 existing dwellings (as at 2010) whose population is not included. Instead, 2-3 existing dwellings in the adjacent rural zone are captured. Therefore, the ABS results for Cumnock are a reasonably accurate measure of the settlement's urban population in both the Village Zone and Rural Small Holdings Zone.

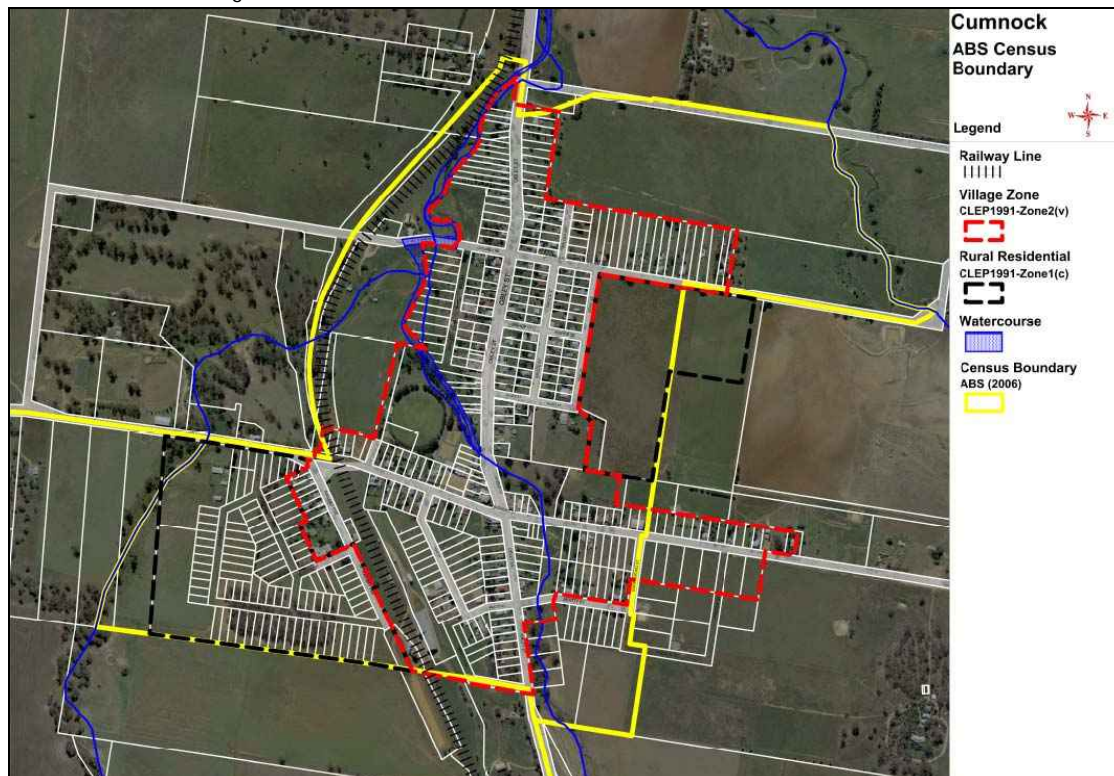


Figure 5: Alignment of the Australian Bureau of Statistics Census Collection Districts in relation to Cumnock's urban zones (Source: Council GIS 2010 using ABS CD boundaries www.abs.gov.au).

Issues & Strategies

Measuring the Catchment: The Cumnock Census Collection District ('CD') includes the majority of the Village Zone and Rural Small Holdings Zones but does not include some of the Village Zone along Googodery Road. Future Census calculations may enable this to be included. This Strategy is based only on the Census figures. This Strategy does not take into account the surrounding rural catchment that utilises Cumnock as its primary service centre.

9.6.2. ABS Census Population of Cumnock

Table 3 shows that the historical ABS population for the Cumnock CD has varied from a low of 236 people in 1986 to a high of 297 people in 1996 and a slight decrease to 288 people in 2006. The average annual population change over time has varied significantly from negative growth periods of -0.9%/year (1976-1986 & 1996-2001) to positive growth rates of +2.6%/year (1986-1996) and +1.3%/year (2001-2006). On average the annual growth rates have been +0.37% (1976-2006) which is higher than many other Cabonne settlements even though the total population has generally stayed in the range of 240 to 300 people over the last 30 years.

Year	Population (Quickstats)	Change	% Change from Previous Period	Average Annual % Change
1976	259	N/A	N/A	N/A
1981	252	-7	-2.70%	-0.54%
1986	236	-16	-6.35%	-1.27%
1991	263	+27	+11.44%	+2.29%
1996	297	+34	+12.93%	+2.59%
2001	270	-27	-9.09%	-1.81%
2006	288	+18	+6.67%	+1.33%
1976-2006		+29	+11.20%	+0.37%
1986-2006		+79	+22.03%	+1.10%
1996-2006		-9	-3.12%	-0.31%

Table 3: Census population counts and population change for the Cumnock Collection District (Source: www.abs.gov.au).

Issues & Strategies

Population Growth Rate: Averaged from 1976-2006, Cumnock has maintained a low to medium growth rate. Whilst this only results in the addition of a few people each year this suggests that Cumnock will have increasing demands for local services and need for local employment and infrastructure. The challenge for Cumnock will be maintaining this growth rate as there have been population decreases between 1981 & 1991 and 1996 & 2001. It will be interesting to see the population in the 2011 Census and how this has responded to recent initiatives to increase the local population including the 'Rent-a-farmhouse' project.

9.7. Summary of Opportunities & Constraints

It is important to try and summarise the potential for Cumnock's population and economic growth in the future. Please note that more detail is provided on each of these issues in the subsequent sections of this Chapter.

9.7.1. Positive Factors

The key **POSITIVE** influences that may assist growth include:

- **Population:** Cumnock has maintained its population over the period from 1976 to 2006 in the range of 240-300 people. This may indicate that the population is likely to remain stable or grow in the future;
- **Proximity to Larger Centres:** The proximity of Cumnock to Molong, Wellington and Orange and its location on a key regional road (Banjo Paterson Way) does provide some limited opportunities for economic growth driven by the larger centres;
- **Tourism:** The retention of a strong heritage and landscape character to Cumnock, its strong community spirit, and its interesting history will create some potential for increased tourism but this may need to be supported by additional tourist infrastructure and activities;
- **Rural Character:** Attraction of the rural character, landscape and village lifestyle with proximity to Molong, Wellington and Orange for employment and higher level services;
- **Rural Employment:** The region around Cumnock has a strong agricultural base of lucerne, wheat, wool and fat lamb production with growth in new areas of viticulture and canola. Agriculture is a key employer for the area;
- **Potential Mineral Resources:** Proximity to the existing O'Briens Pit (road base) and Burrawong Central and Northern Potential Resource Areas (Limestone) may increase employment in the future;
- **Affordability:** Attraction of a reasonable supply of affordable land, particularly with programs such as 'Rent-a-farmhouse' which have been broadly advertised and recognised;
- **Education:** Access to a local primary school which makes it attractive for families with younger children;

- **Recreation:** Access to a good range of recreation facilities including both passive and active recreation areas and sporting facilities, particularly with school sports;
- **Rural Service Centre:** The higher level of rural services meets the needs of a larger catchment that extends throughout most of the southern part of Cabonne;
- **Community Spirit:** Good community associations that can foster community spirit and local solutions to community needs.

9.7.2. Negative Factors

The potential **NEGATIVE** influences on growth include:

- **Proximity to Regional Centres:** Cumnock is well outside the usual 'commuter zone' (25-30 minutes drive) from most major centres such as Orange and Dubbo but may act as an alternative place to live if working in Wellington or Molong;
- **Ageing Population:** With a reasonably high percentage of older citizens there will be significant increased demand for aged care and health services which are not currently provided in Cumnock. There may be some loss of this large segment of the population if they need to relocate to centres with higher level services;
- **Flooding:** There is some limited flooding along Doughboy Creek which does impact on urban areas and may affect property values and development opportunities;
- **Water:** Water is supplied by Cabonne Council from the Bell River. The water supply is only disinfected and is not potable. There are substantial issues with water security, particularly during drought periods. There is no short term solution for provision of a secure potable water supply and this may limit growth;
- **Sewer:** Cumnock does not currently have a centralised sewerage system and is reliant on on-site effluent management systems. This is likely to limit further subdivision below 2,000m² unless there is evidence it can be supported on smaller lots. However, Cumnock is part of the Four-Towns Sewer Scheme and will have a centralised sewerage system constructed shortly that will enable smaller lot sizes;
- **Transport:** There is no Countrylink bus service operating in Cumnock. There is a community transport service operated by Cabonne Council (fortnightly service) and the school bus service (private operators) will pick up public patrons and return to Cumnock during the school term. No services available during the school holiday periods. This may impact on growth in terms of senior living and the requirements of the aged to be able to access regional centres such as Orange;
- **Employment:** With unemployment in 2006 at 11.3% and a heavy reliance on a limited number of key employers including local government, schools, the hospital and the rural sector - this may not be robust enough to survive economic, social and political change which would have a significant impact on economic growth and the population;
- **Industry:** There is no designated area for industry, limited existing industry and challenges attracting new industries to Cumnock which may impact on growth and employment;
- **Retail & Entertainment:** There are limited local retail services / entertainment and range of opportunities, particularly after-hours that may affect tourism and attraction for youth and young families to the area.

Issues & Strategies

Population Growth: In conclusion, the positives for Cumnock tend to outweigh the negatives and suggest that Cumnock has the potential to exhibit low to medium population growth over the next 10 to 30 years within some limited increasing demand for land and/or services. However, there are a number of challenges to growth and land supply that will need to be addressed.

9.8. Projected Future Population

Warning: The estimated population in 2036 is only an estimate based on the factors considered in this chapter and it may be affected by future changes in growth potential.

For all of the above reasons, it is estimated that the projected growth rate for Cumnock is likely to be in the range of 0.3% to 0.7% with an average annual growth of 0.5%.

Table 4 shows how the existing and projected rates of growth for Cumnock fit with other growth rates in the area and the resulting population projections (based on an estimated 2006 population of 288 – including both the Village Zone and Rural Small Holdings Zones).

Range of Potential Average Annual Population Growth Rates	Av. Ann. Growth Rate	Projected Population						Δ in pop. 2006-2036
		2011	2016	2021	2026	2031	2036	
MINOR NEG. GROWTH Projected Growth Cabonne Pt.C	-0.10%	287	285	284	282	281	279	-9
LOW GROWTH	+0.10%	289	291	292	294	295	297	+9
LOW-MEDIUM GROWTH <u>Projected Growth Rate Min.</u>	+0.30%	292	297	301	306	310	315	+27 Minimum
MEDIUM GROWTH ABS 1986-1996 Cabonne <u>Projected Growth Average.</u>	+0.50%	295	303	310	318	326	334	+46 Average
MEDIUM-HIGH GROWTH <u>Projected Growth Rate Max.</u> ABS 1996-2001 Cabonne	+0.70%	298	309	320	331	343	355	+67 Maximum
HIGH GROWTH Cumnock Growth 1986-2006	+1.1%	304	321	339	358	379	400	+112
VERY HIGH GROWTH Orange Commuter Zone	+1.8%	315	344	376	411	450	492	+204

Table 4: Projected population growth for Cumnock based on a variety of growth scenarios.

Issues & Strategies

- **Regular Review:** The growth rate for Cumnock should be reviewed every census period (5 years) to see whether it accords with the estimated rates of growth and, if not, then growth projections and the supply of land may need to be modified.
- **Negative Growth:** There is a low but real possibility that Cumnock may experience a slight negative growth over the next 30 years. However, this has been discounted at this time due to the number of positive growth factors present and recent growth rates.
- **Average Growth:** Assuming an average projected population growth rate for Cumnock at the medium rate of 0.5%/year to 2036 there will be an increase in population of an additional 46 people, resulting in a total population of 334 people.
- **Maximum Growth:** Assuming a maximum projected population growth for Cumnock in the medium-high range of 0.7%/year there will be an increase in population by 2036 of an additional 67 people, resulting in a total population of 355 people.
- **Unsustainable Growth:** If Cumnock were to grow at a very high growth rate above 1.1%/year then this would place great pressures on housing, employment, services, utilities, transport and facilities and is likely to be unsustainable under existing conditions.
- **Supply & Demand:** The estimated increase in population will result in a slight increase in demand for additional housing, employment, services, and facilities.

9.9. Demographics

Warning: The demographic information in this chapter is only valid on the Census night in 2006 and due to the small census population it is subject to significant change over time.

The following provides a short summary of the demographics for Cumnock's Collection District in 2006 that are relevant to this Strategy and/or different from the demographics for Cabonne. Please see [Section 2.6 – Demographics](#) for a comparison of all of the settlements and Cabonne.

- a) **Age:** 20.5% of Cumnock's population were over the age of 65 years of age and 16% of the population was over the aged between 55 and 64 years of age. Therefore, a total of 36.5% of the population are aged 55 or above. The median age of Cumnock was 42 years compared with 41 for Cabonne and 37 years for Australia.
- b) **Labour Force:** 11.3% of the labour force in Cumnock (12 people) were unemployed compared to 3.7% for Cabonne and 5.2% for Australia. 105 people over the age of 15 were not in the labour force.
- c) **Occupation:** 23.4% of employed people were labourers; 19.1% technicians and trades workers; 12.8% sales workers; 10.6% managers; 10.6% machinery operators and drivers; 8.5% professionals; 8.5% community and personal service workers; and 4.3% clerical and administrative workers.
- d) **Employers:** 12.8% were employed in local government & administration; 9.6% in sheep, beef cattle and grain farming; 8.5% in road and freight transport; 8.5% in school education; and 6.4% in hospitals.
- e) **Income:** The median individual income (\$276), median household income (\$534), and median family income (\$668) were slightly less than the Australian averages (\$466, \$1,027, \$1,171 respectively).
- f) **Family Characteristics:** 46.2% were couple families with children (C=45.2%; A=45.3%; 2001=38.4%); 44.9% are couple families without children (C=43.2%; A=37.2%; 2001=45.2%); and 9% are one parent families (C=10.6%; A=15.8%; 2001=16.4%).
- g) **Dwelling Characteristics:** There were 125 private dwellings (of which 111 were occupied) on the night of the census. 96.4% were separate houses and 3.6% were other dwelling types. The average household size was 2.5 people per dwelling (compared to 2.6 in Cabonne and Australia).
- h) **Household Composition:** 67.6% were family households (C=73.4%; A=67.4%); 26.1% were lone person households (C=22.3%; A=22.9%); and 2.7% were group households (C=1.5%; A=3.7%).

Issues & Strategies

- **Age:** With a reasonably high percentage of older citizens and a higher median age than Australia there will be increased pressure and demand for aged care and health services in the future and a corresponding lack of younger aged people to provide economic growth in Cumnock. There are limited local health infrastructure/services and this could result in significant loss of older people away from Cumnock over time.
- **Employment:** At 11.3% the unemployment rate in Cumnock is more than double that of Australia and three times larger than that for Cabonne. A lack of local employment may result in greater dependence on community/social services and less local investment.
- **Income:** Cumnock has a substantially lower median income than the Australian average which may affect slightly affect economic growth and local investment.
- **Family Characteristics:** From 2001 to 2006 there would appear to be an increase in families with children which may result in increased demand for local schools. There is still a significant percentage of one parent families that may require additional assistance and services.

- **Dwelling Characteristics:** The dominance of detached housing combined with an ageing population may indicate a need for greater housing choice in the future with a range of smaller lots and smaller dwellings not met by the current market.
- **Household Composition:** The high percentage of lone person households (26.1%) may reflect the older age but also supports demand for smaller houses in the future.

9.10. Environment & Natural Hazards

9.10.1. Topography

The urban area of Cumnock lies between approximately 500 metres and 540 metres above sea level (Figure 6). Cumnock is located in an area of flat to mildly undulating topography that poses little constraints in terms of development for a range of land uses except where it is close to existing watercourses.

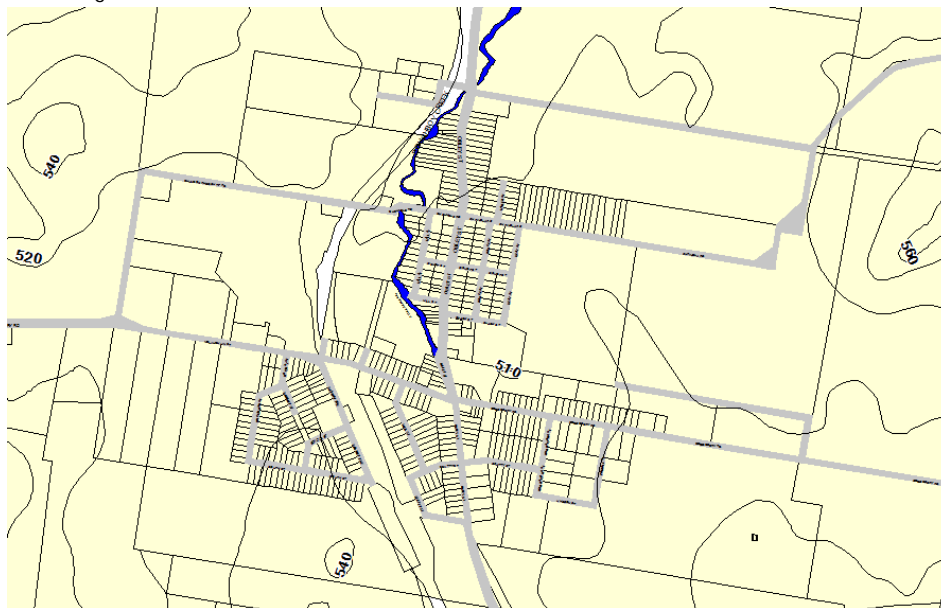


Figure 6: Topography of Cumnock showing contour lines and relative levels at 20m intervals (Source: Council GIS 2011).

Issues & Strategies

Cut and Fill: Where possible, land uses should be located so as to minimise the need for cut and/or fill of land to create a suitable construction site. Sites with any significant slope should be avoided or require larger lot sizes for a wider choice of dwelling/building locations. This may restrict growth of the Village Zone in close proximity to the creek but there are few other constraints as the topography is not steep.

9.10.2. Geology & Mineral Potential

The Department of Primary Industries (as of 2011) has provided Council with a Mineral Resource Audit of Cabonne Shire dated February 2010 (Figure 7). Please note that this is based on existing information and there may be additional mineral resources not identified on this map as there are exploration licences across a significant percentage of Cabonne.

The Mineral Resource Audit shows that whilst there are no areas within the existing Village Zone with identified or potential mineral resources, there are three potential resource areas (Burrawong Northern, Central & Southern Potential Resource Areas) and one existing identified resource (O'Briens Pit). Development to the west of Cumnock along Baldry Road towards the potential resource areas is likely to require a review by the Department of Primary Industries.



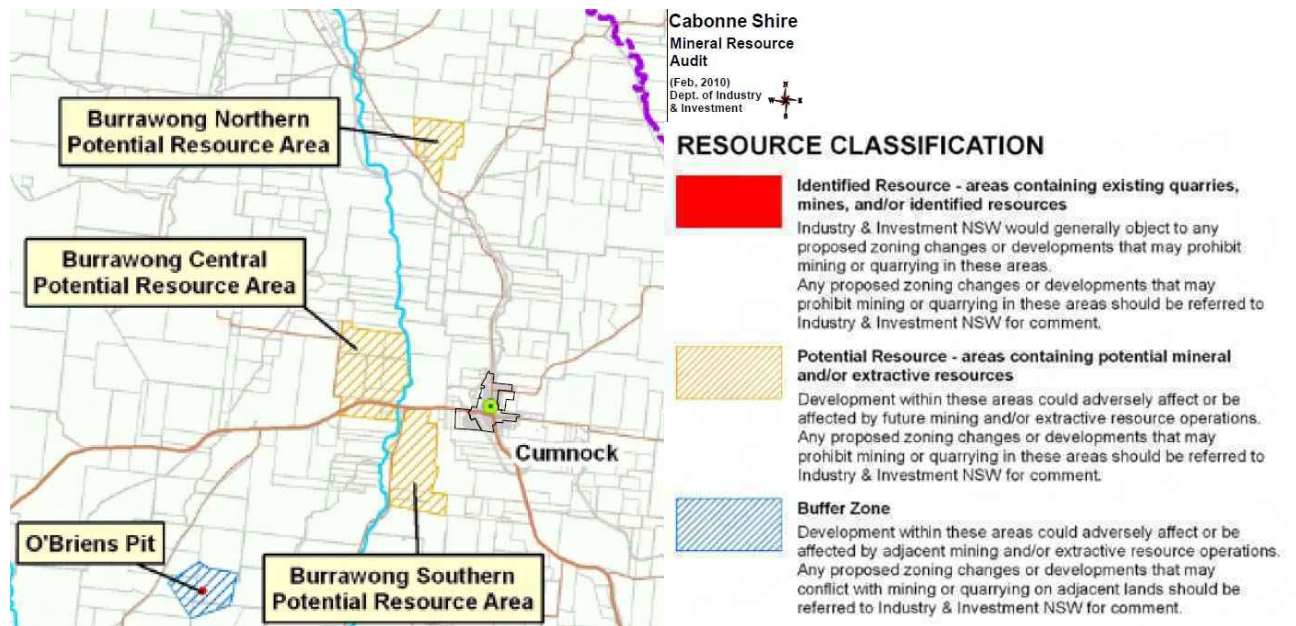


Figure 7: Excerpt of Mineral Resource Audit of Cabonne Shire (Source: DPI, February 2010).

Issues & Strategies

Mineral Potential: There may be some limitations to further intensification of development and growth of Cumnock to the west towards the known potential resource areas. These potential resources may offer future economic growth and employment potential.

9.10.3. Groundwater

Figure 8 illustrates that the majority of Cumnock's urban area is either in a high or moderately high groundwater vulnerability area (as identified by NSW Office of Water).

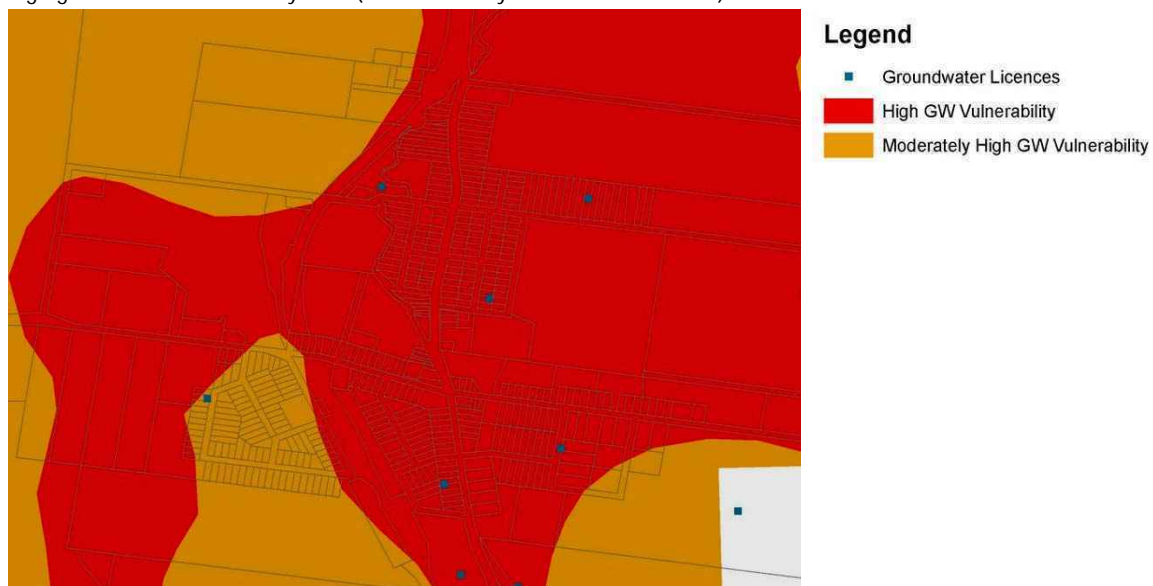


Figure 8: Groundwater vulnerability & licences (Source: NSW Office of Water 2011).

Issues & Strategies

Groundwater Vulnerability: There is either a high or moderately high groundwater vulnerability affecting all of the Cumnock urban areas and therefore Cumnock would not be suitable for land uses with potential for significant contamination of groundwater sources (potentially including heavier industries or intensive animal agriculture). There may also be limitations to growth of large lot residential development that may be reliant on groundwater for a secure water supply.

9.10.4. Watercourses & Flooding

Watercourses

Water management is an important aspect of land use planning. The general aim is to minimise impacts on natural water systems from development and manage local drainage and flooding issues. Biodiversity is addressed in more detail below.

The key watercourses affecting Cumnock's urban area are Doughboy Creek which runs roughly north/south along the western edge of the village and Ironbark Gully which runs off Doughboy Creek down through the recreation ground bisecting the village (Figure 9). In addition, approximately 1.6 kilometres to the west is the Buckenbah Creek.

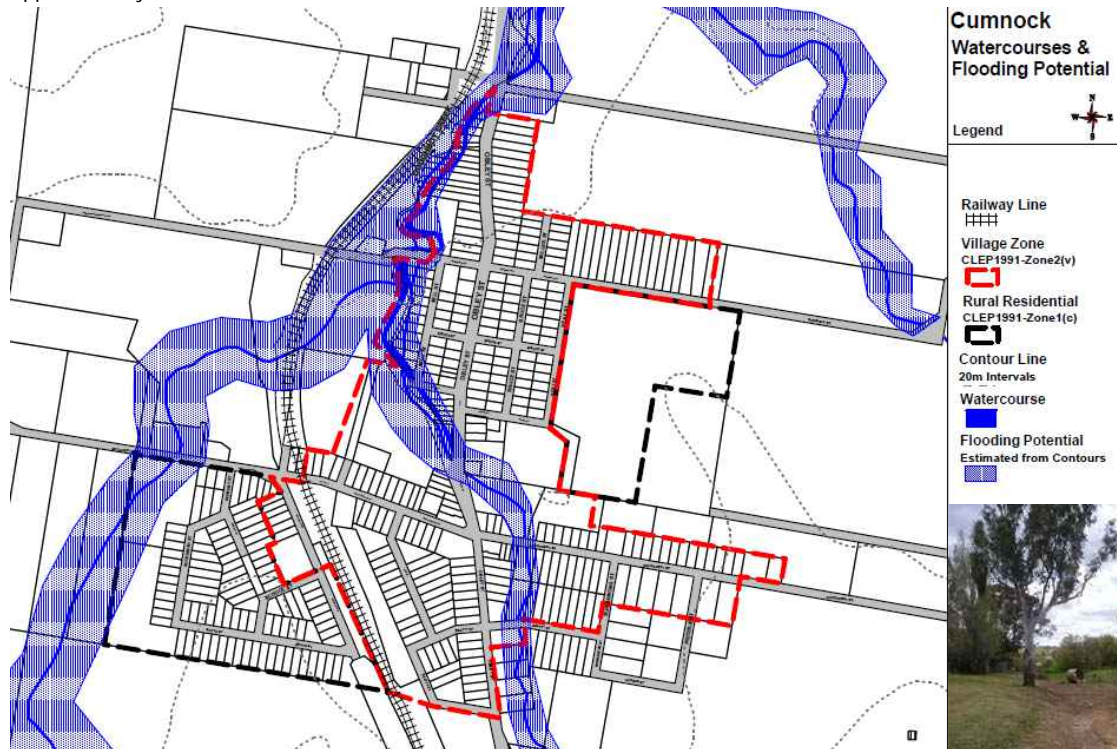


Figure 9: Watercourses and indicative flood prone lands (from contours and historical information)
(Source: Council GIS 2011).

Flooding Issues

No formal flood study has been prepared for Cumnock to date so there is no documented flood planning level for Cumnock. Cumnock does have some land that is considered to be flood liable at the northern end of Obley Street. In an extreme flood event up to three additional dwellings could be at risk of inundations. After heavy rains in November 2005 one house in Cudumple Street was inundated with another being at risk as a result of blocked drains.

The existing Clause 22 of CLEP1991 requires development in flood affected land to demonstrate it is not likely to impede the flood waters, imperil the safety of persons, aggravate the consequences of flood waters, or have an impact on the water table. For this reason it is preferable to exclude all flood liable land when identifying infill development sites or areas for future development.

Issues & Strategies

Flood Prone Lands: There is a potential for flooding along the low-lying areas close to Doughboy Creek and Ironbark Gully that have historically affected urban lands through Cumnock. Areas in close proximity to these watercourses are likely to be less suitable for intensified development and/or more expensive to develop. This may also limit expansion of the village to the north-west.



Cumnock
Watercourses &
Flooding Potential

Legend

- Railway Line
- Village Zone
CLEP1991-Zone2(v)
- Rural Residential
CLEP1991-Zone1(c)
- Contour Line
20m Intervals
- Watercourse
- Flooding Potential
Estimated from Contours



9.10.5. Biodiversity & Vegetation

As Figure 10 shows, there are limited areas within the existing urban boundaries of Cumnock that have any significant biodiversity / vegetation. Most of this is located along Doughboy Creek and Ironbark Gully and may consist of Ecologically Endangered Communities ('EECs'). There is also a significant area of vegetation to the south of the western Rural Small Holdings area that should be protected.



