



Mudgee Shire Rural Lands Study



Mudgee Shire Council
Mudgee Shire Rural Lands Study

Prepared for Mudgee Shire Council by



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July 2003

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Chapter 1 Introduction

1.1 Introduction

Mudgee Shire is located on the Central Tablelands of NSW and is generally defined by the Goulburn River National Park in the north, Cudgegong River in the west, Windamere Dam in the south and the township of Lue to the east. The Shire includes an area of approximately 5,550 square km. The study area is all of the rural land within the Shire and includes the villages but not the urban areas of Mudgee and Gulgong. Map 1.1 shows the study area.

Mudgee is a growing inland area of NSW known for its vineyards, coal mining, cattle and sheep grazing, honey production and horse studs. The town is a destination for people seeking 'lifestyle' where they can enjoy the rural character and explore the numerous National Parks and heritage landscapes located throughout the Shire. As part of the Rural Lands Study a landscape character analysis has been prepared to ensure that current planning instruments recognise significant visual components of the landscape as a resource and ensure their protection.

Mudgee Shire Council is preparing a Rural Strategy, which is to provide Council with direction in terms of development within the rural areas of the Shire having regard to the following matters:

- § the historic fragmentation of rural land
- § agricultural development,
- § natural resource management
- § future trends in rural land use and management.

This document is the first of two documents that have been prepared for the rural lands of Mudgee Shire. It provides a description of the physical, social and economic environment of the Shire as well as the planning context. The development pattern of the Shire is described as well as the issues facing the future of the rural lands have been discussed. Finally, analysis of these issues has been carried out to provide a set of options. This report, however, does not make any recommendations for further action. They are included in the accompanying Mudgee Draft Rural Strategy.

The term rural residential use is referred to in this document and means the use of the land where residential living is the main use and the owner does not earn their main source of income from agricultural production on the land. Rural residential use has a variety of lot sizes ranging from 1 ha to 10 ha and higher. Mudgee Shire Council have a zone called rural residential which refers to a specific lot size of 4000m² to 2 ha and is located around the towns of Mudgee and Gulgong. This distinction should be taken into consideration when reading this document because of the potential confusion between the commonly used term for residential use of rural land generally and the specific use of the term in Mudgee Shire.

Map 1.1: Study Area

1.2 Purpose and Outcomes

The purpose of the Rural Strategy as outlined in the brief is as follows:

The purpose of the Rural Strategy is to provide Council with direction in terms of development within the rural areas of the Shire consistent with the Department of Urban Affairs and Planning Rural Lands Policy having regard to the historic fragmentation of rural land and agricultural development, natural resource management and future trends in rural land use and management.

The brief also lists the following outcomes:

- § *Assessment of the general physical characteristics of the rural area including environmental constraint mapping*
- § *Land capability assessment of rural land*
- § *Categorisation of significant rural land use activities.*
- § *Review of existing subdivision provisions.*
- § *Investigate impact of existing rural subdivision and need for further submissions and minimum size lots suitable in rural areas.*
- § *Identification of irrigated agriculture existing and opportunities for future development.*
- § *Identification of vineyard district based on physical characteristics and existing landuse.*
- § *Identification of land use associated with vineyard development and assess suitability/capability of land for this "complementary" development.*

The brief is reproduced as Appendix 1.

1.3 Methodology

The study has been prepared by the consultant team based on discussions held with Council Officers, Government Departments and the Community. A review of all relevant literature has also been carried out.

Data was gathered based on secondary information except for a detailed landuse survey and lot and holding size analysis, which was carried out by the consultant. The land use survey entailed utilising aerial photography to gain an appreciation of the landuse, which was then field checked by a survey of all roads and properties in the Shire. This information was then coded and entered into Councils property database, which enabled it to be mapped using a Geographical Information System (GIS). The lot sizes within the rural lands were categorised and mapped. The rural lands were inspected from the air in a light plane, which provided a valuable perspective on the issues such as catchments, vegetation and conflicting landuses. A detailed description of the methodology for the landuse survey is contained in Appendix 2.

A detailed literature review has been carried out of studies and issues relevant to local and regional planning. Discussions were held with various Council officers

covering the areas of planning, environmental science, engineering and social services.

Australian Bureau of Statistics census information was used to provide a population and demographic profile of Mudgee Shire's rural lands. In addition various community groups were consulted to ascertain the issues surrounding social services provision. Discussions have also been held with the Community Services Interagency Meeting.

Input has been given by the Community and the State Government Departments through formal and informal discussions with the Reference Group that was established by the Council. In addition, a community consultation meeting was held. The outcome of the consultation is reported in a separate document titled Community Participation Report.

1.4 Study Team

This document has been prepared by the consultant team led by EDGE Land Planning who have compiled all of the data. Additional information has been provided as follows:

- § Demographic Review and Community Services - Heather Nesbitt Planning
- § Jawin Associates – Agriculture and Economic Issues
- § Landscape Character Analysis – Andrews.Neil Architecture, Planning, Landscape, Environment +Urban Design Consultants
- § GIS and Mapping - Andrews.Neil Architecture. Planning. Landscape. Environment +Urban Design Consultants

A Separate report has been prepared for the Landscape Character analysis and published under separate cover.

Chapter 2: Existing Characteristics

2.1 Introduction

Mudgee Shire has an array of existing characteristics. They have been grouped under the following headings:

- § Physical and Environmental Characteristics – natural and built environment
- § Social Profile
- § Economic Factors

This has been done to reflect the main components of Ecologically Sustainable Development (ESD) and also to provide a logical break-up of information.

2.2 Physical and Environmental Characteristics

Mudgee Shire has a range of physical and environmental characteristics which combine to give it its unique qualities. They can be categorised into the Natural Environment and the Built Environment. They will be discussed briefly below.

Natural Environment

2.2.1. Water Catchments

The Shire of Mudgee lies within 3 catchments which are as follows:

- § *Cudgegong River* – Central part of the Shire. This is the major catchment and flows through the major developed areas of the Shire including the towns of Mudgee and Gulgong. This is also the most developed catchment in terms of agricultural land uses. In the south and central parts there is a mixture of extensive agriculture (mostly sheep and cattle grazing) and intensive forms of agriculture (vineyards and market gardening as well as some intensive livestock in the form of dairies and horse studs). Whilst in the northern parts of the catchment there is mainly extensive forms of agriculture – both cropping and grazing. Native vegetation is scattered throughout the catchment and mostly on the steeper land.
- § *Macquarie River* – Southern part including the Hargraves and Windeyer areas. This is mostly steep to undulating landforms which only support extensive grazing of sheep as well as some significant areas of native vegetation.
- § *Goulburn River* – Eastern part including the Ulan and Wollar areas. This is similar to the Macquarie with mostly extensive agriculture and native vegetation. The Ulan coal mine is located in this catchment but is mostly out of the Shire.

There are many waterways in the Shire. Some are merely drainage depressions and only flow when it rains. Others, like the Cudgegong, Macquarie and Goulburn rivers

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and tributaries are extremely important because of their size and location. This is not to infer that the drainage depression is not as important as the larger creeks and river. A key objective of Total Catchment Management (TCM) is to ensure that landuses do not have a detrimental impact on the quality of the water in streams. It is also important to strive to improve the quality of water by ensuring that the surrounding land uses are sustainable and conform to the principles of ESD.

Photo 2.1 shows the typical landform of the Macquarie and Goulburn River catchments, which is steep to undulating with little settlement.



Photo 2.1: Part of the Macquarie River Catchment

Date of Photo: October 2001

Photo 2.2 shows the typical landform of the Cudgegong river catchment, which is flatter and open, and with more and larger settlements.



Photo 2.2: Cudgegong River Catchment at Mudgee

Date of Photo: December 2001

2.2.2. Geology and Soils

The geology of the Shire varies from Hawkesbury sandstone in the north east of Botobolar and Ulan to alluvial sand and gravels along the river flats of the Cudgegong River. In the central and southern parts of the Shire there are various intrusions of granite with mostly sandstone country to the south west and west of Piambong.

There are a number of broad soil landscape types in the Shire, as identified by the Department of Land and Water Conservation in the document titled *Soil Landscapes of the Dubbo 1:250 000 Sheet* and are as follows:

- § *Alluvial Soils*. These are based on the floodplains of the Cudgegong River and its tributaries. They are fertile and have few limitations to plant growth.
- § *Chocolate Soils*. These are based on mostly basalt and are influenced by slope and bedrock drainage. They are located between Gulgong and Mudgee and are moderately well drained and support native and improved pastures.
- § *Non-calcic Brown Soils*. These soils occur on mid to lower slopes and are based on a range of parent materials including sandstone, siltstone, limestone, shale and alluvium. They are moderately well drained and used for improved pastures and cropping. They are distributed between Mudgee and Gulgong and to the east and north to Cooyal and Botobolar and along the Lue valley. They also are the main soils that are suitable for grape growing, particularly the Craigmoor and Gulgong landscapes.
- § *Siliceous Sands*. These occur on granites and sandstones with outcrops of the parent material occurring. They are well drained and have low water holding capacity. They are frequently undeveloped and may have pasture and grazing with some fertiliser input. They occur to the east and north of Gulgong.
- § *Soloths*. These occur on granites and other material with high sodium content, are leached by rainfall and are therefore acidic. They have low fertility and are used for unimproved pastures and occasional cropping. They are highly erodible when disturbed and susceptible to gully erosion. They occur in the south west around Pyramul, Windeyer and Hargraves.
- § *Shallow Soils*. These occur on slopes of greater than 30% and are usually less than 50cm deep. They are stony and patchy because of rock outcrops. They are used for unimproved pasture on cleared land or left as native bushland in its uncleared state. They occur to the south west and north east of the Shire.

2.2.3. Topography

The topography of Mudgee Shire can be described as being in three basic landforms as follows:

- § Steep land and plateaux in the south and east
- § Wide open valleys in the central and southern parts
- § Flat to undulating land to north

Map 2.1 shows these broad topographic features.

Photos 2.3 and 2.4 show the varying topography of the Shire.

Map 2.1: Broad Topographic Features



Photo 2.3: Typical topography in the southern part of the Shire
Date of Photo: December 2001



Photo 2.4: Typical topography in the northern part of the Shire
Date of Photo: December 2001

2.2.4. Native Vegetation

The native vegetation of the Shire is an important resource that is essential to ecological and land management as well as contributing to the visual landscape of the Shire. There is a vast amount of it, which is shown on Map 2.2. As a general statement, it can be said that the most native vegetation occurs to the southern and eastern parts of the Shire and is associated with the steep land. There have not been any studies of the native vegetation to ascertain its structure and make up and this is needed to identify the important parts that need to be conserved. Photos 2.5 and 2.6 show the extent of the vegetation.

The Regional Vegetation Management Plans to be prepared by the Department of Land and Water Conservation will provide the necessary information.



Photo 2.5: Native Vegetation on the Steep land to the South
Date of Photo: July 2002



Photo 2.6: Native vegetation in the north of the Shire
Date of Photo: July 2002

Map 2.2: Extent of Native Vegetation Cover

Source: NPWS

2.2.5. Biodiversity

Biodiversity is the variety of all life forms - the different plants, animals and microorganisms, the genes they contain and the ecosystems of which they form part (Commonwealth of Australia, 1996).

The biodiversity of the Shire is an important resource, which is yet to be studied in any detail. The native vegetation cover shown on map 2.2 is an indicator of the importance of the biodiversity of the Shire and the need to study it in more detail. There is also a considerable amount of the biodiversity habitat associated with roadside vegetation and the travelling stock reserves that extend throughout the Shire.

There are 11 threatened bird species, 5 threatened mammal species and 6 threatened plant species which have been listed under the provisions of the Threatened Species Conservation Act.

The Shire has been identified as an important area for woodland birds including the Regent Honeyeater. Woodland remnants containing White Box, Forest Red Gum, and Mugga Iron Bark are of high value as a nectar source for these species. Large old growth trees with nesting hollows are considered to be essential for retaining a diversity of native bird species.

2.2.6. Bushfire Risk

The abundance of native vegetation and the topography of the LGA make it prone to bushfire. The Rural Fire Service have prepared a Bushfire Risk Management Plan for the Shire.

The Mudgee Shire has a limited number of areas facing extreme bush fire risk, Areas identified with an extreme bush fire risk are the rural subdivision/bushland interface areas, within approximately 100m of the bush, where development occurred prior to bush fire protection mechanisms being incorporated into the development. Without adequate management, there is a probability of the loss of houses and possibly lives in a bush fire burning under severe conditions.

Some of the urban interface areas face a risk from bush fires. These areas are also located within 100m of the bush, but have some protection mechanisms such as housing design and perimeter roads which lower the risk from extreme to high. Without adequate management, loss of some houses and the loss of life is possible in a bush fire burning under severe conditions and the occurrence of spotting

2.2.7. Salinity

Salinity can be a symptom of environmental change resulting from natural processes as well as human impacts. It can also exist without any interference. In NSW it is an existing process that is exacerbated by human activity, particularly European farming techniques, land clearing and urban development. It is the result of past and present land management practices, which have dramatically changed the way water is cycled through the environment.

The Central West Catchment Salinity Risk Assessment which showed that salinity was a significant problem in the Shire. It is mainly centred on the Cudgegong River valley. However it is not as prevalent as other areas because of the Shire's location in the headwaters of the catchment. Mudgee Shire Council has prepared a report titled *Mudgee Shire Salinity Background Study* which was adopted by Council in May 2002. This study highlighted the issue as it affects the Shire.

2.2.8. Flooding

Flooding in the Shire is a localised issue and is not as bad as some of the other nearby settlements in other Shires. The flooding is characterised by short term flood heights which have a minor impact on some roads.

Flooding is an issue for the Cudgegong River around Mudgee and some farms downstream and for the village of Lue. In these areas some roads are cut for a short period of time.

The Council has prepared a Floodplain Management Study but this only covers the land in the immediate vicinity of the town of Mudgee and does not, therefore apply to the study area for the Rural Lands Study.

2.2.9. Landscape

Mudgee Shire is generally contained within a flat valley which broadens to the north from the south. The southern areas of the Shire are generally characterised by narrow valleys with steep hillsides including broad plateaus on top of the ridges. The central and northern portions of the Shire are dominated by the gently undulating valley floor and characterised by vineyards and grazing.

The broadscale visual catchment of the Shire is limited to the east, by the steep western escarpment of the Wollemi National Park. The western limit is defined by a lower range that is dissected by the Cudgegong River. The central and northern parts of the western range have been heavily grazed while the southern, more rugged areas remain densely vegetated.

The visual catchment of the Shire to the south is limited by the range incorporating Mount Misery and the Avisford State Forest. The hills nearest to Mudgee have been heavily grazed in the past exposing erosion and salinity problems. There is little opportunity for distant views in the southern part of the Shire given the nature of the topography, however, it is highly scenic as most of the roads wind through valley floors following creeks, rivers and drainage lines. Distant views are not

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available until just south of the Mudgee township where the valley broadens to reveal the vast agricultural landscape to the north.

The broader extent of the visual catchment to the north is less prominent given the undulating nature of the topography through the central portion of the study area. Views over the undulating middle section towards Goulburn River National Park are available from selected elevated high points on major roads and from elevated points in the hills surrounding Mudgee township.

The Mudgee township is enclosed by local hills including Mount Frome and Mount Knowles to the east, Mount misery to the south and Round Hill to the west. To the north the land is gently undulating towards the township of Gulgong. The flat open landscape to the south of the town is considered to be important to creating the setting of the town and particularly as it forms the main entry to the town from the south.

The varying topography of the rural lands is the dominant visual feature of the landscape as it provides a framework for other elements such as vegetation, agriculture, lot sizes, viewpoints and the location of major transport and communication corridors. The topography also defines the broader visual catchment of the rural lands, which is generally enclosed to the east, west and south by hills. The valley is fan shaped, opening out to the north until the Goulburn River National Park.

To the east and west of the immediate hills surrounding the Mudgee township a number of broad, parallel valleys are linked to the main valley by narrow valleys running in an east west direction.

Photos 2.7 and 2.8 show the landscape features.



Photo 2.7: Landscapes of Southern Mudgee Shire

Date of Photo: July 2002



Photo 2.8: The Landscape setting of Mudgee

Date of Photo: July 2002

2.2.10. Mineral and Extractive Resources

Mineral and extractive industry resources are important to the Shire and information from the Department of Mineral Resources shows that there are the following resources and potential resources:

- § *Coal and Petroleum* resources in the north east of the Shire. Part of the resource is currently being mined as part of the Ulan Coal Mine which is partly in the Shire and the adjoining Merriwa Shire.
- § *Gold* resources are contained to the south west around Hargraves and Windeyer. This is noted as a potential resource which requires more investigation.
- § *Magnetite* is currently being mined from a site located in the north west of the Shire south of Birriwa.
- § *Kaolin* is being extracted from a number of sites to the north of Gulgong and there is also a significant potential resource that has been identified in the vicinity of the existing extraction sites.
- § *Dimension Stone, Basalt and Granite* are both existing and potential resources within the Shire. Basalt is being extracted from a site at Beryl, north west of Gulgong and Dimension Stone and Granite are being extracted at Home Rule and Botobolar.
- § *Clay / Shale* is being extracted from a site on the Hill End Rd north west of Mudgee township. There is also an extraction pit at Ulan.
- § *Construction Sand* is being extracted from the Putta Bucca area to the north of the town of Mudgee.

- § *Limestone and Dolomite* mines are located to the east and southeast of the town of Mudgee in the hills.
- § *Copper, Lead, Zinc and Silver* potential resources are scattered throughout the Shire north of Gulgong, in Eurunderee, and at Botobolar.

Built Environment

2.2.11. Villages and Rural Centres

Six Villages are located within the rural areas. They range in size from a small collection of houses to 50 houses and are as follows

- § Goolma
- § Ulan
- § Wollar
- § Lue
- § Windeyer
- § Hargraves

They all have some type of shopping facility, usually a general store / petrol station. Photo 2.9 shows the Hargraves General Store.



Photo 2.9: Hargraves General Store

Date of Photo: October 2001

There are also a number of rural centres scattered around the Shire which are marked by a hall or bushfire shed. Examples of these are as follows:

- § Birriwa
- § Grattai
- § Cooyal
- § Botobolar
- § Pyramul
- § Cooks Gap

Photo 2.10 shows the Grattai Hall.



Photo 2.10: Grattai Hall

Date of Photo: October 2001

2.2.12. Domestic Waste Disposal

Domestic Waste Disposal is provided in the rural area by way of waste transfer stations. These are located at the following locations:

- | | |
|-------------|----------------|
| § Lue | § Windeyer |
| § Hargraves | § Wollar |
| § Birriwa | § Gulgong |
| § Goolma | § Kains Flat |
| § Ulan | § Queens Pinch |
| § Home Rule | § Frog Rock |

Photo 2.11 shows the waste transfer station at Kains Flat



Photo 2.11: Waste Transfer Station at Kains Gap

Date of Photo: July 2002

2.2.13. Rural Land Uses

There are a variety of land uses within the rural areas of Mudgee Shire. They include urban, agricultural, native vegetation, rural residential, extractive industries, commercial and light industrial uses. They all have an impact on each other as well as the environment. Finding the balance between these often competing desires is the key to planning for rural land uses.

There are basically two forms of land use within the rural areas of the Shire – ones based on agriculture and ones that do not have an agricultural base.

Agriculture

The uses, which are based on agriculture, include the following:

- | | |
|----------------------------|---------------------|
| § Vineyards | § Olives |
| § Sheep and Cattle Grazing | § Dairying |
| § Lucerne | § Horse Studs |
| § Grain Crops | § Deer |
| § Market Gardens | § Farm Homestays |
| § Orchards | § Bed and Breakfast |
| § Forestry | § Wineries |

To the north of the Shire in the open plains country, there is a mixture of cropping and grazing. The major crops that are grown include Oats, Wheat, Barley, Canola and grain Sorghum. The grazing of cattle and sheep with some of the more niche animals such as goats, alpacas and an ostrich farm occurs here.

Photo 2.12 shows the land used for cropping in the north of the Shire.



Photo 2.12: Land used for Cropping

Date of Photo: July 2002

The vineyards are mostly located between Mudgee and Gulgong with some isolated ones on the Hill End Road as well as on the Botobolar Road. Photo 2.13 shows the vineyard area between Mudgee and Gulgong.



Photo 2.13: Vineyards

Date of Photo: December 2001

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The alluvial flats of the Cudgegong River provide a rich resource of good land that is used for intensive forms of Agriculture such as irrigated lucerne, market gardening and orchards. Although the market gardening and orchard produce is not generally exported outside the Shire and is bought locally. Photo 2.14 shows this land.



Photo 2.14: Alluvial River flats

Date of Photo: December 2001

To the south of the Shire the main form of agriculture is grazing of sheep for fine wool. Some of the world's best fine wool is reported to come from this part of the Shire. Photo 2.15 shows the typical sheep grazing country in the south of the Shire.



Photo 2.15: Sheep Grazing Country

Date of Photo: July 2002

Agriculture is also practiced on small rural holdings of 10 ha of which there are a large number scattered across the Shire. This type of agriculture is generally of a part-time style and scale. It includes some of the more niche forms such as alpacas, olives and some small scale grazing.

Non-Agricultural Uses

Uses that do not have an agricultural base include the following:

- § Rural Residential
- § Abattoirs
- § Extractive Industry
- § Coal Mines
- § Industrial Uses
- § Tourist related uses

Photo 2.16 shows the Ulan Coal mine which is located in the north east of the Shire.



Photo 2.16: Ulan Coal Mine

Date of Photo: July 2002

Land Use Survey

A detailed landuse survey has been carried out of the rural land. This was carried out to give an understanding of the landuse pattern within the rural areas so that appropriate decisions can be made having regard to the mixture of landuses throughout the area as well as to identify those localities that have a predominance of a particular landuse in terms of the number of lots. It is important to note that the analysis was carried out of the holdings within the rural area and not the lots. In an area like Mudgee, the rural properties or holdings are made up of a number of lots and these have been aggregated to determine the land use. This survey was carried out in June and July 2002. A detailed description of the methodology used

for the landuse survey is contained in Appendix 2. The landuses were categorised into the following landuse types which also have been defined in Appendix 2:

- § Rural Residential
- § Intensive Plants
- § Intensive Animals
- § Extensive Agriculture
- § Commercial
- § Vacant Cleared
- § Native Vegetation
- § Extractive Industries
- § Public Use
- § Village

Within each of these categories there are a number of sub categories relating to the specific use of the land. These are also outlined in Appendix 2. It should be pointed out that the landuse survey categorised the primary use of the property and where a property had a number of uses, the dominant use was chosen. It is assumed that all of the agricultural uses have a dwelling house located on the property. This is to enable the estimation of the number of dwelling houses and is based on observations carried out during the survey.

The details of the landuse for each locality within the rural lands are outlined in Chapter 4, which deals with the existing development pattern. There are a total of 4,182 rural holdings within the rural lands that were counted in the landuse survey (the villages were not counted as part of the rural holdings, but were in the land use survey). The overall landuse for the Shire is shown in Figure 2.1. Map 2.3 shows the land use in broad terms.

The landuse survey has revealed the variety of uses in the rural area. They can be categorised in to agricultural uses, non-agricultural uses and rural residential uses. Table 2.1 lists the variety of uses observed in the rural areas.

Table 2.1: Variety of Rural land uses.

Agricultural Uses	Non-agricultural uses	Rural Residential Uses
Cattle and Sheep	Service Stations	Dwellings
Cropping	Caravan Parks	Truck activities
Vineyards	Farm Produce stores	Horses
Market gardening	Churches and Schools	Home based businesses
Orchards	Cemeteries	
Nurseries	Tourist facilities	
Irrigated cropping		
Turf farming		
Horse studs		
Aquaculture		

Table 2.2 lists the total number of uses and the percentages and figure 2.1 shows them in graphical form.

Table 2.2: Number of Primary Land Uses in the Shire

Land Use	Number of Uses	Percentage of Total
Rural Residential	2,067	46.2
Extensive Agriculture	1,164	26.1
Native Vegetation	416	9.3
Village	287	6.4
Vacant Cleared	208	4.7
Public Uses	146	3.3
Intensive Plants	129	2.9
Extractive Industry	42	0.9
Commercial	5	0.1
Intensive Animals	4	0.1
T O T A L	4,468	100.0

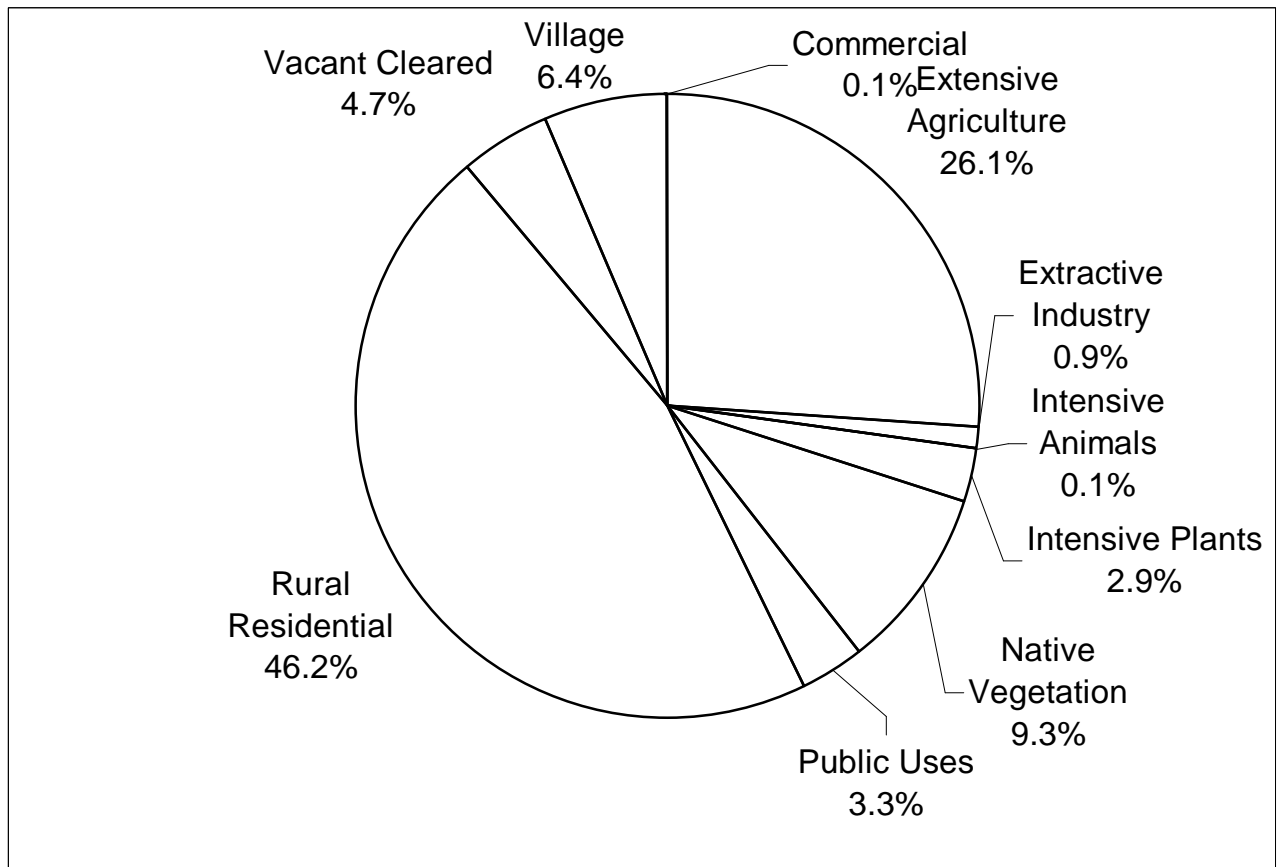


Figure 2.1: Land Use within the Rural Land

It can be seen from the graph that rural residential land uses make up the largest category with 46.2% of the holdings followed by extensive agriculture at 26.1% and then native vegetation at 9.3%. This high proportion of rural residential usage is a result of the large number of 10 ha lots that were subdivided in the 1970s and 1980s. It would also be a result of the large number of people moving to the area for a lifestyle and retirement purposes. This figure for rural residential use can be

said to be conservative because, generally, it only covered those lots with an area of less than 20 ha. They have only been counted as larger if they are mostly covered by native vegetation and are steep and cannot therefore support any form of agriculture.

The details of the contribution of each of combined localities to the land use is provided in detail in chapter 4. For the ease of analysis, the localities have been combined and these combined localities are described in chapter 4 and this should be referred to when reading the following discussion. Some general points can be made as follows:

- § Rural residential use is a significant one in all localities being greater than 30 % in all except Botobolar – Lue (14.2%), Goolma (19.2%) and Ulan – Wollar (28.5%)
- § Home Rule – Frog Rock has the highest proportion of rural residential use with 78.2% followed by Cooks Gap – Cooyal 75.2% and Mudgee with 65.9%.
- § Extensive agriculture is also a significant use. The largest number holdings are in Goolma (59.8%), Birriwa – Stubbo (43.7) and Piambong Grattai (43.4%).
- § Vineyards are clustered in an area from the west of Gulgong to the north east of Mudgee. They are mostly found in the Eurunderee – Wilbertree area and make up 11.4% of the land uses and in Gulgong are 3.9% with Mudgee contributing 3.4%.
- § The three areas with the most vineyards also have a high proportion of rural residential uses.
- § Native Vegetation is also a significant use with Bungabah – Cope (30.9%) having the largest proportion followed by Windeyer – Pyramul (21.7%) and Ulan – Wollar (20.3%).

Map 2.3: Rural Land Use

2.2.14. Rural Holding Sizes

The size of rural holdings in an area is a reflection on the degree of fragmentation and is also an indicator of potential rural land use conflicts. One matter to be considered is the differences between holdings and individual lots. In an area such as Mudgee Shire, there are a number of large holdings that are made up of a number of smaller lots. These are mainly the agricultural uses and not the rural residential uses which are nearly all in single ownership.

A detailed lot size and holding size analysis has been carried out as part of the land use survey and has shown that the area is quite fragmented. Figure 2.2 shows the holding sizes.