Figure 10: Map of Environmentally Sensitive Areas - Biodiversity for Cumnock and surrounds (Source: DECCW 2008/Council GIS 2011).

A list of threatened, endangered and/or vulnerable species in Cabonne can be found on the website for DECCW. There are no known threatened species and/or endangered ecological communities under the *Threatened Species Conservation Act* in the Village Zone at Cumnock, however, this does not mean that there are not any in existence. Each development application will need to address this issue.

Issues & Strategies

- Ecological Corridors:** There is a need to protect and enhance remaining significant remnant or native vegetation in or around Cumnock. There is also an opportunity to strengthen the ecological connections along the existing creek and drainage lines and connect these to the stands of significant vegetation outside the Village Zone (where possible). There may also be a need to avoid any intensification of development in the stand of significant vegetation at the southern edge of the western Rural Small Holdings area by a change in zoning or other development controls.
- Street Tree Planting:** There is potential to enhance street tree planting in Cumnock. Whilst urban areas do not necessarily require native species in gardens and streets, Cumnock may be suited to native street tree planting.

9.10.6. Bushfire Hazard

There are no bushfire prone lands in or around Cumnock. However, there should still be asset protection zones around existing stands of significant vegetation as described in the section above.

9.11. Access, Transport & Parking

9.11.1. Air Transport

Please see summary in Cabonne Chapter [Section 2.7.1 – Air Transport](#). In general public air transport access is considered low for Cumnock with a 1 hour 10 minute drive to either Orange or Dubbo Airports the nearest available.

9.11.2. Rail

Please see summary in Cabonne Chapter [Section 2.7.2 – Rail](#). Cumnock is located on the Molong to Dubbo railway line (closed). Cumnock station opened on 19 January 1925 and the line was completed through to Dubbo in that year. It was originally used for both passenger and goods transport, particularly for grain. The Molong to Yeoval section of the track was closed on 20 July 1992 though the Yeoval to Dubbo section had already been closed on 25 January 1988 (www.nswrail.net). The line has been severed by the Mitchell Highway just to the north of Molong so it would be difficult to restore. The railway station building has been fenced off but is derelict but the island platform is still present as well as the grain siding and goods platform (www.nswrail.net). As a result there is no passenger or freight rail infrastructure that connects to Cumnock and the nearest passenger station is in Wellington.



Issues & Strategies

Rail Access: The closure of the rail corridor removes the opportunity to utilise the existing line for freight or passenger movements. As the line is already severed by the Mitchell Highway and there is an alternative route via Wellington, this line is likely to remain closed for the foreseeable future. However, there have been discussions about reusing the line as a regional bicycle route.

9.11.3. Road Hierarchy & Vehicle Traffic Impacts

Please see [Section 2.7.3 – Road Hierarchy](#) for more details. The primary north-south road passing through Cumnock is Banjo Paterson Way/Obley Road (MR 234) which becomes Obley Street (Local Road) through the village and connects Cumnock to Molong and Yeoval. In addition there are several significant east-west local roads including Eurimbla/Cudumple Road and Googodery Road/McLaughan Street providing connections to surrounding localities. The remaining roads are generally local roads.



The pattern of local roads in Cumnock generally follows a quasi grid-pattern which assists with navigation except where broken by the railway line, topography and watercourses. Most local roads within the Village Zone are formed and paved but there are some roads that are gravel and/or unformed.

Issues & Strategies

Road Access: Banjo-Paterson Way (Main Road) is the important arterial route and results in heavier vehicles and numbers of traffic passing along Obley Street. This has the benefit of attracting passing tourist traffic but there may be some impact upon residential amenity and safety along the main street. The survey for the Community Plan 2025 indicates that roads are a very important priority (72.40%) to the Cumnock community, particularly due to the need to travel to Molong, Wellington, Orange and Dubbo for higher level services and employment and the potential for tourist traffic.

9.11.4. Bus

Please see [Section 2.7.4 – Bus](#) for more details. Cumnock does not currently have access to any Countrylink or other regular public bus services except for a community bus service between Cumnock and Orange twice monthly. On this basis there is a very low level of public transport accessibility, particularly for those without access to private vehicles and including the



elderly, youth and lower socio-economic groups. In addition there are school bus services that bring children from the surrounding rural areas to Cumnock's primary school and also connect to schools in Molong and Orange.

Issues & Strategies

Bus Access: There is very limited public bus transport available in Cumnock except for community bus services and school bus services. This is a significant constraint to growth and economic activity, particularly for those without regular access to private transport such as the elderly, teenagers, and those in a lower socio-economic bracket. The poor level of bus services may also be impacting on accessibility for tourists to Cumnock, particularly those without private vehicles such as backpackers.

9.11.5. Parking

There were very few community responses in the Community Plan 2025 Survey suggesting that there is insufficient parking in Cumnock so parking does not seem to be a key concern within the Cumnock village. Most business parking would be on-street but some off-street parking may be required if there are larger numbers or sizes of vehicles.



9.11.6. Pedestrian Access

Pedestrian footpaths are provided in Cumnock in the key pedestrianised areas close to the business centre including parts of Obley Street (from McLaughlan to Bishop Street) and along McLaughlan Street (west) and along Railway Parade to the school. A large area of Cumnock does not have fully formed footpaths and these are unlikely to be provided in the short to medium term. Council's Pedestrian Accessibility and Mobility Plan ('PAMP') (see [Section 2.7.5 – Pedestrians](#) for more details) includes, but is not limited to, improvements such as new footpaths, drop kerbs and refuges along parts of McLaughlan Street and Obley Street, Memorial Walk/Public Toilets to a total of \$101,000. There have been no pedestrian crashes recorded in Cumnock from 2002 to 2006.



9.11.7. Cycle Access & Facilities

Council's Bicycle Plan (2005) (see [Section 2.7.6 – Cycling](#) for more details) recommends improved connections from the school to the pool/sports oval; a clear pedestrian crossing from the park to the shops; and development of the Banjo Paterson Trail linking Molong, Cumnock and Yeoval. The proposed program includes new cycle links from the School to the Pool/Sports Oval and may include a Golf Course circuit in the future and the re-use of the closed railway corridor to commence a regional cycleway. The cycleway from McLaughlan Street to Obley Street via Park Street has been completed.



9.12. Utilities & Infrastructure

9.12.1. Water Supply

Cumnock is supplied by Cabonne Council via the Bell River. This water is only disinfected and is not a potable water supply. The water is pumped from the Bell River Weir, via a rising main, into a 23 megalitre turkey nest storage dam located to the east of the village and then reticulated back through the town. All new dwellings are required to have an on site rainwater tank to supplement this water source.

The *CENTROC Water Security Study* (Aug 2009) identifies Cumnock as requiring a water security improvement. CENTROC recommended that new minor storage and water treatment facilities. Cabonne Council has requested that Central Tablelands Water ('CTW') consider incorporating Cumnock into the CTW supply system but there is no current proposal to connect Cumnock to this network at this time. There are concerns by local residents that the water charges are very high, probably due to the high cost of pumping water from the Bell River over a long distance.

Issues & Strategies

Water Supply & Security: A key constraint to the growth of Cumnock is the lack of a secure potable water source and the high cost of pumping water from the Bell River. Whilst this issue has been clearly identified in the 2010 CENTROC Report, no solution has been agreed and budgeted to-date. It is unlikely in the short to medium term (5-10 years) that there will be any connection to Central Tablelands Water provided to Cumnock.



9.12.2. Stormwater & Drainage

Kerb and gutters are not provided to all of the streets within the Cumnock Village Zone but are limited primarily to Obley Street (between Eurimbla Road and Beatty Street), the southern side of McLaughlan Street, and the western side of Railway Parade (generally correlating to where there are pedestrian footpaths). The remaining streets utilise grass swales for drainage, except for the odd under-road pipe for cross street drainage. Drainage and flooding issues are dealt with in more detail in [Section 9.10.4 – Watercourses & Flooding](#).



Issues & Strategies

Stormwater & Drainage: There are no known significant drainage issues noted in this Strategy. Council should review whether there are any stormwater or drainage issues that require further stormwater works in Cumnock. Full kerb and guttering of Cumnock's streets is unlikely in the foreseeable future.



9.12.3. Sewerage

Cumnock is not currently provided with a centralised reticulated sewerage system so each property must rely on on-site effluent management systems. However, Cumnock has been identified as part of the Four-Towns Sewerage Scheme to have a reticulated system and this is currently under design and construction.

Preliminary investigations for the sewerage scheme have been completed including investigation and design. Land has been purchased adjacent to the waste depot on the Baldry Road (~2km from Cumnock) for the Sewage Treatment Plant ('STP'). It will be a low pressure system that will allow for current village population plus 20% growth. No water recycling will be provided due to cost of extra piping and pumping. All dwellings will be required to be connected to this new system and no longer can rely on on-site sewerage management schemes (such as standard septic systems) within the Village Zone.

The proposed Cumnock Sewerage Treatment Plant ('STP') has a design loading of 365 to 370 Equivalent Persons ('EP') (Source: Letter from Council to Dept. of Water & Energy dated 23/24 October 2007) with an estimated growth for design life of 75 EP.

Comparing this to **Section 9.8 – Projected Future Population** it can be seen that the current STP would have the capacity to allow for up to between +0.5% to 0.7% population growth per year up until the year 2036 (a total population of 334 to 355 people) which is consistent with the maximum growth projections of this Strategy for Cumnock. Therefore, the current STP may need to be expanded shortly after the year 2036. However, it is important to note that there is not sufficient land capacity within the current STP site to allow expansion without purchase of additional lands.

Residents have raised concerns that due to the lack of a secure water supply (see above) that the new system should seek to recycle water from the sewerage system. However, there is a high cost associated with treating and pumping water back to Cumnock from the proposed STP. Alternative sites may not be suitable.

Until the reticulated scheme is operational each new development will need to ensure that the subject lot can support an on-site effluent management system in accordance with Council's controls and policies. This may often result in the need for larger lot sizes, particularly where a standard septic system with absorption trench is utilised up to 2,000m² in area. However, once the new centralised sewerage system is in place and lots are connected, this will no longer be a major constraint on minimum lot size and a smaller lot size may be suitable for subdivision.

Issues & Strategies

- **On Site Management & Lot Size:** Whilst development is reliant on on-site effluent management there will be a minimum lot size that will be dependent on the size of the development, the system, and the geo-technical characteristics of each site. There may be potential to reduce this minimum lot size once the reticulated system is introduced.
- **Sewerage Constraints on Growth:** Preliminary calculations would suggest that the new reticulated system will allow up to 20% growth in population (an additional 58 people up to a new population of 346 people). If a maximum growth scenario results (+0.7%/year) then the population will not exceed this number for 25-30 years.
- **Impacts on Growth:** In the period up to the new sewerage system introduction development may be constrained because applicants do not want to have to pay for an on-site system and then have to pay for the new reticulated system and connection.

9.12.4. Electricity

As Figure 11 shows, access to electricity lines is readily available along most of the key streets in Cumnock's Village Zone and most major streets in the Rural Small Holdings areas except for the issues noted below.

Issues & Strategies

Electricity Access: Electricity access is not known to be a significant constraint to growth in Cumnock. However, there may be substantial costs with extending the electricity network to the two Rural Small Holding / large lot residential areas surrounding Cumnock that may constrain development in these areas. Significant growth may also have implications for the capacity of the local network, particularly if there are large energy consumers such as some industrial land uses. Based on the fact that there is only low voltage electricity network in Cumnock this would not make it ideal for larger-scale industrial uses that need access to higher voltage networks or are high energy consumers/producers. This may limit the growth of industrial uses in Cumnock.

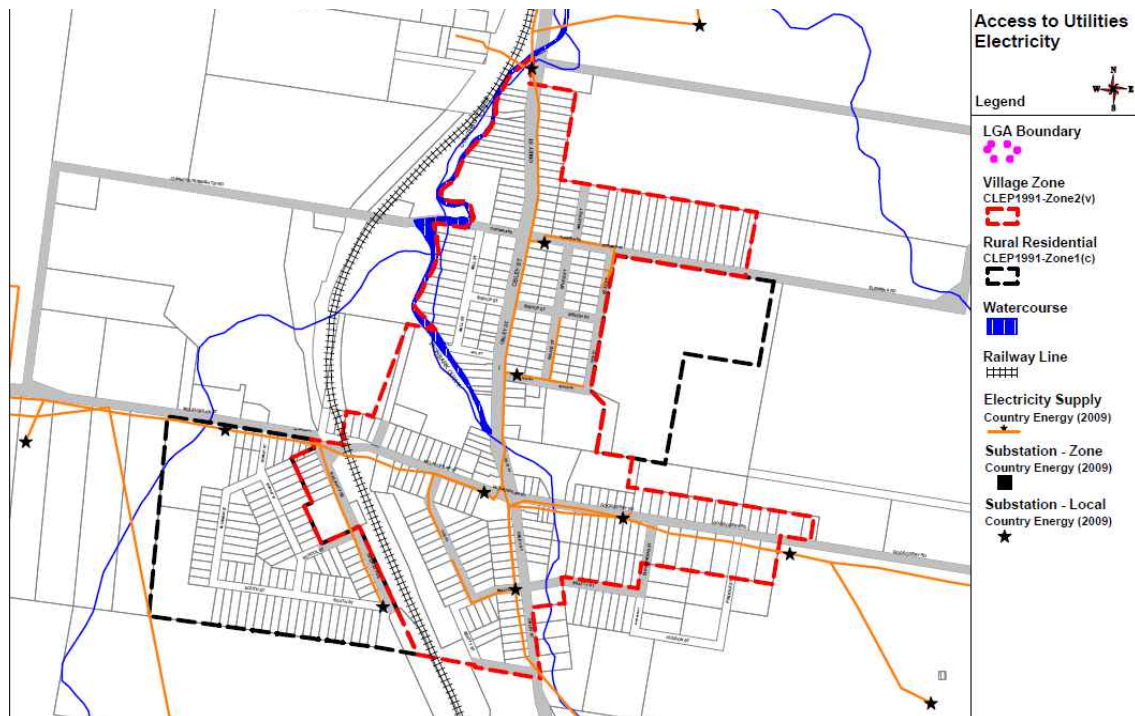


Figure 11: Location of electricity supply lines (orange) and substations (stars) in Cumnock (Source: GIS file from Country Energy (2009) – not confirmed as accurate).

9.12.5. Telecommunications

Please see [Section 2.8.5 – Telecommunications](#) for a review of access to fixed, mobile and broadband telecommunication services in Cumnock and across Cabonne's settlements.

Issues & Strategies

Telecommunications: In general there are reasonable levels of telecommunication access in Cumnock that should support limited growth of business, industrial and residential needs but a more detailed study is required. Improvements in internet access speeds (ADSL2+) and mobile reception may improve opportunities for business and residential growth. Cumnock may receive the benefits of wireless high speed internet access under the National Broadband Network in the next 5-10 years but this requires further review.

9.12.6. Waste Management

Please see [Section 2.8.6 – Waste Management](#) for a review of access to waste management services in Canowindra and across Cabonne's settlements. The Cumnock waste depot is located approximately 2.7 kilometres west of Cumnock on the Baldry Road. This depot has the facilities for recycling, bulk materials storage and processing and landfill facilities.

Issues & Strategies

Waste Management: The Cumnock waste depot has an estimated lifespan of ~2.2 years with current compaction methods. It is likely that this landfill will be closed in the next few years and waste will need to be transferred to Manildra. This is unlikely to affect the growth of Cumnock but may affect the sustainability of any substantial increases in development. However, it is also expensive and has environmental effects to operate a number of small landfill sites so consolidation may be more effective.



9.13. Heritage

9.13.1. Heritage Items

Currently under CLEP1991 there are only six (6) listed heritage items for Cumnock, some of which are outside the urban area. Key urban items include Bruce Memorial Church, Bruce Street; the building at the corner of Obley & Black Streets; and the former CBC Bank, Obley Street. As a result, there are also a number of important buildings that do not have the protection of heritage listing under the LEP.

Council is currently finalising the *Community Heritage Study* building upon work that was conducted in 2003 and 2006. There are 25-30 items of heritage interest listed in the Cumnock Village Zone in the 2003 Draft Inventory that may be considered for listing as future heritage items. At the time of writing, there were twenty (20) proposed items recommended for immediate listing in the LEP but this will be finalised as part of the Heritage Study and new LEP. This is a significant increase in items identified for heritage protection but may increase with further review of items in the heritage study inventory.

9.13.2. Heritage Conservation Area

Cumnock does not currently have a heritage conservation area in CLEP 1991. In addition, the National Trust of Australia has recommended an Urban Conservation Area for Cumnock in 1982 (see Figure 12). This recommendation is currently under review by the National Trust.

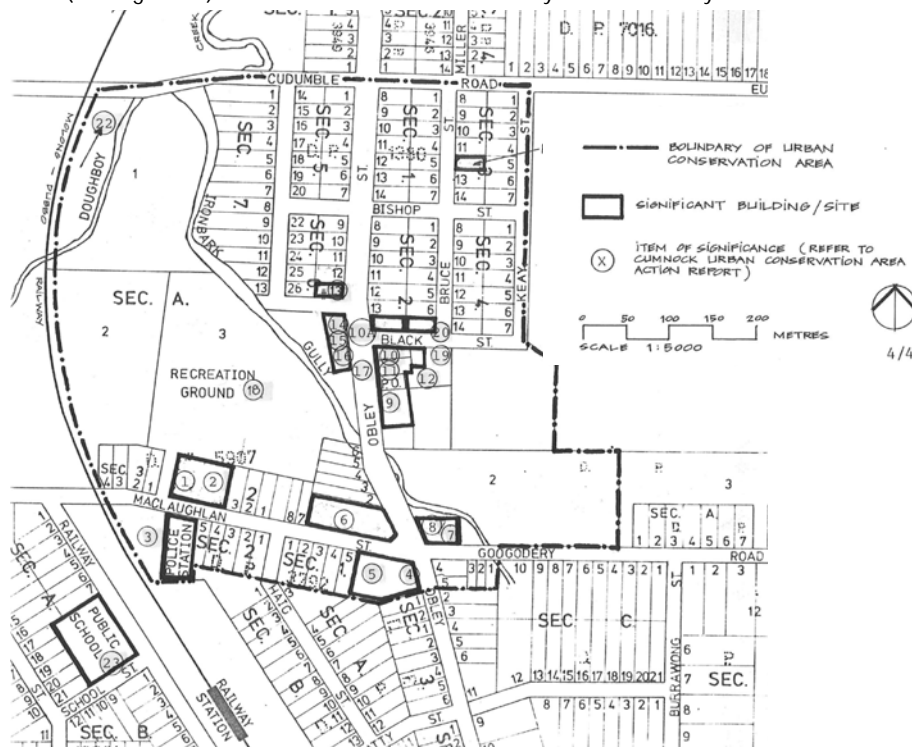


Figure 12: National Trust Classification Card showing potential heritage items and heritage urban conservation area (Source: National Trust April 1982).

Issues & Strategies

Heritage Conservation Area: This Strategy does not suggest a need to create a new heritage conservation area for Cumnock based on the National Trust urban conservation area but does believe that the streetscapes in these areas should be given added consideration for any new development to ensure it is sensitive to this important area. This will be further investigated as part of the Community Heritage Study.



9.14. Summary of Existing Land Uses (Village Zone & Rural Small Holdings)

A summary of the existing land uses within both the Village Zone and Rural Small Holdings Zones of Cumnock is shown in Figure 13 and Table 5 and Table 6.



Figure 13: Location of key land uses in Cumnock (as at July 2010).

Existing Village Zone

Land Use	No. Lots	% of VZ Lots	Description
Total Lots – Village Zone	346		Includes Crown land & open space
Vacant Lots	165	47.7%	No existing dwelling or business on lot
Residential Land Use Lots	138	39.9%	Mostly detached housing except aged care housing
Business Land Use Lots	14	4.0%	Mostly retail & tourism services
Industrial Land Use Lots	8	2.3%	Utilised lots within an existing industrial area
Community Land Use Lots	18	5.2%	Health, Religious, Community, Emergency, Tourism etc
Open Space & Recreation	3	0.9%	Parks, Reserves & Crown land

Table 5: Summary of key land uses in Cumnock's Village Zone (as at July 2010).

Existing Rural Small Holdings Zone

Land Use	West		East		Description
	No. Lots	% of Lots	No. Lots	% of Lots	
Total Lots	104	--	1	--	Mostly vacant agricultural land
Vacant Lots	92	88.5%	1	100%	No existing dwelling or business
Dwelling Lots	1	0.9%	0	0	Detached housing
Community	10	9.6%	0	0	

Table 6: Summary of key land uses in Cumnock's Rural Small Holdings Zones (as at July 2010).

Issues & Strategies

- **Supply & Demand:** The aim of this Strategy is to review the supply of land for each land use in the urban area of each settlement and determine the estimated future demand for each land use to ensure there is sufficient supply of urban land for the growth of the settlement.
- **Residential Demand:** Residential land uses are the greatest consumer of Village Zoned land and take up 39.9% of the Village Zone Lots.
- **Vacant Infill Development:** A significant proportion of existing total Village Zoned lots are currently vacant (47.7%) and may be able to support some of the additional growth of this settlement, subject to these lots being suitable for development.
- **Land Use Areas:** This Strategy seeks to identify appropriate areas in Cumnock for specific land uses such as industry, business, residential, open space and recreation, and environmental outcomes that seek to minimise land use conflicts and maximise accessibility.



9.15. Open Space & Recreation

9.15.1. Open Space & Recreation

There are several existing open space and recreation areas in Cumnock as follows:

- Cumnock Memorial Park** includes a sportsground, swimming pool, and tennis courts (and also includes the Cumnock Community Centre and Bowling Club). The sportsground provides a ground for cricket, football and a range of other sports. There is also a small park off Obley Street that includes a toilet block and BBQ facility (Approximate total area 5 hectares including community land uses).
- Cumnock Showground** (Outside Village Zone) includes an area for shows, horse sports, pony club, and festivals. It includes a rodeo / camp-drafting arena, yards, and associated facilities (Approximate total area 10.8 hectares – Owner: Cumnock Show Society).
- Cumnock Golf Course**, Baldry Road (Outside Village Zone) is a nine-hole semi-private golf course. It includes land owned by a private land holder (~21.75ha), Crown land (~3.22ha), and land owned by the Cumnock Golf Club (~0.27ha).
- Cumnock Cemetery**, Cemetery Road (off Obley Road - Outside Village Zone) includes a Memorial Garden and Rotunda.

Issues & Strategies

Open Space: There is reasonably good level of open space per person in Cumnock and a range of recreational opportunities (both passive and active) for the current population. No changes are proposed or needed at this time. However, there would appear to be a need for upgrades and repairs to a range of existing facilities to improve their usage.

9.16. Vacant Land

Vacant lots are important as they can provide the potential for infill development within the existing Village Zone that may take up some of the projected future growth of each settlement.

9.16.1. Total Vacant Lots and Development Constraints

A vacant lot is any lot that does not contain any significant building (dwelling or business - active or vacant) and may be capable of supporting a dwelling. However, it may contain ancillary sheds, garages, gardens or septic systems on these lots and these lots may be held by an adjacent non-vacant lot. Figure 14 shows that there are approximately 165 total vacant lots in the Village Zone and 93 vacant lots in the Rural Small Holdings Zones in Cumnock.

However, this Strategy recognises that sometimes the historic pattern of subdivision has not taken into account the natural hazards or topography that may prevent a lot from being developed. Figure 14 shows that there are 51 vacant lots in the Village Zone and 23 vacant lots in the Rural Small Holdings Zones that may be difficult or costly to develop due to a range of constraints including, but not limited to, flood prone land, lack of road access, lot size or slope, significant vegetation / biodiversity or existing development on the lot. In addition, in the western Rural Small Holding Zone it is assumed that 4,000m² would be required to support a dwelling so another 33 lots would not be developable.

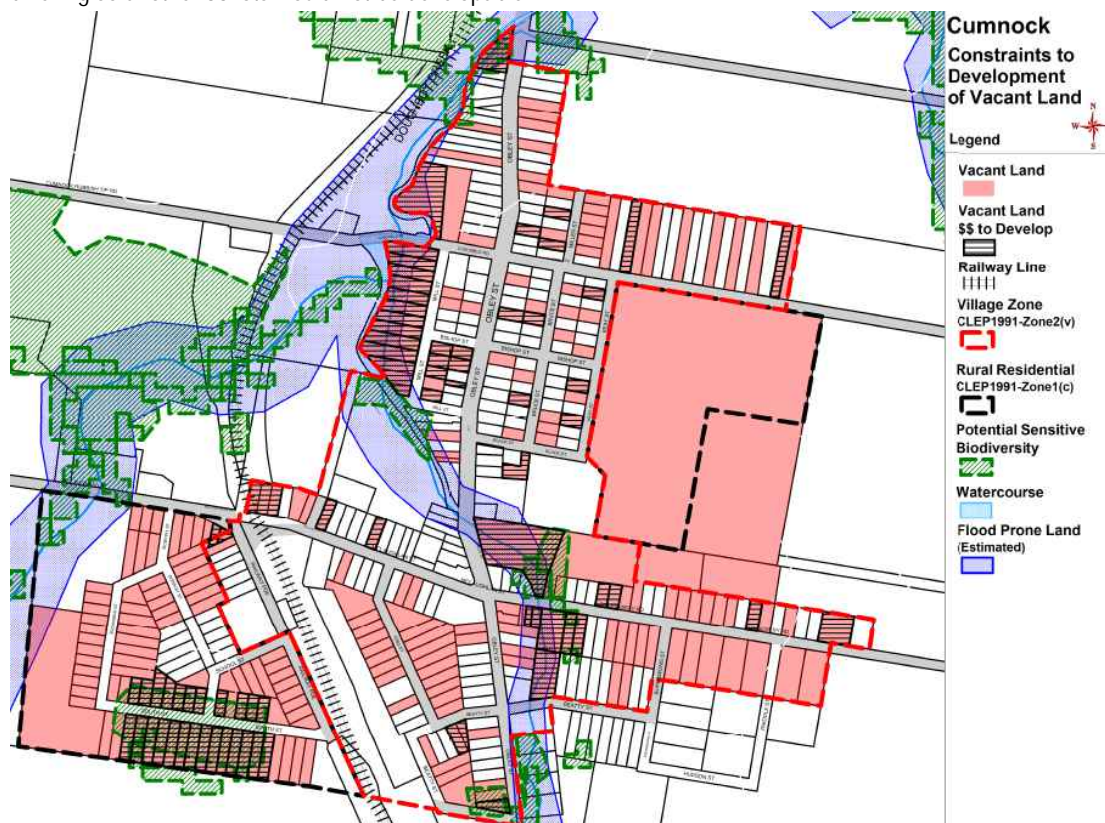


Figure 14: Vacant allotments and those affected by constraints to development in Cumnock (as at 2010) (from aerial photo and brief street analysis).

Zone	Total Vacant Lots	Constrained Vacant Lots	Developable Vacant Lots
Village Zone	165	51	114
Rural Small Holdings Zone	93	56	37
TOTAL	258	107	151

Table 7: Summary of vacant allotments with/without constraints to development in Cumnock (as at 2010).

As a result, there are 114 vacant lots in the Village Zone and 37 vacant lots in the Rural Small Holdings Zones that may have the potential to support a dwelling (subject to detailed studies and consent) (Table 7). As these lots already have their own titles they could be sold any time.

Historical records suggest that in 1980 there were approximately 117 vacant lots & in 1989 there were approximately 108 vacant lots in the Village Zone with dwelling potential of which about 30 are swampy and about 30 are small (<1,000m²) and have septic difficulties (*Cumnock Village and Environs Draft Notes* (November 1989)). Therefore, there has not been a significant take-up of vacant land in the last 20-30 years for new dwellings.

9.16.2. Likelihood of Development of Vacant Lots

It is important to note that the community often claims that some of these vacant lots should not be counted for the purposes of infill development because the current owners are not interested in selling.

However, this Settlement Strategy is looking to review land supply over the next 30 years and whilst the existing landholders may be reticent to make land available that could be expected to change over these lengths of time, particularly as land prices rise and people no longer need larger lots.

Council can only make a 'guesstimate' of what percentage of lots may become available for sale or development. Therefore, Council is proposing a very conservative estimate of 50% possible available vacant lots is a reasonable percentage over a 30 year period in Cumnock.

9.16.3. Development Potential of Vacant Land (Village Zone)

This Strategy seeks to look at development potential for the next 30 years for Cumnock. Whilst Cumnock does not currently have a centralised sewerage system one is proposed to be constructed within the next few years. This will remove one of the key constraints to minimum lot size to support a dwelling.

Whilst lots as small as 300m² could theoretically support a dwelling with centralised sewerage, this Strategy assumes that an appropriate minimum lot size that is consistent with the character and growth rate of Cumnock would be 900-1000m² lots in the Village Zone.

Therefore, all lots between 900m² and 2,000m² are counted as 'small vacant lots' that could support at least a single dwelling. In Cumnock, there are approximately 104 small vacant lots (out of 114 total developable lots) with potential for redevelopment. If only 50% of these are redeveloped then approximately 52 lots may support a dwelling in the future.

Any lots greater than 2,000m² may be capable of further future subdivision. There are approximately 10 lots in Cumnock's Village Zone that may be capable of subdivision and this Strategy estimates that they may be capable of producing up to 21 new dwelling lots. If only 50% of these are redeveloped then approximately 10 lots may support a dwelling in the future.

Therefore, as Table 8 shows, there is a potential for a total of 125 future lots in Cumnock but applying the 50% rule suggests that only 62 new lots are likely to result in the next 30 years (if demand is present).

Village Zone	Existing Lots	Potential Lots	50% Rule
Small Vacant Lots	104	104	52
Lots with Subdivision Potential	10	21	10
TOTAL	114	125	62

Table 8: Potential future lots/dwellings in the Village Zone by the year 2036.

9.16.4. Development Potential of Vacant Land (Rural Small Holdings Zone)

In the Rural Small Holdings Areas it is not appropriate to merely look at vacant land as there may be other constraints. For example, in the western area there are lots as small as 1,000m² that were subdivided in 1925 as part of the original village. However, the vast majority of these lots have not been developed and they are now located in a Rural Small Holdings Zone where lots of 4,000m² or greater are generally expected.

In addition, the market is less likely to support small rural residential blocks and it may be estimated that the large lot residential lot size in the future would vary between 4,000m² and 2 hectares per lot. If an average of 1 hectare / lot is adopted then this would potentially produce 35 new dwelling lots. If only 50% of these are developed then an additional 18 dwellings would result.

Large Lot Residential Area	Area	Potential Lots@4,000m ²	Potential Lots@1ha	Potential Lots@2ha
West	~22ha	~55 Lots	~22 Lots	~11 Lots
East	~13ha	~33 Lots	~13 Lots	~7 Lots
TOTAL	~35ha	~88 Lots	~35 Lots	~18 Lots
50% Rule	--	~44 Dwellings	~18 Dwellings	~9 Dwellings

Table 9: Potential future lots/dwellings in the Rural Small Holdings Zones based on different average lot sizes.

9.16.5. Total Potential Supply of New Lots

Therefore, based on the above methodology the total potential lots that is likely to be redeveloped (assuming that each has a single dwelling) would be 80 lots / dwellings over the next 30 years (from 2006 to 2036) as summarised in Table 10.

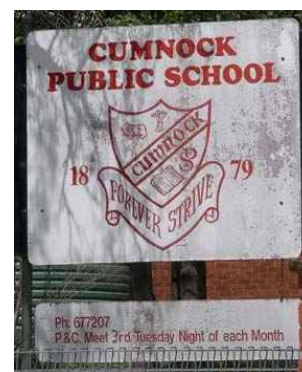
Source of New Lots for Dwellings	Vacant Lots with Development Potential	Likely Number to be Available in next 30 years (50% Rule)
Village Zone	125	62
Rural Small Holdings Zones	35	18
TOTAL	160 Lots	80 Lots/Dwellings

Table 10: Summary of total potential lot / dwelling yield in Cumnock over the next 30 years (subject to demand and supply).

9.17. Community Land Uses

Figure 13 shows the location of the key community land uses in Cumnock. For the purposes of this Strategy, 'community uses' are defined as buildings, services, facilities and infrastructure that are not-for-profit and/or support the local community.

As stated in [Chapter 2 - Cabonne Overview](#), community uses are permitted in a broad range of zones and, therefore, there is no need for a detailed analysis of supply and demand of land for these uses. However, community uses are often a vital service for the community and provide employment and social and economic support and growth. A more detailed review of access to community services for all of Cabonne's settlements is provided in [Section 2.10 – Services & Facilities](#).



9.18. Business Land Uses

Warning: Please note that services / facilities change regularly and this section merely provide a 'snapshot' of key services / facilities to assess issues in each settlement in 2010/11.

9.18.1. Existing Retail / Commercial Businesses (2010)

As Figure 13 shows, the majority of the existing businesses are located along Obley Street and Googodery Road. In 2010, essential services were primarily provided at the Thrifty Link Store (31 Obley Street) which incorporated a post office; banking facilities & EFTPOS; hardware and building supplies store; gas/fuel and service station; takeaway shop; newsagent; and pharmacy.

Cumnock also acts as a rural supplies centre for the surrounding rural areas with a local Ag N Vet Agricultural Supplies on Obley Street. The only local professional service is RJ & TM Maunder, Stock & Station agent/auctioneer. There are no retail clothing stores in Cumnock. There are also no specialist home-ware, art/craft, antique or plant nursery shops.

Issues & Strategies

Business Services: Cumnock has a limited range of business (retail/commercial) services that is suited to its population size and servicing the surrounding rural areas. However, there has been a loss of local businesses over the last 30 years (as with most smaller settlements) and an increased reliance on larger centres for higher level services. Cumnock is extremely dependent on co-location of services into single operations such as the Thrifty Link Store. It is vital that these stores and the essential services are retained locally to support growth.

9.18.2. Existing Tourism Facilities

Cumnock's attractions lie in its heritage buildings and streetscapes, its public art, its community spirit and key yearly events, as well as some surrounding attractions such as Hoppers Hill Winery, nearby Yeoval, and the Animals on Bikes route.

The community has spent a lot of time, money and energy on making Cumnock an attractive place to visit including 'The Happy Poles of Cumnock' (vibrantly painted telegraph poles in main street) and the 'Animals on Bikes' route from Molong to Dubbo (45 creative 2 metre high sculptures). It also has several yearly events at the showground and in association with nearby Yeoval that attract visitors to the area and it has the Cumnock Golf Club for recreation.

The primary accommodation in Cumnock is the Cumnock Royal Hotel. There is also an informal camping ground provided at the Cumnock Showground where electricity connections are provided. This provides significant limitations to the size of event that can be held locally and retaining visitors overnight. Supporting tourism services include a limited range of takeaway and food/beverages at the Thrifty Link Store, Cumnock Royal Hotel, Cumnock Bowling Club - T.C's Bistro (Thurs/Fri/Sat/Sun) eat in and takeaway, and Lou's/Cookies Café / Take-Away.

Issues & Strategies

- Tourism Attractions:** Cumnock has only a limited range of attractions and these are predominantly targeted at the capturing passing tourists on the Molong to Dubbo or Parkes Route and limited to short stays or passing visits. Therefore, it is important that Cumnock leverage off passing tourism traffic and its character and events for peak periods. Previous community workshops have recognised the need to have tourism attractions with presence to get people to stop in Cumnock and improved tourism support services (more than just a place to eat and a toilet stop). However, Cumnock has certainly been more successful than some settlements in utilising its community spirit to create a clear sense of identity and attraction through programs such as 'Animals on Bikes'.



- **Tourist Accommodation:** Due to a number of tourists passing through with their own mobile home / camping set-ups there may be a need for improved camping and caravanning facilities. Whilst the Showground meets some of this need it is located away from services in the village. There have been queries about the potential for limited mobile home places with electricity in the park on Obley Street. There is also a need for improved signage for the showground camping facilities. This may also be assisted by getting a sewage waste disposal site in Cumnock for mobile homes through funding from the Motor Homes Association.

9.18.3. Proposed Business Land Uses

Business land uses will generally be permissible under the new Standard LEP Template in the Village Zone (or its equivalent) which is likely to be retained for Cumnock. Due to Cumnock's limited size, growth and area of business land uses - there is no need to provide a specific zone for business land uses in the proposed new LEP.

Whilst the proposed Village Zone will provide flexibility for local retail and commercial businesses to grow in Cumnock there should be some attempt to consolidate stand-alone businesses along Obley Street between Googodery Road and Black Street, where possible to reinforce the character of Cumnock's central business area and minimise conflicts with residential areas.

This defined 'business' area would hopefully result in adaptive re-use of existing vacant buildings and restoration of original business premises for this purpose to provide an area of higher activity that will assist in attracting passing tourist trade and business and restore these existing premises to contribute to the streetscape.

Historically there has been a falling demand for new businesses in Cumnock and there has been regular opening and closing of existing businesses. However, future demand for business growth may be estimated to allow for a new business opening every 5 or so years. Therefore, there is not a high level of demand for large areas of business land.

Issues & Strategies

Business Land Supply & Demand: There are sufficient vacant businesses / lots to support a growth of a new business every few years for the foreseeable future. In addition, home businesses with lower impacts are likely to be supportable across the village area.



9.19. Industrial Land Uses

9.19.1. Existing Industrial Land Uses

There are several low scale businesses that may be classified as 'industrial' uses or heavier impact than retail/commercial businesses in Cumnock as follows (note this does not include any home businesses):

- GrainCorp – grain storage facility, Railway Parade;
- Cumnock Engineering – sheet metal and steel fabrication and welding, Obley Street;
- Dave Coles Transport – truck transport operation;
- Hogan's Transport – truck transport operation, Obley Street;
- Cabonne Council Depot, Haig Street;
- Bundella Group – design, supply and installation of commercial kitchens and cool rooms, Googodery Road.

Issues & Strategies

Industrial Services & Employment: There is a limited range of light industrial uses and employment generally associated with rural uses, transport and vehicle repair. It is interesting to note that Bundella Group has set up a fabrication shed in Cumnock, perhaps as a result of a lack of suitable industrial land in Molong.

9.19.2. Demand for Industrial Areas

The key benefit of creating an industrial area is that it can be located and designed to minimise land use conflicts, particularly with regards to sensitive residential land uses. It also should provide for expansion of industrial uses without any additional impact.

The current Village Zone makes this difficult because industrial uses are theoretically permissible anywhere in the zone, subject to addressing key issues. This provides no certainty to someone buying a sensitive land uses - such as a dwelling – that an industrial land use may be placed adjacent or near to that use. There has never been an Industrial 'Zone' under CLEP1991.

Whilst Cumnock has some light industrial uses such as Bundella Group and trucking operations at Hogans, there is not estimated to be a large demand for industrial lands in Cumnock due to economic and physical constraints to attract new industries to the area. This includes distance to the Mitchell Highway, lack of an operating rail line, lack of infrastructure and utilities (particularly water and high voltage electricity), and competition with other preferred industrial areas in the region. For this reason, the Rural & Industrial Strategy has not classified Cumnock as a suitable location for larger-scale or heavier industries in Cabonne.

Whilst the proposed Village Zone will provide flexibility for home industry and some light industries to grow in Cumnock where they can address issues of land use conflict with residential uses, it would be more ideal if future light industrial uses were located in an area where land use conflicts could be minimised and industrial uses could be co-located.

Issues and Strategies

Industrial Land Demand: There is not estimated to be a large demand for industrial lands in Cumnock due to economic and physical constraints to attract new industries to the area. However, it is estimated that small local industries may require 2,000m² to 4,000m² of land every 5 or more years for new operations.



9.19.3. Potential Industrial Areas

One such potential area is along Haig Street adjacent to the railway corridor where the land is relatively flat, there are few dwellings, and there is a good setback to existing residential areas. A significant number of lots are held by 2-3 land owners and there is good access to Obley Street via Haig or McLaughlan Streets. This area is also less visible from Obley Street so there would be less visual impact on the main tourist route.

Another location for consideration would be along Googodery Road between Obley Street and the unformed Priddle Street. However, this area has a much higher potential for existing and future land use conflicts with dwellings in the area.

Issues and Strategies

Proposed Industrial Areas: It is not the intent of this Strategy that an area is zoned for industrial use in any LEP but future applications for industrial uses should take into consideration these factors and this Strategy and seek to minimise land use conflicts with sensitive land uses.



9.20. Residential Land Uses (Village Zone & Rural Small Holdings)

9.20.1. Existing Residential Character

Number of Dwellings / Occupancy Rate

As of December 2009, there were 138 lots used for dwellings in Cumnock's Village Zone (39.9% of the total lots - with an estimate of 125 dwellings) plus a handful of dwellings in Cumnock's two Rural Small Holding Areas (according to a count from aerial photo and street analysis). This is consistent with the ABS 2006 Census (Quickstats) that recorded 125 private dwellings in the Census Collection District with 14 vacant private dwellings (11.2% of total private dwellings) and 111 occupied private dwellings. The average household size in 2006 was 2.5 people per dwelling compared to 2.6 in Cabonne and Australia even though 29 (22.9%) of households were lone person households.

Dwelling Types

Whilst there are some examples of dwellings from the late 1800s, most of the existing housing stock is from the mid to late 1900s. Newer housing is interspersed with some of the older housing stock. Some housing is reaching the end of its life and will need to be replaced where it is not nominated as a heritage item. The dominant dwelling type in Cumnock is the detached or separate dwelling (96.4%). Cumnock also has a limited number of other dwelling types (4 or 3.6%).

Lot Sizes

As stated in **Section 9.5 – Settlement Pattern**, the majority of lots in the Village Zone range from 900m² to 1,300m² generally with 20 metre frontages. There are also a number of medium sized lots ranging from 2,000m² to 4,000m², predominantly along Eurimbla Road (east) and Googodery Road (east). There are also much larger lots around 1-2 hectares in size.

For lots of size greater than 1,000m² the lot depth and width is generally sufficient to allow the placement of a dwelling with good side setbacks and a good rear yard. For lots less than 800m² there may be need for clear controls to guide setbacks and ensure good house and building design on these narrower lots. This will be guided by current state government initiatives to allow complying development within residential zones on smaller lots. There may be some opportunities for consolidation and subdivision to provide for medium density in close proximity to the village centre in the future.

Dwelling Densities

The density of housing in Cumnock ranges from as low as 1-2 dwellings/hectare to a high of 7 to 8 dwellings/ hectare (excluding roads) which is a low density of housing in accordance with its rural village character. There is virtually no medium density development. There is generally a large yard attached to each dwelling which allows for on-site effluent management systems and landscape.

Rental Rates

Out of 111 occupied private dwellings in Cumnock, 10 dwellings are rental properties (12.5% of occupied dwellings) (Source ABS 2006) which may not be sufficient to meet demand.

Issues & Strategies

- **Density / Character:** A combination of larger lot sizes and a dominance of detached dwellings means that the dwelling densities in Cumnock are relatively low. This results in a rural village character. Increased densities may offer an alternative to consumption of more land for growth and improved sustainability but are less likely to be desirable in the current market.
- **Housing Types:** The majority of dwellings in Cumnock are detached and there are virtually no medium density housing types. Whilst part of the attraction of living in Cumnock is to have a separate dwelling, with an increasingly larger older population and



high percentage of lone-person households there is likely to be future demand for small or more compact housing that is lower in maintenance on smaller lots. There is currently a limited choice of housing types in Cumnock to meet this future need.

- **Rental Supply:** There may be an issue with the provision of rental properties and affordable housing in Cumnock to meet the needs of lower socio-economic groups and itinerant workers.
- **Development Controls:** There are no major issues with the character and design of dwellings in Cumnock but there may need to be some controls to ensure that the character of key streetscapes in Cumnock is preserved. This may involve restrictions on the use of transportable/relocatable houses and shed-style homes to ensure that they are in keeping with the existing housing stock materials and sympathetic to heritage items.

9.20.2. Projected Dwelling Demand

Dwelling Occupancy Rate

The occupancy rate is the number of people that will live in each house. **Local Profile Paper – Table 2.12**, notes that for Cabonne, the average household size has decreased from 2.9 (1991), to 2.8 (1996), to 2.7 (2001), to 2.6 (2006). Therefore, average household sizes have decreased over the last 15 years and this is also occurring in neighbouring Shires.

The occupancy rate for Cumnock (ABS data) is also expected to remain low over the next 10-30 years, especially if there are increases in aged care housing (senior citizens living alone); families having less children (smaller family sizes); and greater variety of housing types which attracts younger people to live independently. On this basis it is assumed that the estimated occupancy rate in Cumnock in the year 2036 will average 2.3 people per dwelling (down from 2.5 in 2006).

This is reasonably consistent with the Rural & Industrial Strategy which projects an occupancy rate in Cabonne Part C (including Cumnock) of 2.3 people per dwelling (**Local Profile Paper – Table 8.16**).

Dwelling Demand from Projected Population Growth

As stated in **Section 9.8 – Projected Future Population**, the projected annual population growth rate for Cumnock ranges from +0.3%/year (minimum) to +0.7%/year (maximum) with an average of +0.5%/year. As this Strategy needs to cater for the greatest potential land demands, dwelling demand will be based on a **maximum** annual population growth rate of +0.7%/year, even if this rate is never achieved.

With an estimated 2006 population of 288 people, the projected population of Cumnock by the year 2036 based on a maximum growth rate of 0.7%/year is 355 people, an additional 67 people over the 2006 Census figure. A projected rate of 2.3 people per dwelling in 2036 results in a requirement for an additional 29 dwellings over 30 years (to 2036) (Table 11).

Method	Calculation	Projected Demand for New Dwellings by 2036
Dwellings required by Additional Population	67 / 2.3 per dwelling	~29
Dwellings required by Total Population minus Total Dwellings	355 / 2.3 per dwelling (154) minus existing total dwellings (125 ABS)	~29
Dwellings required by Total Population minus Occupied Dwellings	355 / 2.3 per dwelling (154) minus existing occupied dwellings (111 ABS)	~43
Average Dwelling Demand to 2036	29 + 29 + 43 (101) / 3	~34

Table 11: Calculation of projected dwelling demand from estimated population growth to 2036 for Cumnock (Source: ABS data www.abs.gov.au).

Dwelling Demand Projected from Historical Growth in Dwellings

An alternative method to estimate dwelling demand is to project from historical growth of dwellings based on ABS Census data (Table 12). Census information provides the number of total private dwellings and number of occupied dwellings in the Cumnock ABS Census District since 1976.

ABS Census	Total Dwellings		Occupied Dwellings	Unoccupied Dwellings	% Unocc. Dwellings	
1976	97		81	16	16.5%	
1981	95		84	11	11.6%	
1986	99		82	17	17.2%	
1991	113		92	21	18.6%	
1996	Census data not accessible					
2001	117		99	18	15.4%	
2006	125		111	14	11.2%	
	Total Dwellings			Occupied Dwellings		
Average	△	%△	Av. Ann. %△	△	%△	Av. Ann. %△
1976-2006	28	28.9%	0.96%	30	37.0%	1.24%
1986-2006	26	26.3%	1.31%	29	35.4%	1.77%
2001-2006	8	6.8%	1.37%	12	12.1%	2.42%

Table 12: Change in occupied and total private dwellings 1976-2006 in Cumnock (Source: ABS Census).

It can be seen over a variety of periods the rate of growth of both total and occupied dwellings averages at approximately 1.5%/year. Based on this rate of growth continuing for the next 30 years, in 2036 there is estimated to be 195 total dwellings (an increase of 70 dwellings) and 174 occupied dwellings (an increase of 63 dwellings). Therefore, an average of an additional 67 dwellings is estimated to be needed in Cumnock by 2036 based on this method.

Dwelling Demand Projected from Development Applications

An alternative method to estimate dwelling demand is based on the historical number of dwelling applications approved each year by Council for new dwellings in Cumnock (Table 13). Please note that this has limited accuracy as development approval does not necessarily ensure that these new dwellings were built. On this basis it could be projected that there could be demand for approximately 14 dwellings over 30 years in Cumnock (based on a continuation of current approval rates).

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	Av.
DAs	0	1	0	0	0	1	1	0	0	1	1	5	0.46 dwellings/yr OR 14 dwellings in 30yrs

Table 13: Total number of dwelling applications approved 1999-2010 (financial years) in Cumnock (Source: Council records - Fujitsu Database).

Dwelling Demand - Summary Table

Table 14 summarises the finding above to suggest that approximately 38 additional (new) dwellings will be required in Cumnock by 2036 (30 years) compared to the 2006 figure.

Projected No. of Dwellings Required by 2036 based on following calculation method	Increased No. of Dwellings from 2006
Projected Population Growth (Max. 0.7%/year)	~34
Projected Development Applications	~14
Projected Historical Dwelling Growth (Max. 0.6%/year)	~67
Average 34 + 14 + 67 = 115 / 3	38 Additional Dwellings

Table 14: Projected additional dwellings needed by 2036 in Cumnock based on a variety of projection methods.

9.20.3. Total Potential Supply of New Lots

As stated in [Section 9.16 – Vacant Land](#) the total potential supply of lots that are likely to be redeveloped (assuming that each has a single dwelling) would be 80 lots / dwellings over the next 30 years (from 2006 to 2036) as summarised in Table 15.

Source of New Lots for Dwellings	Vacant Lots with Development Potential	Likely Number to be Available in next 30 years (50% Rule)
Village Zone	125	62
Rural Small Holdings Zones	35	18
TOTAL	160 Lots	80 Lots/Dwellings

Table 15: Summary of potential lot / dwelling yield in Cumnock over the next 30 years (subject to demand and supply).

9.20.4. Comparison of Supply & Demand for Dwellings to 2036

Summarising all of the above sections there is a projected demand for 38 additional dwellings in Cumnock over the next 30 years and a potential for approximately 80 small vacant lots in this area (after subdivision). Therefore, the total supply of land available in Cumnock (both the Village Zone and Rural Small Holdings Zones) compared to the demand is shown below:

80 (potential dwelling lots available) X 30 years = ~63 years supply.

38 (projected demand for new dwellings)

Issues & Strategies

Need for Rezoning in Next LEP: This Strategy recommends that there is no need to rezone any additional urban residential land in Cumnock in the next LEP as there is sufficient land to provide well in excess of 10 years supply based on the projected growth rates. Even if there is a change in the growth rate of Cumnock then there is sufficient 'buffer' in the existing supply to provide sufficient land for at least 30 years.

9.20.5. Proposed Village Zone Areas

As a result of the above analysis, the proposed land use arrangements for Cumnock are set out in Figure 15 and summarised as follows.

Extension of the Village Zone

The only minor extension to the existing Village Zone boundary would be the inclusion of all of the Department of Education lands associated with the Cumnock Public School into the zone (rather than split across the Village Zone and large lot residential area). This is an additional ~1.4 hectares but it is assumed not to have any additional dwelling potential whilst it is used by the school (for the foreseeable future). Whilst SEPP (Infrastructure) 2007 allows schools to develop in a range of zones, this will avoid any distinction in zoning across the school and how it could develop if it needed to grow.

Reduction of the Village Zone

However, due to natural hazards and other environmental factors there are some areas where there should be a reduction of the Village Zone and this will partially reduce the supply of residential land as follows:

- **Village Zone to Non-Urban Zone:** The lands along Doughboy Creek that are west of the unformed Mill Street south of Cudumbe Road (~1.6 hectares) have a high likelihood of flooding and low potential for any additional development. For these reasons they should be returned to a non-urban zone to limit future development. The primary buildings for the existing business in this area would be retained within the proposed Village Zone so as to not unduly constrain this business from expansion in flood free areas.

- Village Zone to Large Lot Residential Area:** The lands along Doughboy Creek to the west of Obley Street but north of Cudumble Road (~3.4 hectares) has a high likelihood of flooding to the west of these lots such that development is generally restricted to the area close to Obley Street. Some of these lots are in excess of 2,000m² in area but the ownership patterns are generally much larger than this resulting in holdings generally in excess of 4,000m². The resulting larger holding sizes generally mean this area is more suited to a large lot residential classification that will be consistent with the street character whilst limiting development to the rear of the lots. This area may have potential for another 2-3 new dwellings.
- Village Zone to Large Lot Residential Area:** There are three large lots to the east of Obley Street between Black Street and Googodery Road that have constraints from flood potential along Ironbark Gully as well as heritage constraints associated with 'Ainesleah' and limited access from surrounding roads. The three lots range in size from 1.4 to 2.5 hectares (total areas ~6.3 hectares) with only part of these lots suitable for development. Therefore, these lots are more suited to a large lot residential classification with a minimum lot size of 4,000m² and an additional dwelling potential of 4-5 dwellings.

Minimum Lot Size

As the centralised sewer is still under construction for Cumnock it should retain the current restriction on minimum lot size for subdivision of 2,000m². However, when the Four-Towns Sewer Program is completed at Cumnock then the minimum lot size for subdivision could be reduced down to 900-1000m² per lot, consistent with some of the existing pattern of development and historical lot sizes.



Figure 15: Summary of Proposed Land Use Arrangements for Cumnock (Source: Council GIS 2012).

Dwelling Potential

The areas that have been added to or removed from the existing Village Zone do not have any significant development potential. Therefore, the original estimate of dwelling potential of 62 new dwellings is still applicable to the new Village Zone (subject to connection to reticulated sewer to allow the smaller minimum lot size).

9.20.6. Proposed Large Lot Residential Areas

The proposed land use arrangements for Cumnock are set out in Figure 15 and summarised as follows. The existing two Rural Small Holding Zone areas are both relatively undeveloped and historically there has been limited demand for development in these areas resulting in a slight over-supply of land for this purpose. The following changes are proposed to the large lot residential boundaries:

West Large Lot Residential Area

This area is predominantly in the ownership of two major land holders and only contains 1-2 dwellings. There is a historical subdivision and unformed street pattern over much of this area but it effectively acts as agricultural land. The proposal is to remove the larger western lots and return them to a rural zone (~6 hectares).

In addition, the area south of the unformed South Street covered by significant vegetation should be removed from the zone for protection (~2.7 hectares). This is held by the same owner that owns the majority of lots to the north of South Street so this owner will have development potential. This is likely to necessitate a new subdivision and road pattern to develop this area to its full potential in the future.

In total the new large lot residential area is ~9.5 hectares of developable land. Assuming an average of 1 hectare per lot this may support ~10 new dwellings but it could be as high as 20 dwellings (at 4,000m²/lot).

East Large Lot Residential Area

This area is in the ownership of one land-holder and does not contain any dwellings (as at 2011). The existing Rural Small Holdings boundary is also not aligned with the existing cadastre and forms an upside down 'L' shape running along Keay Street and Cudumbe Road. During the exhibition there was a submission by this land owner to align the new large lot residential boundary with the lot boundary (Lot 83 DP220716) to avoid split zoning and maximise the use of this site for large lot residential growth. As the remaining 'rural' zoned land on this lot is isolated and only ~5.2ha in size it is unlikely to be able to support viable agriculture. The land in question does not have any significant vegetation or environmental constraints that would prevent this change in zoning so a full local environmental study is not warranted. In addition, the land owner has received development consent for a dwelling at the north-eastern edge of the lot (that on exhibition was proposed to be placed in a rural zone) so the agricultural qualities are again compromised.

The inclusion of the entire lot in the large lot residential area was supported by the Cabonne Councillors. Therefore, the existing large lot residential area (~14 hectares) has been increased to ~19 hectares. Assuming an average of 1 hectare per lot this may support ~19 new dwellings but it could be as high as ~36 dwellings (at 4,000m²/lot minus 25% for roads).

Areas Originally in Village Zone / Rural

It should be noted that there is a corresponding increase in the large lot residential areas where the Village Zone has been replaced with this classification as listed above. The additional ~11 hectares has a number of constraints that limits development potential to a maximum of ~10-12 new dwellings.

Dwelling Potential

Therefore, in total there may be a dwelling potential in the new large lot residential areas of 39 to 68 dwellings. Assuming that only 50% of these are likely to be created then the result is 20 to 34 new dwellings.

9.20.7. Future Investigation Areas

This Strategy suggests that the proposed land use arrangements will provide in excess of 30 years supply of land to meet the growth of Cumnock. However, should the growth calculation in this Strategy be exceeded in the medium to long term then the proposed land use arrangements in this Strategy may need to be amended to expand the urban area of Cumnock.

If Cumnock did need to grow then the most effective and logical way would be to rezone some of the existing large lot residential lands for urban residential purposes (most likely in a Village Zone). This would include the lands to the west and east of Cumnock – particularly those lands adjacent to the existing Village Zone where existing utilities may already be present such as along Keay Street and Railway Parade.

This would depend on which land had already been taken up for large lot residential development – but as growth and demand for this type of residential use has been limited it is unlikely to be a significant constraint. Alternatively, some additional extension of development along Googodery Road to the east may be suitable where impacts on the right to farm adjacent rural lands can be managed.

9.21. Previous Land Use Strategies

9.21.1. Previous Studies

It is important to conduct a review of all relevant previous studies as they can provide valuable information on key opportunities and constraints as well as key recommendations that have been put to the community. Where possible, this Strategy should be consistent with those recommendations (unless there are clear reasons to change recommendations).