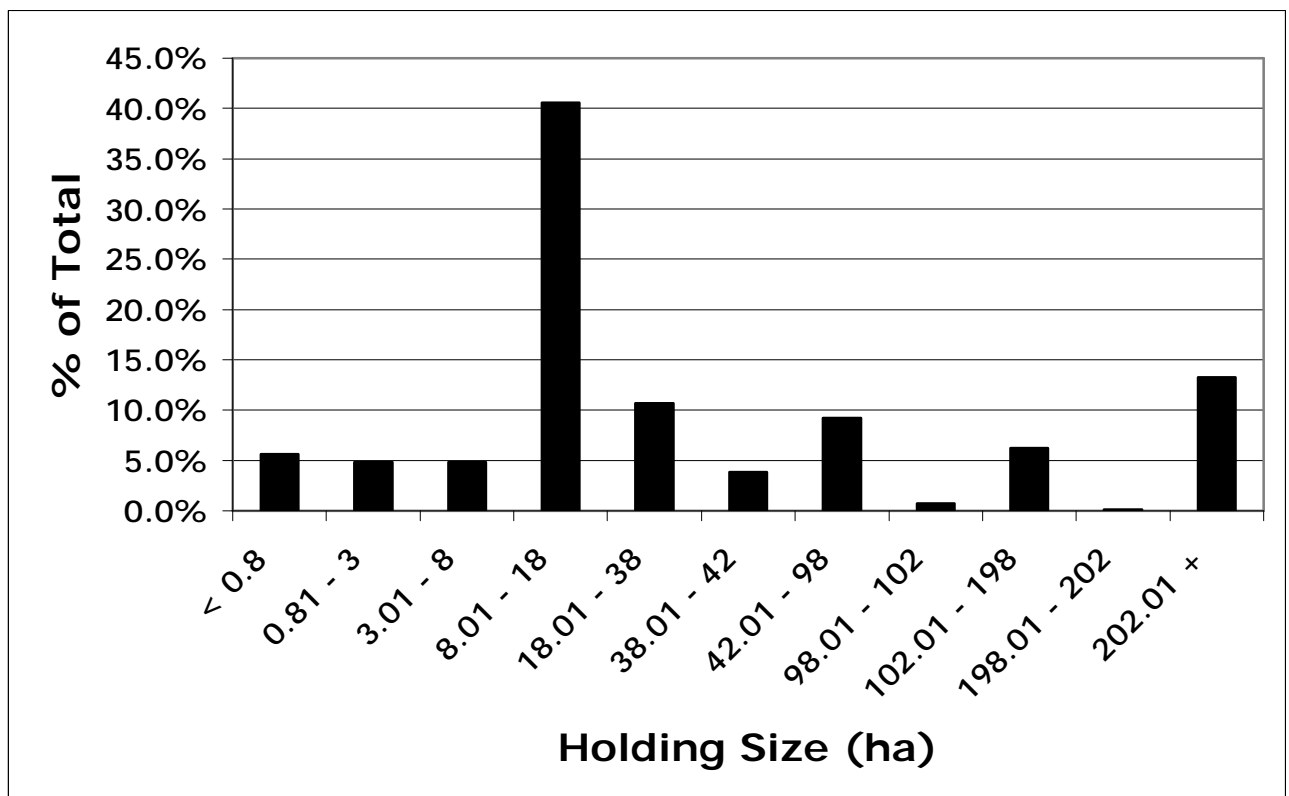


Figure 2.2: Holding Size Analysis
Source: Council GIS and Property System

It can be seen that there are a large number of holdings in the 8 to 18 ha range which is the rural small holding zone that was created in the 1970s (these are mostly made up of single lots in one ownership). Kelleher, et al note that

“These developments are clearly evident in the northern and northeastern sector of the Shire, and in scattered areas south and southeast of Mudgee township. A feature of these developments is their apparent isolation from the major population centres, Mudgee and Gulgong.” (Kelleher, et al, 1998, p135)

The small rural holdings are dealt with in a later section.

Chapter 4 provides the analysis of the holding size range for each locality and it can be generally said that the larger holdings are located in the flat open plains area to the north and the high plateaux areas to the south. The smaller holdings are to be found closer to the towns of Mudgee and Gulgong. However, the presence of the rural small holdings lots causes some problems, specifically where there are large numbers of them as discussed in a later section.

2.2.15. Land Use by Holding Size

The land use data has been cross referenced with the holding sizes to show the proportion of land use that is within each holding size range. Figure 2.3 shows the results of this analysis. The major land use categories have been shown and the others have been grouped together (village, extractive industry, commercial, and public uses).

Figure 2.3. shows that, as would be expected, the rural residential land uses are the dominant ones in the categories less than 18 ha which is a reflection of the large number of 10 ha lots as mentioned above. However, it is significant to note that there are a number of rural residential uses in the holdings that are between 18 and 42 ha. These are mostly in areas with steep land and significant native vegetation which limits any potential agricultural uses. Most of the large extensive agriculture holdings are in the north and south west of the Shire.

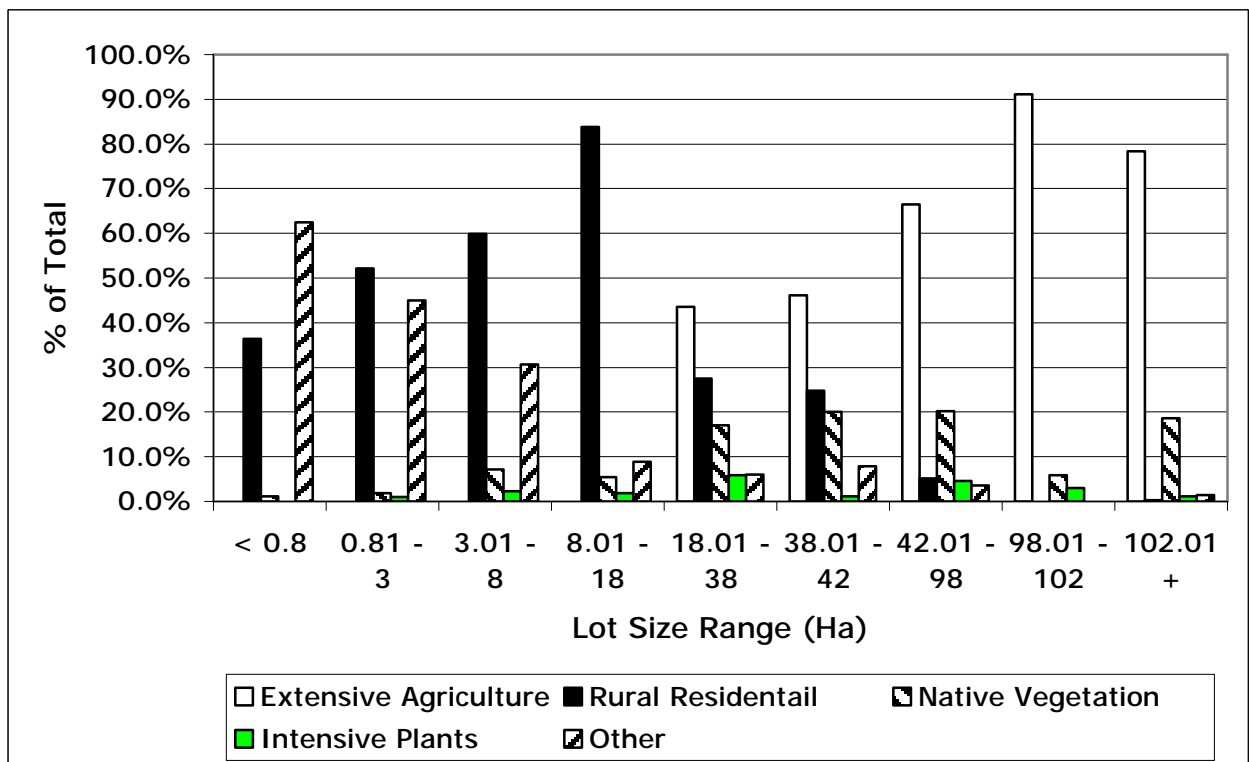


Figure 2.3: Land Use by Holding Size

Source: Council GIS and Land Use Survey

2.2.16. Small Rural Holdings

Rural Residential development within Mudgee is scattered throughout the rural areas. The rural residential allotments are a result of the previous Cudgegong Shire Council adopting a 10 hectare subdivision policy in the early 1970s which led to random subdivision patterns of mostly marginal quality agricultural land, which is often steep and has poor soil and geology which causes erosion. A total of 2,175 small rural allotments were created in the period 1973 to 1977. These areas were zoned as rural 1(c1) under the provisions of Mudgee Local Environmental Plan 1998.

The land use survey has shown that the majority of these lots have a dwelling on them. The details of the land uses are shown in figure 2.3. A number of them are not occupied on a full time basis and are used as ‘weekender’ style of accommodation. This is reflected in the housing types. They range from standard type housing to very rustic shacks and caravans. These are shown in photos 2.17, 2.18 and 2.19. Photo 2.20 and 2.21 shows the land on which a number of the subdivisions are located. Map 2.4 shows the location of the rural small holdings zones in the Shire.

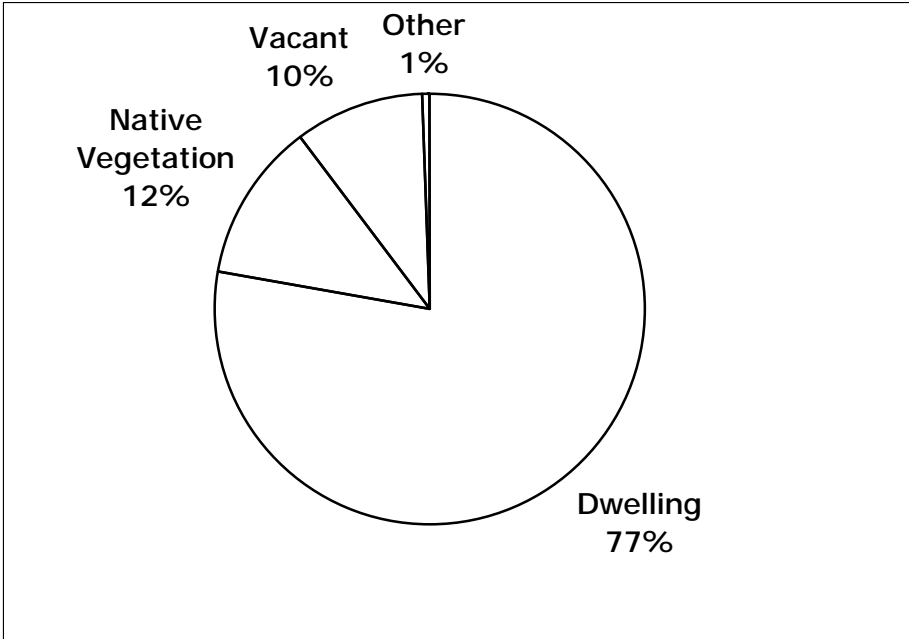


Figure 2.3: Land Use of Rural Small Holdings

Map 2.4: Rural Small Holdings Zones



Photo 2.17: Conventional Housing on Rural Smallholdings
Date of Photo: June 2002



Photo 2.18: Rustic Housing on Rural Smallholdings
Date of Photo: July 2002



Photo 2.19: Caravan on Rural Smallholdings
Date of Photo: July 2002



Photo 2.20: Rural Smallholding Subdivision
Date of Photo: July 2002



Photo 2.21: Rural Smallholding Subdivision

Date of Photo: July 2002

There are a total of 42 of these subdivisions and they range in size from

§ less than 10 lots	(36 lots in total),
§ 11 to 20 lots	(134 lots in total)
§ 21 to 100 lots	(948 lots in total)
§ 101 to 200 lots	(575 lots in total)
§ 201 to 300 lots	(482 lots in total)

The five largest subdivisions are as follows:

§ Cooks Gap	250 lots
§ Yarrawonga	185 lots
§ Gulgong	147 lots
§ Grattai	140 lots
§ St Fillans	103 lots

There are a number of problems associated with these areas and they are as follows:

- § Isolation from the main settlement areas of Mudgee and Gulgong
- § Lack of community facilities for the larger settlement areas
- § Steep land which causes erosion and access problems, necessitating sealed roads
- § Significant native vegetation in some parts
- § The cost of road maintenance and
- § Pressure to upgrade the road networks
- § Land use conflict
- § Lower socio economic groups are transport disadvantaged

2.3 Social Profile

This section provides a broad overview of the social structure of the rural lands primarily focussing on its demography and current provision of community facilities and services. It identifies key social sustainability indicators and provides a preliminary assessment of identified social issues facing the community.

It should be noted here that the residents of the rural lands of the Shire are very dispersed from the main population centres of Mudgee and Gulgong. This, in itself causes problems with the ability to provide services and facilities to these people. This should be taken into consideration when reading this section.

2.3.1. Demographic Profile

The Mudgee Shire had a 1996 resident population of 17,074 persons. Initial data has been released by the Australian Bureau of Statistics for the 2001 Census which has shown that the population reached 17,682 people (which is equivalent to a 3.6% increase since 1996). The Shire is expected to grow significantly with Planning NSW estimating that by 2011 it will have a population of 19,500 residents and 19,900 residents by 2021.

At the time of writing this demographic analysis, the details of the 2001 Census had not been released and so reliance had to be made on the 1996 Census for the detailed analysis of Collector District based information. Since then, preliminary release of the 2001 data has been made. However, as there has only been an increase in the population of the rural areas of 184 people since then, it is not considered that the results would be vastly different and the 1996 data will provide a valid representation of the demographic profile.

It is important to note that the analysis has been confined to the rural areas and that the urban land of Mudgee and Gulgong has not been included.

Demography of Rural Lands

Using the 1996 ABS data and as shown in Table 2.1, the rural area of Mudgee has the following characteristics:

- § It houses some 6,800 residents or 40% of the total population of the Shire. The most populated rural areas are located to the north of Mudgee with 63% of the total population of the rural area (4,314 residents) while communities in the south house 37% of the total rural area population (2,547 residents).
- § The age profile is consistent with the whole Shire except that the rural area has a slightly greater proportion of school age children (ie under 19 years) and a smaller proportion of older residents aged over 65 years old. However, this may change with a high proportion of rural residents aged 55-64 years old (13% compared to 10% for the Shire).
- § The proportion of preschool children is consistent with NSW average (ie 7%) but slightly lower than the Shire average (8%)

- § The proportion of primary school age children (ie 5-12 year olds) is above the Shire and NSW averages at 14%
- § Youth are also significant with 13-19 year olds comprising 9% of the population of the rural area (ie 633 youth). This is equivalent to the Shire average and just below the NSW average
- § Young adults are considerably less in the rural area comprising only 3% of the population compared to 5% for the Shire and 7% for NSW.
- § Older residents aged 65 years and over are significantly less than the Shire average at 10% compared to 14% and 12% for the Shire and NSW respectively.
- § 0.3% of rural residents are Aboriginal / Torres Strait Islanders (142 residents) which is slightly higher than the Shire and NSW averages
- § 4% are from non-English speaking backgrounds (286 residents) which is consistent with the cultural profile of the Mudgee Shire
- § Rural residents are less mobile than the Shire and NSW averages with only 36% of residents at a different address from the last Census.
- § 58% of working age residents are working or actively seeking employment (ie workforce participation rate)
- § In 1996, the unemployment rate in the rural area was 14% compared to 11.3% for the Shire. Historical data on the unemployment rate in the rural area is not available as Centrelink data is only available by postcode and does not coincide with Census Collector Districts.
- § There are 2,487 occupied private dwellings in the rural area of which 43 dwellings are classified as caravans/cabins/improvised home (observations suggest that this is probably higher). These are not located in caravan parks and therefore are likely to be temporary homes on permanent lots. This comprises 37% of all caravans/cabins/improvised homes in the Shire with those in the Shire likely to be in caravan parks in Mudgee and Gulgong.
- § Skill levels of rural residents are consistent with Shire averages although the rural area does have a higher proportion of people with vocational qualifications (41% compared to 39%). However, for both the Shire and the rural area skill levels are significantly lower than NSW averages.
- § As to be expected the main employment for rural residents is in agriculture (27% of the workforce) followed by retailing (11%) and manufacturing (9%). The remaining industry sectors are very diverse and include cultural and recreation services (7%), health and community services (6%) and mining (5%).

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- § Median weekly household incomes in 1996 were consistent with the Shire average at \$300-\$499 which was less than the NSW average
- § Data on household structure highlights that the majority of households in the rural area are couples with children (39% of households) and couples with no children (31%). These were much higher than the Shire average and it is consistent with the age profile identified above ie lots of school age children and high proportion of residents aged 55-64 years old.
- § Access to private transport is a key issue in many communities and for the rural area only 4% of households do not have access to a motor vehicle. However, this does represent 101 households for whom their reliance on others for transport in the more remote areas of the Shire is of major concern.

Demography of Rural Communities

Using 1996 ABS Census boundaries, Parish boundaries and Council's Locality boundaries, the rural area of the Shire has been divided into 17 rural communities to understand more closely the existing population distribution and demographic characteristics. These communities exclude the urban areas of Mudgee and Gulgong townships. They may not correspond with the geographic boundaries of communities as identified by the local residents but, at this stage, provide the best approach with the information available.

Information from the 2001 Census will be available later this year and should be used to update this data.

These rural communities are:

- | | |
|----------------------------------|--------------|
| § Birriwa | § Grattai |
| § Bocoble | § Hargraves |
| § Bungaba | § Lue |
| § Budgee Budgee/Frog Rock | § Mullamuddy |
| § Cooyal/Botobolar | § Piambong |
| § Cooks Gap/Home Rule/Yarrowonga | § Pyramul |
| § Eurunderree | § Windeyer |
| § Goolma | § Wollar |
| | § Yarrabin |

Table 2.3 provides an overview of demographic characteristics for each rural community. It highlights that:

- § The most populated rural communities are Cooks Gap/Home Rule/Yarrowonga (784 residents); Budgee Budgee/Frog Rock (639 residents); Birriwa (485 residents) and Mullamuddy (450 residents).
- § The least populated rural communities are Yarrabin (186 residents), Windeyer (210 residents) and Bocoble (237 residents). All of these communities are located to the south of Mudgee township.

- § Cooks Gap/ Home Rule /Yarrowonga has the largest number of children aged 0-4 years (68 children) while Bocoble has the highest proportion of children aged 0-4 years (12%). Both communities have a higher proportion of preschoolers than the Shire average.
- § Budgee Budgee/Frog Rock has the largest number of youth aged 13-24 years (82 youth) with Bungaba (17%), Goolma (16%), Eurunderee (15%), and Grattai (15%) having a higher proportion of youth than the Shire average. However, with the exception of Bungaba, all rural communities have a low proportion of youth compared to the NSW average which is typical of many rural communities.
- § Budgee Budgee/Frog Rock has the largest number of residents aged 65 years and over (78 residents) with a high proportion of older residents living in Yarrabin (18%), Windeyer (15%) and Hargraves (14%). It is important to note that the proportion of older residents in the majority of rural communities is less than the Shire average (14%).
- § The majority of occupied private dwellings are found in Cooks Gap/ Home Rule / Yarrowonga (303 dwellings) and Budgee Budgee/Frog Rock (228 dwellings).

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Table 2.3: Selected Demographic Characteristics of Rural Communities

Rural Community and Census Collector Districts	2001 Population	1996 Population	% of Total Rural Area Population	0-4 years olds (% rural community population)	13-24 year olds (% rural community population)	65+ year olds (% rural community population)	Total Occupied Private Dwelling
North of Mudgee	4,314	4,314	63	320 (7%)	544 (13%)	385 (9%)	1,540
Birriwa (1032802)	438	485	7	36 (7%)	57 (12%)	53 (11%)	163
Budgee Budgee /Frog Rock (1032608 1032601)	778	639	9	50 (8%)	82 (13%)	78 (12%)	228
Bungaba (1032807)	430	434	6	29 (7%)	72 (17%)	28 (7%)	152
Cooyal/Botobolar (1032609 / 1032607)	574	501	7	40 (8%)	71 (14%)	51 (10%)	193
Cooks Gap/ Home Rule /Yarrowonga 1032604 / 1032603 / 1032605	812	784	11	68 (9%)	77 (10%)	66 (8%)	303
Eurunderee (1032808)	401	381	6	24 (6%)	58 (15%)	22 (6%)	124
Goolma (1032806 / 1032801)	498	440	6	19 (4%)	69 (16%)	48 (11%)	154
Piambong (1032401)	245	252	4	21 (8%)	19 (8%)	12 (5%)	92
Wollar (1032602 / 1032606)	345	398	6	33 (8%)	39 (10%)	30 (8%)	150
South of Mudgee	2,551	2,547	37	183 (7%)	320 (13%)	310 (12%)	947
Bocoble (1032405)	224	237	3	28 (12%)	27 (11%)	27 (11%)	96
Grattai (1032403)	427	401	6	27 (7%)	58 (15%)	39 (10%)	141
Hargraves (1032407)	207	235	4	12 (5%)	16 (7%)	33 (14%)	95
Lue / Hayes Gap (1032408)	554	535	8	45 (8%)	49 (9%)	65 (12%)	187
Mullamuddy (1032404)	431	450	7	30 (7%)	58 (13%)	49 (11%)	162
Pyramul (1032406)	309	293	4	17 (6%)	46 (16%)	33 (12%)	108
Windeyer (1032409)	232	210	3	15 (7%)	24 (11%)	31 (15%)	81
Yarrabin (1032402)	167	186	3	9 (5%)	24 (13%)	33 (18%)	77
Total Rural Area Population	7,045	6,861	100	503	864	695	2,487

Source: Australian Bureau of Statistics, CLIB 96, CDATE 2001

2.3.2. Other Characteristics of the Rural Community

Using information collected from interviews with key community spokespersons in the area (see Appendix 4) and from a series researched and printed by the *Mudgee Guardian March –April 2002*, the following broad picture of Mudgee's rural communities is outlined below. As outlined in earlier reports, there are 5 identifiable rural villages in the Shire - Goolma, Lue, Hargraves, Wollar and Windeyer. The remaining areas are rural communities. The following section provides further qualitative information on some (but not all) of these rural villages and communities.

- § *Bocoble* - approximately 30 minutes drive south east of Mudgee off the Queens Pinch Road, Bocoble has an identifiable clustering of homes. The area has several snow falls each year and has a strong local history. The community again has a mix of large agricultural farms (ie fine merino sheep and cattle), rural residential lots and weekenders. Anecdotal information suggests that the area lacks community cohesion with few social activities, community groups etc. The community has several historic properties such as "Ingleburn" (established in 1874), the old Bocoble school and the "Woolshed" (built in 1850's). Equally, it also houses significant aboriginal sites important to the Wirajuri people. Mullamuddy Bushfire Brigade provides emergency services to the area while there is a Bocoble Rural Watch Group.
- § *Bungaba* – half an hour north of Gulgong off Blue Springs Road, this community has no specific facilities or clustering of homes to identify the community. Local residents estimate that the community houses some 100 families. The original "Bungaba" property was subdivided into lots of varying sizes (3ha - 40ha) during the 70's and comprises of a mix of weekenders, permanent rural residential blocks and agricultural farms. It also once housed a public school and tennis courts (Talbragar River Public School). In recent years, the Bungaba Womens Progress Association was formed in response to residents wanting to come together more as a community. The group has been successful in receiving grant funding to investigate the feasibility of establishing a community centre in the local area. They see the centre as providing a place for local activities and functions, bush fire and emergency activities and sessional government services. Some 25 children live in the area and attend Gulgong Public School. Local residents suggest that the area does have significant flooding problems with the Talbragar River and Cockabutta Creek flooding regularly. Bushfires also are a major issue with extensive areas of native bushland and poor road access. The community is serviced by the Bungaba-Cainbil rural fire service.
- § *Cooyal/Botobolar* – seen by many as two separate communities, both are located about 20 minutes drive north east of Mudgee off the Cassilis Road. The *Mudgee Guardian* estimates that 400 people live in the area with many weekenders/absentee landlords combined with rural residential lots and productive agricultural farms. Cooyal Hall, tennis courts and bush fire brigade shed are key facilities together with the Old Cooyal Hotel (established 1901). Seen as a close-knit community with functions/meetings held at both the hall and hotel the community also has 4 active local community groups. Agriculture in the area is primarily sheep

with vineyards a recent development. Blue Wren Wines is located along Cassilis Road together with 3 other wineries located within the area. Cooyal Bush Fire Brigade have fire sheds at Cooyal and Botobolar.

- § *Grattai* – about 20 minutes drive south west of Mudgee, the area has a rich Aboriginal, gold mining and agricultural history. It is also seen as an area attracting people seeking alternative lifestyles. The area has a historic and still functioning CWA hall while Grattai village once housed two hotels, a school, church, butcher, baker, blacksmith and boot maker. A historic graveyard is located at Grattai Station. The community has several 10 ha subdivisions, including Beragoo Estate which was developed in the 1980's. Many of these homes did not initially have power but most have now been serviced. There are currently no tarred roads to the Beragoo Estate. Historic Beragoo Homestead still remains and was built in the 1870's. The area has many sites which highlight the activities of its Aboriginal inhabitants, the Wirajuri, and of Chinese gold diggings.
- § *Goolma* - the Goolma rural community is primarily comprised of large farm holdings, farm workers and new arrivals seeking a new lifestyle including self-funded retirees. It has an identifiable village including a school, church, hotel, hall, rural fire brigade shed and takeaway store. The community hall is used by a local Arts and Crafts group and the CWA which meet regularly. The school has 21 children and 2 teachers. Due to its location, many residents travel to Dubbo for services (only 45 minutes and equidistant to Mudgee) with Gulgong and Wellington providing health services.



Photo 2.22: Goolma Community Hall

Date of Photo: April 2002

§ *Wollar* – bordering Munghorn National Park, Wollar is a historic village housing a clustering of homes, general store/service station, public school (1926), Memorial Hall (1955), public park, church and several historic but closed shops. It is evident that this village was once a vibrant centre for the area. Anecdotal information suggests that some residents in the area are on social security benefits and live in the area because it is affordable. However, this cannot be validated as information on unemployment benefits is only available from Centrelink by postcode which does not correspond to Census data. Some residents also suggest that the area has become popular for weekenders and/or investment properties providing cheap rental accommodation ie \$50-\$60 per week. The community produces the *Village Voice* which it distributes to 130 households in the area with the local primary school providing printing and distribution support. The Rural Fire Service is very strong with 350-400 volunteers which also includes residents who are weekenders.

2.3.3. Assessment of Existing Community Infrastructure

Education

The rural area has 5 public primary schools located in the following villages

- § Goolma
- § Hargraves
- § Lue
- § Windeyer
- § Wollar.

These small schools provide young children with local access to education services with high school services provided at Gulgong and Mudgee. They also provide a strong focal point for the rural community with many community groups / community newsletters supported by the school while the school is used as a community meeting place for playgroups, community meetings and as polling booths.

They are also used by individuals and families seeking welfare or support services. Rural schools have identified that they are often the first port of call for individuals / families seeking information about services such as crisis accommodation, counselling, family support and financial advice.

Health

As in many rural communities, poor access to health and medical services is a major issue for rural residents. Health indicators suggest that 1981-1993 the leading causes of death in the Mudgee Shire compared to the Macquarie Health Region and NSW were reasonably consistent although Mudgee had a higher level of circulatory diseases and injuries / poisons (see Council's *Community Plan*, p6).

Key health risk factors identified in Council's *Community Plan* are:

- § alcohol particularly amongst males,
- § tobacco amongst both males and females

- § access to health practitioners with only 69.6% provision rate in 1997 ie 1 general practitioner per 1,294 residents compared to 1 per 900 residents in NSW. The recommended benchmark is 1 general practitioner per 1100 residents.

Again, rural residents are likely to exhibit these high health risk factors particularly and preventative measures are required. Rural residents need to travel to either Mudgee, Gulgong, Wellington or Dubbo for health services and are likely to not access these services as often as they should. This is a major issue for high risk residents such as the elderly, pregnant women and people with life-threatening conditions. This is even more critical for emergency services with most rural areas having no resources to deal with emergency situations. Community health nurses do provide sessional community nursing services at several community halls in the rural area.

Although not researched by the consultant, Council's Community Project Officer suggests that the Wellness Clinic at Ulan Community House which is coordinated by Macquarie Area Health is a particular good case study of what can be done to improve health services for rural residents.

Employment

As outlined earlier, the 1996 Census highlights that the main employment for rural residents is in agriculture (27% of the workforce) followed by retailing (11%) and manufacturing (9%). Council's *Community Plan* highlights that 40% of Shire residents receive some type of income support payments from Centrelink (as at December 1999) and as suggested by anecdotal information many of these are likely to be rural residents.

There is considerable concern that the rural area lacks employment opportunities particularly for those who have moved to the Shire in more recent years. Many are not trained in agriculture and / or have low skill levels while traditional employment opportunities on large farms are decreasing. This is often a major issue for rural youth with anecdotal information suggesting that there are few employers in Gulgong and the northern areas of the Shire that employ junior staff.

Data on skill levels within the rural community as shown in Appendix 3, highlight that many rural residents do not have any formal qualifications. The need to increase the skill levels of rural residents and to increase employment opportunities, particularly for rural youth, is essential for the social sustainability of the rural community.



Photo 2.23: Ulan Community House

Date of Photo: April 2002

Children's Services

Children's services in the rural area are below average even though it houses a higher proportion of children and youth aged under 19 years than the Shire average. The rural area has a large concentration of primary school aged children (5-12 years olds) and slightly less than the Shire average of 0-4 year olds.

Parents have to travel into either Gulgong or Mudgee for children's services and this lack of local provision causes some concern. Council's *Community Plan* highlights that the Shire has a high rate of children:

- § Who are believed to have suffered notifiable injuries or harm in Orana / Far West DOCS region
- § Who do not access childcare due to its high cost
- § Have poor pre-literacy and social skills
- § Who have young parents requiring support

The development of appropriate service models for children living in the rural area is essential.

Youth Services

Again, the proportion of youth in the rural area is equivalent to the Shire average with some 860 youth aged 13-24 years old. The proportion of 20-24 year olds is significantly less however consistent with the trend of this age group leaving rural communities in search of further education and / or work opportunities.

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The only youth service located in the rural area is the Wollar Youth Group although many rural youth are likely to be actively involved in sporting and school activities based in Mudgee and / or Gulgong. It should be noted that the town of Mudgee doesn't have a full time youth worker and that the provision of these by the Department of Community Services is very light on across the entire state.

Again, for rural youth access to these services and activities is difficult due to the lack of public transport networks and their reliance on parents for driving them to sport/activities. Council's *Community Plan* highlights that youth issues focus on:

- § Absence of crisis accommodation
- § Drug and alcohol abuse
- § Sexual assault
- § Lack of mental health services
- § Limited employment and TAFE opportunities
- § Youth depression is a consistent problem in the Shire.

It should be noted that the TAFE college is undergoing a review of its services to move to a more flexible delivery mode using the internet. This could improve some of the service accessibility to the youth who have good internet access or are in close proximity to the site in Cassilis Rd.

These issues will be further exacerbated for youth living in the rural areas who have extremely limited access to any support services and resources. The need to provide for this group is very important. Some rural communities have Youth Development Officers working only in the rural areas of the Shire or youth workers shared with other adjoining Shires (eg Snowy River, Cooma-Monaro and Bombala Shires). Equally, a focus on youth health services would be a key issue for any youth workers in this Shire.

Services for Older Residents

Although there are only some 700 residents aged over 65 years old, older residents are likely to increase significantly in the rural area as the population ages. Again, Mudgee and Gulgong are the base for a full range of Home and Community Care services including Meals on Wheels, Home Care, Community Nursing, Community Transport, Neighbour Aid and Home Maintenance and Modification suitable for older residents. Many of these are provided in the home and therefore rural residents form a significant proportion of the client base.

However, day respite and transport services remain a high need and these are the type of services required by older rural residents. The need to provide services in the rural areas on a sessional or mobile basis should be explored for this age group. There is a pilot project funded by Department of Transport in Dubbo aimed specifically at providing access to medical services for rurally-based frail and aged residents. Some rural communities also have a pool car which is used by local volunteers to transport aged/frail residents to medical appointments etc.

Services for Residents with Special Needs

Indigenous

The rural area houses some 150 Aboriginal and Torres Strait Islanders. With this comprising half of the all indigenous residents in the Shire and significantly higher than the NSW average, the lack of any Aboriginal groups or specific services is of concern. These residents are likely to receive very little support and access to services evident in other communities.

Equally, as outlined earlier, the rural area houses some very significant Aboriginal sites which should be recognised as part of the cultural heritage of the Mudgee Shire. The Local Aboriginal Land Council and the Shire Council are currently looking at this issue and this needs to be further developed.

Disability

No information is available on the number of people living in the rural area with a disability. Anecdotal information suggests that the rural area houses many people living on disability pensions and this would suggest that services need to be available to this group. Again, the HACC program does service the rural area but there is concern that because of large distances, poor communications and poor transport networks would make the quality of life for rural residents with a disability extremely difficult. No other specific services for rural residents with a disability have been identified.

Residents from a Non-English Speaking Background

Consistent with the Mudgee Shire, the rural area has a very small proportion of residents from a non-English speaking background. Most residents born in non-English speaking countries have lived in Australia for many years and with primarily northern European backgrounds. Anecdotal information suggests that many newly arrived migrants have settled in the rural area and this needs to be further researched as part of the outcomes of the 2001 Census.

Emergency Services

As outlined in other sections of this report, the rural area has poor access to Police and Ambulance services due to the large distances involved and the limited provision of this service in the Shire.

The Rural Fire Service however is very active with the entire rural area covered by 14 volunteer brigades. The resource needs of this very important group should be considered with information provided in the section on Community Facilities highlighting that many groups have identified significant equipment deficiencies. It is noted that the Rural Fire Service is now run by the State Government and not the Council and therefore the responsibility for all equipment is now in the hands of the State Government and not the Council.

Community Groups/Organisations

The rural area houses a range of community groups and organizations which have historically and now continue to maintain strong community spirit and connections. Rural residents are also likely to be actively involved in a range of Mudgee and Gulgong based community groups and organizations.

These groups need to be supported and resourced as they provide much of the "backbone" of the rural communities. They also need to ensure that they remain relevant to their community, network together on key local rural issues and attract new incoming rural residents in their activities.

The Council has an annual rural forum meeting in each of the communities to identify some of the issues that need to be addressed.

Below are 42 rural based community organizations identified as part of this study and there are likely to be more. However, it is interesting to note that not all the rural communities identified in Table 2.1 are represented by Progress Associations. These are Bocoble, Grattai, Mullamuddy, Eurunderee, Piambong and Frog Rock / Budgee Budgee. As a result, these communities may not have the structures in place to identify / lobby Council about the needs of local residents. It is essential that Council encourages all of these rural groups to participate in determining community issues and cooperative approaches to addressing the needs of rural residents.

§ Birriwa Recreation Ground Trust	§ Lue Hall and Recreation Committee
§ Birriwa Rural Fire Brigade	§ Lue/Havilah Rural Fire Brigade
§ Bocoble Rural Watch Group	§ Lue P & C
§ Botobolar Community Committee	§ Meroo Progress Association
§ Bungaba Rural Bushfire Brigade	§ Mullamuddy Bushfire Brigade
§ Bungaba Womens Progress Association	§ Pyramul Progress Association
§ Cooyal Hall Committee	§ Pyramul Rural Fire Brigade
§ Cooyal Rifle Club	§ Pyramul Progress Association
§ Cooyal/Botobolar Bushfire Brigade	§ Piambong Rural Fire Brigade
§ Cooks Gap Progress Association	§ United Rural Residents Mudgee Shire
§ Cooks Gap Rural Fire Brigade	§ Wollar Progress Association
§ Deadmans Creek Rural Fire Brigade	§ Wollar Rural Fire Brigade
§ Erudgere Grattai Fire Brigade	§ Wollar P & C
§ Goolma Amenities Committee	§ Windeyer P & C
§ Goolma Tennis Club	§ Windeyer Progress Association
§ Goolma Cricket Club	§ Yarrabin Progress Association
§ Goolma P & C	§ Yarrabin Rural Fire Brigade
§ Goolma Rural Fire Brigade	§ Several Landcare groups operate in the rural area
§ Hargraves Progress Association	§ Several agricultural groups such as Native Food Growers Group, Rural Protection Land Board and NSW Farmers Association
§ Hargraves Rural Fire Brigade	
§ Hargraves P & C	



Photo 2.24: Cooks Gap Rural Fire Shed

Date of Photo: April 2002

Communication

The Mudgee Guardian / Gulgong Advertiser is the main commercial newspaper servicing the rural area and is printed each Tuesday and Friday. Although distributed widely and covering rural news, anecdotal information suggests that many rural residents only access newspapers on an irregular basis when they are visiting either Mudgee or Gulgong and / or it is posted to them. As highlighted by the principal of Goolma Public School, mail delivery is only twice or three times per week in some rural areas, so keeping up-to-date with local and world news can be difficult.

Local community newsletters include the Hargraves Nugget News, the Gulgong Gossip and Wollar's Village Voice while some Rural Fire Brigades and primary schools also distribute community newsletters eg "Red Alert" Cooyal/Botobolar Rural Fire Brigade and Goolma School Newsletter.

Other important sources of information and communication are TV, radio, mobile telephone and the internet. Local residents indicate that many of these services are of varying quality throughout the rural area while anecdotal information suggests that a significant number of households lack these services as they do not have access to power grid electricity.

Although this may have some personal benefits for residents in terms of their "isolation from the rest of the world" it does pose problems for the transfer of information and communication regarding essential services and life-long learning. In particular, the inability of children to access world information from a range of sources is of major concern.

Community Facilities

Community facilities in the rural area focus primarily on community halls and recreation facilities (such as parks and tennis courts). Most are managed by Community Committees but many are old and basic in their design and fit out.

Public primary schools also act as community facilities in several villages providing a location for community meetings and activities.

Rural fire sheds are also centres for community activities particularly when there are no other public facilities available. Council's mobile library also visits several rural communities.

Each village has a Village Masterplan, which was prepared by Council and the community. These Masterplans guide future development of village infrastructure and help local community committees guide their fundraising efforts. Council provides some financial assistance and support for local village projects while Committees also apply to other funding bodies for assistance for these projects Table 2.4 shows the allocation from the Council of funds for these Masterplans.

Table 2.4: Village Masterplan Funding Allocation

VILLAGE	1999/00	2000/01	2001/02	Proposed for 2002/03	TOTAL
Birriwa	\$5,000 Purchase Shed	\$7,000 Concrete Slab - Hall	\$500 Chairs	\$1,500 Slasher	\$14,000
Botobolar	\$7,500 Improvement to Fire Shed & Grounds	\$2,500 Water Tank	\$3,000 Awning at Hall	\$2,000 Generator	\$15,000
Cooks Gap	\$10,000 Repay Loan Hall Construction	\$15,000 Hall including concreting, kitchen, tank, electrical	\$7,500 Further Hall Improvement tiles, chairs appliances	\$2,500 Heaters, driveway & Carpark	\$35,000
Cooyal	\$10,000 Grass Matting Tennis Courts	\$2,500 Materials for Hall Verandah	\$2,500 Concrete slab to complete Verandah	\$2,500 Storage Shed & Entrance	\$17,500
Goolma	\$6,000 Replace Hall Roof & repair ceiling	\$2,500 Complete ceiling repair & Playground Equipment	\$5,000 Upgrade Supper Room	\$2,500 Hall Improvement	\$16,000
Grattai	\$7,000 CWA Hall New Ceiling	\$6,000 Bushfire Shed Septic	\$4,243 CWA - doors windows & fencing	\$1,000 CWA Hall kitchen floor covering	\$18,243
Hargraves	\$7500 Replace Hall Roof	\$2500 Tennis Court Resurfacing	\$5000 Hall ceiling & line walls	\$4000 Lighting for tennis courts	\$19000
Lue	\$10,000 Toilet Block	\$2,500 Hall	NIL Requested	\$1,500 Slasher	\$14,000

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VILLAGE	1999/00	2000/01	2001/02	Proposed for 2002/03	TOTAL
		Improvement			
Meroo	\$7,500 Toilet block, fence, fittings	\$2,600 Wood heater & urn	\$2,280 Hall & Tennis Court work	NIL No submission	\$12,380
Pyramul	\$7,500 Hall Improvement	\$2,700 Hall gutters & Grandstand	NIL No request	\$3,125 Concreting at Hall	\$13,325
Windeyer	\$12,000 Hall Awning & Extension	\$1,700 Cattle Grid	\$7,800 Hall-Change Room & Tennis Shed	\$2,500 Electrical work at hall	\$24,000
Wollar	\$10,000 New Floor for Hall	\$2,500 Hall Improvement	\$9,200 Hall Roof & Water Tank	\$5,000 Upgrade toilet facilities	\$26,700
TOTAL	\$100,000	\$50,000	\$47,023	\$28,125	\$225,148

Council's *Community Plan* recommends that Section 94 Plans for the Shire include provision for the following community facilities to service the rural area:

- § mobile community information and government access centre to provide information and communication facilities for rural residents eg public internet access, govt information, Council customer services, room for Council consultation.
- § Mobile occasional care for rural areas particularly targeted at disadvantaged families.
- § New mothers & babies clinic/support group and parents information service coordinated with mobile preschool. Improved community halls are needed to run this service.

However, the current rate of development in the rural areas is not considered to be sufficient to warrant the preparation of such a plan because the ability to raise the funds from development contributions is not considered to be achievable.

A survey of Community Infrastructure Needs was undertaken by the Office of Regional Communities, Premiers Department in April 2002. Responses to this survey by rural community groups highlighted the need for:

- § Improvements to community halls and recreation areas eg fencing, playground equipment, internal hall improvements, recycling bins, ride on lawn mower, hot water system, amenities block, disability access, lighting for tennis courts, community information sign, landscaping, flag pole etc
- § Improvements to local public primary schools eg grounds, play equipment, multipurpose hard courts etc
- § Additional Rural Fire Service equipment – fire pumps, storage shed, generators, shed improvements and water storage tanks. One brigade does not have a funded fire truck.
- § Maintenance of heritage buildings – particularly local churches

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The following specific facilities were identified in this survey:

- | | |
|--|--|
| § Community Hall and Sports Facility (Cooks Gap) | § Refurbishment of two historical churches, one at Hargraves and another at Triamble. |
| § School bus shelters (Cooks Gap) | § New entrance to park (Cooyal) |
| § Fortnightly bus service (Cooks Gap) | § Storage shed for hall (Cooyal) |
| § Public Telephone (Cooks Gap) | § New fence around park (Cooyal) |
| § Gate and fencing to enclose recreation ground (Windeyer) | § Lights for tennis court (Cooyal) |
| § BBQ and oven for the community hall (Windeyer) | § General refurbishment of hall including new floor, flag pole, trees and watering system, blinds for verandah and sign to advertise local events (Cooyal) |
| § Tables and chairs for the hall | § Outdoor furniture and access ramp for hall and new security shed (Upper Meroo) |
| § Playground equipment (Lue) | § Playground equipment (Hargraves School) |
| § Upgrade of the community hall (Lue) | § Multi-purpose hard court to replace worn tennis court (Windeyer) |
| § Upgrade of school grounds (Lue) | |
| § Upgrade of recreation ground (Lue) | |
| § Amenities block for recreation ground (Hargraves) | |
| § Access ramp for community hall (Hargraves) | |
| § Fencing of recreation ground (Hargraves) | |

Retail Services

Shopping facilities, even basic general stores / takeaways, are virtually non-existent in the rural area.

General Stores with petrol stations are provided in the following areas:

- § Goolma
- § Cooks Gap
- § Wollar
- § Lue
- § Windeyer
- § Hargraves

Residents to travel to Gulgong or Mudgee for even basic goods with long distances and often poor roads involved. For example, the round trip from Bungaba to Mudgee is 2 hours or approximately 120 kilometres with Gulgong about 60 kilometres round trip. This is similarly an issue for Wollar, Pyramul and Goolma which are at the extremities of the Shire boundaries and not within close distance of other major retail centres.

This is likely to be similar to other rural Shires and Council should continue to facilitate the further development of the Gulgong retail area which would ensure that rural residents in the northern part of the Shire have closer access to shopping facilities. Also the maintenance of local general stores which may be combined with cafes and / or tourist facilities could be promoted.

Transport

As outlined earlier, the rural community relies on private motor vehicles to travel within the Shire. The only transport available is through the HACC service (for the frail aged and people with a disability) or school bus services.

This is a particular problem for rural residents without access to a motor vehicle such as children, youth, older residents and often women.

Culture and Heritage

The rural area has a rich culture and heritage. Anecdotal information suggests that the rural community strongly identifies with local natural features including pagoda rock formations, sandstone caves and rock faces eg Lizard Rock and Chinaman's Lantern, Bungaba; Frog Rock at Frog Rock; Cockabutta Caves, Talbragar Riverbed Fossil Site, Munghorn Gap Nature Reserve (see Mudgee Guardian, *Mudgee Shire Communities*, 2002).

There is also appears to be recognition of the pioneers of the area and the history of local communities. Personal and family histories are well remembered and need to be recognised in more formal ways in the community. Equally, important rural icons such as the history of travelling stock routes, once vibrant local rural villages and historic agricultural homesteads have not been strongly recognised.

In an attempt to provide greater awareness of the rural identify of specific areas, the Council has erected locality name signs. Photo 2.25 shows such a sign for Lue.

Identification and awareness of Aboriginal cultural heritage appears limited. These need to be considered as part of any Local Plan for the rural area.



Photo 2.25: Locality Signs

Date of Photo: March 2002



Photo 2.26: Historic Wollar Anglican Church

Date of Photo: April 2002

Housing

Of concern for the rural area is the poor level of basic utility services and quality of some rural housing. As already mentioned, some rural homes are not connected to the formal power grid and whether this is by choice or not, the ability to access a formal power grid is considered to be essential.

Similarly, the quality of some rural housing is also of concern, with some residents living in very basic housing such as a caravan or temporary dwelling. For these people, there is a need to ensure that the quality of housing meets government requirements and that they have access to appropriate services.

2.3.4. Social Issues Identified Through Consultation and Other Studies

As part of this study, meetings have been held with key community representatives to gain some insight into the issues effecting rural residents. Unfortunately, the budget has not been sufficient to allow more extensive consultation focusing on these issues but this section outlines the information gathered by this process. Information on social issues identified in other studies has also been documented. Together, both information sources have been used to further inform the study process.

Feedback from Key Community Representatives

In order to find out the identify the social and community issues, interviews were conducted with a representative sample of the community. This included the following:

- § Mudgee Interagency – A key meeting of representatives from government and non-government social service/welfare organizations working in the Shire;
- § Wollar Progress Association – considered to be a good representation of the issues of small isolated communities;
- § Bungaba Women's Progress Association – considered to be a good representation of the issues for the rural areas generally;
- § Goolma Primary School – considered to be a good representation of the education and social issues of the rural area.

The outcomes of these discussions are provided below.

Mudgee Interagency

At a regular meeting on the Mudgee Interagency (which is a regular meeting of the people who deal with social and community issues) on Tuesday 9th April 2002, one of the study consultants ran a short workshop with the Interagency to identify the key social issues in the rural area. The Interagency comprised of representatives from government and non-government social service/welfare organizations working in the Shire. In summary, the representatives identified the following points:

- § The rural area is comprised of a mix of socio-economic groups with "blockies" (ie people living on small rural lots who are not engaged directly in agriculture production); "weekenders" (ie people who have bought land in the Shire and only use their land on an irregular basis) and "traditional farmers" (ie those who earn their main income from agriculture and have been long term residents of the area).
- § Rural communities identified were Piambong, Hargraves (strong community), Bocoble, Kains Flat, Cooks Gap, Grattai, Wollar and Cooyal.
- § Agriculture has changed in the rural area with many smaller farms merged into larger farms and employing less people. Also the rural area has a diversity of agriculture ie old agriculture of cattle and cropping; new agriculture of vineyards; speciality agriculture such as olives and hobby agriculture such as alpacas, horses etc. Most rural producers derive only part of their income from agriculture with members of the household also working in other industries eg government, retail job.
- § Many people in the rural area are unemployed and are experiencing a range of social problems such as isolation, family dysfunction, poor health, low skill levels etc.
- § Rural area lacks transport and basic services with many people not having access to a telephone and / or electricity. This compounds the social

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problems in the area and makes servicing / addressing their needs even more difficult.

- § Community health nurse has clinics at Wollar, Ulan and Hargraves and also provides home nursing from these bases. Counsellors and community midwives are also provided.
- § Barnardo's provides outreach services while the Salvation Army provides financial counselling. Some agencies are not able to undertake home visits due to insurance issues. This highlights the need for community centres in the rural areas for sessional services.
- § Home Care has identified the high proportion of older residents in the rural area requiring assistance and support.
- § Council is establishing a volunteer referral service which may be able to appropriate to rural needs.
- § Rural bush fire brigades provide a key service and link in the rural area.

Key issues for the rural area identified by the Interagency representatives were:

- § Poverty
- § Lack of transport and poor road access
- § Lack of basic services
- § High cost of servicing rural areas due to transport and staff costs. These issues are not considered by funding agencies.
- § Loss of parental control of children and youth due to large distances
- § Relationship breakdowns and need for crisis accommodation

Representatives considered that the rural area should only increase in population if:

- § People understand that they cannot make a living from small hobby farms
- § People are given support/resources to help sustain rural communities
- § Issues of physical, social and cultural isolation are addressed
- § There is more consultation with and involvement of rural residents about their needs and how these issues can be addressed.

Wollar Community

The Wollar Progress Association is a key group in the area with many members also being members of the Rural Fire Service, P & C and any other community activity in the area. The group is active in trying to maintain basic services in the Wollar village and to ensure that the village does not die. Employment from Ulan mines was significant during the 1980's but employment levels have decreased and many people have left the area due to lack of local employment.

Key issues identified by the group were:

- § **Social disaggregation** – once a community where everyone knew each other this appears to have changed in recent years with many people not

involved in the local community. However, they do come together when there is a crisis eg bushfire but community spirit seems to be disappearing.

- § **Feral animals/dogs** – a key issue for locals particularly with many weekenders not involved in pest reduction schemes or reducing weeds etc.
- § **Improved road conditions** – tarring of the road between Mudgee and Wollar has been of huge benefit reducing travel times and vehicle wear and tear.
- § **Lack of social activities** – as the community has declined so too has the level of social activities in the community. This vicious cycle has meant that people find it difficult to stay in the area due to the lack of community activities for adults and particularly for children. The community has tried to assist by building a bicycle track and running a youth group but still the problem remains.
- § **Concern over water quantity and quality and on-site sewage issues** – many residents are concerned about the quality of water in the Goulburn River/Wollar Creek and also about impact of on-site septic systems on water catchments. Health and odour issues from on-site systems are also of concern in the village.
- § **Poor communications** – the community has no mobile telephone reception and poor radio, TV and internet facilities.
- § **Sessional services are limited** – the community nurse and mobile library visit the village monthly but this is not considered sufficient.
- § **Salinity issues** – major concern over salinity problems in the area with the group considering that Council could do more education and support for environmental programs in the rural area.
- § **Relationship with Council is reactive and not partnership** – the village has received considerable funding for its Village Masterplan over the years while a Council Forum is held annually at the village. However, residents consulted considered that this has produced a reactive relationship with Council rather than a cooperative/partnership approach.

Bungaba Women's Progress Association

The Bungaba Women's Progress Association was established in 2001 as a lobby group to improve facilities in the Bungaba rural community. The community is considered to extend beyond the boundaries outlined in Section 2.2 and consist of some 100 families. Residents have to travel 120 kilometres to Mudgee and 60 kilometres to Gulgong round trip for basic services. Of importance to the group is the need for:

- § improved roads and signage
- § community noticeboard
- § bus shelter
- § community hall
- § improved access to health and emergency services

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- § low levels of personal and household income of residents
- § food cooperative due to the lack of fresh affordable food locally
- § fire fighting equipment and storage
- § outreach government services to the community eg library, community health etc
- § further development of village infrastructure including employment, transport etc

The Association also considers that the community lacks cohesion and identity with the need to establish relationships between residents and develop community support. Many residents have health problems, lack of support networks, limited employment etc and these can create considerable strain and pressure. The work of the Association will provide much-needed networking and support for this community. The Association has recently received grant funding to investigate the feasibility of establishing a community centre in the local area. It is anticipated that if feasible, the centre will provide a place for local activities and functions, bush fire and emergency activities and sessional government services.

Goolma Primary School

The Principal of Goolma Primary School was interviewed regarding the needs and issues for this community. In summary, the principal highlighted that:

- § the community is strong with most community activities well-supported
- § there are poor communication networks with many local areas STD calls to/from Goolma while TV, radio, mobile and internet reception is of varying quality. A significant number of households do not have access to some of these facilities also due to their lack of connection to a power grid.
- § information networks are also limited with the school bulletin the only community newsletter. It is delivered to as many local residents as possible (by the local school bus driver) with 200 distributed and includes a range of community information.
- § rural children lack of social experience, cultural isolation and general knowledge with this further reinforced by the existing poor communication systems.
- § there is a lack of transport with many people using the school bus services as no others are available. However this is difficult for older residents and those with limited mobility.
- § residents have poor access to health/medical services with this further exacerbated by poor mobile phone reception. Any emergency is very difficult to deal with.
- § there is conflict between established residents and weekender/new residents regarding bush fire management
- § there is a need for organizations to be inclusive of all residents and not just rely on providing/involving long term residents.



Photo 2.27: Wollar Public School

Date of Photo: April 2002

Feedback from Other Studies

Review of the studies identified in the References highlighted the following social issues for the rural area. Many of these are consistent with the issues identified above.

Key social issues identified for the rural area were:

- § Inability of residents to access services or information about services
- § Lack of access to crisis services eg domestic violence
- § Lack of public transport
- § Isolation
- § People in outlying areas do not associate with Mudgee based services
- § Lack of a "voice" for Aboriginal residents
- § Lack of coordination
- § Limited access to information/poor communication
- § Widespread social disadvantage and family dysfunction
- § Specific service gaps
- § Lack of infrastructure to address social needs
- § No-one focusing on grant opportunities and developing funding proposals
- § Lack of auspice body to attract funding.
- § Poor communication and coordination with some studies suggesting that the rural communities need a service directory (hard copy), emergency number in phone book, advertise in community papers, information distributed through mobile services eg library, community nurse, mobile neighbourhood centre

However, these studies also identified that the rural area has:

- § Strong community spirit and resourcefulness due mostly to women
- § People willing to participate in development of community plans and strategies eg Council's *Community Plan*
- § A Council willing to meet with more isolated communities to listen to their concerns

2.4 Economic Factors

2.4.1. Introduction

Economic Development in the Shire is based on mining, manufacturing and agriculture including agricultural based tourism. The Western Research Institute (WRI) have recently completed a report titled *Mudgee Regional Competitiveness Profile* which outlines the Shire's economy. It states that the gross regional product of the Shire is \$518.9 million (WRI, 2001 p 17). The top 3 contributors to this being Mining (\$180.7m), Manufacturing (\$52.3m) and Agriculture (\$44m). It should be pointed out that this includes both the urban and rural areas.

The report lists the Shire's competitive strengths as follows:

1. *Small scale production* – the Shire's relatively small production is more suited to small to medium scale firms.
2. *Specialised production skills* – due to low labour turnover, employers can invest in their workers to develop highly specialised production skills.
3. *Niche marketing* – firms that target specific markets gain a competitive advantage due to their focused efforts built on dynamic small scale operations and specialised workforce.
4. *Land availability and soil quality* – firms that require land for agricultural production or industrial needs can obtain land at a lower cost than in larger cities.
5. *Weight losing Production* – firms that produce outputs that are lighter than the inputs will develop a competitive advantage. This is multiplied which the inputs are sources from the local area.

Agriculture is an important economic driver in the Mudgee region, and has been since the gazettal of Mudgee township in 1838.

The first settlement of the area began with the discovery of productive grazing land adjoining the Cudgegong River in 1821. The discovery of gold in the 1850s led to rapid population growth in Mudgee and the surrounding towns of Gulgong, Hill End, Hargraves and Windeyer. The Municipality of Mudgee was gazetted in 1860. Despite the gold rush, the economy of the Municipality was largely based on its agricultural industries, particularly of superfine merino wool.

Agriculture in the Mudgee Shire has undergone a number of different phases. In the period 1940 through to 1960, there was a cannery in the Shire and Mudgee was a major producer of vegetables for both fresh and processed markets. When the cannery closed in the early 1960s, the vegetable industry contracted substantially and

it is now only a minor production focus in the region, serving mainly local demand. Cereal cropping for grain has also been through cycles of contraction and expansion, corresponding with relative returns from grazing industries. Lucerne for hay has been a significant crop in the area for many years. Much of the hay produced is used in the horse industry in the Sydney region. Mudgee is well known for its honey, and this continues to be an important local product. Wine has been produced in the region for more than 150 years, but it is only in recent years that it has become the dominant production focus.

In financial year 2000, agriculture accounted for more than \$44 million (8.5%) of the Shire's total estimated gross regional product of \$518.9 million. This made it the third largest contributor by dollar value after mining (35%) and manufacturing (10%).

Federal government predictions indicate continued growth is likely in these three sectors through to 2008, with agriculture in total expected to grow in value by around 10% each year over the period. The key drivers in this increase are expected to be beef (26.5% in production), wine (5.9%), poultry (3.6%), and horticulture (2.4%). Other related agricultural production industries predicted to grow over the period to 2008 are leather tanning (9.1%) and agricultural services (2.7%).

Agriculture is the second largest employer in the Mudgee region, exceeded only by retail trade. In 2000, there were more than 1000 people directly employed in agricultural enterprises in the area.

2.4.2. Agriculture

The major categories of agricultural activities include:

- § Viticulture;
- § Horticulture;
- § Grazing industries;
- § Cropping; and
- § Other products.

Each of these is discussed below.

An imported related activity for the Mudgee region is that of agricultural tourism, and this is also discussed below, together with some suggestions as to activities that could be undertaken to support the further development of agricultural activities in the Mudgee region.

Viticulture

Mudgee is now one of Australia's fastest growing and most successful wine production areas and the importance of the wine industry to the region cannot be over-estimated. Apart from the significant income generated directly by grapes and wine, the industry fuels the thriving tourism industry in the Mudgee region.

With some 4,500 hectares under production in 2001, the Mudgee region now has more acreage under vines than the long-established Hunter Valley wine production area. In an industry survey of values of vineyards in Australia undertaken in 2000, Mudgee vineyards were identified as being at least as valuable as those in the better-

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known Hunter area. The survey valued premium vineyard areas in the Hunter at between \$60-75,000 per hectare, and at \$60-85,000 per hectare in the Mudgee region.

Wine grapes were initially planted in the area because of the quality of the soil, and because of the suitable climate for grape growing. This has led to the development and growth of a wine industry cluster in the region, now encompassing some twenty-eight wineries and salesrooms. Consumer awareness of Mudgee as a wine region has been increasing, particularly for red wines. This has established the region's reputation as a premium wine production centre.

Mudgee wines are claimed to be of distinctive and high quality, and a voluntary Appellation system under which wines produced in the region can be certified as Mudgee Appellation wines has been in operation since 1978.

The three main grape varieties grown in the region are chardonnay, shiraz and cabernet. Production of these varieties is growing rapidly, reaching 10,700 tonnes in 2000. This represented a 90% increase over the total production of 5,600 tonnes in 1998. During that period, production of shiraz and cabernet grew by more than 115%, while chardonnay grew by only 45%. This reflects the strong performance of Mudgee reds in both domestic and international markets.

There are a large number of small vineyards and winemakers in the Mudgee region and many of these exist mainly on cellar door sales. A strong tourism base will support these operators. There are also a number of large corporate vineyards in the region, including Rosemount and Orlando Wyndham. Rosemount have no wine making facilities in the region – their vineyards grow grapes which are processed elsewhere. Orlando Wyndham make wines at their Montrose vineyard, but cellar door sales are located at their Craigmoor vineyard. There are also a number of contract growers in the region who supply grapes to larger wineries.

Although the wine industry in the region has grown rapidly in the past, there are still opportunities for further development. There are areas of land suitable for wine grape growing in the area between Gulgong and Home Rule. Expansion of production will, however, be constrained by the availability of water.

There is also expansion potential for winemakers who establish a mass market for their product or who develop strong brand recognition for their particular label and vintages.

Further development of cellar door sales is also likely. As well as contributing to the development of the Mudgee wine cluster, this has the added advantage of contributing to tourism and regional recognition.

However, the industry is rapidly reaching saturation and overproduction will force prices down even further. Poor returns will limit capacity for further investment and will impact on the capacity of growers to react quickly to changing trends in the industry.

Mudgee is well positioned to secure a place in the market by integrating winery and vineyard development with expanding tourism activities. The region's existing

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reputation and proximity to Sydney will underpin the industry's sustainability into the future.

Horticulture

Horticultural uses other than viticulture include the following:

- § Orchards
- § Market Gardens
- § Olives
- § Turf

Each will be discussed below.

Orchards

The Mudgee climate is suited to production of some tree fruits, particularly stone fruit and apples. Fruit growing has been a significant industry in the region since the 1940s and it remains a significant economic contributor.

However, returns are variable, and expansion of these industries will be limited unless growers focus on replanting of new and more marketable varieties. Availability of suitable land and water would also be limiting factors.

Market gardens / Vegetables

The Mudgee Shire was at one time a major supplier of vegetables to both fresh and processed markets. The existence of a local cannery drove most of this production, particularly of sweet corn. However, increasing competition from other vegetable production areas (including Hawkesbury and Wollondilly) affected sustainability of production for the fresh market. When the cannery closed, production was scaled down even further. There are still some very successful producers, and these are largely focused on servicing the needs of local communities and the tourist trade in the Shire and surrounding regions. There is some potential for growth, particularly in high quality niche products such as miniature vegetables, new varieties of corn and herbs as well as Asian vegetables.

Olives

Olives are a relatively new crop in the Mudgee Shire but the industry is now a significant agricultural activity within the region. The area under planting has increased rapidly since the mid 1990s. This industry is in expansion phase, and is likely to continue to grow over the next few years. However, caution needs to be exercised in predicting future economic returns.

There are many similarities between the wine and olive industries. Both have gained in popularity and become lifestyle farming choices for many producers. Production has increased rapidly, with little apparent thought as to markets and end uses. Returns are not reliable and processing facilities drive much of the demand. Growers are often reliant on contracts from processors and are clearly price takers. The olive industry

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needs to learn from the experiences of the wine industry. Co-operation between growers will assist in development of a sustainable industry in the Mudgee region.

Olives are used mainly for fresh consumption and oil production. There are some varieties that are specific for each of these end uses, and some which are used for both table and oil production,

World demand for olive oil is huge, and demand in Australia is growing rapidly. Most of Australia's domestic consumption is filled by imported product and there are some opportunities for import replacement activities. However, there is limited processing capacity in Australia and growers here are not internationally price competitive. Processing can be undertaken in small-scale plants on farm, or at large scale commercial processing plants. There are some lucrative niche markets for boutique Australian olive oil products but generally returns are not reliable.

Fresh or table olives can be pickled or value-added (eg tapenades, dips etc). The demand for loose raw olives, where the buyer takes them home and pickles them, is increasing. There are also opportunities for increasing supply into the food service industry (for pizzas etc). Demand for Australian grown table olives is currently strong but industry sources predict that the market will reach saturation within a decade.

Olives are also useful for on-farm rehabilitation work. They make excellent windbreaks and can assist in lowering water tables. They are low maintenance crops, needing little water and few chemicals.

It is expected that Australian production of olive products will reach saturation over the next decade. There is scope for some expansion in oil production and value added products such as tapenades and dips. However, careful market research will be necessary if returns are to be commercially viable. It may also be necessary to undertake cultivar trials to determine the most suitable trees for the Mudgee area. It is also likely that successful regional production will be linked to available processing facilities and establishment of regional food brands.

Two olive presses has been established in Rylstone Shire and is expected to use fruit from the local area.

Turf

There is some turf production in the Mudgee Shire. The industry has been static for some time but it is likely that there will be scope for some expansion, particularly along the alluvial river flats. Increasing activity in the local housing construction industry will drive demand. There is limited potential for sales outside the region because of the high costs of transport.

Grazing Industries

Prime lamb, beef and superfine merino wool are the main products of the area's extensive grazing industries. Lamb and beef production are concentrated in the better class grazing lands within the Shire, with wool production being located on the poorer quality higher country in the north and northeastern sectors as of the Shire, as well as in the south and southeastern parts.

Sheep

Sheep have always been a major industry in the Mudgee Shire and, despite reduced returns, lamb and wool production continue to generate the second largest source of agricultural income (after wine).

The wool industry in the region is based on superfine merinos, which have continued to produce reasonable returns even during the worst downturns experienced in the industry over many years. Nevertheless, wool returns are substantially less than in the past and the current market situation does not indicate that a return to previous levels of profitability is likely.

Production of prime lambs is also important for the region. Again, the industry has experienced significant cyclic performance. Following major industry restructuring in the early 1990s, current production is well under past levels. Nonetheless there is potential for expansion of production into first quality prime lamb if producers are willing to invest in development of a brand presence in discerning markets.