Key studies relevant to the land uses of Cumnock include:

- Cabonne Council (1990) *Cumnock Village & Environs – Proposal to Prepare a Development Control Plan* (Shire Planner – G.Barry) ('1990 Draft DCP');
- Habitat Planning (2005) *Draft Cumnock Village Strategy* ('2005 Strategy');
- GHD (2008) *Subregional Rural and Industrial Strategy* ('R&I Strategy').

9.21.2. Cumnock Village & Environs – Proposal to Prepare a Development Control Plan ('1990 Draft DCP')

The 1990 Draft DCP set out objectives, preliminary controls, and a set of sub-zones specifying areas for particular land uses within the Village Zone. Key objectives included reducing land use conflicts, provision of land for urban/ industrial / commercial development, efficient use of infrastructure, heritage and landscape conservation, and avoidance of environmentally constrained lands. All of these objectives continue to apply today to this Strategy.

This Strategy largely agrees with the draft Structure Plan from 1990 in that the Village centre (Commercial Sector) should be concentrated along Obley Street (though it should extend as far as Bishop Street) and that industry should largely be concentrated towards the old railway line (where possible). However, heavily constrained land near Doughboy Creek / Ironbark Gully should not have intensified development.

This Strategy also agrees with the comments regarding rural residential development that states that both existing areas *"would require substantial redesign of lots and new subdivision, although some development of clusters of small existing lots in the 1(c) proposal west of Railway Parade may be possible. Supply of reticulated water appears doubtful and prospective developers will need to demonstrate satisfactory alternative water arrangements ... Subdivision of larger portions down to Lots of about 2 hectares can be considered subject to servicing and other requirements."*

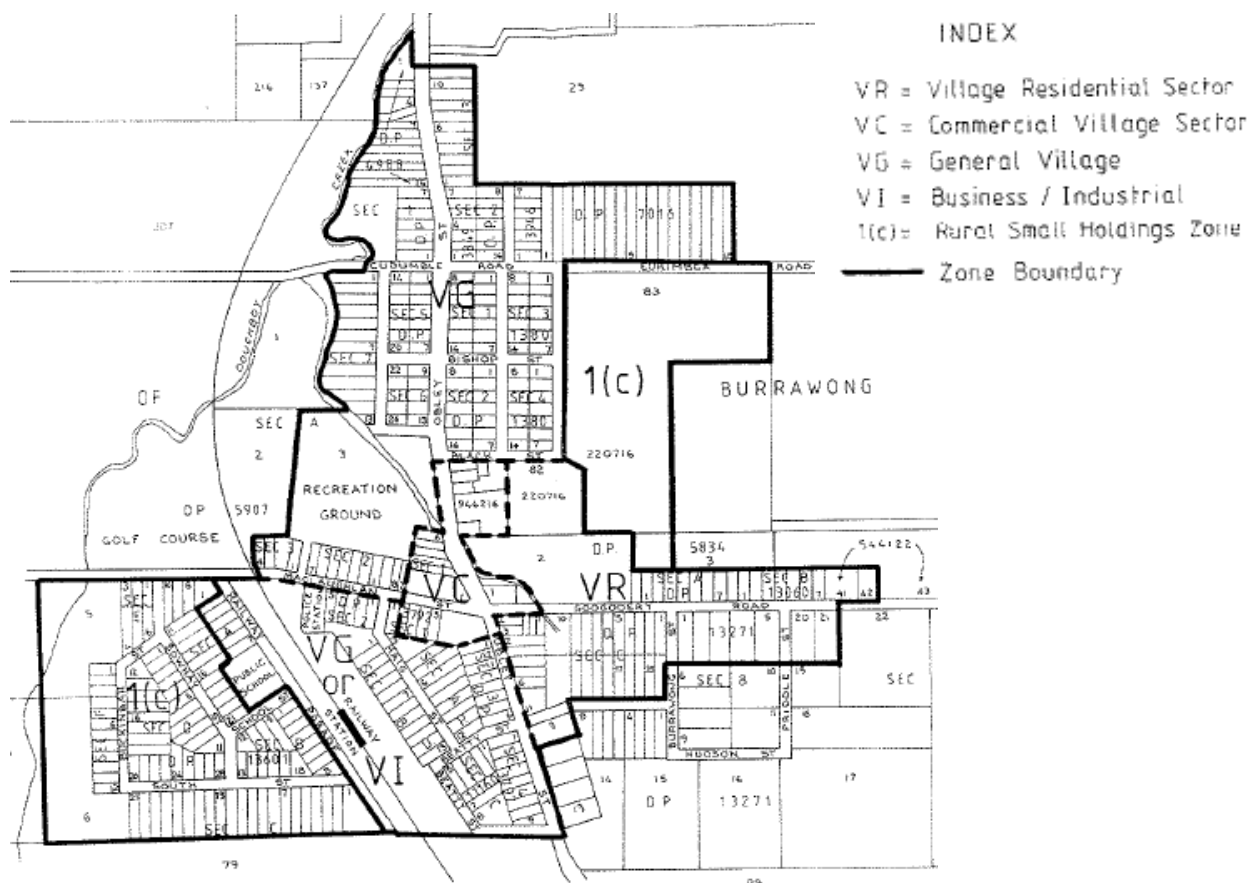


Figure 16: 1990 Draft Structure Plan for Cumnock (Source: 1990 Draft DCP- Map 1).

9.21.3. Draft Cumnock Village Strategy (2005)

The key features and major strategic directions identified in Cumnock are shown in Figure 17 and Table 16 and addressed as follows:

Recommendations of the 2005 Draft Strategy	Response in 2011 Strategy
Business Uses: <i>The preferred commercial activity area to be in Obley Street and surrounding intersection with McLaughlan Street.</i>	Agreed. The preferred commercial area should run along Obley Street in proximity to McLaughlan Street.
Industrial Uses: <i>The preferred industrial precinct to be located surrounding the railway station and the existing grain storage facility, with potential future expansion to the south to link directly with the transport route through the village. The railway line should define the western boundary of the industrial land.</i>	Mostly agreed. However, the presence of several quasi industrial/business activities along Googodery Street should be supported where they do not impact on residential amenity in adjacent areas.
Village Expansion: <i>The existing 1(c) zoned land to the south of Eurimbla Road and to the east of Key Street to be rezoned to 2(v) to provide for future residential development, with the potential for future urban growth to the east.</i>	Disagree. There is no need to upzone any additional land for the foreseeable future unless growth rates significantly increase. Instead, this large lot residential area should be rationalised as it has not been developed in over 20 years.
Infill Development: <i>Investigate the three parcels of undeveloped land within the village zone for infill development as indicated on the map.</i>	Agree that these lands may be suitable for some infill development but this Strategy recommends that they are rezoned for large lot residential uses due to the constraints and limited development opportunity.
Large Lot Residential: <i>Retain the 1(c) on the southwestern fringe of the village surrounding the public school.</i>	Partly agree except that there is an oversupply of large lot residential land and some that is particularly constrained or useful for agricultural purposes may not be needed.
Large Lot Residential Expansion: <i>Provide potential for future expansion of 1(c) land to the northeast as well as areas on the south and southeastern sides of the village.</i>	Agree with direction for growth but disagree that this is needed in the foreseeable future unless growth rates significantly increase.

Recommendations of the 2005 Draft Strategy	Response in 2011 Strategy
Flood Mapping: <i>The 1 in 100 year flood level of the Doughboy and Park Creeks to be determined and accurately mapped.</i>	Agreed. This is an outstanding matter that should be pursued when there is funding.

Table 16: Review by this Strategy of the 2005 Draft Cumnock Village Strategy recommendations.

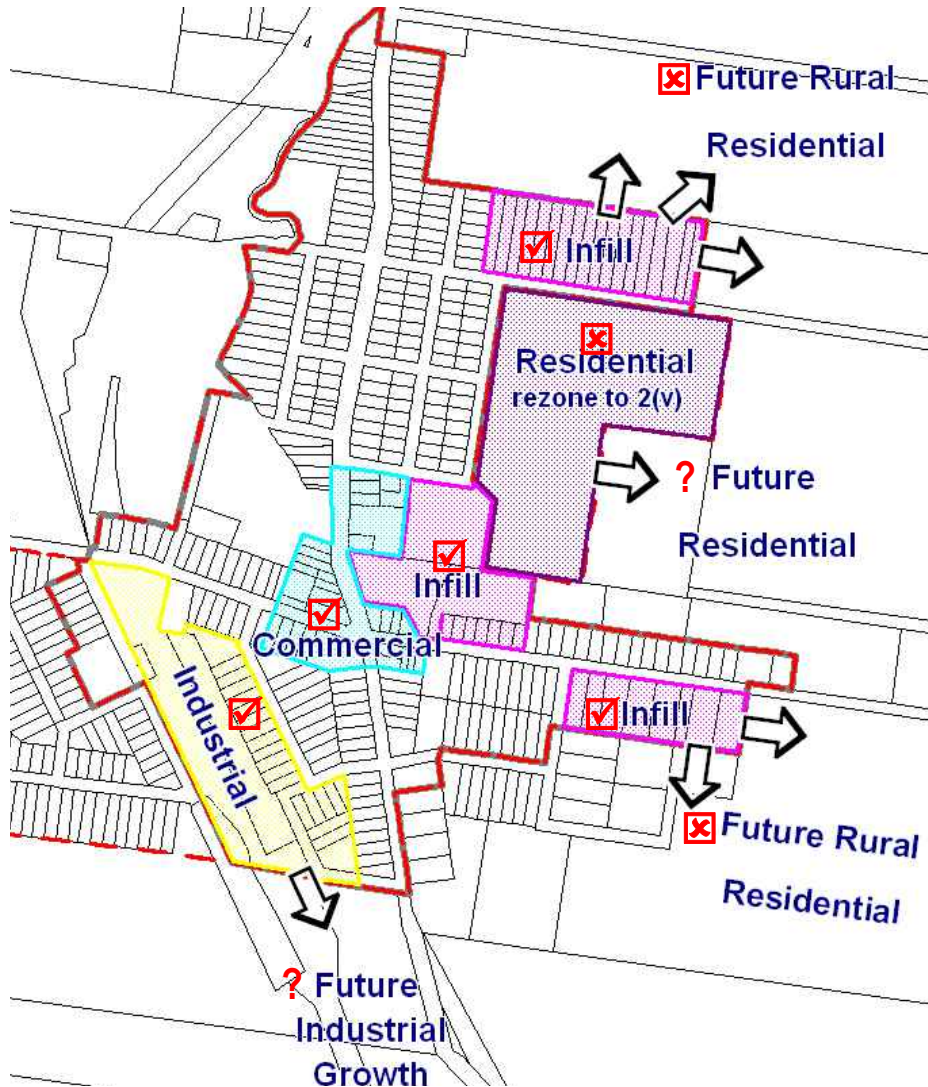


Figure 17: Proposal for growth of Cumnock in the Draft Cumnock Village Strategy (2005) with mark-ups suggesting whether these proposals are supported by this Strategy.

9.21.4. Outcomes from Draft Subregional Rural and Industrial Strategy (2008)

There were no outcomes from the R&I Strategy that were particularly applicable to Cumnock in anything other than general terms, as follows:

- **Large Lot Residential** - The **Final Strategy - Section 6.4.3 (Table 6.2)** shows that the R&I Strategy considered the need for additional large lot residential at Cumnock but discounted it on the basis that there is *"[p]oor accessibility and significant road distance to nearest essential services. Adequate supply of zoned land for foreseeable future."*
- **Industrial** - The R&I Strategy only identified larger format and heavier industrial lands around Manildra of sub-regional importance in Cabonne. Therefore, it did not look at industry at the settlement level. This Strategy seeks to supplement the R&I Strategy with a local industrial strategy for Cumnock.



9. Village of Cumnock

Cabonne Settlement Strategy



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Document Control

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10. Village of Cargo

Please note that **Chapter 10 – Village of Cargo** should be read with **Chapter 2 – Cabonne Overview** as some of the Issues and Strategies applicable to all settlements are not reproduced in this chapter.

10.1. Executive Summary & Proposed Land Use Arrangements

10.1.1. Historical population growth

The Australian Bureau of Statistics ('ABS') Census District for Cargo encloses all of the existing Village Zone and the majority of the Rural Small Holdings. Therefore, the ABS results for Cargo can be utilised as a reasonably accurate measure of the settlement's population (both Village and Rural Small Holding Zones). As Table 1 shows, the population of Cargo has been increasing since 1991 at an average annual rate of 1.4% to 6.6% resulting in a population of 278 people in 2006.

Year	1986	1991	1996	2001	2006
Population	180	175	242	260	278
Average Annual Change from previous Census	N/A	-0.55%%	+6.65%	+1.48%	+1.385%

Table 1: Summary of recent historical population statistics for Cargo's census area (Source: www.abs.gov.au).

10.1.2. Key Factors Influencing Population/Economic Growth

Cargo has a number of potential positive influences that could result in positive population and economic growth including, but not limited to, its strong population growth since 1991 (compared to other Cabonne settlements), its proximity to Orange and Canowindra (and commuter opportunities), its rural character and larger lot supply, access to a secure centralised water supply, access to a good local public school, the growth of agriculture and rural industries in the fertile soils of the area, and the potential growth in mining in the surrounding area.

However, there are a number of potential negative influences that could hamper population and economic growth including, but not limited to, proximity to Orange and Canowindra (resulting in escape expenditure and less local services/employment), the lack of a centralised sewerage system that would permit smaller lot sizes and infill development, drainage and flash flooding issues along watercourses reducing development potential, the difficulty maintaining a small public school, and the potential impacts of future mining on village growth and amenity.

10.1.3. Projected Population Growth

Based on the opportunities and constraints, Cargo's population is expected to grow at a projected annual rate ranging from +0.5%/yr (minimum) through to +1.0%/yr (maximum) with an average of +0.7%/yr (Please note that growth rates will change over time and this is an estimated average growth rate over the 30 year period).

Based on the **maximum** growth rate of +1.0%/year and an estimated 2006 population of 278 people (Village Zone + Rural Small Holdings areas) the projected 2036 population in Cargo will be approximately 375 people, an increase of 97 people over the 2006 population. This growth will create additional demand for residential, business, community and open space/recreation land uses that will need to be provided in Cargo and surrounding areas.

10.1.4. Proposed Land Use Zone(s)

Good planning practice suggests that settlements above 1,000 in population that are experiencing higher growth should consider adopting specific zoning for each land use ('complex zoning') to minimise land use conflicts and maximise amenity and economic activity.

As the estimated 2006 population of Cargo's Village Zone + Rural Small Holdings is approximately 278 people (+/- 10-15 people) this Strategy recommends that Cargo retains a zone similar to the existing 'Village Zone' for the core urban area combined with areas for large lot residential uses (to replace the existing Zone 1(c) (Rural Small Holdings)). Therefore, there is not a major change in zoning categories proposed for Cargo.

10.1.5. Summary of Proposed Changes

There are changes proposed to both the 'zoned' areas and the subdivision potential of some lands in this Settlement. See the detailed land use sections of this chapter for more details.

The proposed land use arrangements for Cargo are summarised as follows (Figure 1):

a) Village Zone

Minimum Lot Size

As Cargo will not have a centralised reticulated sewerage system for the foreseeable future then it is appropriate to maintain the existing requirement for 2,000m² as the minimum lot size for subdivision. Applicants that hold existing lots that are below 2,000m² should be able to apply to Council to seek a dwelling approval based on the merits of each application and evidence showing the lot can support a dwelling and on-site effluent management system.

Extension of the Village Zone

In 2012 there were 47 vacant lots in the Village Zone, 33 of which were relatively free of major constraints. This Strategy estimates there is a demand for 1-2 additional dwellings per year. However, there is not a lot of land that is currently on the market and residents often demand larger village lots (particularly as centralised sewerage is not available).

Therefore, some additional provision of Village Zoned land may assist in making land available for purchase and development. The natural extension of the Village Zone would be to include the following lots in the Village Zone:

- **Large Lot Residential to Village Zone:** 20 Wall Street (Corner Sharp Street) (Lot 314 DP750145) has an area of ~1.98 hectares and a single dwelling and garden that only takes up ~0.56 hectares, leaving 1.4 hectares for potential development. If Short Street were to be extended through to Sharp Street then this area could potentially support another 6 lots/dwellings (2,000m² or more each). This land is held by one landowner that will make it easier to develop.
- **Large Lot Residential to Village Zone:** 17 Wall Street (Corner Brooks Street) (Lot 1 Section 35 DP758226) has a total area of approximately 4.39 hectares. Approximately 1.13 hectares is already located in the existing Village Zone facing Brooks Street but remains undeveloped. However, a significant portion of this land adjacent to the drainage channel to the east is not suitable for small lot development. Therefore, it is proposed to move the Village Zone away from the eastern end and include land along Wall Street that increases the Village Zoned land to ~2.33 hectares (an increase of ~1.2 hectares) that could potentially support another 5-6 lots/dwellings (2,000m² or more each). This land is held by one landowner that will make it easier to develop.

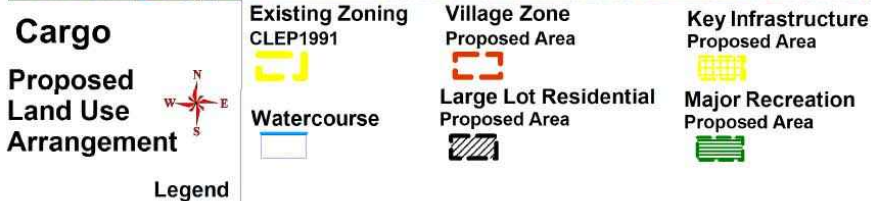


Figure 1: Summary of proposed land use arrangements for Cargo (Source: Council GIS 2011).

Reduction of the Village Zone

There are a number of lots that are so heavily constrained that they would not be suitable for further development and therefore do not benefit from remaining in the Village Zone as follows:

- **Village Zone to Large Lot Residential:** There are a number of privately held lots in the existing Village Zone adjacent to the unnamed watercourse through the middle of Cargo that are highly likely to be subject to overland flows or drainage issues in high rainfall events. Therefore, in order to develop this land it will be necessary to have a larger land area to find a suitable dwelling location and they would be more suited to a large lot residential classification (Total area ~ 3 hectares). This includes:
 - 5-7 Loftus Street & 26 Molong Street (Lots 1-3 Section 25 DP758226) & Part of 2 Brown Street (Lot 335 DP750145) (One owner); and
 - The majority of 2 Molong Street (Lot 342 DP750145) & 16-18 Belmore Street (Lots 3-4 Section 28 DP758226) (One owner).
- **Village Zone to Recreation:** There are a number of lots held by government authorities (mostly Crown) along the unnamed watercourse that are used for recreational purposes that should be located in a recreation area to limit development (Total area ~5 hectares) but would previously have had limited development potential so there is no impact on growth potential.
- **Village Zone to Rural:** There is one Crown Lot at the corner of Court and Belmore Streets (Lot 44 DP1126505) (western entrance to Cargo – total area ~0.27 hectares) that is heavily vegetated and would not be suitable for additional development so it is relocated into the adjacent rural area.

b) Large Lot Residential Areas

Appropriate Land Classification

It is likely that the term 'Rural Small Holdings' will be replaced in the future LEP with the term 'Large Lot Residential'. This describes dwellings that are located on larger lots (greater or equal to 4,000m²). However, contrary to past practice the focus for these lots will be on their residential or 'lifestyle' uses rather than their 'rural' or agricultural uses.

Minimum Lot Size

For the large lot residential areas around Cargo this Strategy proposes to retain the existing minimum lot size for subdivision of 4,000m² per lot. However, it is important to note that due to a number of environmental hazards throughout these areas including, but not limited to, flash flooding along watercourses, bushfire risk, significant vegetation and the potential for extractive industries in the area Council may require larger lot sizes where dwellings need to be set back from hazards (depending on the subdivision design). Council expects a range of lots sizes from 4,000m² up to 2 hectares in size to be provided according to market demand.

Extension of the Large Lot Residential Area

As determined by this Strategy there is no need to provide additional lands for large lot residential usage for at least the next 10 years and most likely for a longer period. Therefore, the focus is on further subdivision and infill development of existing areas before additional lands are investigated for rezoning. However, the large lot residential area will replace the Village Zone along the unnamed watercourse to the east of Molong Street and north of Belmore Street (details above - Total area ~ 3 hectares).

Reduction of the Large Lot Residential Area

- **Large Lot Residential to Infrastructure:** The Crown land that forms the Cargo cemetery on Davys Plains Road (Lots 1-7 DP1041279 & Lots 51 & 52 DP750145) is currently in the Rural Small Holdings Zone but has no development potential and should only be utilised as a cemetery (Total area ~5.3 hectares).

- **Large Lot Residential to Rural:** There are three (3) Crown lots between the unformed Elder and West Streets (Lots 1-3 Section 18 DP758226) adjacent to significant vegetation and bushfire risk that have a very low development potential and should be relocated to the adjacent rural zone (Total area ~0.5 hectares).

c) *Industrial Land Uses*

This Strategy recommends that Cargo is not an ideal location for anything other than local light and home-based industry. Whilst larger-scale industry could provide local employment it is likely to conflict with the residential amenity of the settlement and is likely to be less economically viable in close proximity to Orange without access to a major highway, rail line, high voltage electricity, and a trade waste disposal system. Instead, Cargo should focus on rural industries in the surrounding lands where wineries, intensive agriculture and other practices are suitable on the fertile soils of the area. However, this may change if exploration of mineral potential surrounding Cargo results in an application for a new mine in the area. This Strategy will need to be reviewed and restructured if mining activity were to occur within 20 kilometres of Cargo.

d) *Business Land Uses*

With the retention of a Village Zone, business uses will be a permissible use throughout this area. Whilst there is no need for a defined business area it is likely that retail/commercial uses will occur along Belmore Street (between Frame and Powers Streets). However, it is not likely that there will be substantial demand for business lands (other than home businesses) in the short to medium term due to the dominance of retail in Canowindra and Orange.

e) *Community Land Uses*

With the retention of a Village Zone, community uses will be a permissible use throughout this area. Whilst there is no need for a defined community uses area it is likely that community uses will cluster around the existing uses at the intersection of Belmore and Molong Streets or around the churches/school and expand on existing community land or vacant land.

10.1.6. Dwelling Supply & Demand

Potential Future Dwelling Yield (Village Zone)

In summary, the proposed future land use arrangement for Cargo's Village Zone removes approximately 8-9 hectares of land from the existing Village Zone (most of which had virtually no development potential) but expands the Village Zone by approximately 3-3.5 hectares. Of the 41 potential vacant lots in the Village Zone (33 existing + 8 future subdivisions) it is expected that 50% (21 lots) will be developed in the next 30 years.

The additional Village Zone land will provide an additional 11-12 dwelling lots (>2,000m²). Therefore, the potential future dwelling yield in the Village Zone is an additional 32-33 dwellings. With a demand for ~1 dwelling/year (30 dwellings over 30 years) there is sufficient land to meet 30 years demand.

Potential Future Dwelling Yield (Large Lot Residential Area)

As a result the proposed large lot residential area will be ~155 hectares in area (including roads) or ~110 hectares (excluding roads & constrained land). At an average of ~1ha/lot this is a total of 110 lots which minus the existing 44 lots equals potential for ~66 new lots/dwellings. Demand is projected at 20-30 dwellings over 30 years – but even if this was as high as 2 dwellings per year (60 dwellings in 30 years) there is over 30 years potential supply.

Comparison to Demand

Based on an estimated demand for 48 additional dwellings over the next 30 years, the 34-35 dwellings in the proposed Village Zone and 48-50 dwellings in the large lot residential area will significantly exceed the demand.

10.2. Regional Location

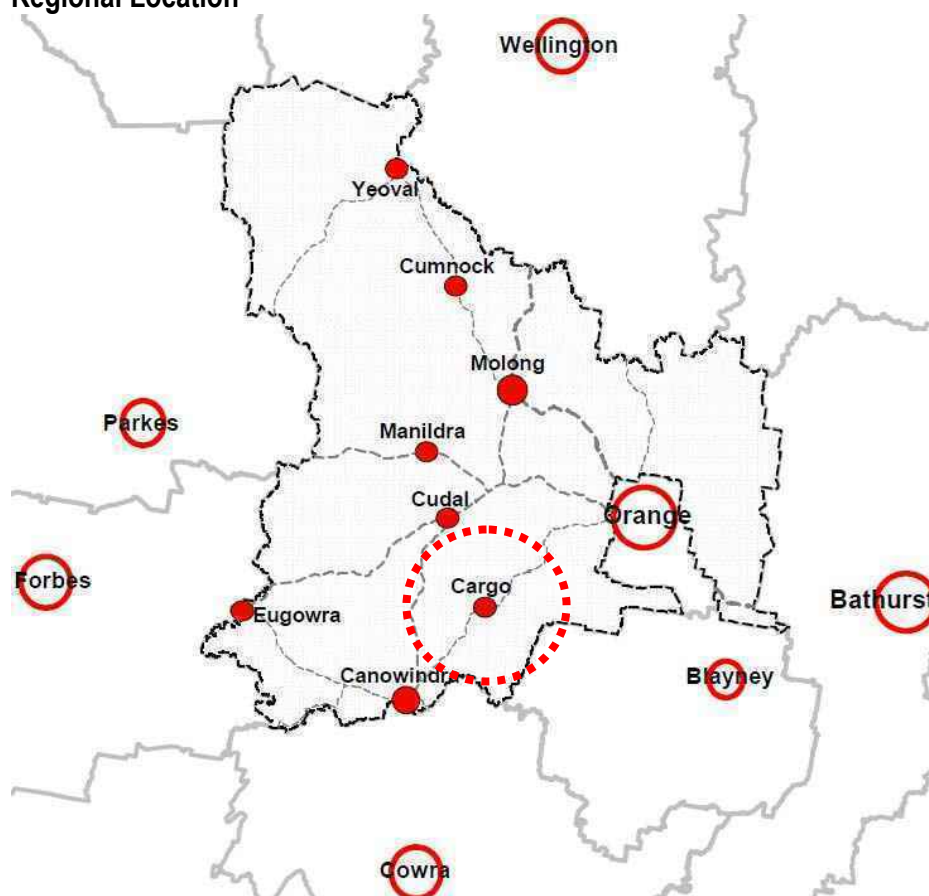


Figure 2: Location of Cargo in Cabonne and proximity to key regional centres and settlements (Source: Council GIS 2010).

Cargo is located approximately (Figure 2):

- 21km (15-20 minutes drive) from Cudal via Davys Plains Road;
- 23km (15-20 minutes drive) from Canowindra via the Cargo Road;
- 37 km (25-30 minutes drive) from Manildra via Davys Plains Road and Orange Road;
- 37km (25-30 minutes drive) from Orange via Cargo Road; and
- 44 km (30-35 minutes drive) from Molong via Davys Plains Road, The Escort Way and Peabody Road.

The proximity of Cargo to Canowindra is likely to result in some local shopping and services being accessed from Canowindra but services are limited. Cargo is just on the edge of the 'commuter zone' (25-30 minutes drive) of the City of Orange, and therefore, Orange is likely to be nearest major centre that can provide a high level of services, employment and retail.



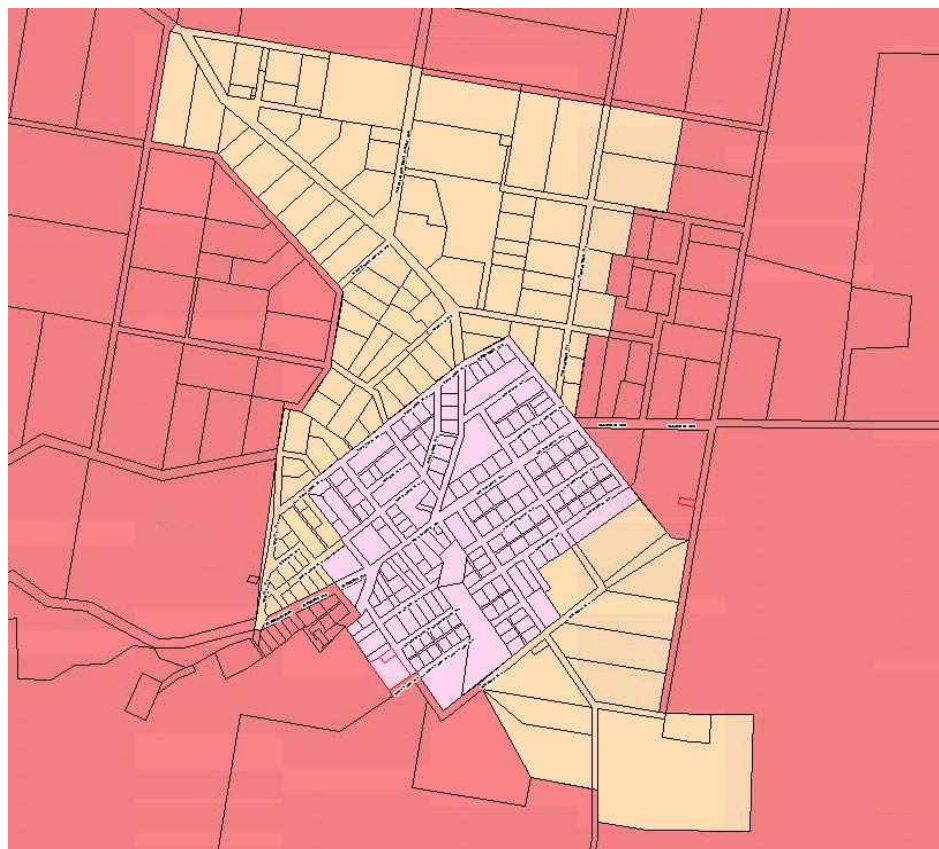
Issues & Strategies

- **Proximity to Cabonne Settlements:** Cargo's proximity to other Cabonne settlements in the south and west of Cabonne may provide some residential opportunities for people who work and shop in other settlements in Cabonne. The proximity to Canowindra (15 – 20 minutes drive) to Cargo is a positive for the utilisation of some services such as groceries, retail and medical services.
- **Proximity to Major Centres:** The proximity of Cargo to Orange can be a positive in terms of access to transport, services and retail in the higher level centre. However, it can also be a negative in that it can have the effect of encouraging 'escape' expenditure, investment and development away from smaller settlements such as Cargo that may result in less support for local businesses.