Beef

Like sheep, beef has been a major industry in the Mudgee region since settlement. This industry has also been subject to significant cycles in production and returns. Currently, beef prices are reasonably solid and there has been some re-investment in the industry over the past few years. As with lamb, there is strong consumer demand for differentiated high quality beef products, particularly for products that are branded or regionally identifiable. This offers some potential for further industry expansion.

There are also a number of beef cattle studs in the region, including 'Havilah' and 'Kaludabah'. These operations are very successful and provide a solid base for ongoing growth.

Horses

The horse industry in the Mudgee region is a diverse and complex one. The industry is dominated by thoroughbreds, with several large breeding and agistment establishments in the Shire. There are also quite a few members of the Pony Club Association of NSW in the region.

Estimating the value of the horse industry is difficult because of the lack of available information and is beyond the scope of this study. Nonetheless, the industry would make a significant economic contribution to the region. Direct industry income comes from breeding, sales, agistment, training and transport. The industry also brings major economic benefit to the area through supporting sectors which supply saddlery and equipment, veterinary and farrier services, feed, stabling and fencing. It is likely that this industry will increase in size in the Mudgee region over time.

Dairying

There has been some history of dairying in the Mudgee region but, following deregulation of the industry, this is now at best marginal. The area is no longer competitive and there is thus no potential for expansion of dairy cattle in the region.

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However, with the further development of Mudgee as a centre for boutique foods, there may be some potential for development of goat or sheep milk cheeses.

Exotic animals

The deer industry is well established in the Mudgee Shire. The industry is still in an expansion stage and, with attractive returns for venison and the capacity of the local abattoir to slaughter deer, it is likely that this expansion will continue.

There are also growing numbers of alpaca in the region. Whilst these are largely non-commercial at this stage, they could contribute to the tourism potential of the region.

Cropping

Lucerne

Lucerne is an extremely important crop in the Mudgee region, both for dryland grazing and hay production. There are some variations in area under crop but, over time, the trend has generally been upwards. Production of lucerne for hay has remained relatively stable over the past decade, with variations being in production for grazing.

There would appear to be some potential for increasing production for hay, mainly for supply into the horse feed market in Sydney. However, availability of water may be a limiting factor.

Winter cereals

There is a long history of wheat production in the Mudgee region, with a record planting of >25,100 hectares in 1947. However, planting for wheat has averaged between 2 – 3,000 hectares per annum over the last decade. This changing emphasis has resulted from falling wheat prices and poor yields. It is unlikely that these conditions will change in the near future, so wheat plantings look to remain stable at around these levels.

The predominant winter cereal crop produced in the Mudgee region over recent years has been oats, and the area under crop has remained relatively stable at around 11,000 hectares pa since the mid 1960s. Current trends indicate that grazing oats will continue to dominate winter cereal crop production in the Mudgee region.

Barley is the third winter cereal crop planted in the area. This has always been a minor crop. It is largely grown as a grazing cereal and grain yields have as a result been comparatively low. It is unlikely that there will be any expansion in this crop in the near future.

Summer cereals

Sorghum and maize are the only summer cereal crops grown in the Mudgee Shire, but both are of only minor importance. Sorghum plantings reached a peak of 1,530 hectares in 1971 but the annual area under crop has not exceeded 100 hectares since 1980. Maize has a long history of production in the region. Production peaked at 979 hectares in 1923, but annual production has been less than 100 hectares since 1979.

There does not appear to be much prospect of expansion for either of these crops.

Canola

Commercial plantings of canola commenced in the region in the mid 1990s and have increased steadily since. Areas previously planted to wheat are suited to canola cropping. There is strong demand for canola and returns are reasonable. This makes it likely that there will be continued expansion of production of canola in the future.

Other Products

Honey

Mudgee is one of the largest areas of honey production in the state. Mudgee honey has a long-standing and well-deserved reputation for quality. There is some potential for expansion of this industry, but this will be limited by the availability of suitable flowering crops.

Pigs

There is a small pig industry in the Shire. However, there are increasing pressure from regulators and local communities on intensive animal industries such as pigs. So, whilst industry returns are solid, significant expansion of production in the region is unlikely.

Abattoir

The Mudgee abattoir is the only abattoir controlled by local government remaining in Australia. The existence of the abattoir clearly gives Mudgee an advantage over other regions, as local stock can be slaughtered close to source. The abattoir is also equipped to slaughter deer, and this expands functionality and adds benefit to the local area. There may be some potential for expansion, but this would probably require significant capital investment.

Leather Tanning

Another agricultural industry that has been identified as having growth potential in the Mudgee region is that of leather product manufacturing. This is a relatively labour intensive industry where low cost imports are extremely competitive. However, Mudgee could develop a competitive advantage by sourcing quality hides from within the region and producing boutique leather products using newer technologies and different designs. There is a market for such products that will return premium prices to local producers and benefits to the region as a whole.

2.4.3. Tourism

The area around Mudgee and Gulgong is one of the more popular tourist destinations in NSW. It is estimated that more than 400,000 tourists visit the Mudgee Shire each year. (Mudgee Gulgong Tourism Inc.) The Mudgee Visitors Centre has experienced

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visitation growth by about 10% per year for the past several years and this is expected to continue.

There are a number of reasons for this growth, but prime amongst these would have to be improved promotion of the region and a greater awareness of the region's attractions. Proximity to the large population centre of Sydney has enabled the region to build on these attributes.

Information provided by Mudgee Gulgong Tourism Inc shows that the estimated gross tourism receipts are \$42.6 million per annum. This does not include the cellar door sales which are estimated to be \$30 million per annum which is matched by the value of bulk grape sales to the larger wineries. So it can be estimated that the value of tourism receipts is in excess of \$70 million. If the bulk wine sales to the larger wineries is included it could be said to be \$100 million per annum.

The regional accommodation capacity is 2,122 beds (Mudgee Gulgong Tourism Inc) with an average occupancy rate of 55%. It should be noted that the bulk of the tourist accommodation is provided in the towns of Mudgee and Gulgong, however there is a significant number in the rural areas and this is increasing. The following types of tourist accommodation are provided:

- § Hotels
- § Motels
- § Leisure / Caravan Parks
- § Bed and Breakfasts
- § Farmstay
- § Self contained cottages and cabins

Mudgee is developing a strong reputation as a centre for boutique food and wine industries, and this has been promoted through regional tourism initiatives. The growing wine industry is clearly a cornerstone of this reputation. However, the region's growing focus on boutique and niche market food products and experiences is an added attraction. The growing interest in bed and breakfast and farm stay type accommodation experiences is another reason for increasing tourist numbers.

There is scope for expansion of these activities, particularly in relation to farm-based tourism experiences. In 1998, research undertaken by the University of Western Sydney (Hawkesbury) indicated that just one tourism operator was bringing more than 150 day tour packages to western Sydney from the city, with many of these packages having some farm-based components. This research identified the potential for expansion of this type of program into weekend tours from the city into surrounding regional centres where visitors could see and experience a wide range of food and farming activities. In the period since then, this interest has increased, with city people demonstrating a clear interest in the provenance of their food and in experiencing rural activities first hand. The rapid rise of interest in farmers' markets is just one obvious demonstration of this trend. The existence of a recognised wine industry in the Mudgee region is an added bonus for the demographic most likely to be attracted to this type of activity.

Experience in marketing regions such as this has shown the importance of having the right product. Products fall generally into two categories:

- § Events; and
- § Activities.

Both of these will now be discussed.

Events

Mudgee has a strong base of farm-related tourism events.

The Mudgee Small Farm Field Days are held over two days in July. They are fast becoming a must-see event for many interested in non-traditional farming and small farm activities. It is estimated the field days contribute more than \$2.5 million each year to the regional economy.

The Mudgee Wine Festival is held in September each year, and this is becoming an increasingly popular tourists draw card. A wide range of activities is staged in conjunction with the Celebration and there is scope for expansion in the supporting program. A wider focus on regional food products would enhance the area's attraction as a centre for both wine and food.

Activities

Tourists focused on farm-based activities demand authentic experiences that enable them to experience an environment or culture not tainted by 'mass market' approaches. Thus, tourists will be looking for personal contact with the producers and local people, rather than a replica of what they can see for themselves any day in the city. To be successful, tourism operators (and this includes wineries) must offer a REAL experience ie one which is Rewarding, Enriching, Adventurous and offers a Learning experience.

Mudgee already has twenty-eight wineries and salesrooms, as well as twenty-six cafes and restaurants. These are the core of the region's rapidly developing reputation as a centre for food and wine excellence. There is certainly room for expanding this sector, particularly in the area of value-added farm produce eg jams, sauces, fruit products etc.

There is already a well-established base of wineries offering cellar door sales and facilities but there is room for further expansion. In other winemaking areas (for example, Margaret River in WA), there have been interesting developments in cellar door activities. These have included expanded restaurant facilities and outsourcing catering to restaurants.

Farms wishing to service this market should be able to meet the following criteria:

- § A well-presented facility, with accessible interpretation of activities for visitors;
- § An interesting program of activities which allows for a visit of 60 – 90 minutes;
- § A technical expert available for at least some part of the visit time (for example, the winemaker, the grower, the jam maker);
- § Be available and accessible every day of the year – or be clearly seasonal (eg fruit picking and harvesting would be a seasonal activity) – as tourists need to have some degree of certainty when planning their programs;

- § Have staff trained in hospitality skills eg 'AussieHost' or similar; and, if necessary,
- § Be prepared to provide commissions for agents who book group visits.

Some visitors who are attracted by these activities will be day-trippers, or will stay in traditional hotel/motel accommodation. However, there is another group that are looking for an authentic regional experience and want to see something different or unique to the area.

Accommodation for this market segment generally falls into three categories:

- § On-farm for families;
- § On-farm for larger groups (eg school or club groups); and
- § B&B accommodation.

To be successful in this market, on-farm accommodation must be on a real working property – not just a place with few animals and a scenic view. Whilst this may be perfect for the people looking for B&B experiences, families and groups generally want a more interactive environment.

Whatever the type of accommodation, it must offer quality surroundings at a price that reflects the standard being provided. Hosts must be friendly and knowledgeable, and prepared to go that extra length to meet guest's needs. They need to make visitors feel at ease, but not be over-friendly or intrusive.

Operators need to establish strong networks both within their industry sector and across the region. Marketing intelligence is available from many sources and operators should make sure they have a thorough understanding of consumer expectations. Working together across the region will ensure visitors have a consistent and quality experience and will add to future visitor numbers.

2.4.4. Developing Potential for Agriculture-Related Activities

There would be many opportunities for supporting activities to be co-ordinated that would assist in achieving the region's potential as a centre for wine and food excellence.

This co-ordination could be undertaken by the local economic development body or perhaps by the establishment of a regional local producers' association. This latter option would empower local producers and give them more ownership of their future and the potential for continued regional success.

It is noted that the Council is preparing an economic development strategy for the Shire and this can build on the matters raised below.

Some activities that would add value could include:

Food and Wine Trail

While there is a lot of information about agricultural related activities available for tourists in the Mudgee region, there would be clear benefits in compiling this into

some summary documents and in the development of a well-promoted food and wine trail.

Capability Directory (Asset Register)

The asset register is the flagship tool for promoting regional produce, a premier publication that acts as a guide to the region's finest fare. It would provide an accurate and comprehensive picture of what is available in the region and where. This may include a harvest calendar, a locality map and a database of how to contact local producers. The register would also provide information to restaurants, other growers and potential investors in production, tourism and other industries who need access to what the region has to offer.

Regional support for Food & Wine Shows, Festivals etc

An excellent way of exposing regional products is to participate in a food show or trade exhibition. The Mudgee region already has a presence in some of these events, but there is scope for more impact with a more co-ordinated and comprehensive effort.

Benefits from this approach include:

- § Access to premium events in professional setting.
- § Cheaper exhibiting costs.
- § Creating a more significant presentation by exhibiting with others.
- § Generate a better marketing impact.

Regional Web site

This would provide a contact point for users as well as a direct link to local producers. The website would explain the concept of the regional producers group, introduce local producers, notify of forthcoming events, describe food and wine trails, and reinforce the region's brand.

Benefits to local producers would include:

- § On-line services provide a way to serve the customer 24 hours per day, 7 days per week.
- § Providing a communication and information base for local producers.
- § Providing a home for loyal customers;
- § Enhancing the professional image of producers; and
- § Enabling more customers know about regional products and services.

Regional Branding

Consumers worldwide are turning to food products that have an identifiable link to a region known for its particular qualities. This direct link between paddock and plate generates greater confidence in food safety. This changing trend toward consumption of differentiated food products has led governments to rethink their agricultural policies, focusing now primarily on food products and secondarily on food safety and

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health. This change in focus impacts upon production systems, which are now treated as the third tier of agricultural policy.

Regional branding offers some unique opportunities for producers of food and related products, as well as in a wider regional development context. A regional brand will allow participating producers to distinguish their products so as to create a premium factor that can lead to higher prices and preferred purchase in a tight market. This should result in customer loyalty and repeat business. Working together has some more indirect benefits too - group members develop a camaraderie which may promote other cooperative opportunities and activities.

Mudgee producers have already demonstrated an interest in development of a regional brand. For example, Mudgee wines have an increasing profile and reputation, and Mudgee honey has a long history in the market place.

A successful regional brand will differentiate quality products and services and promises greater market share and/or price differential to local producers.

Benefits include:

- § Marketing can be more aligned with current trends in consumption;
- § Increased recognition, demand and value of regional products;
- § Increased recognition by buyers and demand for your produce;
- § Cost sharing of an otherwise expensive marketing task that could probably not be afforded individually; and
- § Satisfies sophisticated buyer needs of having access to a complete range of products.

Training & Development.

To support this regional program, there is an opportunity to empower producers in the Mudgee region to be professional, smart and aware about their marketing.

Typical areas include retailing, packaging and presentation, customer relations, new market driven developments in farming, quality assurance, value adding and many others.

Benefits would include:

- § Being kept at the leading edge of marketing developments
- § Being trained in professional marketing.
- § Specific training programs that address shortfalls.
- § Cost sharing.

Chapter 3: Planning and Policy Framework

3.1 Introduction

The management and control of rural land uses within Mudgee Shire are guided by a number of policy and legal processes. These are Acts of Parliament and Regulations as well as Plans and policies prepared under the provisions of those Acts and Regulations.

The State Government has most authority for the statutory processes applicable to the management of rural land within Mudgee Shire. The Federal Government plays a role in the conservation of biodiversity under the auspices of the Environmental Protection and Biodiversity Conservation Act.

The main act dealing with land use within the Shire's rural land is the Environmental Planning and Assessment Act (EP&A). The Local Government Act also controls the manner in which Local Government is carried out in New South Wales and also requires that Councils adhere to the policies of Ecologically Sustainable Development (ESD) with all decisions that are made. It is not the purpose of this document to outline fully the provisions of the EP&A and Local Government Acts, suffice to say that they have a major bearing on the planning of Mudgee's rural lands. The EP&A Act makes provision for three levels of planning policies which are:

- § State Environmental Planning Policies (SEPP)
- § Regional Environmental Plans (REP)
- § Local Environmental Plans (LEP)

The relevant SEPPs and LEPs are discussed below. There are no REPs that apply to the Shire.

Planning NSW are in the process of reviewing the plan making provisions of the EP&A Act. Called Plan First, it proposes significant changes to the plan making system. The features include:

- § a single plan for a Council area which will have all of the planning provisions in the one document;
- § a regional strategy for each region of NSW which is aimed to give a common direction to the local plans;
- § all State Policies relating to planning to be held in one document;
- § the option of producing place based plans that will reflect the local issues;
- § community input at the beginning of the plan making process;
- § adopting sustainability as a guiding principle in the planning process; and
- § regular monitoring and review to ensure that the plans are up to date.

3.2 State Environmental Planning Policies

The State Environmental Planning Policies that are relevant to the rural lands are as follows:

- § SEPP No. 1 – Development Standards

- § SEPP No. 5 – Aged Housing and Housing for People with a Disability
- § SEPP No. 15 – Rural Land Sharing Communities
- § SEPP No. 21 – Caravan Parks
- § SEPP No. 30 – Intensive Agriculture
- § SEPP No. 37 – Continued Mines and Extractive Industries
- § SEPP No. 44 – Koala Habitat Protection
- § SEPP No. 45 – Permissibility of Mining
- § SEPP No. 55 – Remediation of Land
- § SEPP No. 64 – Advertising and Signage

3.3 Acts of Parliament

There are also a number of other Acts that affect the management of rural land within the Shire including:

- § Crown Lands Act 1997
- § Environmental Protection Biodiversity Conservation Act, 2000 (Commonwealth)
- § Fisheries Management Act 1994
- § Fisheries Management Amendment Act 1997
- § Heritage Act 1977
- § Threatened Species Conservation Act 1995
- § National Parks and Wildlife Act 1974
- § Native Vegetation Conservation Act, 1997
- § Protection of the Environment Operations Act 1998
- § Rivers and Foreshores Improvement Act 1948
- § Water Management Act 2000
- § Rural Fires Act 1997
- § Contaminated Lands Management Act

3.4 State Government Policies

The State Government does not have any specific policies that relate to rural planning per se. However, there are a number of policies that have an impact on the rural lands of Mudgee Shire.

The main one is the Policy for Sustainable Agriculture in NSW. The purpose of this Policy is to facilitate a coordinated approach to achieving an ecologically and economically sustainable agricultural sector in New South Wales. The Policy provides an agreed goal for sustainable agriculture in New South Wales, common objectives, and strategies that should guide a wide range of stakeholders towards this goal. It also provides a framework within which individual agencies and interest groups can develop specific position statements and action plans. The policy develops objectives and strategies for the following areas:

- § Agricultural production
- § Land management
- § Water use and quality
- § Nature conservation on farms
- § Rural communities
- § Integrated management

It is a whole of Government Policy which is to be implemented by all government departments.

Planning NSW, although not having a specific policy dealing with Rural Planning, does have a number of requirements for Councils undertaking rural planning policy reviews. These include the following

§ The need to preserve the rural land as a resource including the following matters:

- to minimise the loss or fragmentation of agricultural land or holdings
- to maintain and promote agricultural activities and uses and to provide opportunities for a greater variety of agricultural uses in the future
- to protect the productive capacity of agricultural land
- to minimise landuse conflicts and environmental impacts
- to protect and maintain the scenic and landscape values of rural lands
- to protect and restore the natural resource base on which agriculture and other land uses depend

§ Planning for settlements are to include the following:

- to ensure supply of new housing relates to demand
- to plan for rural residential development in the context of a rural release or settlement strategy
- to maximise use of existing infrastructure in the provision of urban and rural residential lots
- to conserve or use land in a way that will not prejudice future urban purposes
- to minimise impact on the existing and potential productivity of agricultural land
- to minimise landuse conflicts and environmental impacts
- to protect and maintain scenic landscape values
- to provide for a variety of urban and rural living opportunities
- to ensure settlement relates to the physical, social and service catchments
- to ensure coordination on a regional level and between adjoining local government areas

The Department of Land and Water Conservation have a variety of policies dealing with water management. The most relevant to the rural lands of Mudgee is the Farm Dams Policy which gives landholders the right to capture and use for any purpose 10% of the average regional yearly runoff for their property. Known as the harvestable right, it corresponds to the total dam capacity of a property.

3.5 Mudgee Shire Council Strategic Objectives

The Council's strategic objectives are embodied in its Annual Report and Management Plan. They include a mission, vision and goals.

The Council's Mission is as follows:

"In partnership with our community, create a quality lifestyle for residents of Mudgee Shire through the provision of infrastructure, services and management of the environment."

Council's Vision is as follows:

"Be recognised by our community for being fair, far sighted and providing good value for money."

To implement the vision and mission, the Council has developed a number of goals that have been categorised into similar groupings. The goals are as follows:

Environmental Services Goals

- § *Improved waste disposal procedures be continually pursued making use of waste minimisation promotion, recycling and other handling methods, taking into consideration financial as well as environmental implications and that Council promote the concept of waste minimisation.*
- § *The Shire be strategically planned to cater for all desired development and social needs.*
- § *A high quality built environment be encouraged and promoted.*
- § *The physical environment be managed.*
- § *Buildings and other items of heritage significance be preserved and protected where possible and practical.*

Health and Community Services Goals

- § *The public health of Shire residents and visitors be safeguarded.*
- § *Recreational and activity needs of the aged and people with disabilities be considered in all development and maintenance programs.*
- § *Council aim to provide the community with services for infants, youth, aged, people with disabilities and people who are disadvantaged.*
- § *Council strive to develop and maintain emergency management procedures, practices and infrastructure that are capable of responding to any foreseeable emergency.*
- § *Council adhere to the principles of access and equity in conducting its business.*

Recreation Goals

- § *Council work towards providing a full range of parks and recreation facilities conveniently located throughout the Shire.*
- § *Sporting facilities be developed in an orderly fashion to satisfy predictable sporting needs within the Shire.*

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- § *All streets be planted with suitable shade and decorative trees.*
- § *Council continue to upgrade and preserve all town entrances.*

Water Supply & Sewerage Services Goals

- § *The major population centres be provided with quality water & sewerage services.*

Transport Infrastructure Goals

- § *Council work towards ensuring that no substantial group of residents in the Shire is more than 10 km from a bitumen road.*
- § *Council work toward replacing all wooden bridges wherever practical.*
- § *Traffic management schemes be drawn up to meet the needs of road users and others by maintaining environmental amenity and a safe and efficient road system.*
- § *Council continue to work towards providing a bikeway system to feed the centre of Mudgee and Gulgong from the outer ring of both towns.*
- § *Council continue to provide and upgrade footpaths in both towns - at least on one side of the street.*
- § *All streets be adequately lit.*
- § *Traffic control devices be provided at all major intersections where necessary.*
- § *Council continue to work towards creating low maintenance road verges.*
- § *Urban drainage systems be developed to cater for recommended discharges as contained in the Australia Rainfall and Runoff Standards published by the Institute of Engineers of Australia.*
- § *Council encourage the development of a regional transport network focused on Mudgee and Gulgong to provide services from outer Shire areas and nearby centres outside the Shire.*
- § *Council work towards the establishment of the Mudgee Orange Road Link.*
- § *Council work towards bringing the road surfaces on school bus routes up to the standard that can be safely used in all weather conditions.*

Business Undertakings, Promotions and Development Goals

- § *Council encourage and assist, within available resources, economic development that will encourage diversity of opportunities within the Shire.*
- § *Council strive for the establishment of Tertiary Educational facilities in Mudgee to promote further education of young people in the district and to encourage retention of youth within the Shire.*
- § *Council encourage the continuing development of a vigorous tourist industry in the Shire.*
- § *Work towards the development of Red Hill Gulgong as a focal point for community and visitor use.*
- § *Council provide facilities in villages and localities that enhance those centres.*

Support Services and Facilities Goals

- § *Provide support process and services that facilitate excellent customer service and good value for money.*
- § *Conduct Mudgee Shire Council as an open and democratic organisation that communicates effectively with the community.*
- § *Council provide facilities in villages and localities that enhances those centres.*

3.6 Mudgee Local Environmental Plan

The Mudgee Local Environmental Plan 1998 applies to the whole of the rural area. The objectives of the LEP are all relevant to the rural areas and are as follows:

- (a) to encourage sound land management practices and to protect land subject to environmental hazards from inappropriate development and promote sustainable development, and
- (b) to protect land of significant agricultural, natural resource and scenic value, and
- (c) to encourage development of the area's resources and a broadening of its economic base, with particular emphasis on growth of employment generating activities such as tourism, mining, extractive and rural industries and intensive agriculture, and
- (d) to ensure that development is appropriately located having regard to environmental constraints, accessibility and existing land use patterns, and
- (e) to provide for the future long term urban development and protect the existing residential amenity of the towns of Mudgee and Gulgong, and
- (f) to enhance the environmental heritage of the Mudgee local government area and to ensure the conservation of identified items of historic, archaeological, architectural and scientific interest, and
- (g) to provide for the proper control and management of subdivision and other development, consistent with the other aims and objectives of this plan, and
- (h) to ensure that development is adequately serviced in an economic, equitable and efficient manner.

The plan makes provision for the following zones in the rural areas:

- § 1(a) General Rural
- § 1(a1) Intensive Agriculture
- § 1(c1) Small Holdings
- § 1(c2) Rural Residential
- § 1(f) Forests
- § 2(v) Village Area
- § 7(a) Environmental Protection – Floodplain
- § 7(b) Environmental Protection – Nature Conservation
- § 7(c) Environmental Protection – Mining Heritage
- § 8(a) National Parks

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The objectives for each of these zones sets out the purpose of the zone and aid in the understanding of the uses that are desired and permitted in the zone. They are as follows:

1(a) General Rural

- (a) to promote the conservation of productive agricultural land for cropping and grazing, and
- (b) to discourage fragmentation of landholdings into holdings which are inadequate to support commercial farming practices, and
- (c) to permit the development of appropriate agricultural land uses and prevent development of inappropriate non-agricultural land uses, such as small lot rural-residential subdivision, and
- (d) to permit the development of mines and extractive, offensive and hazardous industries, but only in an environmentally acceptable manner, and
- (e) to encourage consolidation of existing allotments that are too small to support commercial farms and their development into productive commercial farm holdings, and
- (f) to ensure that development does not significantly detract from existing rural character or create unreasonable or uneconomic demands for provision or extension of public amenities and services, and
- (g) to permit some non-agricultural land uses and agricultural support facilities, such as rural industries, tourist facilities and the like, which are in keeping with the other zone objectives and which will not adversely affect agricultural productivity.

1(a1) Intensive Agriculture

- (a) to encourage intensive agriculture, particularly horticulture, viticulture and irrigation farms for specialised agriculture, which can take advantage of high land quality and availability of a reliable water supply, and
- (b) to ensure that new rural holdings created by subdivision are of a suitable size for their proposed purpose, and
- (c) to ensure that development does not detract from the existing rural character or create unreasonable or uneconomic demands for the provision or extension of public amenities and services, or create unnecessary disturbance to the landscape through clearing, earthworks, access roads and the like, and
- (d) to permit some non-agricultural land uses and agricultural support facilities, such as rural industries, tourist facilities and the like, which are in keeping with the other zone objectives and which will not adversely affect agricultural productivity.

1(c1) Small Holdings

- (a) to permit development of rural small holdings accessible to the urban areas of Mudgee and Gulgong, and
- (b) to ensure that development maintains and contributes to the rural character of the locality and minimises disturbances to the landscape and to agricultural activity, and

- (c) to ensure that development does not adversely affect the rural and residential amenity of the locality, and
- (d) to make provision for a reasonable range of suitable activities associated with residential occupation of the land.

1(c2) Rural Residential

- (a) to allow the creation of rural-residential allotments of various sizes, ranging in size between 2 and 10 hectares, to provide a greater choice of housing types, and
- (b) to permit the development of rural-residential lots adjoining the existing Mudgee and Gulgong urban areas which can be efficiently serviced with town water and sewerage, electricity, telephone and tar sealed roads, and
- (c) to encourage low density rural-residential and related activities which maintain the residential amenity and semi-rural character of land within the zone, and
- (d) to ensure that allotments created in the zone do not hinder the proper and orderly development of future urban areas.

1(f) Forests

- (a) to recognise and define the boundaries of existing State forests, and
- (b) to permit the continued use of State forests for forestry purposes and other uses authorised by the *Forestry Act 1916*.

2(v) Village Area

The objective of this zone is to allow for future development of residential, commercial or light industry associated with residents of the villages of Hargraves, Lue, Windeyer and Wollar and surrounding rural communities.

7(a) Environmental Protection – Floodplain

- (a) to identify land that is in a floodplain or floodway, or both, and
- (b) to promote the conservation of productive agricultural land within the floodplain, and
- (c) to ensure development and use of the Cudgegong River floodplain is compatible with the natural conservation and landscape values of the riverine environment, and
- (d) to permit the development of appropriate agricultural, recreational and ancillary land uses which do not result in increased flood hazard and damage potential or adversely affect the amenity of adjoining living areas, and
- (e) to discourage the siting of further buildings on land identified as flood prone and, in the event of any structure being allowed, to ensure that floor levels are above projected flood levels.

7(b) Environmental Protection – Nature Conservation

- (a) to protect and preserve the landscape and environmental setting of the local government area of Mudgee, particularly the forested hill slopes, and

- (b) to conserve natural areas and habitats and discourage clearing, subdivision and incompatible development in the zone, and
- (c) to ensure that development in this zone adjoining land within Zone No 8 (a) is compatible with the management objectives for that land, and
- (d) to ensure that development allowed in the zone will not adversely affect the environmental sensitivity of land in the zone.

7(h) Environmental Protection – Mining Heritage

- (a) to recognise and conserve areas considered to have historical and archaeological significance, particularly relating to mining heritage, and
- (b) to prevent development which might adversely affect such historical and archaeological significance of the areas identified.

8(a) National Parks

- (a) to identify land which is reserved or dedicated under the *National Parks and Wildlife Act 1974* as national parks, nature reserves, historic sites, Aboriginal places and State game reserves, and
- (b) to allow for the management and appropriate use of that land as provided for in the *National Parks and Wildlife Act 1974*.

3.7 Mudgee Development Control Plans

There are a number of Development Control Plans (DCPs) that cover the rural lands. These are as follows:

- § DCP No. 8 – Mudgee Environs Rural Residential and Future Urban
- § DCP No. 12 – Sign Code
- § DCP No. 17 – Advertising Signs
- § Exempt and Complying Development

Chapter 4: Existing Development Pattern

This Chapter presents selected data and characteristics of the combined localities of the rural areas as well as a map of the localities. To make the understanding of the data more manageable, the localities have been combined. Table 4.1 shows the combined localities.

Table 4.1 Combined Localities

Combined Name	Localities Included
1. Goolma	Goolma, Mebul, Beryl, Biraganbil, Ben Buckley
2. Birriwa – Stubbo	Birriwa, Barneys Reef, Merotherie, Tallawang, Stubbo
3. Bungabah - Cope	Bungabah, Cope,
4. Gulgong	Gulgong, Cumbandry
5. Cooks Gap – Cooyal	Cooks Gap, Yarrawonga, Linburn, Moolarben, Cooyal, Munghorn
6. Ulan - Wollar	Ulan, Mogo, Wilpinjong, Cumbo, Wollar, Kains Flat, Tichular, Totnes Valley, Barigan
7. Home Rule - St Fillans - Frog Rock	Home Rule, St Fillans, Frog Rock
8. Eurunderee - Wilbertree	Canadian Lead, Wilbertree, Galanbine, Budgee Budgee, Cross Roads, Buckaroo, Bombira, Eurunderee, Menah,
9. Mudgee	Caerleon, Putta Bucca, Mudgee, Glenayr, Spring Flat
10. Botobolar - Lue	Stony Creek, Botobolar, Hayes Gap, Bara, Lue, Havilah
11. Piambong - Grattai	Piambong, Erudgere, Collingwood, Yarrabin, Grattai, Worlds End, Maitland Bar, Avisford, Cullenbone
12. Windeyer – Pyramul	Windeyer, Meroo, Queens Pinch, Bocoble, Green Gully, Pyramul, Carcalgong, Crudine
13. Mt Frome - Cudgegong	Milroy, Mt Frome, Burrundulla, Mt Knowles, Appletree Flat, Mullamuddy, Riverlea, Cudgegong
14. Hargraves	Hargraves, Triamble, Ullamurra, Tambaroora

Map 4.0 Shows the combined localities.

Details presented includes the following:

- § Population
- § Number of dwellings
- § Total number of rural holdings
- § Number of primary uses
- § Agricultural land classification
- § Land use and lot size graphs
- § General comments

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The population data is based on the 2001 Census data preliminary release in September 2002. It is based on the Collector Districts which relate in a broad sense to the boundaries of the combined localities.

The number of rural holdings does not include the land within the villages.

The land use details come from the land use survey carried out as part of this study and the lot size graph data is based on Council's property system. Intensive plants include irrigated cropping, vineyards and olives. Most of the intensive plants are vineyards and where they are located near to the Cudgegong River flats, they are irrigated cropping.