10.3. Existing Zoning

Figure 3 illustrates the existing zoning pattern in and around Cargo under CLEP1991 including:

- **Zone 2(v) (Village Zone)** with the core of the Village of Cargo (pink on map) (Total area ~62ha including roads etc);
- **Zone 1(c) (Rural Small Holdings)** (orange on map) (Total area ~ 163ha including roads etc) including:
 - North & West Cargo ~117ha;
 - South East Cargo ~46ha.
- **Zone 1(a) (General Rural)** for all surrounding areas (red on map).



**Zone
(CLEP1991)**

	1a General Rural
	1c Rural Small Holdings
	1f Forestry
	2v Village
	7c Environment
	8 National Park

Figure 3: Existing zoning for Cargo and surrounds (Source: CLEP1991 / Council GIS 2010).

Other than a small extension of the Village Zone in the south-western area of Cargo – the urban boundaries have not changed considerably for several decades including the introduction of CLEP1991.

Issues & Strategies

Review of Zoning Boundaries: It is the role of this Strategy to define appropriate areas for each land use to ensure sufficient supply of land for the next 5-10 years. This will then inform the preparation of new zoning boundaries under the proposed new Cabonne Local Environment Plan. Cargo's Village Zone is relatively compact and well utilised. However, there would appear to be a large amount of Rural Small Holdings land that is under-utilised and may be suitable for infill development before any additional land is required. Any expansion of the urban area of a settlement into the surrounding rural lands needs to be justified as it may take up prime agricultural land that is important to the Cabonne economy.

10.4. Settlement History

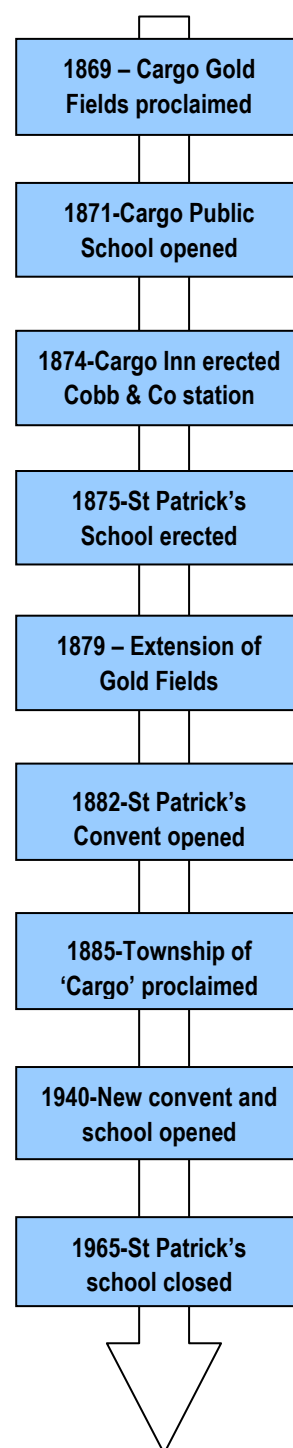
History is important because it explains why a settlement is located in its present location and how the settlement has changed over time. The name 'Cargo' is derived from an Aboriginal name for the area sounding like 'Ngargu'. The Cabonne Community Heritage Study 2003 outlines some of the history of the settlement of Cargo. The website of the NSW Education Department www.cargo-p.schools.nsw.edu.au is the key source for the history of Cargo below:

- 1815/17** Explorations of Evans and Oxley opened up the countryside to the west of Canobolas.
- 1868** FW Peisley appointed postmaster of first post office in Cargo on 1 December 1868.
- 1869** The Cargo Gold Field on which the township of Cargo was built was proclaimed on the 11th February 1869 by RH S R Lowry-Corry, Earl of Belmore, and Governor of the Colony of NSW.
- 1871** Cargo Public School opened on 20 August 1871. This school was of a stringy-bark construction with dirt floor (62 children enrolled in 1872).
- 1873** 20 May 1873 – western extension of gold fields.
- 1874** Cargo Inn built. This Inn was used as a Cobb & Co stop-over and change station.
- 1875** St Patrick's Catholic Church opened (weatherboard & roofed with shingles). 16 February 1875 southern extension to gold fields. This included the Ironclad Mine, Dalcooth Mine, and Golden Clad Mine.
- 1879** Canowindra Gold Field (to east of village) proclaimed 21 March 1879 (with further extension on 24 August 1882 to north-east of village). New Cargo Public School occupied on 20 January 1879 at current site with brick building.
- 1881** Cargo Cemetery dedicated 11 March 1881 (with subsequent extensions to west and east in 1886 to its current size).
- 1882** St Patrick's Convent opened. 20 February 1882 the Cargo telegraph office opened.
- 1885** Proclamation of the Township of Cargo occurred on the 20th March 1885.
- 1907** St Patrick's Catholic Church opened November 1907 (present brick church).
- 1910** Mining ceased around this time due to drop off in gold mining activity. A telephone exchange was opened on 29 April 1910.
- 1929** Cargo Common (to west of Cargo) proclaimed on 28 March 1929.
- 1936** A report by the postal inspector described Cargo as a small village comprising 'two small stores, hotel, bakery, and a few private residences'.
- 1940** New convent and adjoining school opened to replace original wooden buildings.
- 1965** St Patrick's convent school closed in 1965 when the pupils travelled to Orange for education.

Records suggest (source: NSW Department of Education) that the key growth period for Cargo was between 1869 to 1899 with the 'gold rush' of between 5000 to 7000 people, many of these being Chinese. There is little evidence to show for how long such numbers remained in the Cargo area. However, there was a clear drop in population in the early 1900s. This can be compared to the school enrolments which were 62 in 1872, 43 in 1906, and 26 in 1938.

Issues & Strategies

Understanding the History: The history of Cargo and its surrounds is an important factor both in understanding the location of the settlement, how it grew, key opportunities and constraints to its growth, and as a fundamental building block for tourism and community spirit. The existing historical research should be expanded by the local historical society and/or Council to allow Cargo to appreciate and build on its history and protect and enhance the key heritage items and character.



10.5. Settlement Pattern

10.5.1. Historical Subdivision Pattern

It is important to recognise that in most circumstances Council and the community are dealing with an historical subdivision pattern for many settlements that has often been in existence for over 100 years. Without conducting a detailed historical study it has not been possible to pinpoint exactly when the current subdivision pattern was formed but it is likely to have occurred in the late 1800's and early 1900's. A Parish Map for Cargo dated 1908 is very similar to the existing urban boundaries and subdivision pattern, showing little change in settlement pattern in the last 100 years except for some infill subdivision and development.

The vast majority of the historic subdivision patterns in settlements in Cabonne were based on a grid pattern with perpendicular streets and regular block sizes. In Cargo, the blocks are generally oriented with the streets running roughly north-east/south-west or north-west/south-east, except where the grid is broken by the watercourse that cuts through the village.

It is important to note that at the time of these subdivisions a rear lane was often incorporated through the middle of most blocks to allow the collection of sewage from the toilets at the backs of the lots and many of these remain on the titles today. However, the rear lanes are rarely fenced off from private property and have often been incorporated into the adjacent allotments.

10.5.2. Street Dimensions

Most of the streets in Cargo are approximately 20 metres in width. This allows for a road with a lane in each direction and on-road parallel parking areas and kerb/pedestrian areas. A 20 metre road width also allows the potential for incorporation of street trees in either footpath or blister formation on-road with minimal impact on parking / pedestrian areas. Belmore Street/Court Street (the main road - Cargo Road) is larger at 30m and may have additional potential for street works to upgrade it as a central 'boulevard'.

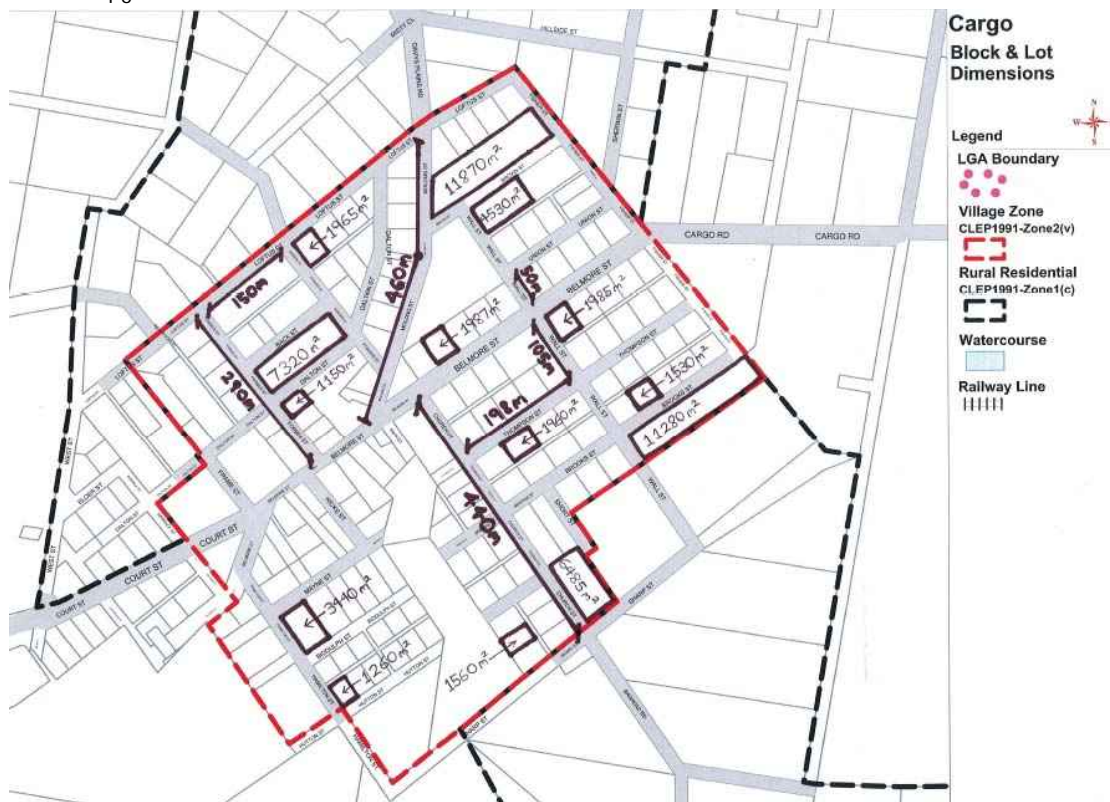


Figure 4: Indicative street, block and lot lengths, widths and areas in Cargo (Source: Council GIS 2011).

10.5.3. Block Sizes

Figure 4 shows some of the indicative block areas, lengths and widths in Cargo. There are very few standard block sizes due to the watercourse through the middle of the village that breaks the grid structure. However, most standard blocks (to the east of the village) are approximately 85-105 by 200 metres in dimension (incorporating a 6 metre wide rear lane) and up to 2 hectares in area. Blocks to the west of Cargo are less standard.

10.5.4. Lot Sizes

As Figure 4 shows the majority of lots to the east of Cargo are regular in size and dimension (approximately 40m by 50m, area ~ 2000m²) but there are some lots down to 1,500m² and some larger lots up to 11,800m². To the west of Cargo there is more variable lot size ranging from 1,100m² up to 1.5 hectares.

The minimum lot width is usually 20m and the minimum lot depth around 30-40m. The lot depth and width is sufficient to allow the placement of a dwelling with good side setbacks and a good rear yard.

Cargo does not currently have a centralised reticulated sewerage system and is not expected to have one in the foreseeable future. Lot sizes in excess of 1,600m² are likely to be able to support an on-site septic system (subject to specific site geo-technical studies) but the existing standard is 2,000m² (see [Section 10.12 – Utilities & Infrastructure](#) for more detail).

Issues & Strategies

- **Rear Lanes:** Council and the Department of Lands need to conduct an assessment of all of the public mid-block rear lanes and determine whether anything will be done to protect their public nature and whether they will be preserved or released for sale to the adjacent land owners.
- **Septic Systems:** Lot sizes and the pattern of lot holdings inform decisions about the minimum lot size that may be required to support a dwelling. Minimum lot sizes will need to be multiples of the existing lot sizes. The minimum lot size for the erection of a dwelling which requires an onsite effluent management system to be connected is 2000m² (Clause 17 (1) - CLEP1991). It is assumed that 1,600-1,900m² lots are able to support a septic system but this would need to be supported by geo-technical studies (which are already required by Council as part of the development assessment process).

10.6. Historic Population

10.6.1. Census Area

The Australian Bureau of Statistics (ABS) Census Collection District ('CD') is the area that ABS uses to calculate the population and demographics for an area. As Figure 5 shows, the CD for Cargo (yellow line) encloses all of the existing Village Zone and the majority of the Rural Small Holdings (excluding approximately 2 dwellings but including at least four (4) dwellings in the Rural General Zone). Therefore, the ABS results for Cargo can be utilised as a reasonably accurate measure of the settlement's population (both Village and Rural Small Holding Zones).

Issues & Strategies

Measuring the Catchment: The Cargo Collection District ('CD') includes all of the Village Zone and the majority of the Rural Small Holdings Zones around Cargo. Therefore, it is a reasonably accurate reflection of the population that resides in the urban zones of Cargo. It is acknowledged that this does not include the rural population catchment that may rely on Cargo for resources.

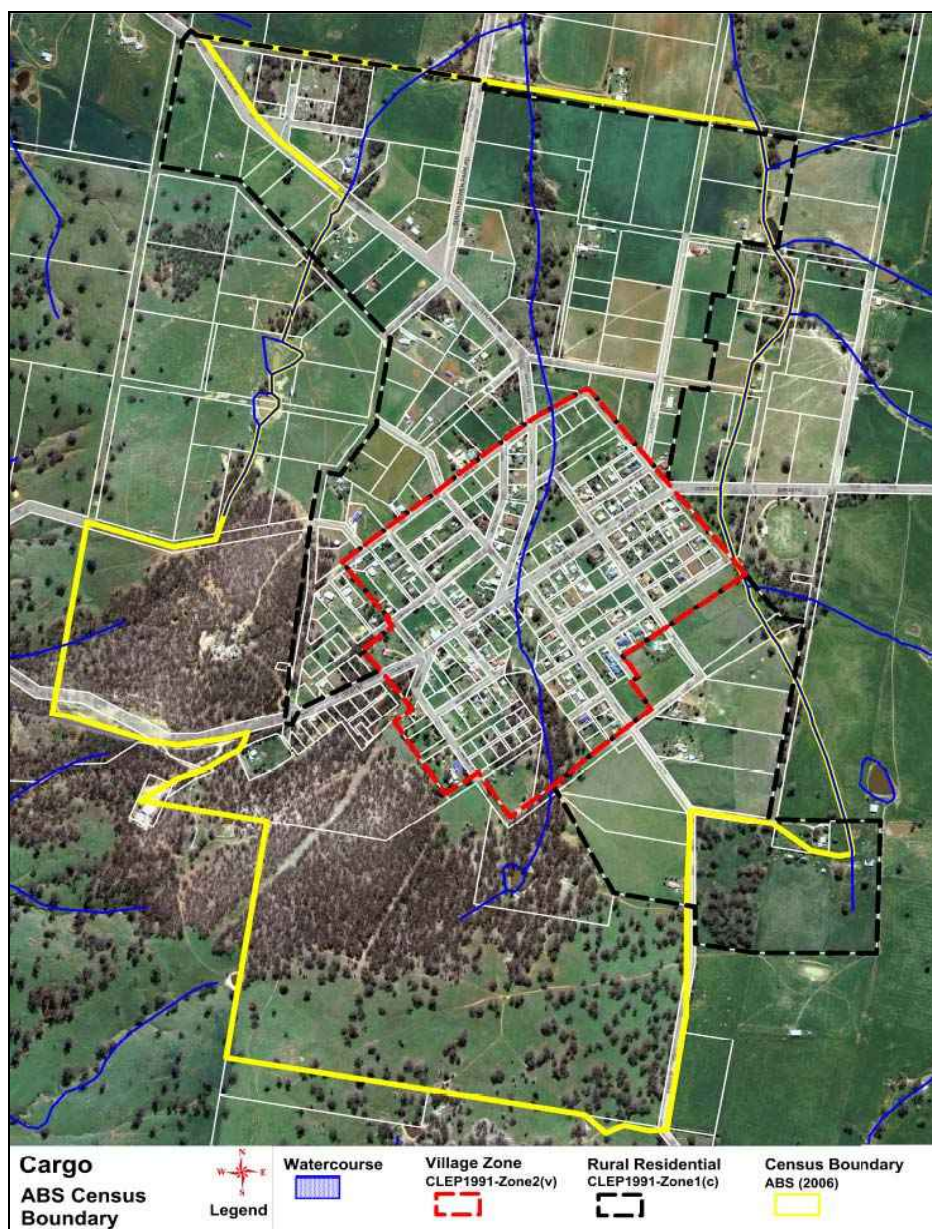


Figure 5: Alignment of the Australian Bureau of Statistics Census Collection Districts in relation to Cargo's urban zones (Source: Council GIS 2010 using ABS CD boundaries www.abs.gov.au).

10.6.2. ABS Census Population of Cargo (Village & Rural Small Holdings Zones)

Council only has anecdotal records of the population of Cargo prior to the ABS Census. Some records suggest that during the period of 1869-1899 it once supported a population of between 5, 000 and 7,000. This was during the period of the Cargo Gold Rush. (Source: *Cabonne Community Heritage Study 2003* and the NSW Department of Education).

Generally accurate population records have only been kept more recently. Table 2 shows that the historical ABS population for Cargo has generally increased from 1986 onwards – increasing from 180 people to 278 in 2006, an increase of 2.72%/year. From 1996-2006 it increased at 1.48%/year and from 2001-2006 it increased at 1.39%/year. This is significantly higher than the annual growth rate of Cabonne over those same periods.



Year	Population (Quickstats)	Change	% Change from Previous Census	Average Annual % Change
1986	180	N/A	N/A	N/A
1991	175	+5	-2.77%	-0.55%
1996	242	+67	+38.28%	+6.65%
2001	260	+18	+7.43%	+1.48%
2006	278	+18	+6.92%	+1.385%
1986-2006		+98	+54.44%	+2.72%
1996-2006		+36	+14.87%	+1.48%

Table 2: Census population counts and population change for the Cargo Collection District (Source: www.abs.gov.au).

Issues & Strategies

Population Growth Rate: The population growth rate of Cargo over the last 20 years has been consistently strong ranging from 1.4 to 2.7%/year which is higher than most other settlements in Cabonne and suggests a growing population rate for Cargo in the future. It is noted however that growth may be occurring unevenly between Village Zone and Large Lot Residential areas.

10.7. Summary of Opportunities & Constraints

It is important to try and summarise the potential for Cargo's population and economic growth in the future. More detail is provided on each issue in the subsequent sections of this Chapter.

10.7.1. Positive Factors

The key **POSITIVE** influences that may assist growth include:

- **Population Growth:** Consistent annual growth rate of 2.72% between 1986 and 2006 and 1.48% between 1996 and 2006 suggests positive influences will continue to promote population growth with corresponding economic growth in the future. Cargo is one of the fastest growing settlements in Cabonne on a percentage basis.
- **Proximity to Orange:** The proximity of Cargo to the City of Orange and its location on a key road connection between Orange and Canowindra/Cowra provides the opportunity to live in Cargo and access higher level employment, services and retail in these other centres. Therefore, Cargo can act as a commuter suburb and leverage off the growth of these larger centres.
- **Rural Character & Affordability:** Attraction of the rural character, landscape, village lifestyle and relatively affordability of larger residential lots in Cargo allows an alternative to the denser urban lifestyle and more expensive land/development in Orange.
- **Water:** Cargo is connected to the Central Tablelands Water system (sourced at Lake Rowlands in Blayney Shire). This is a relatively secure potable water supply so water is not a major constraint to growth in Cargo and there is improved safety and amenity for users.
- **Sewer:** It is possible to argue that as Cargo has voted to not have a centralised sewerage system that this may give it a competitive advantage over some other settlements that have centralised systems and are forced to pay the higher sewerage charges. This may be perceived as improving affordability in Cargo.
- **Education:** Cargo is fortunate to have a strong local public school that makes it an attractive option for young families with children. Whilst enrolment numbers support 1-2 teachers, they have remained relatively steady over time.
- **Rural Industries:** There has been an increase in development of agricultural and rural industries in the highly fertile soils around Mount Canobolas including wineries, cellar doors, and orcharding that promote local employment, economic growth and tourism opportunities.

- **Mining:** Cargo has good proximity to the Cadia-Ridgeway mine (though Edinboro Lane is not sealed) for employment opportunities. Cargo is also surrounded by a number of identified potential mineral resource areas and has a long history of mining around the settlement that suggests potential growth in mining in the area may become a future economic driver.

10.7.2. Negative Factors

The potential **NEGATIVE** influences on growth include:

- **Proximity to Orange:** Cargo's proximity to Orange may have affected the viability of local retail with the majority of people shopping in Orange ('escape-expenditure'). This affects the opportunity for local employment and services and increases demand on private vehicle ownership and travel to access these opportunities in Orange.
- **Employment:** Cargo has limited local employment and services. There are no industrial or key businesses (except for the local store and the school) so residents are required to travel to employment in other centres or surrounding rural areas which may make Cargo less attractive and less sustainable.
- **Road Transport:** Whilst Cargo Road is a significant transport route it is not a state road or highway and has less access to passing traffic. The RTA has also placed an 80km/hr speed limit on some sections of Cargo Road which increases travel times to Orange and makes the route less desirable.
- **Sewer:** Cargo does not have a centralised sewerage system and have voted against incorporating one. This is likely to result in the requirement for larger lot sizes so support standard septic systems which are more expensive to maintain and consume more land. There is anecdotal evidence that septic systems do fail and the odours can reduce property values and the amenity of the village.
- **Flooding:** The watercourse that runs through Cargo does result in flood prone lands that limits development in these areas. There is no detailed flood study identifying flood prone land so it is harder to assess development applications for land that may be affected.
- **Mining:** The location of Cargo in an historic and existing mining area has the potential to conflict with the amenity of the village if extractive industries produce impacts on village amenity. As Cargo is surrounded by a mineral potential area then growth of the settlement is more likely to conflict with mining growth.
- **Education:** Proximity to Orange and Canowindra and Cargo's location on bus routes generally means that pre-school/child care opportunities and secondary education is provided in these other centres. There is a demand for more after school care in Cargo that is not currently able to be met.
- **Land/Dwelling Supply:** The community has stated that whilst there is vacant land in the village and 1(c) zones that the preference is for much larger blocks of land and therefore owners are slow to release the land. There is also likely to be a rental accommodation shortage to meet the needs of lower socio-economic groups and more mobile workforces (such as mine employees).
- **Development Costs:** A key issue with all smaller settlements is the difficulty getting finance from banks for development. In addition, the cost of development is high compared with land/house prices making development less viable.

Issues & Strategies

Population Growth: In conclusion, the positives for Cargo tend to outweigh the negatives and suggest that Cargo has the potential to exhibit medium to high population growth over the next 10 to 30 years within increasing demand for land and/or services. However, there are a number of challenges to growth and land supply that will need to be addressed to achieve this growth.

10.8. Projected Future Population

Warning: The estimated population in 2036 is only an estimate based on the factors considered in this chapter and it may be affected by future changes in growth potential.

For all of the above reasons, it is estimated that the projected growth rate for Cargo is likely to be in the range of +0.5% to +1.0%/year with an average annual growth of +0.7%/year.

Table 3 shows how the existing and projected rates of growth for Cargo fit with other growth rates in the area and the resulting population projections (based on an estimated 2006 population of 278 (including the Village Zone and Rural Small Holdings Zones).

Range of Potential Average Annual Pop. Growth Rates	Av. Ann. Growth Rate	Projected Population						Δ in pop. 2006-2036
		2011	2016	2021	2026	2031	2036	
MINOR NEGATIVE GROWTH Proj. Growth Cabonne Pt.C	-0.10%	277	275	274	272	271	270	-8
LOW GROWTH	+0.10%	279	281	282	284	285	286	+8
LOW-MEDIUM GROWTH	+0.30%	282	286	281	295	300	304	+26
MEDIUM GROWTH <u>Projected Growth Rate Min.</u> ABS 1986-1996 Cabonne	+0.50%	285	292	300	307	315	323	+45 Minimum
MEDIUM-HIGH GROWTH <u>Projected Growth Average</u> ABS 1996-2001 Cabonne	+0.70%	288	298	309	320	331	343	+65 Average
HIGH GROWTH <u>Projected Growth Rate Max.</u>	+1.00%	292	307	323	339	357	375	+97 Maximum
VERY HIGH GROWTH Cargo 1996-2006 Growth Rate	+1.48%	299	322	347	373	401	432	+154
UNSUSTAINABLE GROWTH Cargo 1986-2006 Growth Rate	+2.72%	318	364	416	475	544	622	+344

Table 3: Projected population growth for Cargo to 2036 based on a variety of growth scenarios.

Issues & Strategies

- **Regular Review:** The growth rate for Cargo should be reviewed every census period (5 years) to see whether it accords with the estimated rates of growth and, if not, then growth projections and the supply of land may need to be modified.
- **Minimum Growth Rate:** Assuming a minimum projected population growth for Cargo in the low to medium range of +0.5%/year there will be an increase in population by 2036 of an additional 45 people, resulting in a total population of 323 people.
- **Average Growth Rate:** Assuming an average projected population growth for Cargo in the medium to high range of 0.7%/year there will be an increase in population by 2036 of an additional 65 people, resulting in a total population of 343 people.
- **Maximum Growth Rate:** Assuming a maximum projected population growth for Cargo in the high range of 1.0%/year there will be an increase in population by 2036 of an additional 97 people, resulting in a total population of 375 people.
- **Unsustainable Growth:** If Cargo were to grow at a very high growth rate above 1.0%/year then this would place great pressures on housing, employment, services, utilities, transport and facilities and is likely to be unsustainable under existing conditions and with existing utilities and infrastructure.
- **Supply & Demand:** The estimated increase in population will result in a significant increase in demand for additional housing, employment, services, and facilities.

10.9. Demographics

Warning: The demographic information in this chapter is only valid on the Census night in 2006 and due to the small census population it is subject to significant change over time.

The following provides a short summary of the demographics for Cargo's Collection District in 2006 that are relevant to this Strategy and/or different from the demographics for Cabonne. Please see [Section 2.6 – Demographics](#) for an overview of all of the settlements and Cabonne.

- a) **Age:** 16.2% of Cargo's population were over the age of 65 and 25.9% of Cargo's population were over 55 years of age. The median age of Cargo was 39 years compared with 41 for Cabonne and 37 years for Australia.
- b) **Labour Force:** 6.3% of the labour force in Cargo (8 people) were unemployed compared to 3.7% for Cabonne and 5.2% for Australia. 92 people over the age of 15 were not in the labour force.
- c) **Occupation:** 22.5% technicians and trades workers; 15% clerical and administrative workers; ; 15% machinery operators and drivers; 13.3% managers; 13.3% labourers; 7.5% professionals; 7.5% community and personal service workers.
- d) **Employers:** 7.5% were employed in residential care services; 6.7% in metal ore mining, Cadia Mine; 5.8% in supermarkets and grocery stores; 5.8% in agriculture and fishing support services; and 5.8% in road freight transport. The majority of employment opportunities are outside the village of Cargo.
- e) **Income:** The median individual income (\$381), median household income (\$735), and median family income (\$1,009) were slightly less than the Australian averages (\$466, \$1,027, \$1,171 respectively).
- f) **Family Characteristics:** 37.3% were couple families with children (C=45.2%; A=45.3%); 45.3% are couple families without children (C=43.2%; A=37.2%); and 17.3% are one parent families (C=10.6%; A=15.8%).
- g) **Dwelling Characteristics:** There were 121 private dwellings (of which 107 were occupied) on the night of the census. 95.3% were separate houses and 4.7% 'other dwellings'.
- h) **Household Composition:** 68.2% were family households (C=73.4%; A=67.4%); 29.9% were lone person households (age) (C=22.3%; A=22.9%); and 2.8% were group households (C=1.5%; A=3.7%).