The agricultural land classification has been taken from the NSW Agriculture's Agricultural Land Classification Map for the Mudgee Shire. Class 1 is the best land and class 5 the least productive. Classes 1 to 3 are considered to be high class agricultural land.

The number of primary uses in each locality are provided.

Land use and lot size graphs are provided to give an indication of the land uses in each locality as well as the lot size range.

The map shows the boundaries of the combined localities as well as the individual localities which make up the combined ones.

Map 4.0 Combined Localities

Map 4.1 Goolma

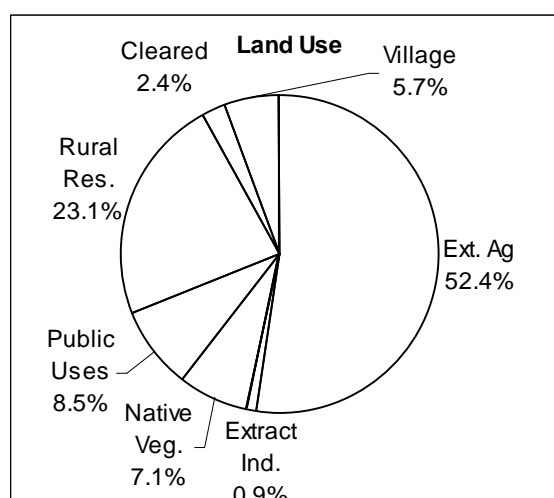
4.1 Goolma

General Characteristics

Population (2001 estimate)	498
Dwellings (2001 estimate)	176
Total Number of Rural Holdings	200
Number of Agricultural Holdings	111
Number of Rural Residential Lots	49

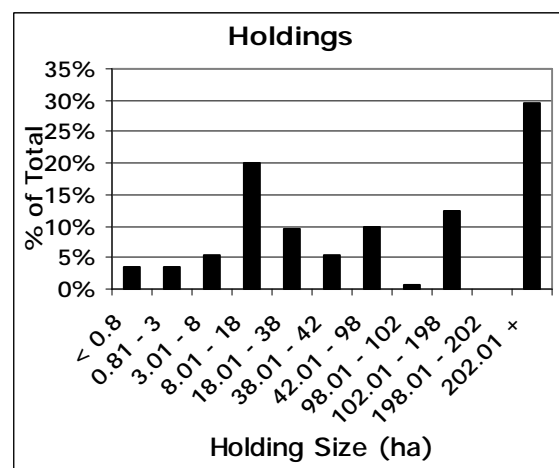
Number of Properties in Each Category

Land Use	Number
Rural Residential	49
Extensive Agriculture	111
Native Vegetation	15
Village	12
Vacant	5
Public Use	18
Intensive Plants	0
Extractive Industry	2
Intensive Animals	0
Commercial	0



Agricultural Land Classification

Class	Location
Class 1	None
Class 2	Along the Cudgegong River flats and Upper Mebul Road near Woodburn Road
Class 3	West of Goolma, north of the road to Dubbo and along Mebul Road and Upper Mebul Roads
Class 4	South of Mebul Road and north of the class three land north of Dubbo Road
Class 5	Steep vegetated lands along the south of Spring Ridge Road and scattered occurrences with steep vegetated land



General Comments

- § Mostly extensive forms of agriculture consisting of cropping and grazing
- § Mixture of flat land and vegetation on steeper parts
- § Village of Goolma has limited services
- § Relatively isolated from Gulgong and Mudgee
- § High proportion of lots greater than 202 ha

Map 4.2: Birriwa – Stubbo

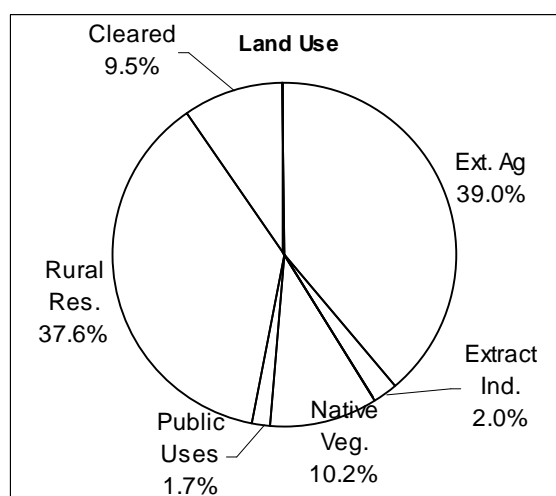
4.2 Birriwa – Stubbo

General Characteristics

Population (2001 estimate)	438
Dwellings (2001 estimate)	159
Total Number of Rural Holdings	295
Number of Agricultural Holdings	115
Number of Rural Residential Lots	111

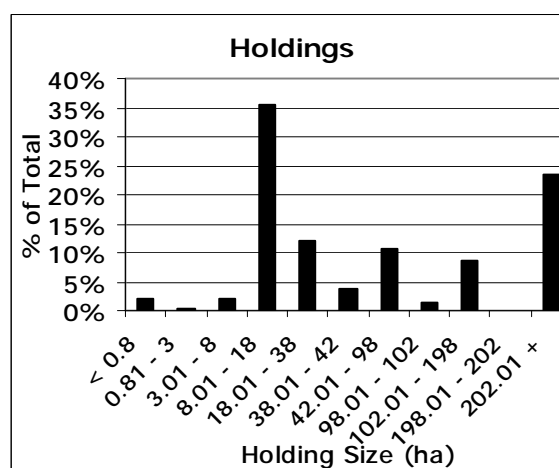
Number of Properties in Each Category

Land Use	Number
Rural Residential	111
Extensive Agriculture	115
Native Vegetation	30
Village	0
Vacant	28
Public Use	5
Intensive Plants	0
Extractive Industry	6
Intensive Animals	0
Commercial	0



Agricultural Land Classification

Class	Location
Class 1	None
Class 2	West of Birriwa Road and north of Corish Lane. North of Birriwa bus route south
Class 3	Remainder of locality
Class 4	Small patches in Gingers Lane
Class 5	North and south of Barneys Reef Road near its end and to Merotherie Road to the vegetation



General Comments

- § Mostly extensive forms of agriculture consisting of cropping and grazing
- § Mixture of flat land and vegetation on steeper parts
- § Birriwa rural centre has very limited services
- § Relatively isolated from Gulgong and Mudgee
- § High proportion of holdings in 8 – 18 and over 202 ha range

Map 4.3: Bungabah – Cope

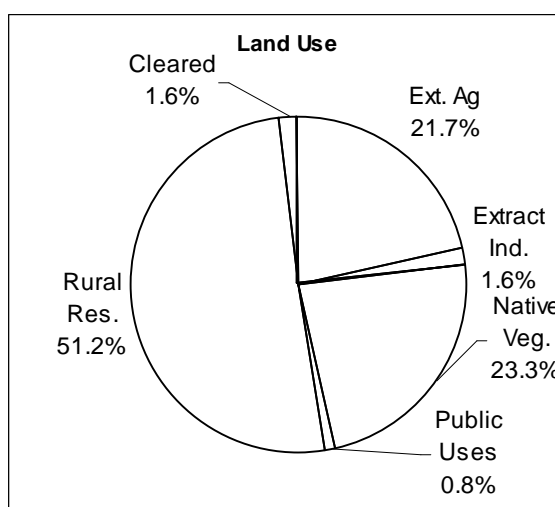
4.3 Bungabah – Cope

General Characteristics

Population (2001 estimate)	430
Dwellings (2001 estimate)	157
Total Number of Rural Holdings	129
Number of Agricultural Holdings	28
Number of Rural Residential Lots	61

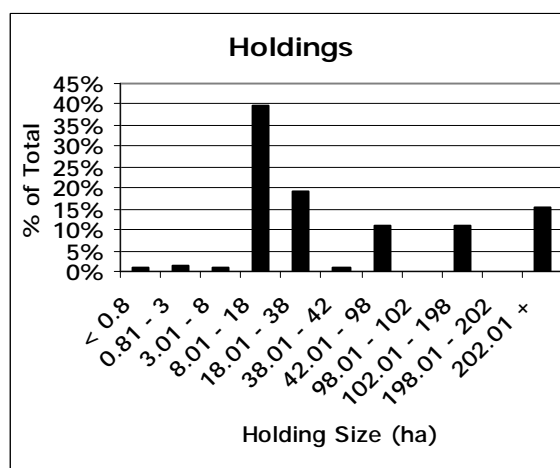
Number of Properties in Each Category

Land Use	Number
Rural Residential	66
Extensive Agriculture	28
Native Vegetation	30
Village	0
Vacant	2
Public Use	1
Intensive Plants	0
Extractive Industry	2
Intensive Animals	0
Commercial	0



Agricultural Land Classification

Class	Location
Class 1	None
Class 2	None
Class 3	North of Wonga Road and Wongaroo Road and in the south
Class 4	None
Class 5	Associated with the vegetation in the north eastern portion



General Comments

- § Mostly vegetated land with main use being rural residential and little extensive agricultural uses.
- § Holding sizes mostly in 8 – 18 ha range with some greater than 202 ha
- § Relatively isolated from Gulgong and Mudgee

Map 4.4 Gulgong

4.4 Gulgong

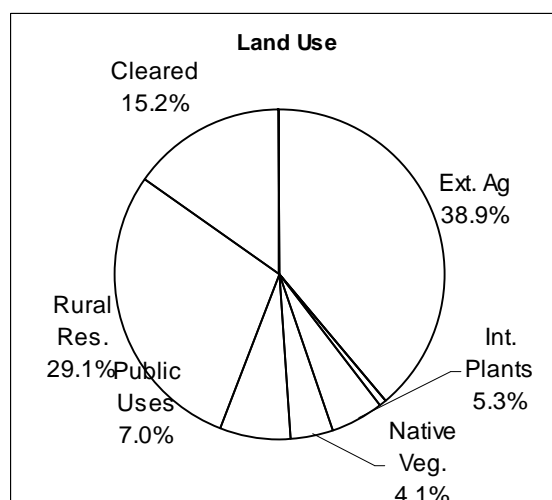
General Characteristics

Population (2001 estimate)	NA*
Dwellings (2001 estimate)	NA*
Total Number of Rural Holdings	244
Number of Agricultural Holdings	109
Number of Rural Residential Lots	71

* The census data for Gulgong does not distinguish the urban area from the rural land.

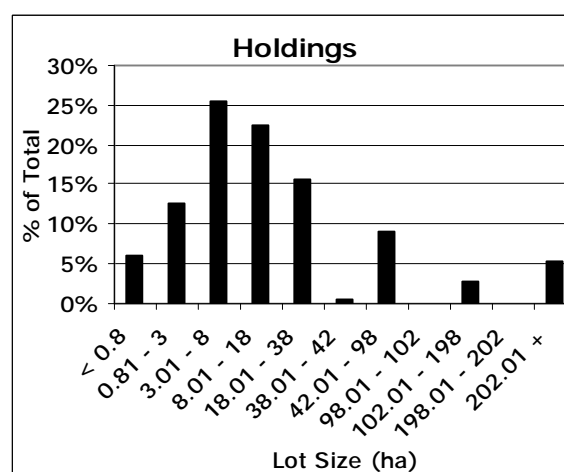
Number of Properties in Each Category

Land Use	Number
Rural Residential	71
Extensive Agriculture	95
Native Vegetation	10
Village	0
Vacant	37
Public Use	17
Intensive Plants	13
Extractive Industry	0
Intensive Animals	1
Commercial	0



Agricultural Land Classification

Class	Location
Class 1	Land along Cudgegong Riverland Along Cudgegong River
Class 2	Most of locality
Class 3	Land along Wellington Road associated with small ridgeline
Class 4	None
Class 5	None



General Comments

- § Mostly rural residential usage with some extensive agricultural uses.
- § Some vineyards to the south of the town
- § Holding sizes mostly less than 18 to 38 ha range

Map 4.5: Cooks Gap - Cooyal

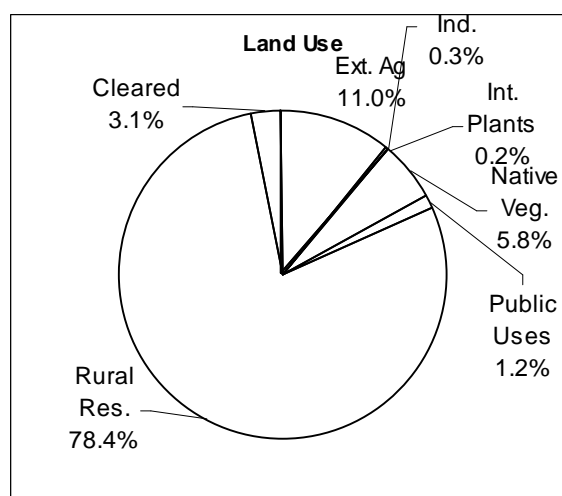
4.5 Cooks Gap – Cooyal

General Characteristics

Population (2001 estimate)	812
Dwellings (2001 estimate)	303
Total Number of Rural Holdings	582
Number of Agricultural Holdings	65
Number of Rural Residential Lots	456

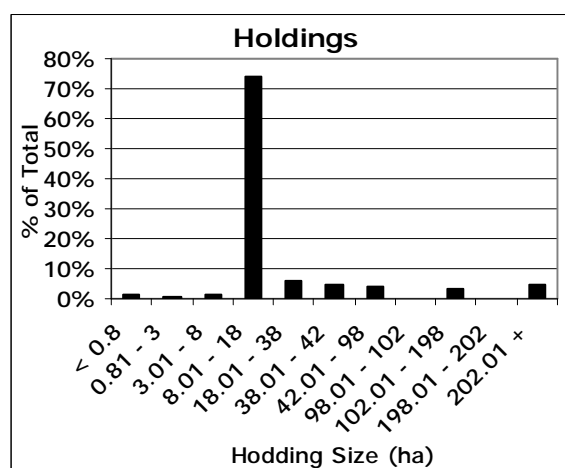
Number of Properties in Each Category

Land Use	Number
Rural Residential	456
Extensive Agriculture	64
Native Vegetation	34
Village	0
Vacant	18
Public Use	7
Intensive Plants	1
Extractive Industry	2
Intensive Animals	0
Commercial	0



Agricultural Land Classification

Class	Location
Class 1	None
Class 2	None
Class 3	Cleared land along Moolarben road and to the west of Cooks Gap and along Wollar road
Class 4	To the east of Ulan Road near Winchester roads and Willandra Lane
Class 5	Remainder of locality and land associated with steep vegetation



General Comments

- § High proportion of rural residential at Cooks Gap – 3rd largest settlement in the Shire.
- § Remainder of the land is extensive agriculture and native vegetation
- § Most holdings are in the 8 – 18 ha range
- § No provision of public community services and facilities – nearest is at Gulgong

Map 4.6: Ulan Wollar

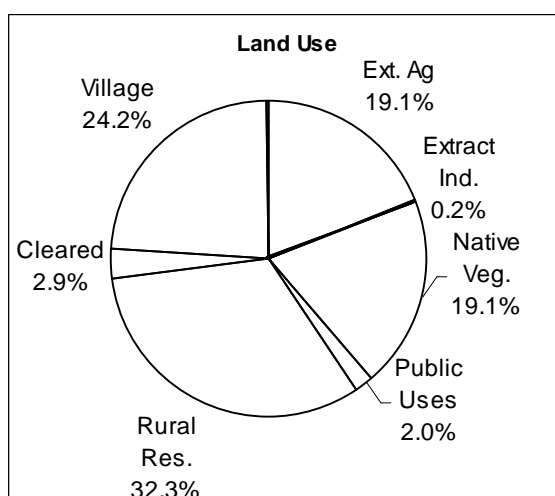
4.6 Ulan – Wollar

General Characteristics

Population (2001 estimate)	345
Dwellings (2001 estimate)	132
Total Number of Rural Holdings	338
Number of Agricultural Holdings	85
Number of Rural Residential Lots	144

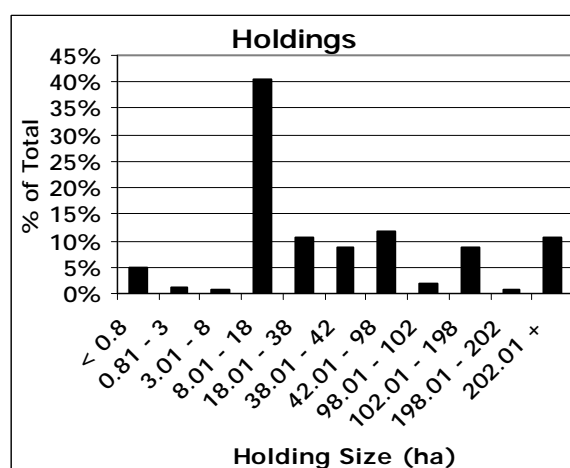
Number of Properties in Each Category

Land Use	Number
Rural Residential	144
Extensive Agriculture	85
Native Vegetation	85
Village	108
Vacant	13
Public Use	9
Intensive Plants	0
Extractive Industry	1
Intensive Animals	0
Commercial	1



Agricultural Land Classification

Class	Location
Class 1	None
Class 2	None
Class 3	Associated with the cleared land along Ulan Wollar Road
Class 4	None
Class 5	Land associated with heavy vegetation and steep to north of Ulan Wollar Road and some to the south



General Comments

- § Land uses balanced between village, rural residential and extensive agriculture and native vegetation.
- § Village of Wollar has very limited services and facilities
- § Relatively isolated from Gulgong and Mudgee
- § Most holdings larger than 8 – 18 ha range with most in that range

Map 4.7: Home Rule – Frog Rock

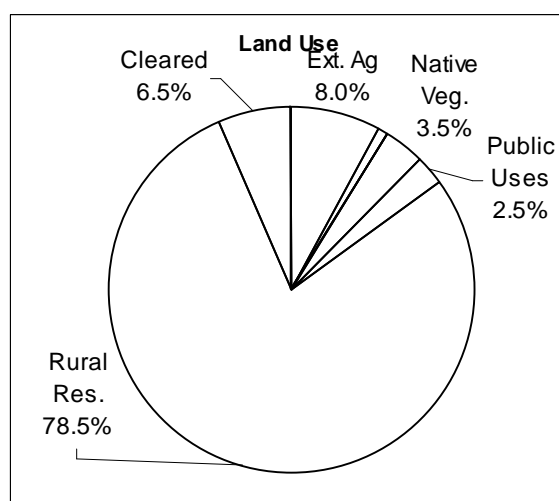
4.7 Home Rule – Frog Rock

General Characteristics

Population (2001 estimate)	778
Dwellings (2001 estimate)	228
Total Number of Rural Holdings	200
Number of Agricultural Holdings	16
Number of Rural Residential Lots	157

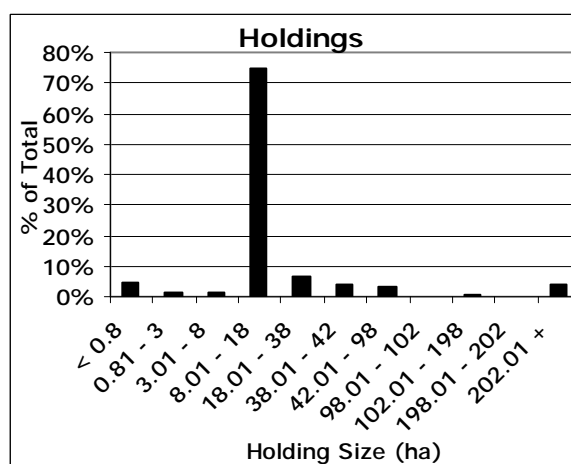
Number of Properties in Each Category

Land Use	Number
Rural Residential	157
Extensive Agriculture	16
Native Vegetation	7
Village	0
Vacant	13
Public Use	5
Intensive Plants	0
Extractive Industry	2
Intensive Animals	0
Commercial	0



Agricultural Land Classification

Class	Location
Class 1	None
Class 2	None
Class 3	Remainder of area
Class 4	Small area to the south
Class 5	None



General Comments

- § Mostly rural residential uses
- § Holdings nearly all in the 8 – 18 ha range
- § Not much native vegetation
- § Land mostly flat to undulating with some steep land.

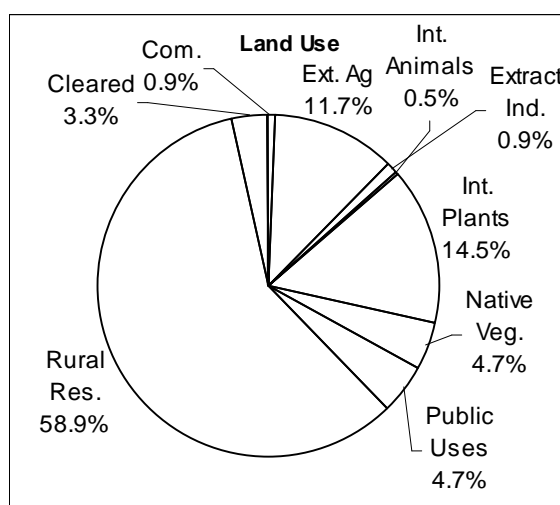
4.8 Eurunderree – Wilbertree

General Characteristics

Population (2001 estimate)	401
Dwellings (2001 estimate)	124
Total Number of Rural Holdings	428
Number of Agricultural Holdings	114
Number of Rural Residential Lots	252

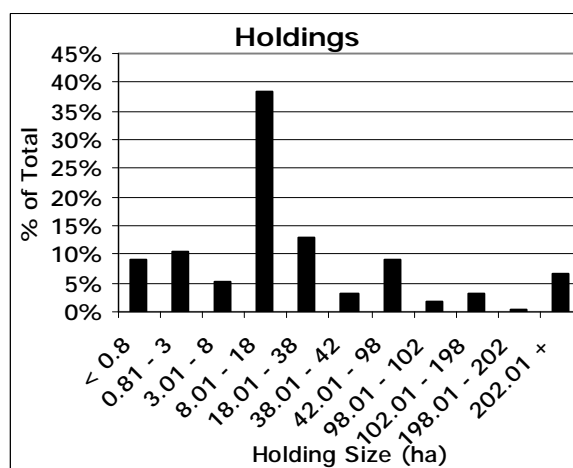
Number of Properties in Each Category

Land Use	Number
Rural Residential	252
Extensive Agriculture	50
Native Vegetation	20
Village	0
Vacant	147
Public Use	20
Intensive Plants	62
Extractive Industry	4
Intensive Animals	2
Commercial	4



Agricultural Land Classification

Class	Location
Class 1	Along Cudgong River flats
Class 2	Along Gulgong Road north of Springfield Lane and to the west of the railway. The river flats to the south of Goree Lane
Class 3	To the north along Canadian Lead Road and Henry Lawson Drive
Class 4	Hilly and vegetated lands in middle of the locality
Class 5	None



General Comments

- § Main vineyards area with most of the cellar door sales
- § High number of rural residential uses
- § Holdings mostly less than 18 ha with some larger ones
- § Land is gently to undulating with the steeper land covered in native vegetation.

Map 4.9: Mudgee

4.9 Mudgee

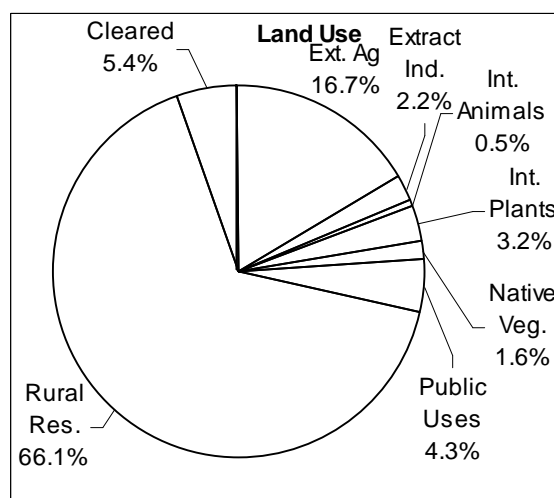
General Characteristics

Population (2001 estimate)	NA
Dwellings (2001 estimate)	NA
Total Number of Rural Holdings	186
Number of Agricultural Holdings	38
Number of Rural Residential Lots	118

* The census data for Gulgong does not distinguish the urban area from the rural land.

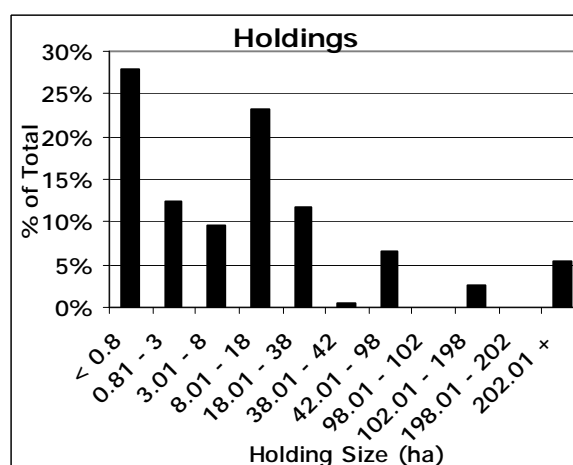
Number of Properties in Each Category

Land Use	Number
Rural Residential	123
Extensive Agriculture	31
Native Vegetation	3
Village	0
Vacant	10
Public Use	8
Intensive Plants	6
Extractive Industry	4
Intensive Animals	1
Commercial	0



Agricultural Land Classification

Class	Location
Class 1	Land along the Cudgegong River flats
Class 2	Most of locality
Class 3	None
Class 4	Land associated with vegetation and hills in the west
Class 5	Steeper vegetated lands to the west



General Comments

- § High proportion of rural residential use with some vineyards
- § Holdings mostly less than 8 – 18 ha range
- § Close to Mudgee and the Cudgegong River flats which are floodprone
- § Mostly flat to undulating in the east with some hilly land to the west.

Map 4.10: Botobolar - Lue

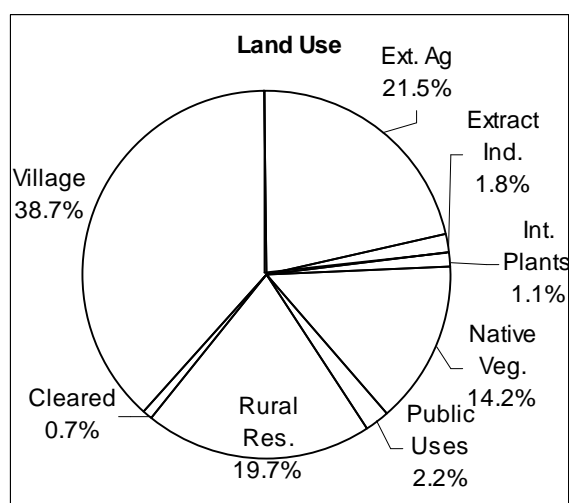
4.10 Botobolar – Lue

General Characteristics

Population (2001 estimate)	554
Dwellings (2001 estimate)	187
Total Number of Rural Holdings	169
Number of Agricultural Holdings	62
Number of Rural Residential Lots	54

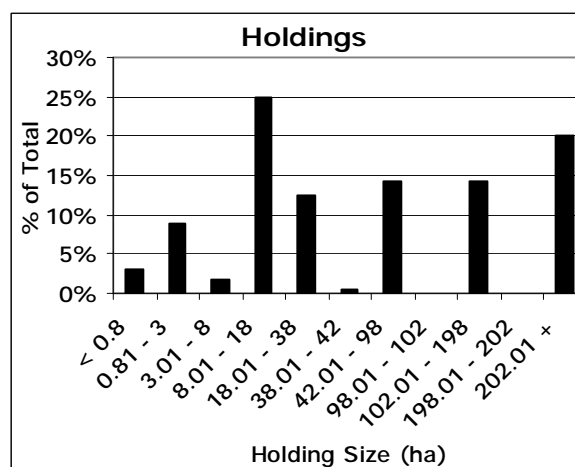
Number of Properties in Each Category

Land Use	Number
Rural Residential	54
Extensive Agriculture	59
Native Vegetation	39
Village	106
Vacant	2
Public Use	6
Intensive Plants	3
Extractive Industry	5
Intensive Animals	0
Commercial	0



Agricultural Land Classification

Class	Location
Class 1	None
Class 2	Along Lue Road and Cudgegong River flats
Class 3	along Botobolar Road
Class 4	Hilly land that is not vegetated
Class 5	Remainder of hilly vegetated land



General Comments

- § Mixture of extensive agriculture and native vegetation
- § Village of Lue has very limited services
- § Land is flat to undulating in the valley floor with steep vegetated land to the east and west
- § Relatively isolated from Gulgong and Mudgee

Map 4.11: Mount Frome – Cudgegong

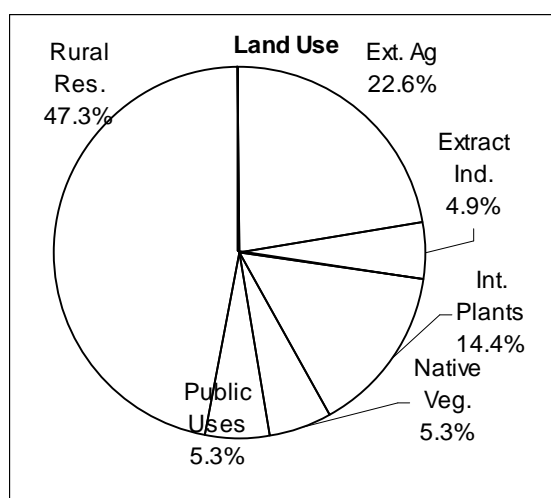
4.11 Mount Frome – Cudgegong

General Characteristics

Population (2001 estimate)	431
Dwellings (2001 estimate)	162
Total Number of Rural Holdings	243
Number of Agricultural Holdings	90
Number of Rural Residential Lots	115

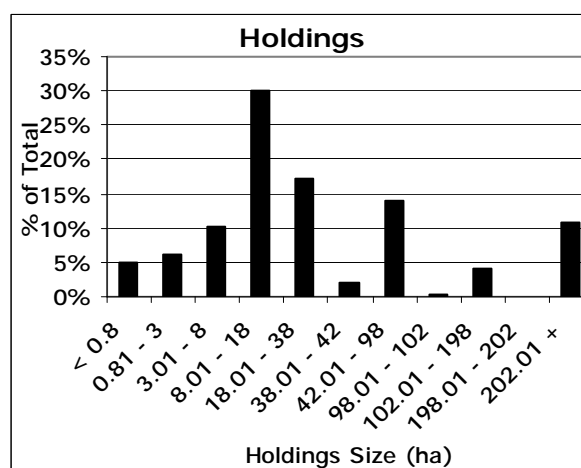
Number of Properties in Each Category

Land Use	Number
Rural Residential	115
Extensive Agriculture	55
Native Vegetation	13
Village	0
Vacant	0
Public Use	13
Intensive Plants	35
Extractive Industry	12
Intensive Animals	0
Commercial	0



Agricultural Land Classification

Class	Location
Class 1	Along Cudgegong River north of Riverlea Lane
Class 2	Along Cudgegong River north of Riverlea Lane
Class 3	Land to south of Sydney Road and north of Horse Flat Road
Class 4	Open land to that is not heavily vegetated
Class 5	Heavily vegetated steep land



General Comments

- § High proportion of rural residential with some extensive agriculture
- § Land is gently undulating to the north and in a valley to the south
- § Most holdings are less than 8 – 18 ha range with this being the dominant one. Some holdings greater than 202 ha
- § Relatively isolated from Gulgong and Mudgee in the south