Issues & Strategies

- **Age:** 25.9% of the population of Cargo are over the age of 55 which is lower than many other settlements in Cabonne but will continue to create increased future demands for health and aged care services. Cargo may lose a percentage of its older population if it does not have the health and aged care services to support this group.
- **Employment:** Cargo has a relatively high unemployment percentage. There are very few local employment opportunities and there is a high percentage of people of working age (43.5% - 25-54 years old). There is a heavy reliance on the rural sector or the need to commute to Orange or Canowindra which is less sustainable in the long term.
- **Income:** Cargo has a slightly lower median income than the Australian average which may slightly affect economic growth and the options available to the community.
- **Family Characteristics:** A reduction in families with children and increase in families without children may result in less support for the local schools. A slightly higher percentage of one parent families also require additional assistance and services.
- **Household Composition & Dwelling Characteristics:** The dominance of detached housing combined with an ageing population and high percentage of lone person households (29.9%) may indicate a need for greater housing choice in the future.

10.10. Environment & Natural Hazards

10.10.1. Topography & Views

Understanding the topography is important to understanding potential restrictions on settlement growth, appropriate locations for key land uses, and key natural hazards (e.g. slope) and opportunities (e.g. views) for each settlement.

The urban area of Cargo lies between approximately 600 metres and 640 metres above sea level. There are higher hills located to the west, south and east of the Village Zone. These hills provide an important landscape backdrop to the village and are an important part of the settlement's character. However, the sloping topography does place some limitations on growth and land uses.

Issues & Strategies

Topography: Cargo is located in an area of mildly undulating topography/hills that results in some steeper slopes and low-lying (flood-prone) areas that would be less suitable (or more costly to develop) for settlement growth or for certain land uses (e.g. industrial sites requiring large flat sites). Land uses should be located so as to minimise the need for cut and/or fill of land to create a suitable construction site.

10.10.2. Geology & Mineral Potential

The Department of Primary Industries (as of 2011) has provided Council with a Mineral Resource Audit of Cabonne Shire dated February 2010 (Figure 6). Please note that this is based on existing information and there may be additional mineral resources not identified on this map as there are exploration licences across a significant percentage of Cabonne.

The Mineral Resource Audit shows that the entire Cargo urban area is within the Fairbridge South, Cargo Creek, and Canomodine Potential Resource Areas which means that increased intensification of development may conflict with future mining and/or extractive resource operations and would need to be reviewed by the Department of Primary Industries. In addition, the existing Village Zone overlaps with the historical Golden Clad Mine and Iron Clad Mine to the west and is not far from the Cargo Prospect.

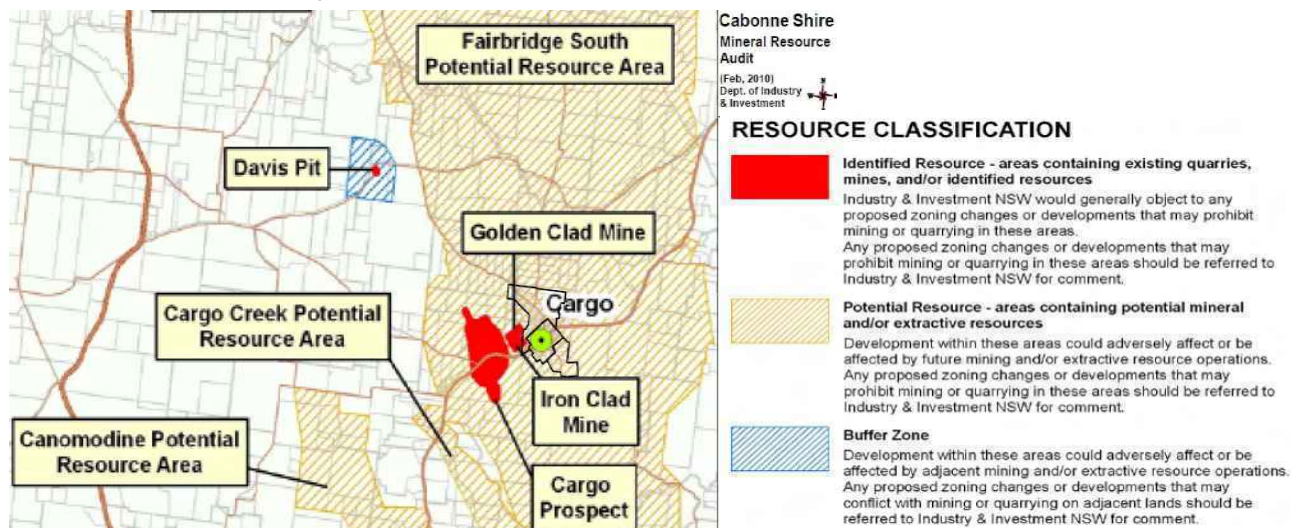


Figure 6: Excerpt of Mineral Resource Audit of Cabonne Shire (Source: Department of Primary Industries, February 2010).

Issues & Strategies

Mineral Potential: Any expansion of Cargo's urban area (particularly to the west) is likely to increase the potential for land use conflicts. However the mineral potential may also provide future economic/employment opportunities and should be promoted where it assists the settlement and community.

10.10.3. Groundwater

Cargo is fortunate that within the land zoned for Village or Rural Small Holdings there are no current lands identified as high or moderately high groundwater vulnerability by the NSW Office of Water so this is not a major constraint to growth / development. However, there are approximately 5 groundwater (bore) licences within the Village Zone and 6-8 bores in the Rural Small Holdings areas.

10.10.4. Watercourses & Flooding

Please note that this Strategy provides only a broad overview of potential flood prone lands based on existing studies and estimations. However, this Strategy should not be relied upon in determining flood impacts on any particular property.

Water management generally aims to minimise impacts on natural water systems from development and manage local drainage and flooding issues. In Cargo there is an unnamed drainage channel that runs north-south through the Village Zone (Figure 7) as well as a drainage channel that runs along the eastern side of the village past the showground.

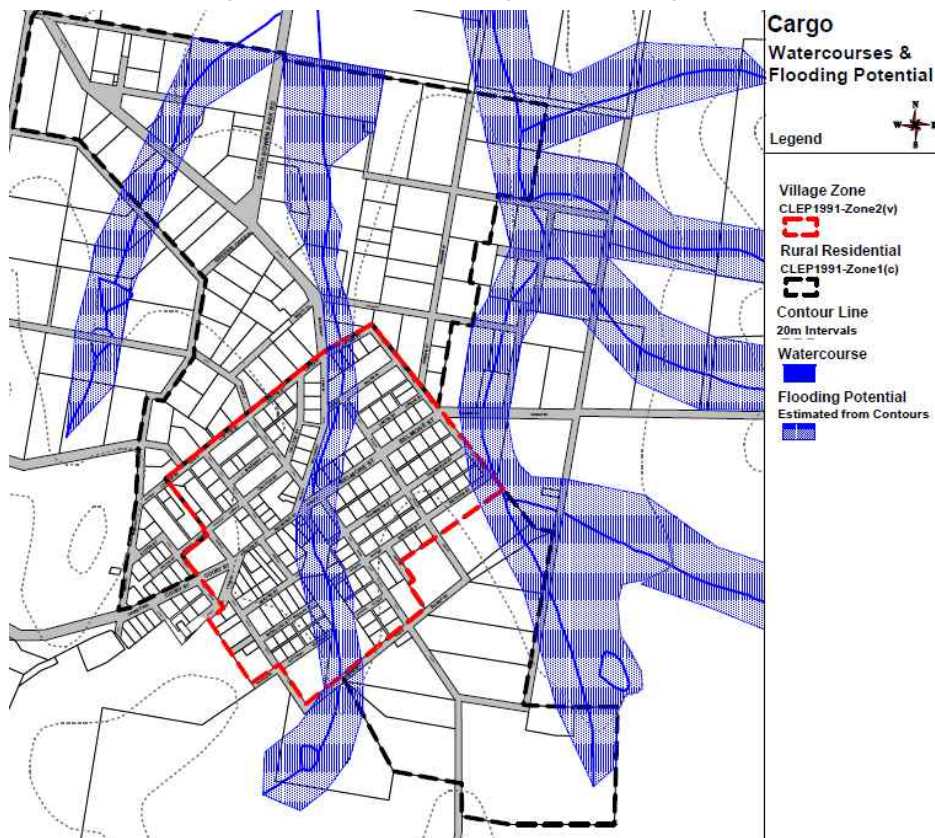


Figure 7: Watercourses and indicative flood prone lands (from contours and historical information) (Source: Council GIS 2011).

There have been no comprehensive flood studies conducted in Cargo. There is only an indicative map in CLEP1991 and in *Cargo Village and Environs – Proposal to Prepare a Development Control Plan* (August 1990). However, these maps combined with anecdotal and historical evidence suggests that there are drainage and overland flow issues in peak rainfall events along these drainage corridors/watercourses.

Clause 22 of CLEP1991 requires development in flood affected land to demonstrate it is not likely to impede the flood waters, imperil the safety of persons, aggravate the consequences of flood waters, or have an impact on the water table. For this reason it is preferable to exclude all flood liable land when identifying infill development sites or areas for future development.

Issues & Strategies

Flood Prone Lands: There is a potential for overland flow / intermittent flooding along the low-lying areas close to the unnamed drainage corridors through the centre of Cargo and to the east of the village. This is likely to make some land more expensive or less suitable to develop and may require larger lot sizes in the Rural Small Holdings areas. It may also limit expansion of Cargo to the east. A more comprehensive flood study should be prepared for Cargo once there is funding in place to better guide development potential.

10.10.5. Biodiversity & Vegetation

As Figure 8 shows, most of the significant vegetation in and around Cargo is outside the Village Zone (particularly in Cargo Common) except for open space areas and areas of Crown Land along the drainage corridor and to the west of the village.

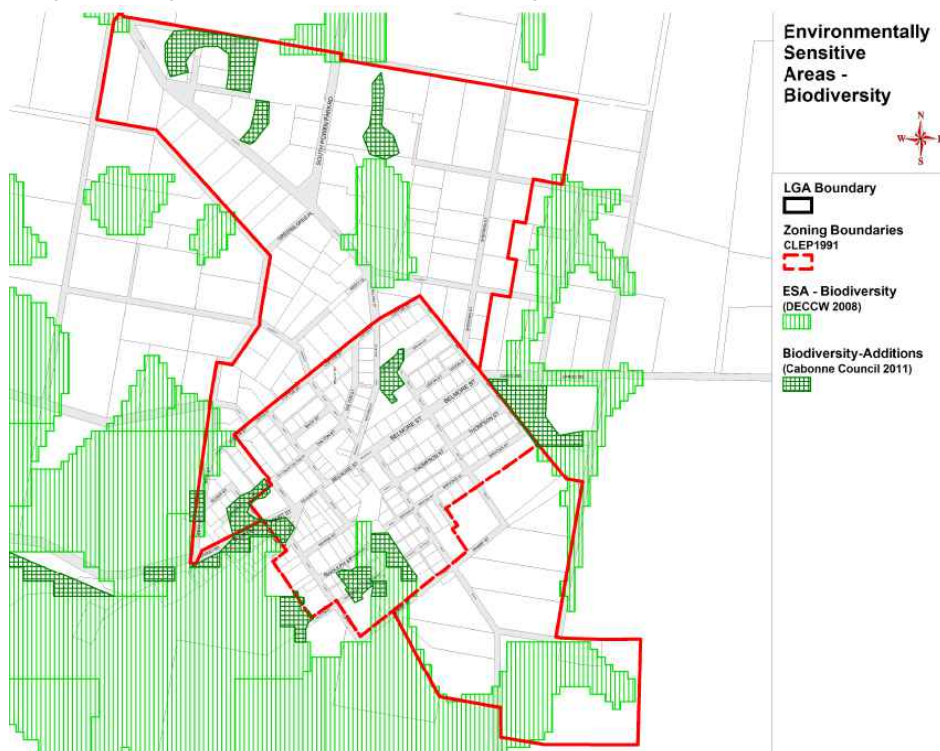


Figure 8: Map of Environmentally Sensitive Areas - Biodiversity for Cargo and surrounds (Source: DECCW 2008 / Council GIS 2011).

A list of threatened, endangered and/or vulnerable species in Cabonne can be found on the website for DECCW. There are no known threatened species and/or endangered ecological communities under the *Threatened Species Conservation Act* in the Village Zone at Cargo, however, this does not mean that there are not any in existence. Each development application will need to address this issue.

Issues & Strategies

- **Ecological Corridors:** Vegetation is scattered through the Rural Small Holdings areas and may result in the need for larger lot sizes to allow dwellings to be sited away from significant vegetation. There is an opportunity to strengthen the ecological connections along the existing creek and drainage lines and connect these to the stands of significant vegetation outside the Village Zone (where possible). Significant vegetation to the west and east of the village may constrain expansion of the urban area.
- **Street Tree Planting:** There is potential to enhance street tree planting in Cargo in accordance with the adopted Street Tree Master Plan (dated 1999). This plan should be reviewed by council and integrated with proposed Village Enhancement programs.

10.10.6. Bushfire Hazard

The area surrounding the village has been largely cleared for the purposes of broad acre agriculture. There are two pockets of native vegetation to the west and south of the village taking in the Cargo Common areas. As Figure 9 shows, these sections are identified to be within the Vegetation Categories 1 and 2 which require different types of asset protection zones. The bush fire prone land to the west impacts on village allotments in regards to buffer zones and the requirement by the NSW Rural Fire Service to meet Asset Protection Zones.

The 2003 Bush Fire Prone Land Map shows areas to the west and south of Cargo, however the map does not show the land falling between the two mapped areas and the land north of Sharp Street to Hayne Street. These pockets of bushland may need to be included in any new bush fire mapping.

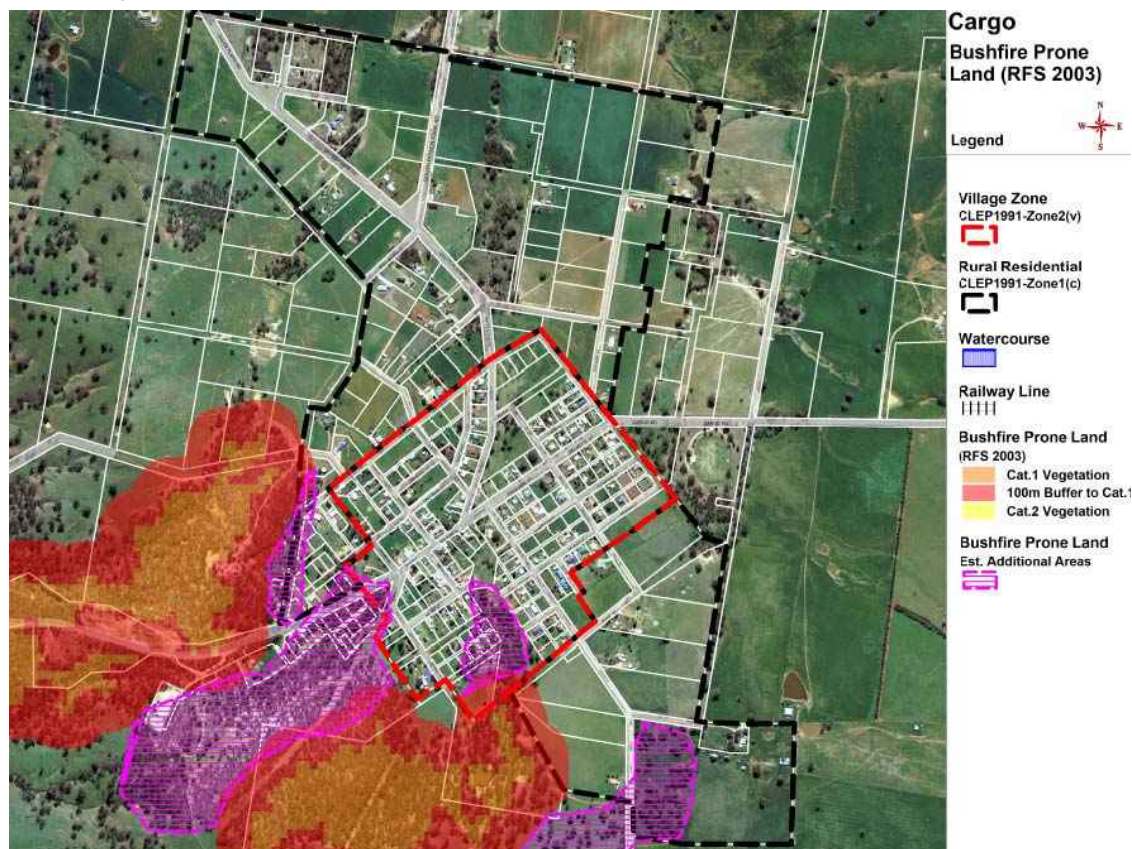


Figure 9: Bushfire prone land in and around Cargo (Source: RFS 2003/Council GIS 2011).

Issues & Strategies

Bush Fire Prone Land: Bushfire risk is likely to constrain development to the west and south of Cargo. Lots in proximity to these areas may require larger lot sizes to allow siting of dwellings with an Asset Protection Zone to minimise risk. There is a need to update the 2003 Bush Fire Prone Maps as some significant vegetation has not been included.

10.11. Access, Transport & Parking

10.11.1. Air Transport

Please see summary in [Section 2.7.1 – Air Transport](#). Public air transport access is considered low to medium for Cargo with a 40-45 minute drive to Orange Airport the nearest available.

10.11.2. Rail

There are no rail services available in Cargo. The nearest active line is the Orange to Broken Hill Line and Orange to Dubbo Line with the closest passenger rail station at Orange. As a result Cargo has a low to medium level of access to public rail transport compared to other Cabonne settlements and must rely on road for freight transport.

Issues & Strategies

Rail Access: The lack of rail transport creates a high reliance on road transport for movement of agricultural products/goods as well as the public and reduces the opportunities for growth in Cargo, particular for larger-scale industries.

10.11.3. Road Hierarchy & Vehicle Traffic Impacts

Please see [Section 2.7.3 – Road Hierarchy](#) for more details. The primary road is the Cargo Road (Regional Road MR237) which becomes Belmore Street and Court Street as it passes through Cargo between Orange and Canowindra. On 28 April 2011 the speed limit on this road between Cargo and Orange was reduced from 100km/hr to 90km/hr between Cargo and Greening Lane and 80km/hr from Greening Lane to Orange due to issues with road quality and safety (www.rta.nsw.gov.au). This is perceived by the community to be a significant issue in terms of travel times and accessibility for Cargo.

The remaining roads are generally local roads. The pattern of local roads in Cargo generally follows a grid-pattern which assists with navigation except where broken by topography and watercourses. Most local roads within the Village Zone are formed and paved but there are some roads that are gravel or unformed.

Issues & Strategies

Road Access: Cargo Road (Main Road) is the important arterial route which results in heavier vehicles and numbers of traffic passing through Belmore and Court Streets to reconnect with Cargo Road. However, this can impact upon residential amenity and safety along these routes, particularly as it bisects the village and is a barrier to pedestrians and cycle connections. The survey for the Community Plan 2025 indicates that roads are a very important priority (71.4%) (No.1), a key concern (No.3) and a key infrastructure issue (No.2) for the Cargo Community.

10.11.4. Bus

Please see [Section 2.7.4 – Bus](#) for more details. Cargo does not currently have access to any Countrylink or other regular public bus services. Cabonne Community Transport operates a bus service once a month from Canowindra, through Cargo, to Orange returning in the afternoon. The only other possible public bus connection is the school bus network including the bus between Canowindra and Cargo and buses travelling into Orange. On this basis there is a very low level of public transport accessibility, particularly for those without access to private vehicles and including the elderly, youth and lower socio-economic groups. In addition there is a school bus services that connects Cargo to Canowindra and Orange.

Issues & Strategies

Bus Access: There are very limited public bus transport connections between Cargo and other settlements in Cabonne, except for the school bus network and monthly community bus. Cargo has a low level of access to public bus transport that may pose a significant constraint to future growth for those without access to private vehicles.

10.11.5. Parking

There have been no community comments that parking is a critical issue in Cargo either through the Settlement Strategy process or Community Plan 2025 Survey. Cargo has adequate parking along the main street, at the local store, or at Cargo Village Green for low levels of passing traffic and visitors at this time. Overnight camping is dealt with in more detail in [Section 10.18 – Business & Industrial Land Uses](#).

10.11.6. Pedestrian Access

There are virtually no formal (paved) pedestrian footpaths provided in Cargo and the road verge is generally just grassed except for driveway crossings and small areas (like outside the Cargo Community Centre). Council's Pedestrian Accessibility and Mobility Plan ('PAMP') (see [Section 2.7.5 – Pedestrians](#) for more details) includes, but is not limited to, improvement of pedestrian connections between the Village Green / Hall and the Public School including new footpaths along Belmore Road (south side) between Church Street and Hamilton Street, then up Hamilton Street to Hutton Street. This will also include drop kerbs and refuges along Belmore Road (Total cost \$80,000). Council is currently acting on this work.

10.11.7. Cycle Access & Facilities

Council's Bicycle Plan (2005) (see [Section 2.7.6 – Cycling](#) for more details) recommends the following improved connections as follows:

- School to village centre, park and tennis courts (via Hamilton and Mayne Streets and across the park/drainage channel)(Year 2);
- Church Street to the Showground / Football Oval (via Church and Brooks Streets) (Year 3);
- Mayne Street to Dalton Street (via Hick Street and Forbes Street) (Year 4).

The cycleway from the School to the Tennis Courts has been completed.

10.12. Utilities & Infrastructure

10.12.1. Water Supply

Cargo's water is supplied by Central Tablelands Water from Lake Rowlands (in Blayney Shire). Lake Rowlands is expected to provide a reasonably secure supply of water (assuming growth across the network occurs as predicted) to meet the growth needs of Cargo. Cargo has the advantage of secure water supply (compared to Cumnock & Yeoval)(For more details please see Hydro Science Consulting (2009) *Joint Integrated Water Cycle Management (JIWCM) Evaluation Study*). Water is pumped from a pipeline near Canowindra through Cargo to Cudal and Manildra. There is a reservoir at Cargo and pumping station. The 2005 Draft Cargo Village Strategy states that there is sufficient excess water for development but there may be water pressure issues.

Issues & Strategies

- **Secure Water Supply:** Cargo is fortunate to be connected to the CTW water line for a secure potable supply that should be able to meet a reasonable level of growth for the village (subject to growth across the entire network).
- **Water Supply Lines:** Some streets within Cargo have not been connected to the reticulated supply, particularly in the south-west and north-east of Cargo. The costs of the connections may make development of these lots less desirable. The Rural Small Holdings areas around Cargo are unlikely to be connected to this network.

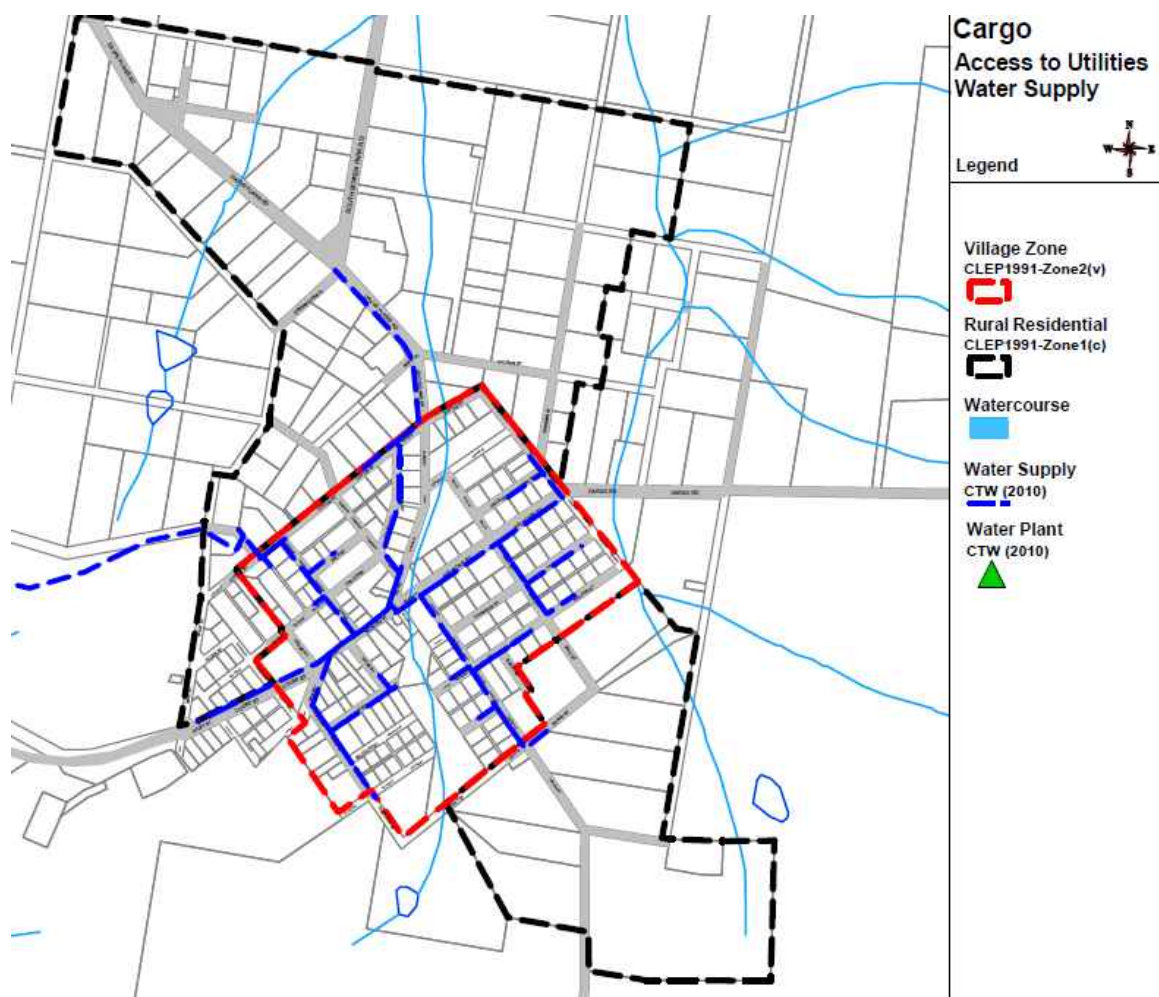


Figure 10: Location of existing water lines in Cargo (Source: Council GIS / Central Tablelands Water 2010).

10.12.2. Stormwater & Drainage

Kerb and gutters are not provided to many of the streets within the Cargo Village Zone and current plans are that they are limited primarily to Belmore Street and Hamilton Street (one side). The remaining streets utilise grass swales for drainage, except for the odd under-road pipe for cross street drainage. Drainage and flooding issues are dealt with in more detail in [Section 10.10.4 – Watercourses & Flooding](#).

10.12.3. Sewerage

Cargo is the only settlement in Cabonne that is not currently scheduled to have a centralised sewerage system in the foreseeable future. A ballot was undertaken by Council in April 1999 to assess whether Cargo would proceed with sewerage. Out of 107 ballot papers issued (89 returned) the outcome was 'Yes' (8.4%) / 'No' (83%).

Whilst it is not impossible that a centralised sewerage system could be introduced in the future, without significant government funding and the support of the community it is highly unlikely. In addition, the majority of residential growth has been in the Zone 1(c) (Rural Small Holdings) area that is not required to be connected to sewer. However, there are some suggestions in the Community Survey 2025 that this is a key constraint to further growth.

Whilst the village is dependent on on-site sewerage management then Council will need to maintain its current control prohibiting further subdivision of Village Lots below 2,000m². If there are existing lots below this lot size then Council can consider applications for a dwelling based on merit and the applicant proving that the intended system can be supported on the site.

Existing septic systems seem to have a low rate of failure in Cargo. The main factor to the system failing is age, collapse of septic trenches and low maintenance.

Issues & Strategies

- **Constraints to Growth:** The lack of connection to a centralised sewerage network may have an impact on the growth of Cargo, particularly as it will reduce the ability to further subdivide most lots and promote infill development. In addition, if systems fail then odour may impact on residential amenity. Even though Cargo historically decided not to connect to reticulated sewerage this may need to be reviewed in the future if Cargo continues to experience high growth or alternatively it will need to consume greater supplies of rural land for subdivision. The key issue is that centralised sewerage is likely to require state/federal funding and there is no guarantee that this will be available in the foreseeable future.
- **Septic System Pollution:** Council should continue to conduct reviews of all septic systems within Cargo to ensure that all systems are able to meet the required environmental benchmark to avoid pollution of water catchments and other impacts.