Map 4.12: Piambong - Grattai

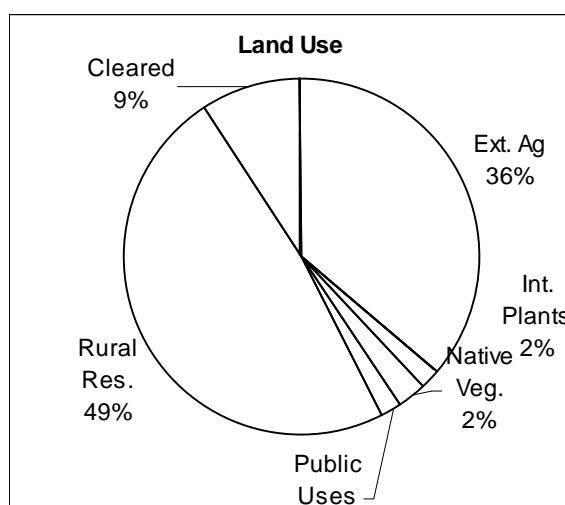
4.12 Piambong –Grattai

General Characteristics

Population (2001 estimate)	167
Dwellings (2001 estimate)	77
Total Number of Rural Holdings	453
Number of Agricultural Holdings	173
Number of Rural Residential Lots	219

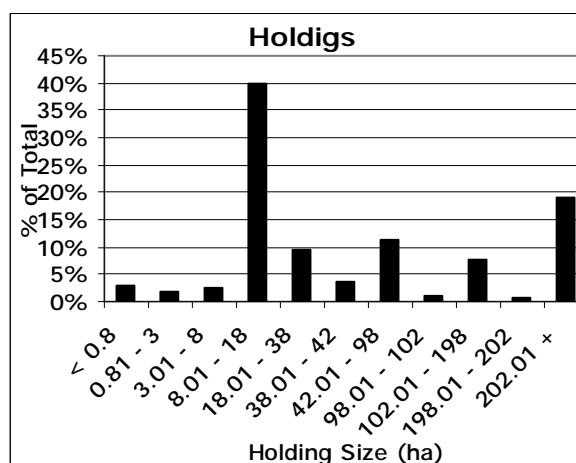
Number of Properties in Each Category

Land Use	Number
Rural Residential	219
Extensive Agriculture	164
Native Vegetation	11
Village	0
Vacant	41
Public Use	9
Intensive Plants	9
Extractive Industry	0
Intensive Animals	0
Commercial	0



Agricultural Land Classification

Class	Location
Class 1	None
Class 2	
Class 3	Along Erudgere Road
Class 4	Open land that isn't vegetated
Class 5	Steep hilly land that is covered vegetation



General Comments

- § Mostly extensive agriculture (grazing) with a large number of rural residential uses
- § Landform is a mixture if gently undulating with some steep land which is covered in native vegetation.
- § Most lots are in the 8 – 18 ha range with some larger than 202 ha
- § Relatively isolated from Gulgong and Mudgee

Map 4.13: Windeyer – Pyramul

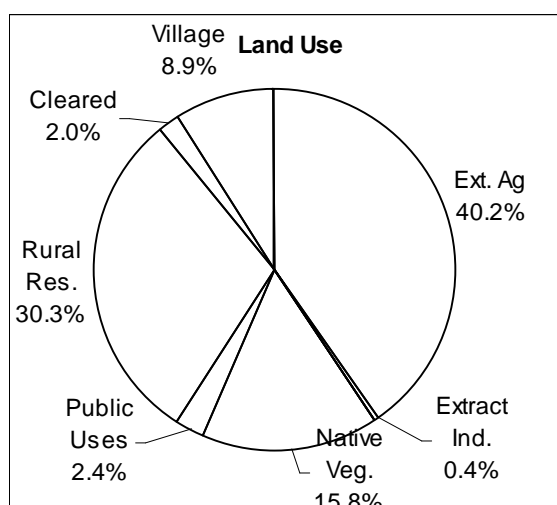
4.13 Windeyer – Pyramul

General Characteristics

Population (2001 estimate)	765
Dwellings (2001 estimate)	285
Total Number of Rural Holdings	460
Number of Agricultural Holdings	203
Number of Rural Residential Lots	154

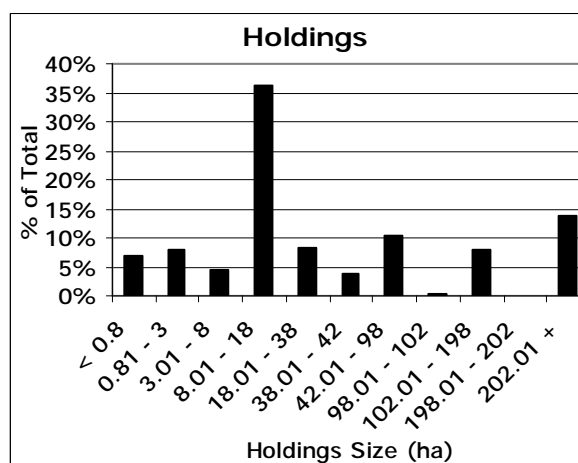
Number of Properties in Each Category

Land Use	Number
Rural Residential	153
Extensive Agriculture	203
Native Vegetation	80
Village	45
Vacant	10
Public Use	12
Intensive Plants	0
Extractive Industry	2
Intensive Animals	0
Commercial	0



Agricultural Land Classification

Class	Location
Class 1	None
Class 2	None
Class 3	None
Class 4	Open land that is not vegetated
Class 5	Steep hilly land that is heavily vegetated



General Comments

- § High proportion of rural residential
- § Extensive agriculture is grazing
- § Land is mostly hilly to undulating with some steep vegetated land
- § Poor agricultural land
- § Relatively isolated from Gulgong and Mudgee

Map 4.14: Hargraves

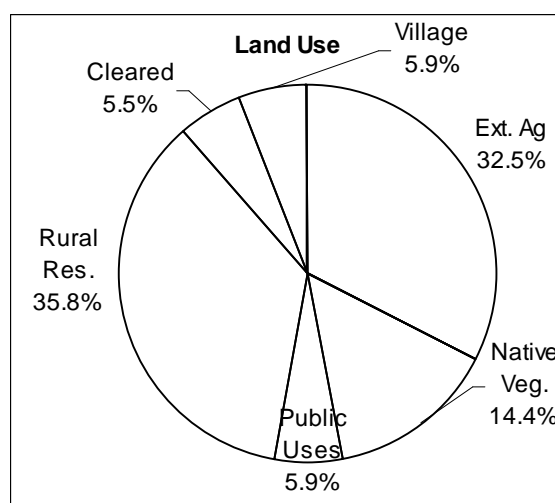
4.14 Hargraves

General Characteristics

Population (2001 estimate)	207
Dwellings (2001 estimate)	95
Total Number of Rural Holdings	255
Number of Agricultural Holdings	88
Number of Rural Residential Lots	97

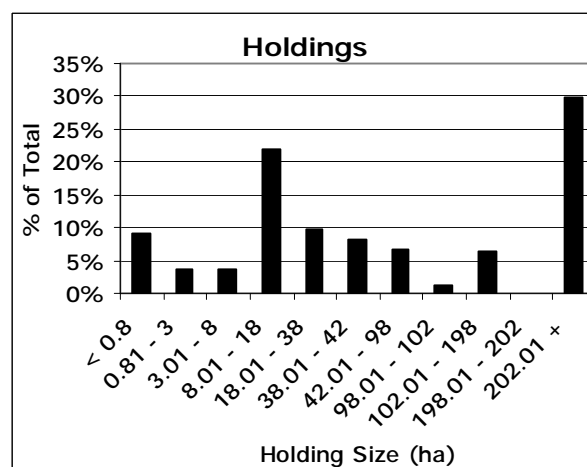
Number of Properties in Each Category

Land Use	Number
Rural Residential	97
Extensive Agriculture	88
Native Vegetation	39
Village	16
Vacant	15
Public Use	16
Intensive Plants	0
Extractive Industry	0
Intensive Animals	0
Commercial	0



Agricultural Land Classification

Class	Location
Class 1	None
Class 2	None
Class 3	None
Class 4	Most of the land which is open and not heavily vegetated
Class 5	Land that is steep and heavily vegetated



General Comments

- § High proportion of rural residential
- § Mostly extensive grazing
- § Land is mostly steep to undulating with the steep land heavily vegetated
- § Relatively isolated from Gulgong and Mudgee

Chapter 5: Ecologically Sustainable Development

5.1 Introduction

"Sustainability is a direction, more than a fixed destination. It is most effective when embraced voluntarily by people living together in cooperation and democracy. The term is now being used worldwide, in every language, to express this critical concept for the future of human societies on earth: that to survive, we need to better understand the consequences of current growth and development patterns on future generations and to pay attention, now, to the linkages that make the environment, economy and society interdependent. The challenge is to learn to continually work with this delicate balance through changing times. The concerns range from local needs and regional limits to global impacts, but the work is here, now, day by day. And it involves everyone."
(Sustainable Seattle 2000)

Ecologically Sustainable Development (ESD) is an important matter to consider when discussing the future of the rural lands of Mudgee Shire.

5.2 Ecologically Sustainable Development

Ecologically Sustainable Development or ESD is a set of principles that have been adopted by all levels of Government in Australia. In 1995 the Intergovernmental Agreement on the Environment was signed and this included Local Government. The discussion that follows outlines ESD and puts it into the context of why it is important for the Council to consider ESD when making decisions about the rural lands of Mudgee Shire.

The National Strategy on Ecologically Sustainable Development defines ESD as

'using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased'.
(Commonwealth of Australia, 1992 p1)

Put more simply, ESD is development which aims to meet the needs of Australians today, while conserving the ecosystems for the benefit of future generations. To do this, there is a need to develop ways of using those environmental resources that form the basis of the economy in a way which maintains and, where possible, improves their range, variety and quality. At the same time there is a need to utilise those resources to develop industry and generate employment.

The goal for ESD is:

Development that improves the total quality of life, both now in the future, in a way that maintains the ecological processes on which life depends. (Commonwealth of Australia, 1992 p1)

The Strategy lists the core objectives of ESD as follows:

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- § *To enhance individual and community well being and welfare by following a path of economic development that safeguards the welfare of future generations.*
- § *To provide for equity within and between regions.*
- § *To protect biological diversity and maintain essential ecological processes and life support systems.*

The guiding principles of ESD are outlined in the Strategy as:

- § *Decision-making processes should effectively integrate both long and short-term economic, environmental, social and equity considerations.*
- § *Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.*
- § *The global dimensions of environmental impacts of actions and policies should be recognised and considered.*
- § *The need to develop a strong, growing and diversified economy which can enhance the capacity for environmental protection should be recognised.*
- § *The need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised.*
- § *Cost-effective and flexible policy instrument should be adopted, such as improved valuation, pricing and incentive mechanisms.*
- § *Decisions and actions should provide for broad community involvement on issues that affect them.*

(Commonwealth of Australia, 1992 pp 2-3)

The Council of Australian Governments has adopted these as the Intergovernmental Agreement on the Environment, which was adopted in 1995, and it endorsed a concept of ESD.

The New South Wales Local Government Act defines ESD as follows:

Ecologically sustainable development requires the effective integration of economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs:

- (a) *the precautionary principle—namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:*

- (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and*
 - (ii) an assessment of the risk-weighted consequences of various options,*
- (b) inter-generational equity—namely, that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations,*
- (c) conservation of biological diversity and ecological integrity—namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,*
- (d) improved valuation, pricing and incentive mechanisms—namely, that environmental factors should be included in the valuation of assets and services, such as:*
 - (i) polluter pays—that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,*
 - (ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,*
 - (iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.*

One of the aims of the Local Government Act is to require Councils, Councillors and Council employees to have regard to the principles of ecologically sustainable development in carrying out their responsibilities. The Act also lists a charter, which identifies the principles under which Councils must function. This charter has as one of its components the following, which deals with ESD:

" to properly manage, develop, protect, restore, enhance and conserve the environment of the area for which it is responsible, in a manner that is consistent with and promotes the principles of ecologically sustainable development."

Mudgee Shire Council therefore is legally obliged to consider the above policies and definitions when carrying out its functions in relation to the rural lands.

5.3 Biodiversity

The purpose of this section is to explain the wider concept of biodiversity and the reason why Mudgee Shire Council is bound to consider it for the decisions to be made for the rural lands.

5.3.1. Definition

Biodiversity, as defined by the NSW Biodiversity Strategy, is:

"The variety of life forms, the different plants, animals and micro-organisms, the genes they contain, and the ecosystems they form. It is usually considered at 3 levels: genetic diversity, species diversity and ecosystem diversity. "(NSW p4)

The 3 levels of biodiversity are as follows:

- § *genetic diversity* - the variety of genetic information contained in all of the individual plants, animals and microorganisms that inhabit the earth. Genetic diversity occurs within and between the populations of organisms that comprise individual species as well as among species;
- § *species diversity* - the variety of species on the earth; and
- § *ecosystem diversity* - the variety of habitats, biotic communities and ecological processes.

"It is not static, but constantly changing; it is increased by genetic change and evolutionary processes and reduced by processes such as habitat degradation, population decline, and extinction. The concept emphasises the interrelatedness of the biological world. It covers the terrestrial, marine and other aquatic environments." (Commonwealth Government 1996b p5)

It is this mixture of things that makes the environment that people live in and enjoy. Biodiversity is vital in supporting human life on Earth. It provides many benefits, including all our food, many medicines and industrial products and supplies clean air and water, and fertile soils. Australia is one of the biologically richest countries in the world and many industries such as tourism, agriculture, forestry and fisheries depend directly upon biodiversity. Therefore its conservation is very important – socially, economically and environmentally. Over the past 200 years, however, the Australian environment has been modified dramatically.

5.3.2. Reasons for Preserving Biodiversity

The four main reasons for preserving biodiversity relate to the following:

- § *Ecosystem Processes*: Biodiversity is often taken for granted, however it does provide the critical processes that make life possible. A healthy and functioning ecosystem is necessary to maintain the quality of the atmosphere as well as maintaining and regulating the climate, freshwater, soil formation, cycling of nutrients and disposal of wastes. This is often referred to as the ecosystems

services. Biodiversity is also essential for controlling pest plants, animals and diseases, for pollinating crops and for providing food, clothing and many raw materials that are used in the manufacturing of products used on a day-to-day basis. The conservation of biodiversity can also have a positive impact on water quality.

- § *Ethics*: all species have an inherent right to exist. Biodiversity belongs to the future as well as the present and no species or generation has the right to take away this inherent right by destroying the existence of a species.
- § *Aesthetics and Culture*: Biodiversity has a range of intrinsic values such as beauty, tranquillity and isolation. Many Australians place a high value on the presence of native plants and animals. This has contributed to the sense of cultural identity and is important for the spiritual enrichment of the community as well as providing for recreation.
- § *Economic*: some components of biodiversity have an economic value that can be used to generate wealth. The variety of plants and animals in Australia provide an attraction for tourism, as well as providing food, medicines and other pharmaceutical products and energy and building materials.

5.3.3. Pressures on Biodiversity

The major pressure on biodiversity today comes directly and indirectly from the increasing demand from population growth and human settlement and the lifestyle and expectations of the residents of those settlements and the way in which the population disperses throughout the environment. This includes the needs and desires for food, water, housing, energy, transportation, recreation and many other aspects of modern living. Figure 1 illustrates the impacts of human populations on biodiversity. The modification of habitats, particularly the clearing of vegetation for urban development has been and still is the most significant cause of the loss of Australia's biodiversity. The high proportion of Australians living in and around the large metropolitan centres and on the coastal fringe generates a range of pressures on biodiversity throughout the continent which includes the destruction of natural habitat, harvesting of plants and animals, the spread of exotic diseases and pollution. An example of this can be seen from the bird community in Sydney. At the time of European settlement there were 283 species of birds believed to have occurred here. Of these, 11 species are now extinct, 76 have decreased in range and/or abundance and only 39 have increased in range and/or abundance. (State of the Environment Advisory Council, 1996 p 4-9). As well, 5 Australian species have invaded the area because the changes imposed on the landscape suited them and 20 exotic birds were deliberately released and have established viable populations

The pressure on the biodiversity of Mudgee Shire comes mainly from land clearing associated with development and agriculture.

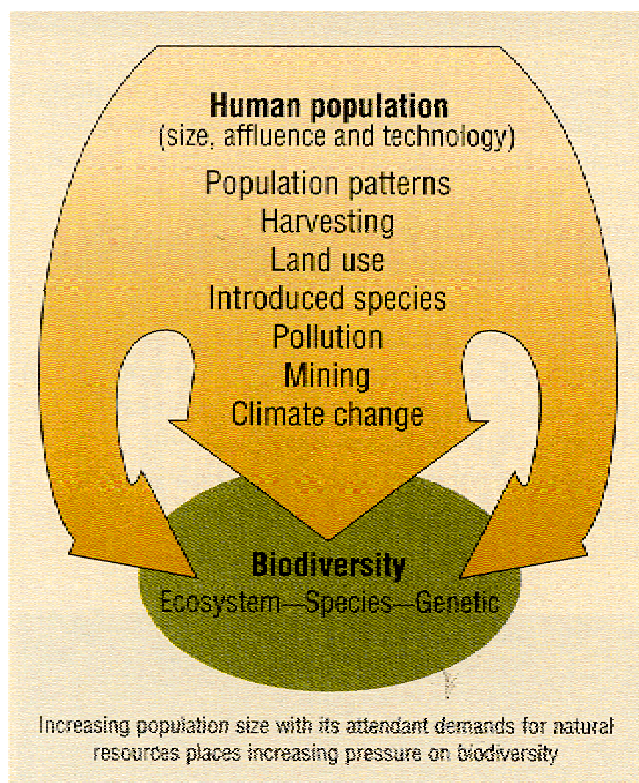


Figure 5.1: Major pressures on biodiversity

Source: SoEAC, 1996, p 4-9.

5.3.4. National Biodiversity Strategy

The National Biodiversity Strategy was prepared in response to these pressures. "Its aim is to bridge the gap between current activities and the effective identification, conservation and management of Australia's biological diversity." (SoEAC., 1996 p 4-39). The document recognises the need to change the way that society thinks acts and make decisions so as to ensure that economic development is ecologically sustainable. It is recognised that human activities are having a significant impact on the fundamental ecological processes of the planet. "If we are to achieve a sustainable future in which food, shelter, health and other basic needs of the growing global population are met, we must act now to change so that we live within the Earth's carrying capacity." (Commonwealth of Australia, 1996, p4). The strategy's goal is as follows:

"The strategy recognises that:

- § *The conservation of biological diversity provides significant cultural, economic, educational, environmental, scientific and social benefits for all Australians.*
- § *There is a need for more knowledge and better understanding of Australia's biological diversity.*
- § *There is a pressing need to strengthen current activities and provide policies, practices and attitudes to achieve conservation and sustainable use of biological diversity.*

§ *We share the Earth with many other life forms that have intrinsic value and warrant our respect, whether or not they are a benefit to us.* (Commonwealth of Australia, 1996, p5).

It acknowledges the core objectives of the National ESD Strategy and accepts the guiding principles of that strategy. The National Biodiversity Strategy contains 9 principles which are to be used for its implementation. These are as follows:

1. *Biological diversity is best conserved in-situ.*
2. *Although all levels of Government have clear responsibility, the cooperation of conservation groups, resource users, peoples and the community in general is critical to the conservation of biological diversity.*
3. *It is vital to anticipate, prevent and attack at source the causes of significant reduction or loss of biological diversity.*
4. *Processes for and decisions about the allocation and use of Australia's resources should be efficient, equitable and transparent.*
5. *Lack of full knowledge should not be an excuse for postponing action to conserve biological diversity.*
6. *The conservation of Australia's biological diversity is affected by international activities and requires actions extending beyond Australia's national jurisdiction.*
7. *Australians operating beyond our national jurisdiction should respect the principles of conservation and ecologically sustainable use of biological diversity and act in accordance with any relevant national or international laws.*
8. *Central to the conservation of Australia's biological diversity is the establishment of a comprehensive, representative and adequate system of ecologically viable protected areas integrated with sympathetic management of all other areas, including agricultural and other resource production systems.*
9. *The close, traditional association of Australia's peoples with components of biological diversity should be recognised, as should the desirability of sharing equitably benefits arising from the innovative use of traditional knowledge of biological diversity.*

(Commonwealth of Australia, 1996, p6).

5.3.5. NSW Biodiversity Strategy

The NSW Biodiversity Strategy details actions to conserve the biodiversity of NSW. The focus is on:

- § community consultation, involvement and ownership;
- § conserving and protecting biodiversity;
- § addressing threats to biodiversity and their management;
- § natural resource management; and
- § improving our knowledge.

The National Local Government Biodiversity was adopted in 1998. It represents an agreed Local Government position at the national level on the management of Australia's biodiversity.

The strategy recognises that:

- § Conservation and sustainable use of our natural resources will only be achieved through local area planning and management, along with community education and participation.
- § There is a willingness of Local Government across Australia to play a lead role in dealing with our most pressing and complex conservation issue—the loss of biodiversity.
- § A clear and co-operative partnership arrangement is required between the 3 spheres of Government.

The strategy addresses 5 key issues and identifies relevant actions for each key issue. The Strategy recognises that these actions will require varying degrees of support from all spheres of Government, and regional organisations. The issues are as follows:

- § Awareness, Training and Education
- § Local Government Resourcing
- § Regional Partnerships and Planning
- § Legislative Frameworks
- § Information and Monitoring

As this has been adopted at the national level, it has relevance for the policies of Mudgee Shire Council because Mudgee Shire Council is part of the organisation which signed the Strategy (the NSW Local Government and Shires Association).

5.3.6. Incentives for Biodiversity Conservation

A lot of the significant biodiversity is on land that is held in public ownership, however there is a significant amount of it on private land. It is this land that needs to be conserved in addition to the publicly owned land. The large amount of vegetation linkages within Mudgee Shire signifies the biodiversity value of the private land. However, to ensure that biodiversity is conserved on private land there should be some incentives in addition to regulations to allow this to occur. These incentives can take the form of economic or financial and non-financial. It must be recognised however that the conservation of biodiversity has costs associated with it. These can be as little as providing fencing, to labour associated with planting of trees, to taking land out of production and therefore losing the productive potential of the land. Whether this has a detrimental impact on the overall value of the land however, is not known.

Non-financial incentives for biodiversity conservation are likely to be in association with people's lifestyle choices and enjoyment of land.

Economic, or financial mechanisms for conserving biodiversity are being developed both in Australia and in other countries around the world. Some economic mechanisms are as follows:

- § *Environmental pricing* includes charges levied and the setting of prices to fund conservation of biodiversity. These are rare in Australia and are really only used for fees for Park use, trail access and other uses within the reserves. Some

Councils have implemented an environmental levy on the ratepayers. Funds raised in this way are used to fund environmental rehabilitation and other matters associated with the improvement of the natural environment.

- § *Conservation easements or agreements* such as those that are provided for under the National Parks and Wildlife Service Act bind current and future landowners to a set of conditions on the use of the land. This can include limitation on clearing, fencing of important areas and restricting grazing on the property. These can be complicated and take some time to draw up and come into force.
- § *Funding arrangements.* A revolving fund is one of several ways to maximise the use of funds for managing biodiversity. This concept involves purchasing land and placing a conservation agreement over it (as a caveat on the title) to ensure that it is managed for conservation purposes. The land is then sold to somebody who agrees to abide by this agreement and the money is used to purchase more land which is then conserved and sold.
- § *Taxation.* There are some income tax deductions available for control of land degradation however they are narrowly defined and do not reflect the concerns of conservation of biodiversity. Land that has a conservation agreement over it can be differentially valued so that the conserved land is valued differently from the non-conserved land. A system of rate rebates can be applied to land for biodiversity conservation purposes (for this to occur in New South Wales however there is a need to amend the rating provisions of the Local Government Act because there is no category for biodiversity conservation). In South Australia, under the Native Vegetation Act 1992 rate rebates apply and further reductions are available under a heritage agreement.
- § *Transferable Development Rights (TDR).* This mechanism is designed to limit development in conservation areas without affecting the underlying value of individual asset. Transferable development rights enable people who own areas of valuable habitat to sell the clearing rights to others who own land of a lesser biological importance and need development rights in order to proceed with a proposed development. This mechanism currently is used in the City of Sydney for the preservation of heritage sites in conjunction with building height limits. In this case, developers are able to purchase a heritage building and transfer the height allowance to another site thereby creating a site with double the normal height limit.
- § *Purchase of Development Rights* is a scheme whereby the rights to develop private land are purchased by a Government body or non-government land trust. A valuation of the land for its development potential is arrived at and this is subtracted from the valuation of the land for no development potential. The difference is given to the landowner in exchange for a restriction on the title of the land that it can only be used for biodiversity conservation, for example. This scheme is not in use in Australia, however it is used widely in United States of America for agricultural land as well as biodiversity conservation.
- § *Financial assistance* forms part of many voluntary management schemes offered by State Governments. They usually take the form of payment to assist with the cost of purchasing materials associated with the works required such

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as a fencing subsidy, the provision of plants or the provision of money for the hire of plant and equipment.

Incentives, therefore are needed to encourage people to conserve the biodiversity of their areas. They are a positive tool and can be used in conjunction with statutory mechanisms such as regulations on land use.

Chapter 6: Community Consultation

6.1 Introduction

Community consultation is an integral component of the Rural Strategy. Consultation gives the Council an opportunity to listen to what the community desires for the future of the area as well as allowing the Council to explain to the community the development issues and wider context of policy development within the region and NSW. It is also important to recognise that the community is vitally interested in the future of the area and as such should have input into the development of policies for the future. The Council sees community consultation as a major component of the Strategy.

There are two forms of consultation being undertaken with this strategy which are as follows:

- § Rural Strategy Reference Group
- § Community Workshop

The reference group was formed to provide advice and as a sounding board for the issues and options that have to be dealt with in the strategy. The first meeting of the reference group was held on 28 February and was used to identify the issues to be addressed by the strategy and these have been discussed in this document.

The community workshop was held in Mudgee on 26 March. There were approximately 70 residents in attendance. The consultation was held jointly with the consultation for another Strategy that is being prepared which is looking at the future needs of the Residential, Industrial and Rural Residential areas of the towns of Mudgee and Gulgong.

The participants were seated in groups of 4 to 6 and they were first asked to list their likes and dislikes for their part of the Shire. These were summarised and the participants were then asked to prioritise the likes and dislikes. The summary of the likes and dislikes and their priority is presented in Table 2.1.

Table 6.1: Summary of Likes and Dislikes

Likes	No.	Dislikes	No.
Country Town Feel	30	Poor Roads	24
Diversity of People / Lifestyles	21	Unattractive New Development	24
Heritage	17	Underutilised Rail	20
Tree Covered Hills	14	Sydney Road Entry Industrial Area	17
Vibrant Town Centre / Outdoor Dining	13	Vineyards Spray Drift	16
Clean Air	11	Poor Youth Employment Opportunities	10
Wineries	9	Too Many Vineyards	10
Climate	8	Poor Signage	7
Large Blocks	8	Narrowing Residential Streets	6
Parks and Open Space	6	Water Supply	6
Individual Character of Towns	6	Declining Roadside Vegetation	6
Bush	6	Overhead Power Lines	5
Country Pubs	6	Not Enough Cycleways	3
No Traffic Lights	6	Outdoor Dining	2
Strong Property Values	5	TV Reception	1
Access to airport	4	Noisy Vineyard Gas Guns	1
Choice of Schools	0	Not Enough Footpaths	0
Location re Sydney	0	Medium Density Housing	0

A more detailed report on the consultations will be prepared and presented as part of the final documentation. For the Rural Strategy, it can be seen that the community likes the diversity the area for its lifestyle. They also like the small country town feel and the heritage of the area as well as the tree covered hills. The wineries feature as an important component of the rural land use as does the bushland. They dislike the poor standard of the roads in the rural area as well as the spray drift from the vineyards. Some feel that there are too many vineyards. They also dislike the poor signage and declining roadside vegetation.

Chapter 7: Development and Planning Issues

7.1 Introduction

The issues, which have to be considered when we discuss the rural lands of Mudgee Shire, can be grouped into two broad headings of:

- § Environmental Opportunities and Constraints
- § Social and Economic Factors

There are a number of uses and issues which influence the settlement pattern of Mudgee Shire. The resources necessary to use the land are finite and need to be conserved. There are a number of constraints to the use of the land and the resource.

Underlying all of the issues are the philosophies of Ecologically Sustainable Development (ESD) and Total Catchment Management (TCM). It is shown graphically in figure 7.1. The figure illustrates the interconnectedness of the issues and the fact they all must be considered in relation to each other and cannot be considered in isolation.

ESD embodies the three concepts of:

- § Environmental conservation
- § Social equity
- § Economic prosperity

All three are interrelated and have to be considered as such. The environment in which we live has to be treated carefully so we can ensure it is left in a good state for the future generations. However, for there to be future generations, we must have settlements in which to live – be they urban areas or rural residential use or in houses scattered throughout the countryside. If we are going to live in an area, there also must be a market economy. There is a need to find the balance between these three so we can have a sustainable future and can leave an intact environment to the future generations.

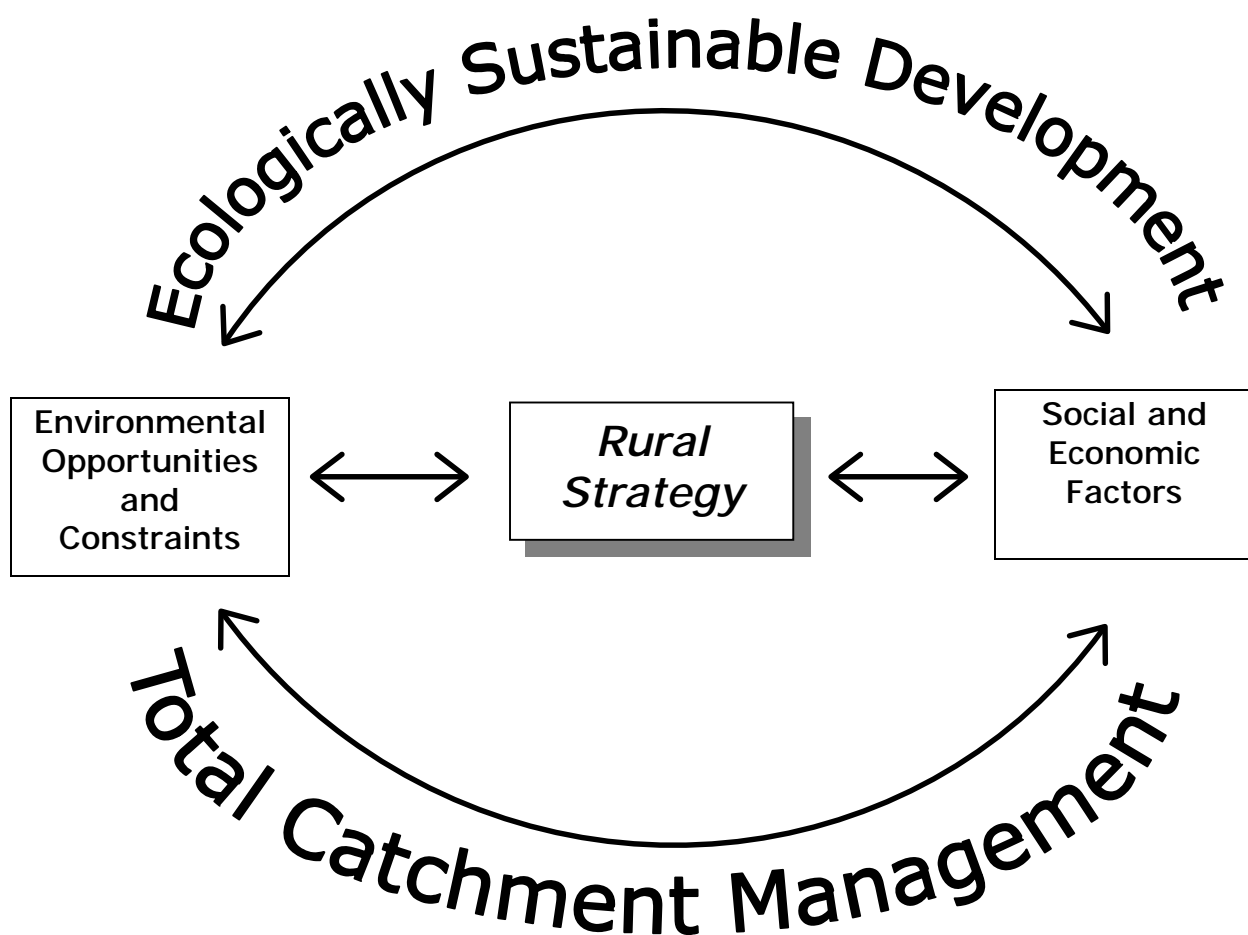


Figure 7.1: Issues and Themes for the Rural Strategy

Source: Sinclair 2002d

7.2 Environmental Opportunities and Constraints

The resources to enable the land to be used have to be conserved so that future generations can also enjoy and use the area. The principles of ESD and TCM are implicit to this section. ESD is discussed in detail in chapter 5.