10.12.4. Electricity

Cargo is serviced with 11kV electricity lines serviced by Country Energy (now Essential Energy). The local electricity lines are located along most of the key streets in the Cargo Village Zone and most major streets in the Rural Small Holdings areas except for the issues noted below.

Issues & Strategies

Electricity Access: Electricity access may be an issue for some lots in the south west and north-east of Cargo where the network would need to be extended at additional cost to the developer. The key issue for Cargo is that its location on a lower voltage network means that it is less likely to attract larger-scale industrial or business users that are high energy consumers and so Cargo is less suited to a major industrial estate.

10.12.5. Telecommunications

Please see [Section 2.8.5 – Telecommunications](#) for a review of access to fixed, mobile and broadband telecommunication services in Cargo and across Cabonne's settlements.

Issues & Strategies

Telecommunications: In general there are reasonable levels of telecommunication access in Cumnock that should support limited growth of business, industrial and residential needs but a more detailed study is required. Improvements in internet access speeds (ADSL2+) and mobile reception may improve opportunities for business and residential growth. Cargo may receive the benefits of wireless high speed internet access under the National Broadband Network in the next 5-10 years but this requires further review.

10.12.6. Waste Management

Please see [Section 2.8.6 – Waste Management](#) for a review of access to waste management services in Canowindra and across Cabonne's settlements. Cargo has a waste depot / landfill located to the west of Cargo at 3635 Cargo Road (approximately 300-400m from the village boundary).

Issues & Strategies

Waste Management: The Cargo waste depot has an estimated lifespan of ~0.9 years with current compaction methods. It is likely that this landfill will be closed in the next few years and waste will need to be transferred to Canowindra. This is unlikely to affect the growth of Cargo but may affect the sustainability of any substantial increases in development. However, it is also expensive and has environmental effects to operate a number of small landfill sites so consolidation may be more effective.

10.13. Heritage

10.13.1. Heritage Items

Currently under CLEP1991 Schedule 1 there are no heritage items currently listed in or around Cargo. There are also no listings for Cargo in the National Trust of Australia (NSW), National Estates or NSW Heritage Register in Cabonne LGA as of August 2010. However, in the 2003 Community Heritage Study there were a number of items listed as items of heritage interest and nine (9) of these have been recommended for inclusion in the new Local Environmental Plan for Cabonne and these will be finalised as part of the Heritage Study. This is a significant increase in items identified for heritage protection but may increase in the future with further reviews of items over time.

10.13.2. Heritage Conservation Area

There is no existing Heritage Conservation Area ('HCA') in Cargo under the current CLEP1991 and there is no proposal to introduce a HCA in Cargo as no particular streetscapes warrant this level of protection at this time.

10.14. Summary of Existing Land Uses (Village Zone & Rural Small Holdings)

Below is a summary of the existing land uses within Cargo's Village Zone (Table 4) and Rural Small Holdings Zones (Table 5) with the locations shown graphically (Figure 11) (Note that has been updated since public exhibition with recent development up to August 2012).

Existing Village Zone

Land Use	No. Lots	% of VZ Lots	Description
Total Lots – Village Zone	174	N/A	Includes Crown land & open space
Vacant Lots	47	27.0%	No existing dwelling or business on lot
Dwelling Land Use Lots	100	57.5%	Mostly detached housing (96 dwellings counted)
Business Land Use Lots	4	2.3%	Local store, tourist accommodation & pub/hotel
Industrial Land Use Lots	0	0.0%	Industrial land uses not attached to a dwelling
Community Land Use Lots	11	6.3%	Health, Religious, Community, Emergency, Tourism etc
Open Space & Recreation	12	6.9%	Parks, Reserves & Crown land

Table 4: Summary of key land uses in Cargo's Village Zone (as at 2012).

Existing Rural Small Holdings Zone

Land Use	North	South	Total		Description
	No. Lots	No. Lots	No. Lots	% of Lots	
Total Lots	96	13	109	N/A	Mostly vacant agricultural land
Vacant Lots	44	7	51	46.8%	No existing dwelling or business
Dwelling Lots	38	6	44	40.4%	Detached housing
Crown Lots	13	N/A	13	11.9%	Crown lots / open space
Community Lots	1	N/A	1	0.9%	Community infrastructure

Table 5: Summary of key land uses in Cargo's Rural Small Holdings Zones (as at 2012).



Figure 11: Location of key land uses in Cargo's Village Zone and Rural Small Holdings Zones (as at 2012)
(Source: Aerial photos & site visits – Council GIS 2012).

Issues & Strategies

- **Supply & Demand:** The aim of this Strategy is to review the supply of land for key land uses in each settlement and correlate this to estimated future demand to ensure there is sufficient supply of urban land for the growth of the settlement.
- **Residential Demand:** Residential land uses are the greatest consumer of urban land (57.5% of the Village Zone lots & 40.4% of Rural Small Holding Zone lots).
- **Vacant Infill Development:** A significant number of lots are vacant (27% Village Zone & 46.8% Rural Small Holdings) and may be able to support some additional infill development for the growth of Cargo.
- **Land Use Areas:** This Strategy seeks to identify appropriate areas in Cargo for industry, business, residential, open space & recreation, and environmental outcomes that seek to minimise land use conflicts and maximise accessibility.

10.15. Open Space & Recreation

10.15.1. Open Space & Recreation

Cargo has the following open space and recreation areas both within & outside the Village Zone (Figure 11):

- **Cargo Village Green** (Corner of Belmore and Church Streets) – including BBQ, toilet facilities and tennis courts adjacent to the drainage channel /watercourse. This is a good facility for passing tourists and community gatherings. It is on land owned by Cabonne Council (Lots 7015 & 7016 DP1020716) and also sits over road reserves (Smith Street and Thompson Streets). Total area ~1.59 hectares.



- **Crown Land along Watercourse** (South of Belmore Street) – including natural vegetation and pedestrian paths along the unnamed watercourse (Lot 7304 DP1147842) as well as 6 adjacent lots (Lots 4-9 Section 6 DP758226) that is mostly suited for passive recreation. Total area ~3.56 hectares.
- **Cargo Showground / Sportsground / Recreation Ground** (Cargo Road) – including sports oval and seating stand and amenities (Lot 41 DP750145) that is the key active recreation area. It is on land owned by Cabonne Council. Total area ~ 5.26 hectares.
- **Cargo Common** (off Greenslopes Place & Powers Street) The Cargo Common is Crown land held in trust for the purpose of communal use of the Cargo community. It does not have any facilities so it is generally for passive recreation. It can be used for grazing should a Temporary Trust Licence be granted by the Cargo Common Trust (Lots 172-181 & Lot 184 DP750145). Total area ~28.8 hectares.
- **Cargo Cemetery** (Davys Plain Road) Crown lands with sections for different religious groups. Total area ~ 5.91 hectares.
- **Other Crown Lands** - There are a few Crown lots to the west of Cargo that are generally heavily vegetated and have little recreational use. There are also two large Crown lots (Lot 7302 DP1147847 & Lot 7011 DP1020072) that were originally proclaimed as a stock reserve and may provide some other passive recreational opportunities.



As a result, Cargo is generally well serviced for open space and recreation for a settlement of its size but there is a need to retain a reasonable population to ensure these facilities can be sustained and maintained.

Issues & Strategies

Open Spaces: There is reasonably good level of open space per person in Cargo (both inside and outside the Village Zone) and a range of recreational opportunities (both passive and active) though residents are likely to need to travel to other centres for specific sporting activities. The community is generally happy with the open space areas. Most concerns are due to the ongoing maintenance/mowing of these areas. As the settlement grows there may need to be upgrades to existing facilities, especially the sportsground.

10.16. Vacant Land

Vacant lots are important as they can provide the potential for infill development within the existing Village Zone that may take up some of the projected future growth of each settlement.

10.16.1. Total Vacant Lots and Development Constraints

A vacant lot is any lot that does not currently contain any significant building (dwelling or business - active or vacant) and may be capable of supporting a dwelling. However, it may contain ancillary sheds, garages, gardens or septic systems on these lots and these lots may be held by an adjacent non-vacant lot. The number of vacant lots in both the Village Zone and the Rural Small Holdings Zones (as at 2010) is set out in Figure 11 and summarised in Table 6.

Zone	Total Lots	Vacant Lots	% of Lots in Zone
Village Zone	174	47	27.0%
Rural Small Holdings Zone	109	51	46.8%

Table 6: Summary of vacant lots in Cargo's Village and Rural Small Holdings Zones (as at 2012).

However, this Strategy recognises that sometimes the historic pattern of subdivision has not taken into account the natural hazards or topography that may prevent a lot from being developed. Figure 12 shows that there are 14 vacant lots (plus several partial lots) in the Village Zone that may be difficult or costly to develop due to a range of constraints including, but not limited to, flood prone land, lack of road access, lot size or slope, significant vegetation / biodiversity or existing development on the lot.

As a result, the total number of vacant lots (47) is reduced down to approximately 33 vacant lots that have the potential to support a dwelling (subject to detailed studies and consent). As these lots are already subdivided, they could be put on the market at any time.

Of the 33 lots, 4 lots are larger lots that are capable of further subdivision into 2,000m² lots – producing an additional eight (8) lots – a total of 41 vacant small lots capable of development.

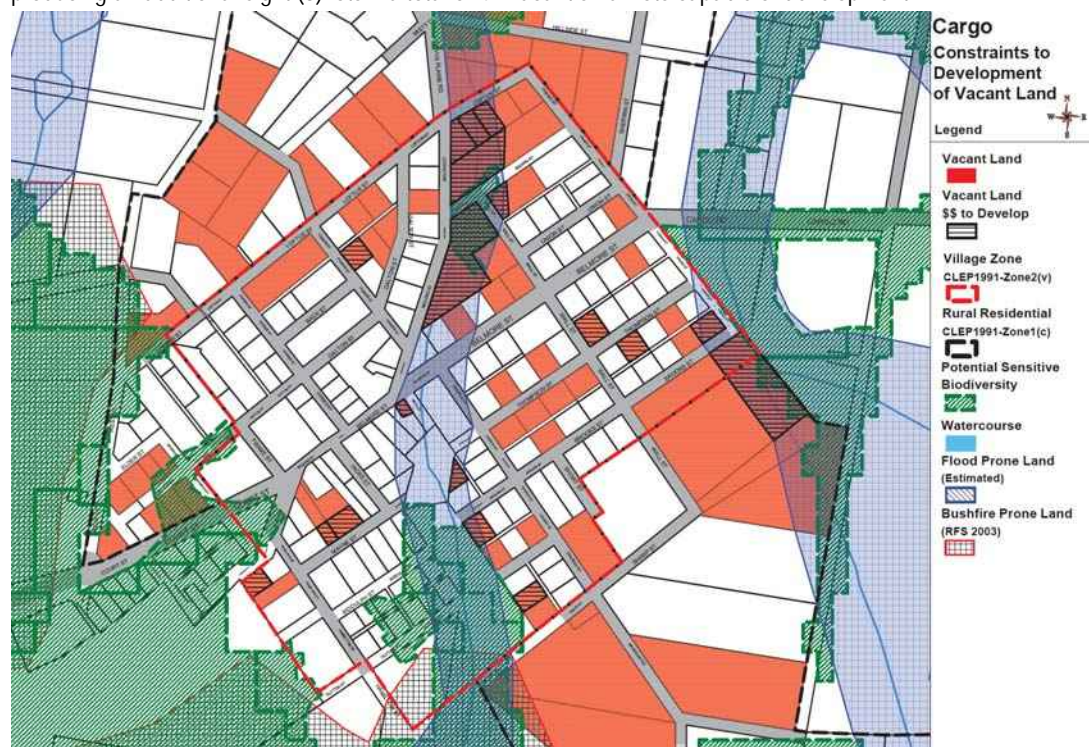


Figure 12: Vacant allotments and those affected by constraints to development in Cargo's Village Zone (as at 2012) (from aerial photo and brief street analysis – Council GIS 2012).

10.16.2. Likelihood of Development of Vacant Lots (Village Zone)

It is important to note that the community often claims that some of these vacant small lots should not be counted for the purposes of infill development because the current owners are not interested in selling. However, this Settlement Strategy is looking to review land supply over the next 30 years and whilst the existing landholders may be reticent to make land available that could be expected to change over these lengths of time, particularly as land prices rise and people no longer need larger lots.

Council can only make a 'guesstimate' of what percentage of lots may become available for sale or development. Therefore, Council is proposing a very conservative estimate of 50% possible available vacant lots is a reasonable percentage over a 30 year period. On this basis of the 41 potential vacant small lots, only 21 are expected to be developed over the coming 30 years (assuming proposals meet the development controls).

10.16.3. Development Potential of Vacant Land (Rural Small Holdings Zone)

In the Rural Small Holdings Areas it is not suitable to merely do a vacant lot count and more relevant to look at development potential in terms of different lot sizes. Not all large lot residential supply is likely to be the minimum size of 4,000m² and there is likely to be some demand for blocks of 1-2 hectares. The existing subdivision pattern shows a range of lots sizes from 4,000m² up to 15 hectares with the majority approximately 1 hectare in size.

Table 7 shows different lot potential based on different possible lot sizes. Depending on lot size the total number of additional dwellings from the existing zoned land could range from 7 to 121 (based on only 50% ever being developed) with the most likely being 35 potential dwellings of 1 hectare average size. This is less than the 51 vacant lots still present in the Rural Small Holdings Zone (many of which have additional subdivision capacity) so a range of 35-70 is most likely.

Large Lot Residential Area	Total Area	Reduction for Roads/ Constraints (~30%)	Potential Lots@4,000m ²	Potential Lots@1ha	Potential Lots@2ha
North	~117ha	~82ha	~205 Lots	~82 Lots	~41 Lots
South	~46ha	~32ha	~80 Lots	~32 Lots	~16 Lots
TOTAL	~163ha	~114ha	~ 285 Lots	~114 Lots	~ 57 Lots
Minus Existing 44 Dwellings	--	--	~241 Dwellings	~70 Dwellings	~13 Dwellings
50% Rule	--	--	~ 121 Dwellings	~ 35 Dwellings	~ 7 Dwellings

Table 7: Potential future lots/dwellings in the Rural Small Holdings Zones based on different average lot sizes.

10.16.4. Total Potential Supply of New Lots

Therefore, based on the above methodology the total potential lots that are likely to be available for development (assuming that each has a single dwelling) would be 56 lots / dwellings over the next 30 years (from 2006 to 2036) as summarised in Table 8.

Source of New Lots for Dwellings	Vacant Lots with Development Potential	Likely Number to be Available in next 30 years (50% Rule)
Village Zone	(>1,800m ² /lot) 41	21
Rural Small Holdings Zones	(Average 1 ha lots) 70	35
TOTAL	111 Lots	56 Lots/Dwellings

Table 8: Summary of total potential lot / dwelling yield in Cargo over the next 30 years (subject to demand and supply).

10.17. Community Land Uses

Figure 11 shows the location of the key community land uses in Cargo. For the purposes of this Strategy, 'community uses' are defined as buildings, services, facilities and infrastructure that are not-for-profit and/or support the local community.

As stated in [Chapter 2 - Cabonne Overview](#), community uses are permitted in a broad range of zones and, therefore, there is no need for a detailed analysis of supply and demand of land for these uses. However, community uses are often a vital service for the community and provide employment and social and economic support and growth. A more detailed review of access to community services for all of Cabonne's settlements is provided in [Section 2.10 – Services & Facilities](#).



10.18. Business & Industrial Land Uses

Warning: Please note that services / facilities change regularly and this section merely provide a 'snapshot' of key services / facilities to assess issues in each settlement in 2010/11.

10.18.1. Existing Businesses & Industries

As at 2011 in Cargo the only stand-alone business premises were the Cargo Store and the Cargo Inn, both on Belmore Street (Figure 11). The Cargo Store is a mixed business that provides a local service station, a licensed Australia Post office, a range of groceries, a newsagency with eftpos facility and take-away food store. The Cargo Inn (34 Belmore Street) is a pub and provides food and drinks as well as an ATM facility (Bank of Queensland) but no accommodation. There is also the Chi-Cargo accommodation that provides rooms in the original convent and communal bathroom facilities which is currently targeted towards backpackers/fruit pickers but has been more of a function centre and full-service accommodation in the past. Tourism attractions include some of the heritage buildings and local wineries along Cargo Road with passing traffic between Orange and Canowindra/Cowra.

There are no larger-scale stand-alone industrial sites in Cargo, however, there may be several home based mechanical repairs, metal fabrication or other facilities. The only business that was clearly signposted in 2010 in the Village Zone was Dudley Frecklington's Rural Road Repairs (truck, backhoe and grader for hire) which would act as a depot for this machinery.



Issues & Strategies

- **Business:** There are limited retail / commercial services in Cargo. The Cargo Store provides a range of essential local services but travel to other settlements is required for higher level services and any significant employment and this is likely to remain the case in the future with the proximity to Orange. The maintenance of these services also comes down to community support and a local person willing to run these services so there may be periods when these services are not available. It may be difficult to maintain local shops if prices are higher than in Orange and not supported by locals.
- **Industry:** There are no larger stand-alone industrial operations and only limited local home industries in Cargo – so once again there are limited local employment opportunities. Cargo's proximity to Orange and lack of local utilities / services may make it difficult to attract new industries.
- **Tourism:** Community stated at workshop that Cargo is on the tourist route through to Canowindra. Tourism is seen as one of the key opportunities for Cargo (34.8%) (Community Survey 2025). However there is very limited tourism infrastructure (limited accommodation and restaurants) and little to warrant more than a passing visit so it may be difficult to leverage off tourism economically. The focus may need to be on camping and caravan tourism.

10.18.2. Supply & Demand for Business Land Uses

Business uses (including home businesses) will generally be permissible under the new Standard LEP Template in the Village Zone (or its equivalent) which is likely to be retained for Cargo. Due to Cargo's limited size, growth and number of businesses - there is no need to provide a specific zone for business land uses in the proposed new LEP. It is expected that for the foreseeable future there will generally only be up to 2-3 stand-alone retail businesses in Cargo with the rest being home businesses and home industries. This is only likely to change substantially if a new mining area opened up in proximity to Cargo at which time this issue would need to be reinvestigated.

Whilst the proposed Village Zone will provide flexibility for local retail and commercial businesses to grow in Cargo there should be some attempt to consolidate stand-alone retail and commercial along Belmore/Court Streets between Frame and Powers Streets to reinforce the sense of a central area of Cargo, attract passing trade on the main transport route, and minimise conflicts with residential areas. This defined 'business' area would also hopefully result in adaptive re-use of some of the original old shopfronts that are now used as residential premises or vacant buildings to provide an area of higher activity that will assist in attracting passing tourist trade and business and restore these existing premises to contribute to the streetscape. There are at least 2-3 existing buildings along Belmore Street that were previously used for small businesses and would ideally be re-used. There is also the potential for some infill development along Belmore Street for new businesses (if required).

Issues & Strategies

Business Land Supply & Demand: There are sufficient vacant businesses / lots to support a growth of a new business every few years for the foreseeable future along Belmore Street between Frame and Powers Streets. In addition, home businesses with lower impacts are likely to be supportable across the village area.



10.18.3. Supply & Demand for Industrial Land Uses

Light industrial land uses (including home industries) will generally be permissible under the new Standard LEP Template in the Village Zone (or its equivalent) which is likely to be retained for Cargo. Due to Cargo's limited size, growth and number of light industries - there is no need to provide a specific zone for industrial land uses in the proposed new LEP.

Cargo lacks access to a major highway, a railway line/interchange, high voltage electricity, and a reticulated sewerage system that could deal with trade waste so it is less likely to attract new larger-scale industrial activity (other than mining or rural industries) as it would find difficult to compete with larger industrial estates such as Orange or at Manildra. For these reasons, the Rural & Industrial Strategy has not classified Cargo as a suitable location for larger-scale or heavier industries in Cabonne.

If light industries were to locate in Cargo they are most likely to be associated with the transport industry, vehicle repairs and heavy haulage associated with passing traffic on the Cargo Road or if the Fairbridge South, Cargo Creek, and Canomodine Potential Resource Areas surrounding Cargo subsequently opened up for mining/extractive industries and there is a need for support / engineering services (see [Section 10.10.2 - Geology & Mineral Potential](#)). However, there are no known plans as at 2011 for opening of a new mine in this area and it is difficult to guess what support industries may be attracted to Cargo – so there is no need to plan for this event at this time. If a new mine were to be considered then there would be 4-6 years prior to commencing operations for Council to reinvestigate Cargo's growth strategy.

The key opportunities of this growth would be on local food, services, accommodation and housing to support a local workforce. However, the key issue is to provide areas for industrial growth that would not impact on the residential amenity and rural/streetscape qualities. Ideally a larger vacant site with limited proximity to dwellings would be chosen (most likely in the

surrounding large lot residential areas) for future rezoning for industrial land uses (if required). Rural industries will be permissible in the surrounding rural zones so there is less likely to be increases in rural industries/processing in Cargo unless there is a need for a smaller lot.

Issues & Strategies

Industrial Land Supply & Demand: Excluding future mining activity, there is not estimated to be any significant demand for industrial zoned lands in Cargo for the next 5-10 years. Cargo has not been identified by the Rural & Industrial Strategy for large-scale industrial activity and does not have the infrastructure to attract industrial uses – unless they were to be ancillary to future mining activity in the area surrounding Cargo. The identification of industrial lands at Cargo should only occur once mineral potential has been clearly identified and the needs of that industry are clarified. In the short term, home industries that do not impact on adjacent residential areas can occur throughout the Village Zone.



10.19. Residential Land Uses (Village Zone & Rural Small Holdings)

10.19.1. Existing Residential Character

Number of Dwellings / Occupancy Rate

As of 2010, there were ~100 lots used for dwellings in Cargo's Village Zone (57.5% of the total lots) plus approximately 44 existing dwellings in Cargo's two Rural Small Holding Areas (according to a count from aerial photo and street analysis) – a total of approximately 144 dwellings in both zones (Figure 11).

This is roughly consistent with the ABS 2006 Census (Quickstats) that recorded 121 private dwellings in the Census Collection District with 14 vacant private dwellings (11.6% of total private dwellings) and 107 occupied private dwellings. The average household size in 2006 was 2.5 people per dwelling compared to 2.6 in Cabonne and Australia even though 32 out of 108 households (29.6%) were lone person households.

Dwelling Types

Whilst there are some examples of dwellings from the late 1800s through to mid 1900s, most of the existing housing stock is from the mid to late 1900s. Newer housing is interspersed with some of the older housing stock. Some housing is reaching the end of its life and will need to be replaced where it is not nominated as a heritage item. The dominant dwelling type in Cargo is the detached or separate dwelling (95.3%) but 4.7% are classified as 'other dwellings'.

Lot Sizes

As stated in **Section 10.5 – Settlement Pattern**, the majority of lots to the east of Cargo are regular in size and dimension (approximately 40m by 50m, area ~ 2000m²) but there are some lots down to 1,500m² and some larger lots up to 11,800m². To the west of Cargo there is more variable lot size ranging from 1,100m² up to 1.5 hectares. For lots of size greater than 900m² the lot depth and width is generally sufficient to allow the placement of a dwelling with good side setbacks and a good rear yard. For lots less than 900m² there may be need for clear controls to guide setbacks and ensure good house and building design on these narrower lots. This will be guided by current state government initiatives to allow complying development within residential zones on smaller lots. There may be some opportunities for consolidation and subdivision to provide for medium density in close proximity to the village centre in the future.

Dwelling Densities

The density of housing in Cargo ranges from as low as 1 dwelling/hectare to a high of 4 to 6 dwellings/ hectare (excluding roads) which is a very low density of housing in accordance with its rural village character. There is very limited medium density development. There is generally a large yard attached to each dwelling which has historically allowed for on-site effluent management systems, landscape and private open space.

Rental Rates

Out of 107 occupied private dwellings in Cargo, 15 dwellings are rental properties (14% of occupied dwellings) (Source ABS 2006) which may not be sufficient to meet demand.

Issues & Strategies

- **Density / Character:** A combination of larger lot sizes and a dominance of detached dwellings means that the dwelling densities in Cargo are relatively low in accordance with its rural village character. Increased densities may offer an alternative to consumption of more land for growth and improved sustainability but are less likely to be desirable in the current market.
- **Housing Types:** The majority of dwellings in Cargo are detached and there are very limited medium density housing types. Whilst part of the attraction of living in Cargo is to have a separate dwelling, with an increasingly larger older population and high percentage of lone-person households there is likely to be future demand for small or more compact housing that is lower in maintenance on smaller lots. There is currently a limited choice of housing types in Cargo to meet this future need. There may also be demand for large numbers of compact dwellings or serviced units for mining related employees if surrounding mineral potential areas go into production.
- **Rental Supply:** There may be an issue with the provision of rental properties and affordable housing in Cargo to meet the needs of lower socio-economic groups and itinerant workers, particularly for mining related employees if this increases in the area.
- **Development Controls:** There are no major issues with the character and design of dwellings in Cargo but there may need to be some controls to ensure that the character of key streetscapes in Cargo is preserved. This may involve restrictions on the use of transportable/relocatable houses and shed-style homes to ensure that they are in keeping with the existing housing stock materials and sympathetic to heritage items.



10.19.2. Projected Dwelling Demand

Dwelling Occupancy Rate

The occupancy rate is the number of people that will live in each house. **Local Profile Paper – Table 2.12**, notes that for Cabonne, the average household size has decreased from 2.9 (1991), to 2.8 (1996), to 2.7 (2001), to 2.6 (2006). Therefore, average household sizes have decreased over the last 15 years and this is also occurring in neighbouring Shires.

The occupancy rate for Cargo (ABS data) is also expected to remain low over the next 10-30 years, especially if there are increases in aged care housing (senior citizens living alone); families having less children (smaller family sizes); and greater variety of housing types which attracts younger people to live independently. On this basis it is assumed that the estimated occupancy rate in Cargo in the year 2036 will average 2.3 people per dwelling (down from 2.5 in 2006). This is consistent with the Rural & Industrial Strategy which projects an occupancy rate in Cabonne Part C (including Cargo) of 2.3 people per dwelling (**Local Profile Paper – Table 8.16**).

Dwelling Demand from Projected Population Growth

As stated in **Section 10.8 – Projected Future Population**, the projected annual population growth rate for Cargo ranges from +0.5%/year (minimum) to +1.0%/year (maximum) with an average of +0.7%/year. As this Strategy needs to cater for the greatest potential land demands, dwelling demand will be based on a **maximum** annual population growth rate of +1.0%/year, even if this rate is never achieved.

Method	Calculation	Projected Demand for New Dwellings by 2036
Dwellings required by <u>Additional</u> Population	97 / 2.3 per dwelling	~42
Dwellings required by <u>Total</u> Population minus <u>Total</u> Dwellings	375 / 2.3 per dwelling (149) minus existing total dwellings (121 ABS)	~42
Dwellings required by <u>Total</u> Population minus <u>Occupied</u> Dwellings	375 / 2.3 per dwelling (149) minus existing occupied dwellings (107 ABS)	~56
Average Dwelling Demand to 2036	42 + 42 + 56 (140) / 3	~47

Table 9: Calculation of projected dwelling demand from estimated population growth to 2036 for Cargo's Village and Rural Small Holdings Zones (Source: ABS data www.abs.gov.au).

Dwelling Demand Projected from Historical Growth in Dwellings

An alternative method to estimate dwelling demand is to project from historical growth of dwellings based on ABS Census data. However, as Cargo only exceeded a population of 200 people from 1996 onwards there is not sufficient historical data to extrapolate using this mechanism.

Dwelling Demand Projected from Development Applications

An alternative method to estimate dwelling demand is based on the historical number of dwelling applications approved each year by Council for new dwellings in Cargo (Table 10). Please note that this has limited accuracy as development approval does not necessarily ensure that these new dwellings were built. On this basis it could be projected that there could be demand for approximately 30 dwellings over 30 years in Cargo's Village Zone and 19 dwellings over 30 years in Cargo's Rural Small Holdings Zones (based on a continuation of current approval rates). This is a total of 1-2 dwellings per year or 49 dwellings over 30 years across both zones.

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	Average
Village Zone	1	0	1	0	0	1	2	2	2	1	1	11	1 dwellings/yr OR 30 in 30yrs
Rural Small Holdings	0	0	0	1	0	1	1	2	0	2	0	7	0.64 dwellings/yr OR 19 in 30yrs

Table 10: Total number of dwelling applications approved 1999-2010 (financial years) in Cargo's Village and Rural Small Holdings Zones (Source: Council records - Fujitsu Database).

Dwelling Demand - Summary Table

Table 11 summarises the findings above to suggest that approximately 48 additional (new) dwellings will be required in Cargo's Village and Rural Small Holdings Zones by 2036 compared to the 2006 figure.