All land is within the various water catchments. Therefore, all development will have an impact on these catchments. Some uses have the potential to cause harm whilst others do not. Potentially harmful uses can be designed to minimise the impact of the use on the catchment.

The philosophy of Total Catchment Management (TCM) is one that should underlie all planning for rural land and settlements. As such, it is an issue which is very important to the Mudgee Rural Strategy.

The following is a discussion of the of the physical constraints for settlement of and development in rural areas of Mudgee Shire. It considers the range of matters that have to be looked at before any decision is made as to the future use of the land. Some also have implications to the current management of the land.

7.2.1. Water Catchments

The provision and conservation of water is a major issue for the future of the rural lands of Mudgee Shire. There is a need to ensure that the integrity of the waterways are protected from inappropriate landuses.

There are many things that can cause the waterways to become stressed. Some are as follows:

- § Nutrient from rural residential, waste disposal and intensive agriculture;
- § Dams and water diversions;
- § Extraction from rivers and streams – both licensed and unlicensed;
- § Turbidity caused by soil erosion;
- § Filling of land;
- § Inappropriate development controls on existing uses.
- § Loss of indigenous riparian vegetation.

The issue of preserving the natural flows of rivers is one that is impacted upon by a number of issues, including the number of rural dams which have the effect of holding back and trapping a large amount of water, especially during and after a long period of dry weather. The Farm Dams Policy mentioned in Chapter 3 has been introduced to address this. It will only have an impact on new dams and not existing ones.

The protection and preservation of riparian land and its management is a major issue that has to be considered. Riparian vegetation an important part of the catchment as it provides a filter for the waterway by trapping sediments and nutrients that may have otherwise entered the water system. It also provides for bank stability as well as a habitat for wildlife.

The groundwater resources of the area are an issue that needs to be considered in a regional context, but one that the use of land in the SHIRE can have an impact on. Groundwater is also part of the wider ecosystem and any changes to it will impact upon other aspects of the environment.

The 3 catchments have varying degrees of settlement which includes towns and villages as well as rural subdivision. This is an indicator of the amount of stress that the catchment is being placed under. The Cudgegong Catchment is the most settled and the most heavily fragmented. It contains the towns of Mudgee and Gulgong as and is the most heavily fragmented and contains some smaller villages. The other two catchments are much less settled and not as fragmented in terms of rural subdivision.

The Department of Land and Water Conservation (DLWC) have recently published the *Draft Central West Catchment Blueprint* which is aimed to

"...provide clear direction for investment and effort in the management of natural resources. The Blueprint integrates current State and Federal natural resource policy, and provides clear policy direction for the future. The Blueprint will provide strong direction and guidance for the future development of water management plans, regional vegetation management plans, floodplain management plans, regional action plans, property management plans and Local Environment Plans." (DLWC p4)

The Catchment Blueprint is in draft form and provides a set of objectives, targets and actions under the following headings:

- § People and Community
- § Salinity
- § Water
- § Soils and Land Use
- § Vegetation and Biodiversity
- § Aboriginal Cultural Heritage

The document is therefore an important one to consider when dealing with the catchments of the Shire and any development in them.

7.2.2. Native Vegetation and Biodiversity

Native vegetation is an important component of the Shire's rural land. It provides habitat for native flora and fauna as well as being a landscape and visual feature. The extent of native vegetation in the Shire has been outlined in chapter 2.

Major pressures on native vegetation in the rural lands arise from clearing the land for a dwelling site, agriculture and service infrastructure. Secondary impacts of human activities such as the spread of garden weeds, domestic pet and livestock damage and pollution from on-site sewage systems all need to be considered in a strategic approach to the planning of rural lands.

The clearing of land is an issue more for the clearing of understorey plants than wholesale clearing of trees. Property owners often wish to 'clear the scrub' to avoid bushfires or just to make their properties look better. However, this can have just as much, and in some cases, a more dramatic impact on biodiversity than the clearing of large trees because of the habitat that it provides.

In the context of Mudgee Shire, it is important to recognise that all landuse decisions will have an impact on the biodiversity of the area. It is important therefore to take into consideration the impact on biodiversity when thinking about changing the use of the land. The *Biodiversity Planning Guide for NSW Local Government* notes that effective conservation of biodiversity requires integrated environmental assessment and management. It lists key issues that need to be considered in making landuse decisions and these are as follows:

- § Protection of biological diversity is essential for achieving ecologically sustainable development.
- § Biodiversity provides "ecosystems services" of inestimable and economic value such as flood control, erosion control, water quality control, insect control, carbon absorption and climate stabilisation.
- § Natural areas, which are larger, less disturbed and more connected, are more likely to retain a higher degree of biological diversity in the long-term.

- § Biodiversity is, as an expression of the unique Australian environment, an intrinsic part of the Australian culture. It supports recreation, tourism and national identity.
- § Biodiversity maintains the gene pool of wild plants and animals. This is a useful resource for future generations.
- § Greater biodiversity provides more resilient environments that are capable of better withstanding unpredictable events.
- § All parcels of land are important for protection of biological diversity, not just those of greater significance.
- § Ecosystems are characterised by local uniqueness and complexity. Landscapes are a non repeating mosaic displaying individual site specific responses.
- § Ecosystems interact and change over time. They have the ability to sustain themselves and to reproduce, migrate in space and evolve in response to changing conditions.
- § Maintenance of natural assets and habitat is required across the landscape, not just within national parks and other reserves. All land parcels within natural areas have a role, not just those of greatest significance or pristine qualities.
- § Most species diversity is found amongst invertebrates, fungi, and microorganisms. Such organisms are critical to the growth and productivity of whole ecosystems.
- § Corridor systems can provide landscape connectivity. They require retention and maintenance of existing links, and the restoration of links.
- § Current trends in species decline and extinction result from land use practices that have occurred over long periods. The full effects of recent decisions may not become manifest for many decades.

The biodiversity of Mudgee Shire needs to be protected when carrying out any planning exercise for the rural areas. This means that any decisions to reduce the subdivision minimum has to consider the impact on the biodiversity of the area. This also holds true for clearing of land for extractive industries, agricultural uses as well as other rural uses. There are also implications for the conservation and expansion of existing wildlife corridors or linkages. Photo 7.1 shows a typical rural scene where there is significant vegetation and linkages on the hilly land but not so much on the flatter land that has been cleared. However, there is significant vegetation and biodiversity habitat in road reserves and travelling stock routes which should be conserved as they can form wildlife linkages. Large areas of bushland remain on private land. Whilst there is no formal protection through local planning instruments, the steep topography of the area helps to preserve it. In addition the Native Vegetation Conservation Act helps to conserve the vegetation.

The designated Protected Lands under the Soil Conservation Act, are generally heavily vegetated.



Photo 7.1: Wildlife Linkages

Date of Photo: December 2001

The only part of the Shire that is protected by the National Parks and Wildlife legislation is the Munghorn Gap Nature Reserve and the Goulburn River National Park, which is located in the north eastern part of the Shire near Wollar.

7.2.3. Topography

The topography of an area is important because steep land can become unstable and when the soil is disturbed, can lead to erosion. A lot of the steep land is also heavily vegetated and so this has to be considered.

This is particularly important for rural residential use development. It is not just the slope of the land that the dwelling is proposed to be built on, but also the access to that land. As the land becomes steeper, there is more potential for land degradation to occur from unsealed accessways. As a general rule, 20% or more slope creates land degradation and should be avoided.

Effluent disposal on sloping land can cause it to become damp which can lead to erosion and slippage.

The variety of landforms within an area can contribute to the rural landscape character and provide a setting for the settlement areas.

The Department of Land and Water Conservation make provision for all land that has a slope of greater than 18 degrees to be protected. This is because of the potential for them to become eroded.

7.2.4. Soils

The maintenance of soil is a major consideration and there is a need to consider the impacts of land degradation, especially soil erosion and salinity. It is both a

management issue as well as being associated with the future development of the land.

Soil erosion and sedimentation is an issue which becomes worse, as the uses become more intensive and where inappropriate land management occurs. It is also an issue for the more steeply sloping land and the construction of dwellings, particularly rural residential uses which tend to be on smaller lot sizes.

Soil erosion becomes more of a problem in areas where the soil is of a poor quality and any disturbance of them often leads to more rapid land degradation.

This is an issue for the environmental as well as the human impact of development.

Photo 7.2 shows gully erosion.



Photo 7.2: Gully Erosion

Date of Photo: December 2001

7.2.5. Landscape Character

The landscape character of the Shire has been described in chapter 2 and the landscape assessment report prepared by Andrews.Neil.

The predominant rural character of Mudgee Shire is created by the numerous rural activities, large lot sizes, vegetation and expansive views. The landscape provides constant variety in landform and landuse from north to south and east to west. Changes to landuse generally arise from topography, which is evident through the high proportion of rural activities contained to valley floors and plateaus while the majority of bushland is located on steep and rugged hillsides.

The unique landscape character of Mudgee is a visual resource as it generates tourism, development and environmental management. The visual resource also plays an important role in promoting environmental awareness and well being for residents and visitors. The expanse of the nearby National and State Parks creates an

impressive backdrop to the simplicity of grazing lands and formal patterns of agricultural crops.

The retention of roadside vegetation is an issue which may require future negotiations with service providers. Other controls which may be considered for retaining the rural character include:

- § Planting controls for screening undesirable elements and incorporating buffers to significant environmental communities,
- § Building controls for siting and advertising,
- § Planning controls for lot sizes, the design and siting of residential dwellings and ancillary buildings, in relation to the visual amenity of road corridors.

It is important to recognise the visual amenity of open paddocks, post and rail fencing, distant views, heritage items and rural activities as Mudgee Shire is one of the few areas accessible to Sydney where there is an opportunity for experiencing such a unique environment.

It can be seen therefore that the preservation of the landscape character of the Shire is of importance.

7.2.6. Bushfire Hazard

The protection of the identified community assets is a key issue as is the preservation of biodiversity within the rural lands.

Managing the bushfire risk is noted as the key factor in dealing with the bushfire hazard. One of the management options is risk avoidance and therefore, land that is prone to bushfires should not be rezoned and subdivided where an adequate fire protection zone cannot be established.

Bushfire Risk Management includes the identification of the level of risk posed by bushfires to the assets and establishing strategies to protect those assets from the adverse effects of the fires. The purpose of bushfire risk management is to protect the community and its values from the adverse effects of wildfire. One key element of bushfire management is to achieve better integration of community preparedness and prevention strategies.

The Rural Fire Service have recently published a new set of guidelines titled *Planning for Bushfire Protection*. The guideline was produced by the NSW Rural Fire Service with Planning NSW to guide development in bushfire-prone areas. Planning for Bushfire Protection brings all the development planning protection measures into one publication. It provides councils and developers with information on bushfire protection from plan-making to development design, development control, construction certificates, and property maintenance.

Key features of *Planning for Bushfire Protection* include:

- § identification of bushfire-prone areas;
- § planning principles to be considered when councils are rezoning;
- § latest hazard assessment method to work out appropriate setbacks;
- § location of developments in areas of bushfire hazard based on latest CSIRO research on bushfire behaviour;

- § appropriate level of building construction relevant to setback distances;
- § special setback distances for special use developments (such as aged care facilities).

Photo 7.3 shows a house that was burnt in the recent bushfires in the Sydney Region. It points out the need for an adequate asset protection zone.



Photo 7.3: The devastating impact of Bushfires in Warragamba

Date of Photo: December 2001

7.2.7. Flood Prone Land

The flooding issue has been outlined in chapter 2 as not being a major issue when compared to surrounding Council areas. It is more of a localised issue and has the impact of cutting road access for short periods of time.

The New South Wales Government have recently published an updated floodplain management manual titled *Floodplain Management Manual: the Management of Flood Liable Land*. This manual outlines a procedure that Councils must follow to prepare a Floodplain Risk Management Plan and introduce appropriate controls within planning instruments. The resulting Floodplain Risk Management Plans are to address existing, future and continuing flood risk for flood prone land. It also requires an assessment of the probable maximum flood and the decision to address it recognises that these rare events should not preclude or unnecessarily hamper development within these areas.

7.2.8. Salinity

Salinity is a threat to the health and productivity of many catchments, and to the rural and urban communities that live in them. It is affecting rural landholders, urban developments, infrastructure (roads and bridges), water users and the environment. In NSW, between 120,000 and 174,000 hectares of land are estimated to be affected by dryland salinity. If land is continued to be used the way it is now, by 2050 the area of affected land in the NSW part of the Murray-Darling Basin could increase to 2-4

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million hectares. Irrigation salinity is estimated to affect 320,000 ha, or 15% of irrigated land. About 70-80% of irrigated land in NSW is threatened by rising watertables and associated salinity problems. Many NSW rural towns are also experiencing the effects of rising watertables causing salinity and waterlogging. This is resulting in corrosion damage to buildings, amenities and infrastructure such as roads, paths, pipes and bridges. (NSW Salinity Strategy).

The *Mudgee Shire Salinity Background Study* which makes a number of recommendations, the main one being the need to prepare a salinity audit of the Shire. It also notes that there is a need to review the Council's LEP.

The Draft *Central West Catchment Blueprint* also deals with the issue.

7.2.9. Contaminated Land

This issue is related to the previous use of land. It is an issue because of a lack of understanding of the issue in the past. It is important to recognise in rural areas because of the potential health risks to future residents of the land, especially that land which is to be used for rural residential use rather than continue as purely rural.

The State Government has recently released a State Environmental Planning Policy (SEPP 55) which sets a procedure to be followed for both development and rezoning issues.

The Council has guidelines on contaminated land that explains the issue. The guidelines have been prepared to outline the objectives, standards and procedures for the assessment and remediation of contaminated land and land suspected of being contaminated due to the past land uses or land fill. The guidelines are based on "Managing Land Contamination – Planning Guidelines" prepared by DUAP and NSW EPA.

7.2.10. Weeds

Weeds are one of the most serious threats to Australia's natural environment and primary production. They can destroy the native species, contribute significantly to land degradation and reduce farm and forest productivity. The National Weeds Strategy has identified the problem and states that the cost of weeds to Australia is approximately \$3.3 billion per annum. The New South Wales weeds strategy estimates the value of control and lost production at \$600 million per annum. Both the National and State strategies identify funding, education and better coordination of control programs as being important.

There is a need therefore to consider the preparation of Weed Management Plans for developments that have the potential to cause the spread of weeds by clearing large tracts of land or that generate effluent in sufficient quantities that may kill native vegetation which then allows for the weeds to invade the bushland.

There are a number of weeds within the Shire that are becoming a problem. They include St John's Wort and serrated tussock. There is a need therefore to address this issue through a weed management plan.

7.3 Social and Economic Factors

The interaction of humans with the environment is an important component of any strategy dealing with the future of rural land.

7.3.1. Land Use

The variety of land uses within the Shire have been identified in Chapter 2. The major uses are extensive agriculture, vineyards, rural residential and native vegetation. They all have an impact on each other and the environment. This is an important issue and the resultant rural land use conflict from some of them is perhaps one of the most important issues to be addressed by the rural strategy. Finding the balance between these often competing desires for rural land is the key to planning for rural areas.

Tourist uses associated with the vineyards is one issue that has to be addressed to ensure that rural land use conflict is not exacerbated by the location of large accommodation developments within the vineyards area that have the potential to cause the demise of the vineyards because of rural land use conflict.

7.3.2. Rural Land Use Conflicts

The presence of agriculture and non-rural land use in the one location can often generate conflict due to their potential incompatibility. Agriculture can affect adjoining small rural lots, which are used essentially for residential purposes. Similarly, the presence of small rural lots creates an adverse influence on the continued operation of the agricultural enterprise. The issue of rural-urban conflict can arise when there is no separation between incompatible uses, let alone the misunderstanding, which may exist about the purpose and character of a district. Land use conflicts may arise in such situations through noise, odour, farm chemicals, light, visual amenity, dogs, and stock damage and weed infestation, to name just a few.

Land use conflict can occur between forms of rural land use. This is particularly so for the vineyard industry and adjoining cropping and grazing activities. The major issue is to do with spray drift and the impact of the chemical residue on the adjoining pasture and the potential impact on livestock and the potential to leach into surrounding watercourses. There are also some problems reported with vineyards that are not adequately fenced, especially those located near travelling stock reserves. Some farmers report having difficulty containing stock from entering the vineyards and disturbing the grapes.

This conflict adds to the conversion of an area from rural to rural residential use as the agricultural uses are forced to move because of the conflict. It is a paradox that people will move into a rural area because of the open spaces and agricultural uses and then when the agriculture starts to smell or the noise of the tractor or pump is too loud, the rural residents complain and the agricultural use is forced to alter its operations. This causes the agriculture to become less economically sustainable and the use changes to a residential one as the farmer sells up and moves out. This is shown by anecdotal evidence and experience of the consultant working in fringe

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metropolitan and rural areas as well as discussions with planners and farmers in the USA.

One issue that has to be addressed is the basic planning principle of the new use blending in with the current one. This has not happened in the past with dwelling houses being permitted to locate next to boundaries with no consideration of the impact it may have on the agricultural use on the next door property. This leads to rural land use conflict and experience in other areas has led to the agricultural use having to move.

Rural land use conflict has occurred between vineyards and tourist accommodation in other areas where the accommodation is located too close to the adjoining vineyards and this is an issue that needs to be addressed with the location of future tourist accommodation uses.

Photo 7.4 shows rural residential development which causes some rural land use conflict with the vineyard industry.



Photo 7.4: Rural Land Use Conflict – North Ridge Estate

Date of Photo: December 2001

7.3.3. Economic Development

A report prepared by the Western Region Institute on the competitive advantages of Mudgee has identified the major sectors of the economy as being mining, manufacturing and agriculture. The report concludes that “the major investment opportunity in Mudgee is the wine industry” (WRI, 2001 p50). It also concludes that new industries that could be developed relate to leather produce manufacturing and light aircraft manufacturing.

It can be seen that the Mudgee economy can be considered to be healthy. There is a need therefore to ensure that it remains in a healthy state. One of the key principles of economic development is to build on what is already in place and not spend time

and money on attracting major employment generating uses from outside the area. Bearing this in mind, there is considerable scope to build on the existing wine industry and its related tourist sectors. However, there might be the need to introduce some land use regulations and controls to ensure that this does not have a detrimental impact on the existing vineyards. It should be pointed out that the tourist industry is not only focused on the wine industry and that there are number of other attractions and events including Gulgong, the Huntington Estate Music Festival, Mudgee Small Farm Field Days and the Henry Lawson Festival. There is also some scope to build on the existing meat processing and manufacturing industries, but these are more urban related and therefore fall outside the scope of this study.

The tourist accommodation sector is made up of hotels, motels, bed and breakfasts, farm stay, and the like. There is currently some interest in developing resort style accommodation uses and provision should be made for this style of development and locations identified so that it does not have an impact on the agricultural production of an area, which can lead to rural land use conflict.

7.3.4. Agricultural Water Supply

The provision of water is an important aspect of the agricultural industry. Irrigation water is used for the vineyard, lucerne and market gardens. However, it is a finite supply with the amount be extracted from the rivers being restricted by the Department of Land and Water Conservation under the new water sharing plans and the farm dams policy. This will have a major bearing on the future of these water dependant commodities.

7.3.5. Mudgee and Gulgong Growth Management

The growth of the towns of Mudgee and Gulgong, although not the subject of this study is an issue that has to be considered. The potential for any future urban area to encroach on the vineyards area and other agricultural areas is of significance to the rural areas.

This can cause rural land use conflict which can lead to problems with the ongoing operation of the vineyards. It is necessary therefore to ensure that the future expansion of these towns does not impact on the future of the vineyards and other forms of agriculture.

7.3.6. Rural residential use development

Rural residential use development is the use of rural land for primarily residential purposes. The main source of income is not from a pursuit carried out on the land. Most rural residential use dwellers move there for lifestyle rather than for the land's productive potential. As a result of this and the lack of an agricultural pursuit, the household does not have any affinity with the productive potential of the land and therefore does not usually understand the issues associated with agriculture. This lack of understanding often leads to rural land use conflict with the adjoining or near agricultural uses. (Sinclair, 2001)

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The main thing that separates urban housing from rural residential use housing is the size of the lots and distances between the dwellings, which create a sense of openness. Rural residential use development, broadly speaking has two types:

“Rural (Urban) Fringe development is that style of development, which is within the servicing catchments and in close proximity to an urban centre. It may have reticulated water and in fact may have reticulated sewerage although most effluent disposal will be on site. It will also have a garbage service. The lot size is generally in the range of 4000 square metres to 2 hectares and it is in “estate” style of development. At the smaller lot size, it is more akin to residential than rural residential and therefore, lots of less than 1 ha are considered to be large lot urban.

Rural Living development is a residential use of the land within a rural environment. It is not necessarily near an existing urban centre and does not have reticulated water or any other form of service, which would generally be provided in a rural urban fringe zone or urban centre. The lot sizes are generally 2 hectares and larger”. (Sinclair 2001)

Examples of rural fringe development in the Shire is the rural residential zoning which surrounds Mudgee and is exemplified by the Northridge estate to the east of Mudgee, which is shown in photo 7.5. It can be seen that this is more akin to residential than rural because of the close proximity of the houses to each other.



Photo 7.5: Rural Urban Fringe development at Mudgee

Date of Photo: December 2001

Examples of rural living are the rural small holding zones which are scattered throughout the Shire. Photo 7.6 shows one of these at Queens Pinch.



Photo 7.6: Rural Living development at Queens Pinch

Date of Photo: December 2001

These lots are "... inhabited by an essentially urban population ... in these pleasant homesteads dotting the landscape ... the new country residents are commuters and weekenders rather than farmers." (Auster and Epps, 1993, pp 77-78)

Rural residential use development has both positive and negative impacts. It has to be said that the negative impacts outweigh the positive ones. However, it provides a choice of housing and therefore should be provided but in appropriate areas which do not take away good quality and productive farmland as well as areas of high biodiversity value.

On the positive side it provides for a lifestyle choice for a number of people. It also provides for a place of business for residents who run home offices and for tradespeople who need land to store plant and equipment as well as supplies. It can also contribute to the local economy. Anecdotal evidence is also that the newer purchasers of rural residential use lots have a higher income and more time to devote to the local schools and community groups.

The negative impacts can be broken into financial, community and environmental. These impacts become more problematical as the lots get smaller.

There have not been any recent studies into the costs of providing rural residential use development in Australia. However, a study in the United Kingdom compared clustered and dispersed growth. This found that overall, the annual costs would be one third higher for the dispersed settlement pattern than a concentrated one. The study also found that, in terms of public costs, a scattered settlement pattern is 395% more expensive for capital and 236% for ongoing costs than a concentrated one.

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There are community costs associated with rural residential use development. They include the provision of services and facilities to the areas that are normally located some distance from towns and villages.

The environmental costs associated with rural residential use development are related to the initial development and ongoing use of the land. During construction of a rural residential use area, especially rural urban fringe development, there can be soil erosion and land degradation.

The ongoing impacts of rural residential use development stem from the onsite effluent disposal, soil and water management and domestic pets. Most rural residential use development has onsite effluent disposal and this can be a concern if there is not a large enough area of land available for disposal. There is also a concern about the cumulative impact of having a large number of onsite systems in one area as can occur with rural urban fringe. There can be impacts on adjoining bushland from the nutrients coming off the site as well as from weeds. Native wildlife can be eaten by domestic pets.

The building of houses in the rural area can have an impact on the landscape, especially when the land is hilly. The introduction of a number of new buildings can detract from the landscape quality of an area.

Rural residential use development can also cause rural land use conflict if it is located in close proximity to intensive agricultural, mines and quarry uses. Siting the house too close to the agricultural uses can cause this.

In a majority of cases, the people who buy a lot used for rural residential are not aware of the issues associated with it as outlined above. Issues such as the need to service the on site effluent disposal system and the impact of pets on wildlife and weed eradication are common ones where the people don't fully understand.

Photo 7.7 is of Orchard Hills in Sydney's west and illustrates the issues. There is a rural urban fringe subdivision of 4000 m² lots which is separated from the urban area which can be seen in the foreground. You can also see the houses interspersed with the agricultural uses and the proximity of the rural residential use development to the creeklines and native vegetation.

It can be seen therefore, that rural residential use development creates a demand on the services provided by the Council and other Government agencies. To ensure that it occurs in an efficient manner, it should only be permitted if it is close to an urban area where the services and facilities are located.



Photo 7.7: Rural residential impacts

Date of Photo: August 2001

Please note that this photo is of Orchard Hills in the Penrith Shire.

7.3.7. Villages

There are a number of villages and rural settlements in the Shire which have been outlined in Chapter 2.

There are also a number of areas that have a community hall or bushfire shed which have a vital role as a focal point for the community which lives in the surrounding area.

In order to understand the relationship between the settlements, it is appropriate to adopt a hierarchy of settlements. This should be based on the facilities provided in the settlement and the role that it plays, rather than purely population. The shopping facilities that are available are a good starting point. 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.

A hierarchy of settlements can be based on this as well as other factors and for an area like Mudgee should take the following form:

- § *Regional Centre* This provides a wide range of employment, entertainment and recreational opportunities, a full range of local services and higher order services such as Major Hospital, TAFE College as well as a high school and major indoor

recreation facility and a often has a University campus. It also has regional offices of State Government Departments. It has a large mixed commercial area providing service, retail and office uses with a large chain supermarket and a discount department store. It caters for convenience, weekly and comparison shopping. It draws its catchment from the surrounding Local Government Areas.

- § *District Centre.* This provides a range of employment, entertainment and recreational opportunities, a full range of local services and some higher order services such as high school and health care as well as a major indoor recreation facility. It has a large mixed commercial area providing service, retail and office uses with a large chain supermarket. It would cater for convenience, weekly and limited comparison shopping. It is the principal centre of the Shire.
- § *Town.* This provides a range of local services and variety of employment opportunities in tourism and retail but relies on the District Centre for other opportunities. It has shopping for weekly and convenience shopping.
- § *Village.* This provides only for convenience needs and typically has only a general store / post office.
- § *Rural Centre.* This is a focal point for the surrounding community and usually has a community hall or bushfire shed. There are generally no shopping facilities or other services in this area.

7.3.8. Sustainable Agriculture

Some of the agriculture in the Shire is becoming more intensive as the value of land increases and hence the need to use it for higher yielding commodities. These are mainly related to the vineyard industry but also include intensive animal uses like feedlots and dairies.

For agriculture to remain in the Shire, it must become sustainable. Sustainability in this context embraces the concept of Ecologically Sustainable Development or ESD, which is discussed in detail in Chapter 3.

Sustainable agriculture, from a land use planning point of view, must embrace environment, economics and social concepts (ESD). A definition of sustainable agriculture therefore is as follows:

“use of land ... which can be maintained and managed so that the land remains

- § *environmentally sustainable (that is, environmental pollution and land degradation arising from the use is minimised);*
- § *socially sustainable (that is, land use conflict and loss of amenity of the surrounding area arising from the use is minimised); and*
- § *economically sustainable (that is, there is a capability of making a net farm profit from the use” (Sinclair, 1999)*

A use may be economically sustainable, that is it makes a living for the farmer, but it may be on a lot that is not large enough to allow it to manage the nutrients or odour and may have an impact on the amenity of the neighbourhood. It is therefore unlikely

to be sustainable. Unsustainable practices include market gardening on small lots, hydroponics on small lots, overgrazing of land by cattle and the loss of topsoil through erosion. Photo 7.8 shows a good example of this from Llandilo in the Penrith LGA. The three separate market gardens in the middle foreground are planted from boundary to boundary with no buffer strips and there is also no buffer between the creek. There is no way to manage the soil and water on the three farms.



Photo 7.8: Example of non-sustainable agriculture

Date of Photo: December 1999

Please note that this photo has been taken from outside the Shire.

It is important to note therefore, that for an agricultural activity to be sustainable it has to meet all 3 of the criteria outlined in the definition.

7.3.9. Domestic Effluent Management

This is perhaps the most important impact of human settlement on the water quality of the surrounding streams and the general environment.

Most of the rural residential use rural small holding areas are not served by reticulated sewerage nor are they planned to be. However, in the rural residential zoned land around Mudgee and Gulgong, the minimum for onsite effluent disposal is 2 ha and all lots less than this must be connected to the reticulated sewerage.

The NSW Government has released Environment and health Protection Guidelines for On-site Sewage Management for Single Households, which have to be complied with for all new on-site effluent disposal systems.

The Council have prepared an On-site Sewage Management Strategy which is to provide a framework to allow Council to regulate and manage the installation, operation and maintenance of all on-site sewage management systems.

This will be an important issue to be looked at when considering urban and rural residential use development.

7.3.10. Heritage

It is important to consider the heritage of the area when looking at the future of the rural lands. This includes both European and Aboriginal heritage values. There is a significant number of listed sites of European heritage but not much is known about the Aboriginal heritage. The gold mining in the area also created an influx of Chinese people to the area, of which not much is known.

The impact of European settlement on the Aborigines within Mudgee Shire is an issue that needs to be considered but does not form a major component of the strategy.

Aboriginal settlement has provided a rich diversity of sites and cultural information, which needs to be investigated and respected for any future options for the rural lands. Prior to this occurring, to ensure that the cultural heritage of the Shire is conserved, the following procedure can be instigated with development applications:

- § Identify the most sensitive areas of the Shire in broad terms (this is to be done in conjunction with the Local Aboriginal community)
- § Require an Aboriginal Archaeology study to be prepared for these areas
- § All other areas are to have an assessment done in conjunction with the Local Aboriginal Community to ascertain whether a detailed archaeological investigation is required.

By doing this, the most significant areas of Aboriginal significance can be identified and conserved.

7.3.11. Emerging Social Issues

Using the 1996 ABS Census data (at the time of writing this report, the 2001 census results had not been published) the rural lands of the Shire have the following characteristics (it should be noted that the urban areas of Mudgee and Gulgong have been excluded from these figures):

- § The rural lands house some 6,800 residents or 40% of the total population of the Shire. The most populated localities are located to the north of Mudgee with 63% of the total population of the rural lands (4,314 residents) while localities in the south house 37% (2,547 residents).
- § 2% of residents are Aboriginal / Torres Strait Islanders (142 residents) which is low compared to LGA and NSW averages
- § 4% are from non-English speaking backgrounds (286 residents) which is low compared to SHIRE and NSW averages
- § 58% of working age residents are working or actively seeking employment (ie workforce participation rate)
- § the community is very stable with 64% of households at the same address in the past 5 years

An assessment has been made of the social issues associated with the rural lands. It has been based on interviews and analysis of the 1996 census data.