Projected No. of Dwellings Required by 2036 based on following calculation method	Increased No. of Dwellings from 2006
Projected Population Growth (Max. 1.0%/year)	~47
Projected Development Applications	~49
Average 47 + 49 = 96 / 2	48 Additional Dwellings over 30 years

Table 11: Projected additional dwellings needed by 2036 in Cargo's Village and Rural Small Holdings Zones based on a variety of projection methods.



10.19.3. Comparison of Supply & Demand for Dwellings to 2036

Summarising all of the above sections there is a projected demand for 48 additional dwellings in Cargo over the next 30 years and a potential for approximately 67 lots/dwellings. Therefore, the total supply of land available in Cargo's Village and Rural Small Holdings Zones compared to the demand is shown below:

56 (potential dwelling lots available) X 30 years = ~35 years supply.

48 (projected demand for new dwellings)

Even if this total lot supply is broken down by different demand for each zone then the above methodology suggests that the:

- Proposed Village Zone will have a demand of ~30 additional lots by 2036 and the potential to provide ~21 lots (at least 20 years supply); and
- Proposed large lot residential area will have a demand of ~20-30 additional lots by 2036 and the potential to provide 35-70 lots (in excess of 30 years supply).

Issues & Strategies

Need for Rezoning in Next LEP: This Strategy recommends that there is a small expansion of Village Zoned land but no additional large lot residential land provided in the next LEP.

Vacant village land may be present but residents often demand larger lots or do not release

land for development. Council should negotiate with existing large lot residential land owners to promote additional subdivision / development before considering additional land in these areas. Even if there is a change in the growth rate then there is sufficient 'buffer' in existing supplies for a minimum of 10-20 years supply.

10.19.4. Proposed Future Land Use Arrangements – Village Zone

As a result of the above analysis, the proposed future land use arrangements for Cargo are set out in Figure 13 and summarised as follows:

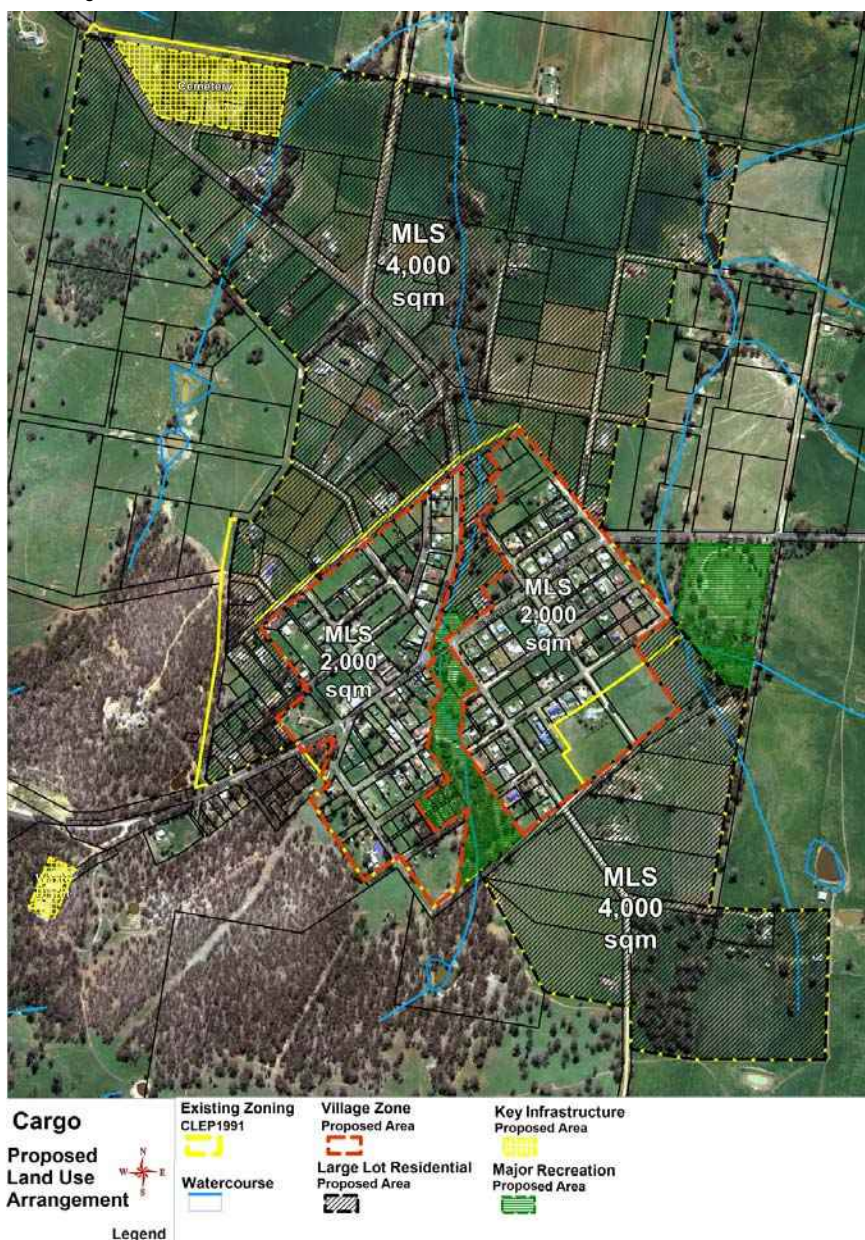


Figure 13: Summary of proposed land use arrangements for Cargo (Source: Council GIS 2011).

Appropriate Land Classification

As Cargo has a 2006 population of 278 it is not a large village and although it has historically experienced some high population growth in the order of 1.4% to 2.7% per year, there is not significant growth in business or industrial land uses that would warrant defining specific areas for business and industrial use. Therefore, the most appropriate land classification for the core village area would be something similar to the existing 'Village Zone'.

Minimum Lot Size

As Cargo will not have a centralised reticulated sewerage system for the foreseeable future then it is appropriate to maintain the existing requirements for 2,000m² as the minimum lot size for subdivision. Applicants that hold existing lots that are below 2,000m² should be able to apply to Council to seek a dwelling approval based on the merits of each application.

Extension of the Village Zone

Whilst there are 47 vacant lots currently in the Village Zone, 33 of which are relatively free of major constraints, there is a demand for 1-2 dwellings per year and not a lot of land that is on the market. Therefore, some additional provision of Village Zoned land may assist in making land available for purchase and development and may be required in the next 5-15 years.

The natural extension of the Village Zone would be to include the following lots in the Village Zone:

- **Large Lot Residential to Village Zone:** 20 Wall Street (Corner Sharp Street) (Lot 314 DP750145) has an area of ~1.98 hectares and a single dwelling and garden that only takes up ~0.56 hectares, leaving 1.4 hectares for potential development. If Short Street were to be extended through to Sharp Street then this area could potentially support another 6 lots/dwellings (2,000m² or more each). This land is held by one landowner that will make it easier to develop.
- **Large Lot Residential to Village Zone:** 17 Wall Street (Corner Brooks Street) (Lot 1 Section 35 DP758226) has a total area of approximately 4.39 hectares. Approximately 1.13 hectares is already located in the existing Village Zone facing Brooks Street. However, a significant portion of this land adjacent to the drainage channel to the east is not suitable for small lot development. Therefore, it is proposed to move the Village Zone away from the eastern end and include land along Wall Street that increases the Village Zoned land to ~2.33 hectares (an increase of ~1.2 hectares) that could potentially support another 5-6 lots/dwellings (2,000m² or more each). This land is held by one landowner that will make it easier to develop.

Reduction of the Village Zone

There are a number of lots that are so heavily constrained that they would not be suitable for further development and therefore do not benefit from remaining in the Village Zone as follows:

- **Village Zone to Large Lot Residential:** There are a number of privately held lots in the existing Village Zone adjacent to the unnamed watercourse through the middle of Cargo that are highly likely to be subject to overland flows or drainage issues in high rainfall events. Therefore, in order to develop this land it will be necessary to have a larger land area to find a suitable dwelling location and they would be more suited to a large lot residential classification (Total area ~ 3 hectares). This includes:
 - 5-7 Loftus Street & 26 Molong Street (Lots 1-3 Section 25 DP758226) & Part of 2 Brown Street (Lot 335 DP750145) (One owner); and
 - The majority of 2 Molong Street (Lot 342 DP750145) & 16-18 Belmore Street (Lots 3-4 Section 28 DP758226) (One owner).
- **Village Zone to Recreation:** There are a number of lots held by government authorities (mostly Crown) along the unnamed watercourse that are used for recreational purposes that should be located in a recreation area to limit development (Total area ~5 hectares) but would previously have had limited development potential.
- **Village Zone to Rural:** There is one Crown Lot at the corner of Court and Belmore Streets (Lot 44 DP1126505) that is at the western entrance to town and heavily vegetated and would not be suitable for additional development so it is relocated into the adjacent rural area (Total area ~ 0.27 hectares).

10.19.5. Proposed Future Land Use Arrangements - Large Lot Residential Area

Appropriate Land Classification

It is likely that the term 'Rural Small Holdings' will be removed in the future LEP and be replaced with the term 'Large Lot Residential'. This describes dwellings that are located on larger lots (greater or equal to 4,000m²). However, contrary to past practice the focus for these lots will be on their residential or 'lifestyle' uses rather than their 'rural' or agricultural uses.

Extension of the Large Lot Residential Area

As determined by this Strategy there is no need to provide additional lands for large lot residential usage for at least the next 10 years and most likely for a longer period. Therefore, the focus is on further subdivision and infill development of existing areas before additional lands are investigated for rezoning. However, the large lot residential area will replace the Village Zone along the unnamed watercourse to the east of Molong Street and north of Belmore Street (details above - Total area ~ 3 hectares).

Reduction of the Large Lot Residential Area

This Strategy proposes the following reductions to the existing Rural Small Holdings Zone:

- **Large Lot Residential to Infrastructure:** The Crown land that forms the Cargo cemetery on Davys Plains Road (Lots 1-7 DP1041279 & Lots 51 & 52 DP750145) is currently in the Rural Small Holdings Zone but has no development potential and should only be utilised as a cemetery (Total area ~5.3 hectares).
- **Large Lot Residential to Rural:** There are three (3) Crown lots between the unformed Elder and West Streets (Lots 1-3 Section 18 DP758226) adjacent to significant vegetation and bushfire risk that have a very low development potential and should be relocated to the adjacent rural zone (Total area ~0.5 hectares).

As a result the proposed large lot residential area will be ~155 hectares in area (including roads) or ~110 hectares (excluding roads & constrained land). At an average of ~1ha/lot this is a total of 110 lots which minus the existing 44 lots equals potential for ~66 new lots/dwellings.

Minimum Lot Size

For the large lot residential areas around Cargo Council proposes to retain the existing minimum lot size for subdivision of 4,000m² per lot. However, it is important to note that due to a number of environmental hazards throughout these areas including, but not limited to, flash flooding along watercourses, bushfire risk, and the potential for extractive industries in the area Council may require larger lot sizes where dwellings need to be set back from hazards (depending on the subdivision design). Council expects a range of lots sizes from 4,000m² up to 2 hectares in size to be provided according to market demand.

10.19.6. Future Growth Directions

If the growth rates of Cargo increased significantly above those projections in this Strategy then there may be future potential to amend the zoning to allow the settlement to grow as follows (Figure 14):

- **Stage One (1) – Infill Development:** In the short to medium term the majority of the growth should be take-up or infill development within the proposed Village Zone (or equivalent) and take-up of existing large lot residential area (or equivalent) to the north, north east and south, particularly those lots with road frontages;
- **Stage Two (2A) – Village Expansion:** Should the demand for vacant land grow in the village area exceed the growth estimated in this Strategy in 10-20 year then Council should investigate up-zoning of existing large lot residential land to the north of the village area along Sherwin Street (but setback from any drainage / watercourses) into the Village Zone. Alternatively there could be investigation of land either side of Church Street and south of

Sharp Street for 40-50m deep lots. Note that either of these areas should only be rezoned when 60% of existing vacant lots have been developed;

- **Stage Three (3) – Large Lot Residential:** In the long-term should 60% of the existing large lot residential supply be subdivided and developed into at least 1 hectare blocks then Council should investigate further expansion of large lot residential to the north of Cargo Road & the Showground into the smaller lot rural lands (but ensuring that there is not over-intensification of flood prone lands along the drainage / watercourses).

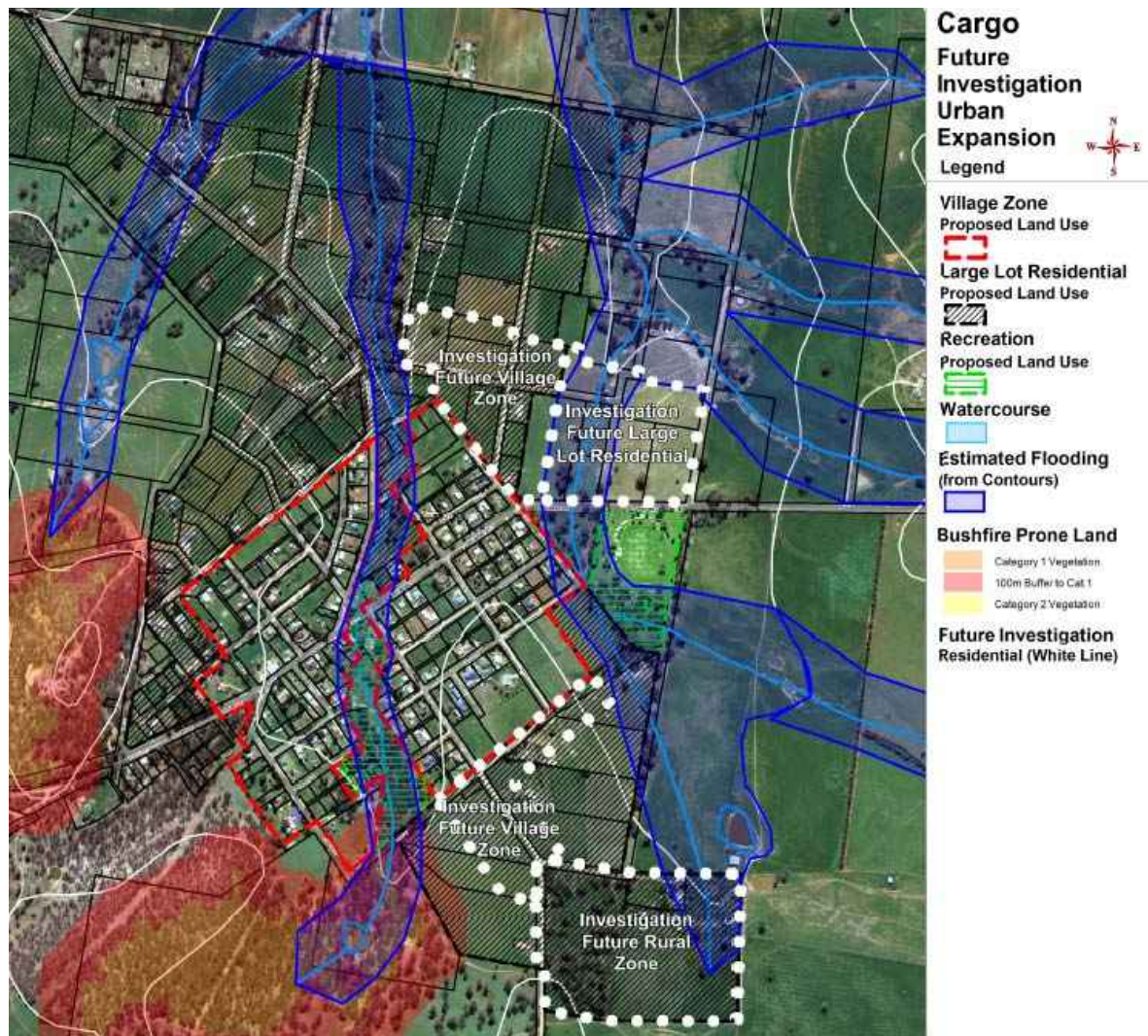


Figure 14: Areas for future investigation for urban expansion/reduction of Cargo (Source: Council GIS 2011).

If growth rates do not warrant additional large lot residential land in the next 5-10 years then if the owner of the properties 'Brimin' and 'Little Waverton' (Lots 10 & 11 DP584281 – 71-73 Baghdad Road) do not show any intention of developing this land then it would be preferable to protect the existing significant vegetation on these lots and their quasi-agricultural status and rezone them back into the surrounding rural zone.

Please note that prior to any rezoning of land, the onus is on the land owners to prepare all necessary environmental studies to confirm that the proposed land is able to support the intended zone and land uses and there will be minimal environmental impact.

10.20. Previous Land Use Strategies

10.20.1. Previous Studies

It is important to conduct a review of all relevant previous studies as they can provide valuable information on key opportunities and constraints as well as key recommendations that have been put to the community. Where possible, this Strategy should be consistent with those recommendations (unless there are clear reasons to change recommendations).

Key studies relevant to the land uses of Cargo include:

- Cabonne Council (1990) *Cargo Village & Environs – Proposal to Prepare a Development Control Plan* (Shire Planner – G.Barry) ('1990 Draft DCP');
- Habitat Planning (2005) *Draft Cargo Village Strategy* ('2005 Strategy');
- GHD (2008) *Subregional Rural and Industrial Strategy* ('R&I Strategy').

10.20.2. Cargo Village & Environs – Proposal to Prepare a Development Control Plan ('1990 Draft DCP')

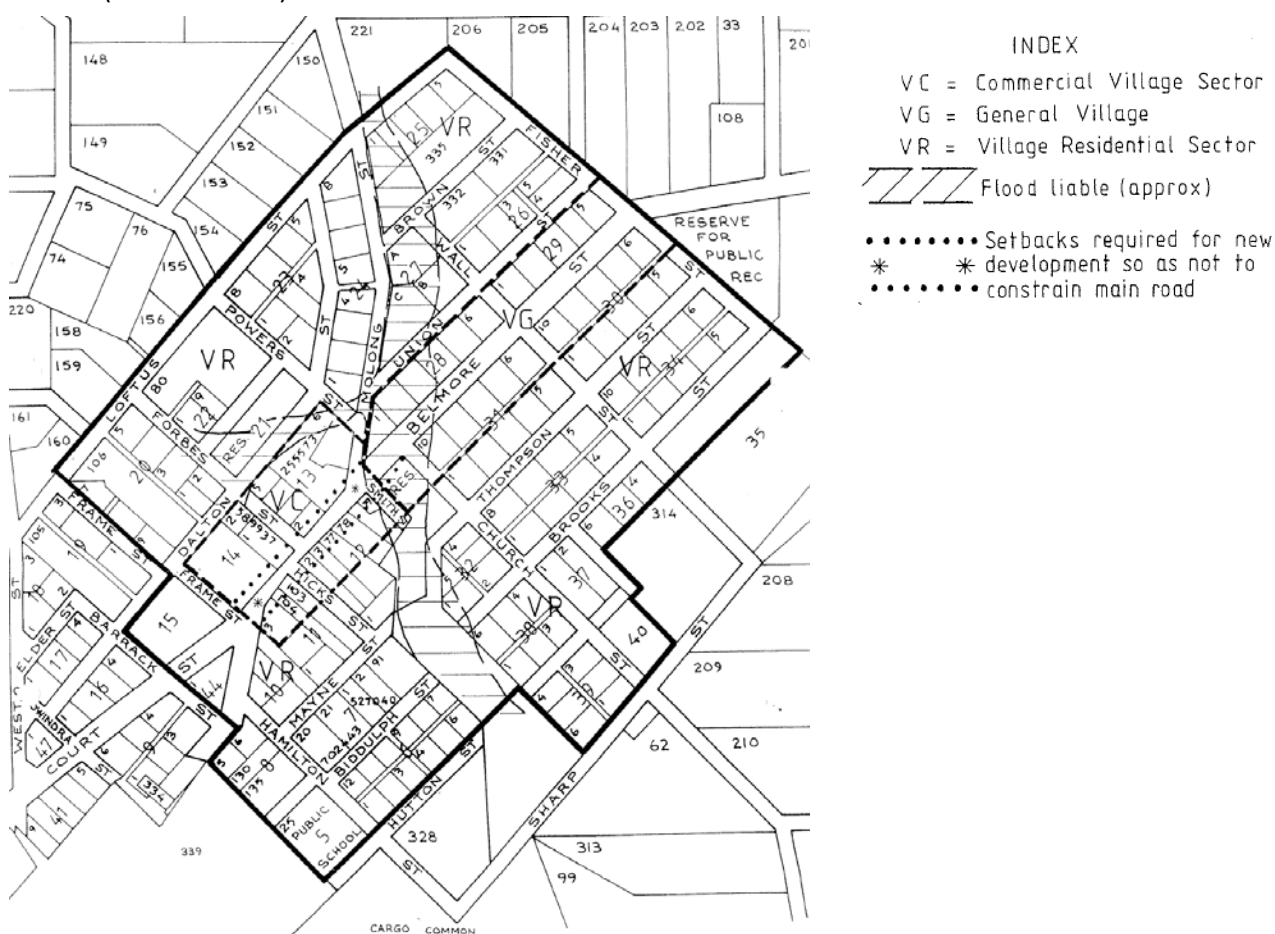


Figure 15: 1990 Draft Structure Plan for Cargo (Source: 1990 Draft DCP- Map 2).

The 1990 Draft DCP set out objectives, preliminary controls, and a set of sub-zones specifying areas for particular land uses within the Village Zone. It was intended that specific DCPs would exist for each village under CLEP1991 but it was never adopted by Council. Key objectives included reducing land use conflicts, provision of land for urban/ industrial / commercial development, efficient use of infrastructure, heritage and landscape conservation, and avoidance of environmentally constrained lands. All of these objectives are supported by this Strategy.

This Strategy agrees with parts of the recommendations of the draft Structure Plan from 1990 in that the Village centre (VC - Commercial Sector) should be concentrated along Belmore/Court Streets (between Frame and Powers Streets). This Strategy also agrees that it may be suitable

for low impact home industries and home businesses to focus along Belmore Street (between Smith and Fisher Streets) (though this may not be the only place that they are suitable). The remainder of the areas are best suited to low scale residential development. Therefore, in many ways the strategy for Cargo's Village Zone has not changed since the 1990s.

10.20.3. Draft Cargo Village Strategy (2005)

In 2005 draft Village Strategies were prepared by a consultant but these were also not subsequently adopted by Council so act as a reference only. The key features and major strategic directions identified in Cargo are shown in Figure 16 and Table 12 as follows:

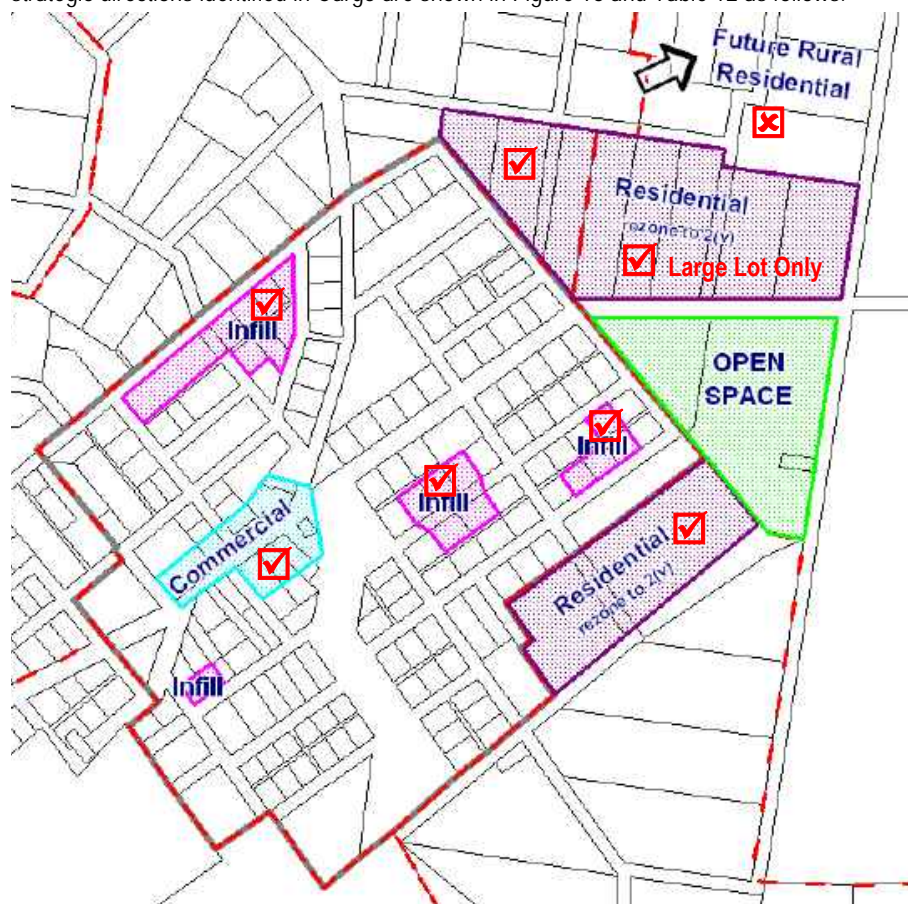


Figure 16: Proposal for growth of Cargo in the Draft Cargo Village Strategy (2005) with mark-ups suggesting whether these proposals are supported by this Strategy.

Recommendations of the 2005 Draft Strategy	Response in 2011 Strategy
Commercial Uses: <i>The preferred commercial activity area to be in Belmore Street around its intersection with Forbes Street.</i>	Agreed. The preferred commercial area should run along Belmore Street between Frame and Powers Streets (consistent with the 1990 Draft DCP).
Village Expansion: <i>Consider rezoning a portion of the existing 1(c) land to the south of Brooks Street for 2(v) purposes.</i>	Agreed (with minor amendment). This is the logical extension of the Village Zone to provide some additional land supply in the short to medium term but should be setback from unnamed watercourse to avoid intensification of flood prone lands).
Village Expansion: <i>Investigate the potential rezoning of rural land to the north of the Orange Road on the eastern fringe of town for future urban development with residential growth in an easterly direction along Orange Road.</i>	Agree this is a future investigation area but rezoning should not occur until 60% of vacant land has been taken up in the existing and proposed Village Zone. In the longer term there is potential to investigate converting some of the large lots along both sides of Sherwin Street for urban residential uses (2,000m ² /lot). However, intensified development should not occur in proximity to the unnamed watercourses close to Molong Street or further east in the rural areas.

Recommendations of the 2005 Draft Strategy	Response in 2011 Strategy
Village Expansion: <i>Seek expressions of interest from landowners on the eastern and southern fringes of the village to coordinate the release of land for future urban residential development.</i>	Agree that land to the north (near Sherwin Street) and land near Church and Sharp Street should be investigated for future village zone expansion in the medium to long term. However, urban residential development should be well setback from existing watercourses, bushfire prone land, and should generally remain within the existing large lot residential boundary to avoid any additional conflicts with future mineral potential.
Large Lot Residential Expansion: <i>Release future 1(c) land to the northeast as required by demand.</i>	Agree to investigate these lands in the medium to long term. The existing large lot residential land supply is sufficient for at least 10 years. No further expansion is required until there is substantial additional subdivision and development of existing lands unless these owners indicate that they will not be making their lands available.
Lot Sizes: <i>Maintain larger allotment sizes to ensure adequate on-site treatment of effluent.</i>	Agreed. The existing minimum lot size for subdivision of 2,000m ² should be retained in future development controls.
Flood Mapping: <i>The 1 in 100 year flood level of the Creek to be accurately mapped.</i>	Agreed. This is an outstanding matter that should be pursued when there is funding. However, this Strategy recommends a reduction in the Village Zone in lands that have a high likelihood of flooding.

Table 12: Review by this Strategy of the 2005 Draft Cargo Village Strategy recommendations.

10.20.4. Sub-Regional Rural and Industrial Strategy (2008)('R&I Strategy')

The R&I Strategy was adopted by the Blayney, Cabonne and Orange City Councils and Department of Planning & Infrastructure as the key strategy for rural and large-scale industrial uses for the sub-region. There were no outcomes from the R&I Strategy that were particularly applicable to Cargo in anything other than general terms, as follows:

- Large Lot Residential** - The Final Strategy - Section 6.4.3 (Table 6.2) shows that the R&I Strategy considered the need for additional large lot residential at Cargo but discounted it on the basis that there is:
 - Prevalence of large holdings (200 hectares or greater) to the west, south and east of the village;
 - Bushfire constraints in vicinity of village (south and west);
 - Class 3 soils to east and west of village;
 - Adequate existing supply of Rural 1(c) zoned land; and
 - It should be noted that further studies will be undertaken by Cabonne Council in relation to the location of land zoned 1(c) adjacent to existing villages. It is possible that some 1(c) areas will be relocated through these further studies.
- Industrial** - The R&I Strategy only identified larger format and heavier industrial lands around Manildra of sub-regional importance in Cabonne. Therefore, it did not look at industry at the settlement level. This Strategy does not recommend any substantial industrial investment in Cargo other than for low impact home industries in the Village Zone where it does not conflict with residential land uses.