- § *Isolation* – long distances between communities together with poor local roads further exacerbates the isolation many rural residents experience. For some, isolation is desirable and / or acceptable, but for others this isolation only further compounds their problems.
- § *Strong local identity* – the rural lands do have a strong local identity with many people strongly associating with local villages and localities. The rural lands house many small community organizations with the Rural Fire Service and Progress Associations being particularly strong. This strong identity is important and highlights that the potential exists to use these networks to improve local communication and develop more local services appropriate to community needs.
- § *Lack of transport networks* – with no public transport except for the school bus and often uncertain road conditions (due to flooding, fires etc), access to the centres of Mudgee and Gulgong for shopping and services can be irregular and limited. This is even more difficult for residents with limited access to a motor vehicle such as older residents, children, youth and households with only one car.
- § *Need for community infrastructure* - with 40% of the Shire population living in the rural lands, there is a need to provide community infrastructure. The population of the rural lands is significant, particularly in the northern parts of the Shire. These residents require equitable access to services and facilities provided by Council and other government agencies. Many rural residents have poor access to services based in Mudgee and Gulgong not only because of the distance but also due to social, financial and cultural issues.
- § *Traditional village infrastructure has helped to sustain and support these residents* – many residents use the services and support provided in traditional villages such as Wollar, Goolma and Hargraves. This traditional village infrastructure, which may include a general store, school, community hall and local park, are essential components of community life which play an important role in sustaining these communities.
- § *Some rural residents lack access to traditional village infrastructure* – with recent subdivision patterns in the Shire, some rural residents do not have close access to a traditional village infrastructure. The needs identified by the Bungaba Women's Association and Cooks Gap residents for access to some community infrastructure such as a community hall, highlights this issue. Following further research, other communities which have limited access to village infrastructure will be identified.
- § *Social disadvantage* – as a result of the varying socio-economic profiles of those living in the rural areas, there are a significant number of people suffering social disadvantage. Compared to both Mudgee and NSW averages, the Rural Lands have a low weekly household income, low level of formal qualifications and low workforce participation rate. This suggests that some residents may be significantly disadvantaged. This is supported by local service agencies who have identified that many residents in the Rural Lands do have significant social

problems particularly related to low incomes, family breakdowns and other crisis situations.

§ *Poor housing conditions* – the ABS data does highlights that residents are living in 55 homes in the Rural Lands which are not traditional housing. These include caravans and cabins and suggest that some residents may not have access to adequate housing. Anecdotal information also indicates that some homes in the Shire do not have access to electricity with people living in very modest accommodation. Although this may be by choice, Council does have a responsibility to ensure that all homes are legal and meet basic habitable standards.

It can be seen therefore that there are a number of emerging social issues related to the rural lands of the Shire that need to be addressed to ensure that the residents enjoy an acceptable quality of life which is similar to those who live in the towns of Mudgee and Gulgong for the provision of basic services and facilities.

7.3.12. Infrastructure

Infrastructure such as roads, water, electricity, telephone is necessary for the provision of human settlement areas. The SHIRE is well served by electricity and telephone. However, some areas do not have this.

Water and Sewerage provision is the responsibility of the Council. It is provided in the towns of Mudgee and Gulgong. All of the villages rely on onsite water collection and storage as well as effluent disposal.

The standards of some of the rural roads is considered to be less than satisfactory, particularly in the rural small holding zones where the combination of steep land and the underlying geology make it difficult to maintain and build the roads.

Chapter 8: Strategic Environmental Analysis

8.1 Introduction

The rural lands of Mudgee Shire provide an important resource for the whole Shire and the wider region. This resource consists of a number of components:

- § Rural Landscapes
- § Productive Agricultural Lands
- § Native Vegetation
- § Habitat linkages
- § Living Areas
- § Cudgegong, Macquarie and Goulburn Rivers as well as other water bodies

Each of these is important in its own right but it is the sum of them that provides the resource for the future.

This chapter presents a strategic environmental analysis of the issues identified in the chapter 7 and discusses options that can be pursued in the strategy document and therefore is to be the focus of discussion at the reference group meeting. In essence, this chapter sets the framework for the Rural Strategy.

A strategic environmental assessment is an assessment of a set of strategic options. It can be defined as the formalised, systematic and comprehensive process of evaluating the environmental impacts of an action and its alternatives. (Therivel et al)

“Strategic environmental assessment is the term used to describe the application of environmental assessment to various stages in the planning process that occur prior to the consideration of specific projects. It may be given another name, depending on the nature of the planning stage involved.

Regardless of the terminology used, strategic assessment primarily differs from project-specific assessment in terms of scale and timing. In regard to scale, strategic assessment:

- i) incorporates a number of potential developments as opposed to a single project;*
- ii) considers a broader range of alternatives;*
- iii) involves a wider geographic area; and,*
- iv) addresses environmental impacts at a more aggregated level.*

In terms of timing, the period between the conduct of a strategic assessment and the resulting environmental impacts will be longer than is the case with project-specific assessments.” (OECD, 1999 p5)

The matters to be discussed in this section are as follows

- § Preserving Rural Land
- § Rural Land Uses and Lot Sizes
- § Settlement Hierarchy
- § Rural Residential Development
- § Biodiversity Conservation
- § Incentives
- § Economic Development
- § Social Sustainability

Each of these will be discussed.

8.1 Mudgee and Gulgong Growth Management

The growth of the towns of Mudgee and Gulgong has been discussed in the *Mudgee Shire Residential, Rural Residential and Industrial Strategy* being prepared by Andrews.Neil. The matters that are of relevance to the Rural Strategy are the broad principles of growth.

In relation to Mudgee the main principle is the provision a 'hard edge' to the expansion of Mudgee to the south because of the significant landscape there. Land to the east and north are used for vineyards which would cause rural land use conflict. There is also the floodplain of the Cudgegong River immediately to the east and north of the town. There is potential for a long term urban expansion to the north west of the town. This will provide a set of growth management boundaries to the east, north and south of the town. They are all based on physical features.

In Gulgong, the land to the north presents an open landscape that should be preserved. To the south, there is some potential for providing a dwelling right with the lots along Springfield Lane to the intersection with the unnamed road that runs in an easterly direction adjacent to the cemetery. This will allow for some development to occur whilst not interfering with the vineyards which are located further south. To the west, there is a significant area devoted to rural living and this should be consolidated with the minimum subdivision staying as 10 ha, but with the existing lots all being granted a dwelling right. There is also a parcel of land that is north of the Wellington Road that is not zoned currently as Rural 1(c2) which should be zoned similarly to the surrounding land and provided with a dwelling right for each existing lot. This will yield an additional 15 dwelling rights for this land. There are some roads that will need to be upgraded and consideration should be given to levying a section 94 developer contribution to this land so that the roads can be upgraded. This would have to be levied at the development application stage for the new dwellings.

8.2 Preserving Rural Land

Rural land has 3 productive components. It is a source of food and fibre, a biodiversity resource and a place for people to live. These relate to the three components of ESD in the following manner:

Source of Food and Fibre	}	Economic
Biodiversity Resource		Environment
Place to live		Social Equity

There is a need to find the balance between of all three of these components.

Agricultural land is a resource, it is not a commodity. It is a resource that is dwindling in NSW as productive lands on the coastal fringe and metropolitan Sydney as well as around the urban centres is converted to residential and rural residential use.

"Prime agricultural soils represent the highest level of agricultural productivity; they are uniquely suitable for intensive cultivation with no conservation hazards. It is extremely difficult to defend agricultural lands when their cash value can be multiplied tenfold by employment for relatively cheap housing. Yet the farm is the basic factory - the farmer is the country's best landscape gardener and maintenance workforce, the custodian of much scenic beauty. The market values of farmland do not reflect the long-term value or the irreplaceable nature of these living soils. An omnibus protection of all farmland is difficult to defend; but protection of the best soils in a metropolitan area would appear not only the sensible, but clearly desirable." (McHarg, 1992 p 60)

One major issue with planning for the preservation of agricultural land is the size of the existing holdings. The smaller the lot the more likely it is to be used for a residential use and when there is a mixture of rural residential use and intensive agriculture this can lead to rural land use conflict. Where there are a number of larger lots it is easier to protect the resource for agricultural use because of the ability to locate any dwellings away from the intensive agriculture that is practiced on the adjoining land. There is also a higher probability that the land will be used for agriculture rather than rural residential.

It is therefore appropriate that these areas be maintained for future agricultural use. However, the major cost of maintaining this resource is the amount of rates that the owners have to pay. This is related to the value of the land and as this increases, so do the rates. Therefore there is a need for an incentive to be provided for these owners to maintain the land as a resource if the community feels that the resource should be maintained. This incentive could be in the way of reduced Council rates. This matter will be discussed in detail in later sections.

It should be recognised that this desire to subdivide is based on the farmers' belief that they should be permitted to subdivide the land. At no time has there been any indication from the Council or State Government that they would be able to subdivide some time in the future. It is a resource that can be utilised in the future if it is not subdivided. However, experience has shown that once land is subdivided, even into rural residential use lots of 10 to 20 ha, the ability for it to be used for agricultural use

is lost. It can be sold as an intact holding which can then be used as a rural residence if desired as an interim use, but the important thing to note is that the resource has been preserved.

There are three basic ways to recognise and preserve agricultural land:

- § Land use zoning;
- § Incentives / Monetary Compensation; and
- § Education / Right to Farm Legislation.

Land use zoning entails placing restrictions on the use of the land by way of statute. It is practised in Australia as the principal method for controlling the development of land. It is a system where land is designated for a principal use and uses that are considered not to be suitable or compatible with the principal use are prohibited. There is also the ability to require certain uses to submit an application for use of the land, which is then assessed having regard to a set of published assessment criteria.

Incentives / Monetary compensation can take three forms: density bonuses for specific uses, purchase of development rights or transferable development rights. Incentives can include an increase in the density for a particular use in exchange for a conservation and / or enlargement of, for example, a wildlife corridor, as is done in Cessnock with tourist accommodation in the vineyards area. They are based on a specific land area which is usually a zone. Monetary compensation takes two forms. Firstly, Purchase of Development Rights involves a farmer selling the development rights of the farm to a government or non-government organisation. In return a covenant is taken out over the land to ensure that the land is only used for agricultural purposes. The purchase of development rights can also be used to require soil and water cycle management to be undertaken on the property. The property is inspected at regular intervals to ensure that it is being used properly. Transfer of Development Rights occurs where land is declared to be in a preservation zone and is to be kept for agriculture. The development rights to this land can be purchased by developers who wish to gain an increase in the development potential of land declared to be in a development zone. Both of these methods exist in the United States. Of the two, Purchase of Development Rights is the more successful. Both are applicable to the Australian situation with the issues of Transfer of Development Rights already in existence for heritage sites in the City of Sydney.

Right to farm legislation basically allows farmers to have a right to continue farming as long as they are carrying out "good management practices" even if there is a loss of amenity for surrounding rural residential uses. It precludes surrounding rural residential use dwellers from suing in the courts for nuisance caused to them by the farm noises, odours or dust. This means that the farmer has to have the right to override the environmental pollution legislation, particularly in relation to noise control. This is a good concept in theory but in practice is difficult to implement effectively as it does not provide a solution for both sides of the problem. The farmer is able to continue operating but the surrounding rural residential users have not solved their amenity issue.

Of these three, only land use zoning is practiced in NSW. Although, Tasmania has Right to Farm legislation, its effectiveness as a tool to preserve agricultural land has been questioned because it doesn't override the environmental pollution legislation. Western Australia has a system of mediation for rural land use conflict. Purchase of Development

Rights and Tradeable Development rights are not used for the recognition and preservation of agricultural land in Australia. However, it is considered that there should be an investigation into their applicability or modification for the Australian political and social environments. It may be that one, two or a combination of them or a modified version is applicable, but without investigation it will not be known.

8.3 Designating Rural Land

As a basis for a future response in a new Local Environmental Plan, a methodology based on a combination of existing land use, lot size and physical features as well as proximity to services and infrastructure has been applied to the rural land. Consideration also needs to be given to the preservation of future land use opportunities.

The first step is to categorise the physical features into areas of similarities. Then designations are considered which bring policy considerations to bear on the land units.

8.3.1. Rural Land Units

Landuse surveys and lot size analyses have been used to identify land with common features as a foundation for future zoning. The landuse survey is used because it provides an overview of the existing landuse pattern within an area and therefore gives an indication of the predominant landuses which should be conserved. It is important to consider the size of the lots and holdings within an area because the existing fragmented lot patterns contribute to rural land use conflicts and the ability of the area to be protected from such rural landuse conflicts.

The methodology used identifies a series of land units as the basis for the land use designations. These land units are areas, which are contiguous, have similar characteristics and are generally homogenous in nature. These characteristics can be topographical, the abundance of vegetation, the similarities in landuses, land tenure, landscape character or the like. They have also been based on an understanding of the issues affecting the rural lands of Mudgee as well as a review of planning policies of other local government areas. Comments from the community were also taken into consideration. Particularly those outlined in the community consultation report. In particular is the desire of the community for lifestyle and conservation of vegetation and the natural features and environmental qualities of the area as well as the continuation of agriculture. It is important to note that these units are based on the existing land uses and landforms and that no attempt has been made at this stage to consider the policy and planning provisions that relate to the land. This is the next step.

The methodology is described in Appendix 5. Based on this methodology, there are 6 broad land units within the Shire. They are as follows:

- | | |
|---------------------------------|-------------------------------|
| § <i>Agricultural Landscape</i> | § <i>Cropping and Grazing</i> |
| § <i>Intensive Agriculture</i> | § <i>Native Vegetation</i> |
| § <i>Vineyards</i> | § <i>Rural Living</i> |

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The land units are outlined on Map 8.1 and are discussed below.

The *Agricultural Landscape* land unit is based on the steeper land, plateaux and valleys to the south of Mudgee and including the Hill End, Windeyer, Lue valleys as well as the land to the south west of Wollar. Photo 8.1 shows the land unit.



Photo 8.1: Agricultural Landscape Land Unit

Date of Photo: July 2002

The *Intensive Agriculture* land unit is based on the high class agricultural land in the floodplain along the Cudgegong River. Photo 8.2 shows the land unit.



Photo 8.2: Intensive Agriculture Land Unit

Date of Photo December 2001

Map 8.1 Rural Land Units

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The *Vineyards* land unit consists of the current extent of the major vineyards area between Mudgee and Gulgong and surrounding land. Photo 8.3 shows that land unit.



Photo 8.3: Vineyards Land Unit

Date of Photo: December 2001

The *Cropping and Grazing* land unit is based on the plains to the north of the Shire. Photo 8.4 shows the land unit.



Photo 8.4: Cropping and Grazing Land Unit

Date of Photo: July 2002

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The *Native Vegetation* land unit consists of the land that is covered by a significant amount of native vegetation which is scattered across the Shire. The land is mostly steep land or land that is poor in soil quality which makes it unsuitable agriculture. It does provide a rich source of biodiversity. Photo 8.6 shows the land unit.



Photo 8.6: Native Vegetation Land Unit

Date of Photo: July 2002

The *Rural Living* land unit covers the existing rural small holdings subdivisions which are scattered throughout the shire. Photo 8.7 shows one of these subdivisions in the Grattai locality.



Photo 8.7: Rural Living Land Unit

Date of Photo: July 2002

8.3.2. Rural Land Designations

The land units can be translated into future zones. However, as this document forms part of a strategy and does not zone the land, the term land use designation has been used to describe them. In determining the boundaries of the land designations, the potential for the expansion of existing agricultural activities, such as intensive plant growing and vineyards is considered. It is important to consider the future needs of these activities as well as the traditional agricultural uses of cropping and grazing.

The utilisation of landuse zoning to segregate landuses is a commonly used practice in New South Wales. In rural areas however there has generally been one or 2 generic type zones that have been called a "rural" zone. One of the major reasons for zoning an area is to preclude or regulate specific uses that are considered to be not in keeping with the general amenity of the area.

Zone names such as residential, commercial and industrial are used to identify a list of specific land uses that are permissible in a particular location. Rural zones are often less specific. The term rural describes a character, not a use. It is therefore appropriate to use a zone name that provides an indication of the uses that are carried out within that area.

Zoning can also be used to identify the major objective for any future as well as existing development in an area for example, if an area is of high conservation status then a zone name outlining this is also appropriate.

A sieve methodology has been used to determine the land use designations. It is described in appendix 5.

The designations are as follows:

- § Agricultural Landscape
- § Intensive Agriculture
- § Vineyards
- § Rural Living
- § National Parks and Reserves
- § Nature Conservation

They are outlined on Map 8.2 and are discussed below. It should be noted that the current Environmental Protection zones (which cover the land designated as Nature Conservation) are to remain.

A key component of intensive forms of agriculture is that they do not cause or increase incidences of rural land use conflict. The philosophy of the new use ameliorating the impacts on the existing uses should be applied in these circumstances. New forms of intensive agriculture are to require the consent of the Council and the development application is to be accompanied by a 'total farm management assessment' which will outline how the proposed development will be environmentally, economically and socially sustainable. This is a map and report which encompasses the following:

- § Property Plan. This will provide details of the existing farm functions and physical landscape as well as a land capability assessment.
- § Agricultural Sustainability Assessment. This will address the environmental, social and economic aspects of the proposal. It will include an assessment of potential land use conflict, potential pollution and how it is to be dealt with as well as an assessment that the proposal can make a net farm profit.
- § Farm Management Plan. This will outline what is proposed to be carried out on the site. It will also consider the manner of soil and water management

The provision of the above information in this format will allow the proponent, Council, neighbours and the wider community to assess the impact of intensive forms of agriculture to ensure that it is sustainable and does not cause an unacceptable impact on adjoining property owners.

Map 8.2: Land Use Designations

Agricultural Landscape

This is an area that has a mixture of land uses and forms which create a distinct Agricultural Landscape character. It covers the Agricultural Landscape and cropping and grazing land units. It also forms part of the attraction of the Shire for tourists as well as the reason why people want to move to the Shire.

The mixture of rural uses is to be retained with controls placed on the location of houses so that they do not create a conflict by being too close to the boundaries, thereby creating rural land use conflict. Agriculture uses are to be encouraged as are rural tourism and accommodation. Where it is close to Mudgee and the vineyards, it can be used for the location of major tourist facilities and resorts rather than in the vineyards area itself. This will have to be complimented by a specific Development Control Plan which will identify the matters to be considered as well as delineating the areas where they should be appropriate.

The subdivision minimum is to be 100 hectares for boundary adjustments and the minimum size for a dwelling is to be 400 ha – which can be either one lot or a number of lots held in the one ownership to make up 400 hectares. The provision for 20 ha lots to be created as long as intensive agriculture is practiced as exists at present should not be included because the proposed Intensive Agriculture and Vineyards designations cover land considered to be suitable for this. The clause is also creating lots that can be used for rural residential uses.

The land between Mudgee and Gulgong and to the south of Mudgee that is near to the vineyards areas would be appropriate for the construction of tourist accommodation facilities that are not permitted in the vineyards land designation. Detailed controls will be necessary for the size, bulk and scale as well as location and landscape impact of these and they can be developed at a later date.

A set of desired future character statements (which can ultimately become the zone objectives) should be prepared for the designation and it should include the following matters:

- § Preservation of the open rural landscape and its cultural heritage values.
- § Maintenance of large holdings.
- § Provision for both intensive and extensive forms of agriculture
- § Buildings to blend into the landscape.
- § Protection and improvement of water quality.
- § Preservation and enhancement of native vegetation, including habitat linkages.
- § Protection of the amenity of existing residents.

Controls should also be placed on the height of dwellings as well as the impact they have on the landscape by way of location and appearance. For example, they should be located below ridgelines and be of colours that blend in with the surrounding environment.

Consideration should be given to placing controls on the clearing of land and preservation of areas of known biodiversity habitat and important habitat linkages.

Intensive Agriculture

This is a small part of the floodplain and alluvial river flats of the Cudgegong River. The land is mostly class 2 and 3 and is used mostly for intensive plant growing including market gardening and irrigated lucerne.

Intensive forms of plant growing will be encouraged because of the high soil quality. Dwellings should be located so that they are not, as far as possible, located on the high class of agricultural land. It is noted that there are currently not a lot of dwellings on the land. Intensive Agriculture is the main use to be practiced on this land and other uses such as tourist accommodation are to be prohibited. A Total Farm Management Assessment will be required to be submitted with applications for intensive forms of agriculture.

The subdivision minima would remain as 20 ha.

A set of desired future character statements (which can ultimately become the zone objectives) should be prepared for the designation and it should include the following matters:

- § Preservation of high class agricultural resources
- § Promotion and maintenance of sustainable agriculture.
- § Reduction of rural land use conflict.
- § Protection and improvement of water quality.
- § Preservation and enhancement of native vegetation, including habitat corridors.
- § Protection of the amenity of existing residents.
- § Buildings to blend into the landscape.
- § Protection of the amenity of existing residents.

Vineyards

This covers the current extent of the vineyards area. Indications have been given that the land available for future vineyards has been used and that there is not planned to be any further expansion of the vineyards that exist. However, there will be infill development. Further, investment in infrastructure to supply water has enabled the development of land for grapes around Gulgong. The intension of the vineyard designation is not to limit the extent of vineyard development in the Shire and provisions will be made for the continued development of vineyards in the agricultural landscape and intensive agriculture designations.

It would be similar to the Intensive Agriculture designation but will signify that the vineyards are an important component of the Shire and should be protected from any uses that are likely to cause rural land use conflict and hence potentially lead to their demise. Of particular concern is tourist uses and accommodation that is not in conjunction with a vineyard. There should also be controls placed on the size of these uses within the vineyards zone. A Total Farm Management Assessment will be required to be submitted with applications for intensive forms of agriculture.

The subdivision minima would be 20 ha.

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Consent will be required for the planting of vineyards. However replanting of an existing area of vineyards after grubbing would not require consent, providing there is a sufficient setback from any dwelling house. The main reason for this is to ensure that the vines are not planted near to boundaries and adjoining houses.

A set of desired future character statements (which can ultimately become the zone objectives) should be prepared for the designation and it should include the following matters:

- § Promotion and maintenance of sustainable viticulture.
- § Reduction of rural land use conflict.
- § Protection of the amenity of existing residents.
- § Protection and improvement of water quality.
- § Preservation and enhancement of native vegetation, including habitat corridors.
- § Buildings to blend into the landscape.
- § Encourage tourism development in association with intensive forms of agriculture

The zone should be accompanied by a Development Control Plan which provides guidelines and controls on the location of wineries, dwelling houses, tourist facilities and accommodation as well as the location of future vines in relation to surrounding residential uses and key strategic sites for tourism development for example in the vicinity of the commencement of Henry Lawson Drive at Mudgee, Henry Lawson Drive north of Poets Corner, Rocky Waterhole Road in the vicinity of Lue Road.

Rural Living

This designation covers the existing rural small holding lots and has been included to provide a better description of the rural residential land use and the desires of the existing and future land owners.

The mixture of rural uses is to be retained with controls placed on the location of houses so that they do not create a conflict by being too close to the boundaries, thereby creating rural land use conflict. Rural tourism and accommodation uses are to be encouraged. Agriculture, particularly intensive forms of it are not to be encouraged as they have the potential to cause land use conflict with the predominately rural residential uses in the area.

Lot sizes are to remain as 10 hectares.

A set of desired future character statements (which can ultimately become the zone objectives) should be prepared for the designation and it should include the following matters:

- § Preservation of the open rural landscape and its cultural heritage values.
- § Buildings to blend into the landscape by having 'earthy' colours and low scale buildings.
- § Protection and improvement of water quality.
- § Preservation and enhancement of native vegetation, including habitat linkages.
- § Protection of the amenity of existing residents.

Controls should also be placed on the height of dwellings as well as the impact they have on the landscape by way of location and appearance. For example, they should be located below ridgelines and be of colours that blend in with the surrounding environment.

Consideration should be given to placing controls on the clearing of land and preservation of areas of known biodiversity habitat and important habitat linkages.

National Parks and Nature Reserves

This designation would cover the existing areas that are zoned as National Parks under the provisions of the current Mudgee LEP.

The desired future character statements would mirror the current zone objectives as would the uses that are permitted and prohibited.

State Forest

This designation would cover the existing areas that are zoned as Rural 1(f) Forestry under the provisions of the current Mudgee LEP.

The desired future character statements would mirror the current zone objectives, as would the uses that are permitted and prohibited.

Nature Conservation

Currently there is insufficient information on the status of the native vegetation to adequately identify with certainty the important areas within the Shire. However, the existing 7(b) Environmental Protection - Nature Conservation zone provides a starting point and should be retained. There is a need to identify the significant areas of native vegetation as well as key habitat linkages. The map prepared by the National Parks and Wildlife Service and discussed in Chapter 2 can be used as a basis for this. It should be noted that this land is mostly hilly and not suitable for agricultural pursuits. In addition, the Native Vegetation Conservation Act requires consent from the Department of Land and Water Conservation for any clearing of vegetation. Once the detailed information is available a designation can be put in place that considers the following discussion.

This designation is for land that is covered by native vegetation. It is also mostly steep land that has limited access. It has two components:

- § National Parks and Nature Reserves
- § Private Land

A set of desired future character statements (which will ultimately become the zone objectives) should be prepared for the designation and it should include the following matters:

- § preserve the integrity of the native vegetation for its own values as well as habitat conservation.

- § recognise areas of significant threatened species.
- § protect areas of significant habitat.
- § discourage clearing of vegetation, subdivision and incompatible development
- § identify linkages to be protected and enhanced.
- § limit clearing of land and construction of buildings in close proximity to the edges of the zone

It should be noted that these are very similar to the existing zone objectives for the 7(b) Environmental Protection - Nature Conservation zone.

Ostensibly, it is to ensure that the native vegetation and resultant habitat is conserved and enhanced. It should have an environmental nomenclature in any zoning that will follow.

Incentives are dealt with later in the document and to be eligible for any incentives, the land in question should be covered by this designation.

8.4 Rural Land Uses and Lot Sizes

8.4.1. Rural Land Uses

This section provides a discussion on the following land uses that have been identified in the research and discussions conducted in the formulation of this study as requiring specific management due to particular issues:

- § Agricultural Uses
- § Tourist Development
- § Home based businesses

A table at the end of this section summarises the uses and gives an indication of how they are to be dealt with in relation to the proposed land use designations / zones.

Agricultural Uses

The term "sustainable agriculture" has many connotations and is linked to the concept of Ecologically Sustainable Development, which embodies the 3 themes of Environment, Economics and Social.

A definition of sustainable agriculture in the ' Strategic Plan for Sustainable Agriculture - Sydney Region' is

"Agriculture that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends"

Another definition is provided by the Standing Committee on Agriculture of the Australian Agriculture Council Working Group on Sustainable Agriculture:

"Sustainable Agriculture is the use of farming practices and systems which maintain and enhance the economic viability of agricultural production; the natural resource base; and other ecosystems which are influenced by agricultural activities"

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All of these definitions embrace the concepts of environmental and economic issues, but do not consider the social aspects of sustainable agriculture. These include the capacity of agriculture to meet the demands of the population for healthy and fresh food and fibre products, as well as its ability to have a minimal impact on the amenity and peace of mind of community members, thus reducing rural land use conflict.

New definitions for sustainable agriculture should be incorporated and be as follows:

Sustainable Agricultural use of land means the use of land for animal boarding or training establishments, cattle feedlots, extensive agriculture, intensive horticulture, intensive livestock keeping establishments, opportunity feedlots or turf farming, which can be maintained and managed so that the land remains

- § *environmentally sustainable (that is, environmental pollution and land degradation arising from the use is minimised);*
- § *socially sustainable (that is, land use conflict and loss of amenity of the surrounding area arising from the use is minimised); and*
- § *economically sustainable (that is, there is a capability of making a net farm profit from the use).* (Wollondilly Shire Council)

From a land use planning perspective, there are 3 broad agricultural uses in NSW: intensive plants, intensive animals and extensive agriculture. It follows, therefore that there is a need define these uses separately. Both of the intensive uses should require consent and extensive agriculture should not as it is considered that it does not, generally, cause major land degradation or water quality problems (unless it is associated with major land clearing), it generally occupies land already cleared and used historically used for that purpose and because it is considered to be an unreasonable and complex land use to be able to embody in a development application.

The current Mudgee LEP defines the term 'agriculture' and the term 'intensive agriculture' and 'intensive livestock keeping establishment'. The agricultural definition and the intensive agriculture and intensive livestock keeping definitions seem to be ambiguous and illogical. The intensive agriculture definition seems to only relate to intensive plant growing when generally, intensive agriculture also refers to the keeping of animals. If the different definitions are meant to require consent for intensive agriculture and intensive livestock keeping establishments and no consent for agriculture, it can be interpreted that all forms of intensive animals as well as intensive plant growing do not require consent. The adoption of the three definitions below would alleviate the confusion that could ensue from the above discussion. It is also easier to refer to terms in common usage. The term livestock keeping refers to animals and horticulture refers to plants so it is felt that these two terms should be used. The basic difference between intensive and extensive agriculture is the application of water and fertiliser over and above that naturally occurring (for plants) and the use of a feeding method other than natural grazing (for animals). It is the intensive forms of agriculture that have the potential to cause land degradation and rural land use conflict and for that reason should require development consent to ensure that it is managed appropriately as well as taking into consideration the adjoining uses. Extensive forms of agriculture (broadacre cropping and grazing) are not considered to require development consent.

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The following definitions are options for discussion, and provide examples that may be applicable to Mudgee Shire.

A suggested definition for extensive agriculture:

Extensive Agriculture means the growing of plants using natural rainfall (except for irrigated pasture and fodder crops) or the rearing of animals using grazing as a feeding method, but does not include intensive plant growing or intensive animal keeping.

This definition uses as its basis cropping and grazing that does not need the continual application of water or feed not occurring naturally. Periodic feeding for drought and water application is considered to be included in this. Irrigated pasture (growing oats) and the growing of irrigated fodder crops (lucerne) are considered to be an extensive form of agriculture because the inputs and the extensive nature of the activity are not considered to be a major cause of nutrient export or land degradation when compared to market gardening or turf farming.

A suggested definition of intensive plant growing is as follows:

Intensive plant growing means the growing of plants and fungi where water is applied over and above that naturally occurring using the following horticultural systems:

- § Hydroponics,
- § Crop protection structure,
- § Market gardening,
- § Orchardng,
- § Field flowers, and
- § Turf farming

except, where in the opinion of the Consent Authority, it is irrigated pasture and fodder cropping or the produce is grown for personal household consumption or enjoyment

This definition relies on a particular horticultural system as the basis for definition. It is the horticultural system, which has the potential to cause land degradation, water quality or land use conflict. Other definitions require decisions to be made about whether the particular use requires consent due to the potential to cause water quality problems. This definition requires consent for the *use* (horticultural system) rather than an interpretation. For the reasons outlined above, irrigated pasture and fodder cropping is not considered to be an intensive form of plant growing.

Vineyards are an important landuse in the Shire as well as having the potential to cause land use conflict because of noise and spray drift potential. For this reason, it is considered that the planting of vineyards for commercial use should require development consent. A suggested definition is the one from Cessnock LEP 1989 and is as follows:

Commercial Vineyard – means a plantation of grape vines , commercially grown for grape or wine production purposes

A suggested definition for intensive animal establishment is as follows:

Intensive animal establishment means a building or place in which or on which livestock are held for the purpose of nurturing by a feeding method other than natural grazing and includes:

- § Poultry farms,
- § Buildings and places use for aquaculture (including the farming of crustaceans);
- § Horse training and boarding establishment;
- § Piggeries and
- § Worm farms;

but does not include the keeping of livestock for personal enjoyment or consumption of the occupier of the land.

The main determinant of whether a form of animal keeping falls under this definition is the reliance on a feeding method other than natural grazing. This could be amended to include uses such as rabbit keeping.

Tourism Development

The current provisions in the Mudgee LEP on tourist related developments are also ambiguous, contradictory and confusing. The source of the problem is the definition of the term 'tourist facility' which appears in the Environmental Planning and Assessment (EP & A) Model Provisions. The definition is as follows:

tourist facilities means an establishment providing for holiday accommodation or recreation and may include a boat shed, boat landing facilities, camping ground, caravan park, holiday cabins, hotel, house boat, marina, motel, playground, refreshment room, water sport facilities or a club used in conjunction with any such activities; EP&A Model Provisions

It can be seen that this includes a number of other uses which are separately defined in the Model Provisions and Mudgee LEP. Of note are the terms 'caravan park', 'motel' and 'restaurant' (which is covered by the definition of 'refreshment room' in the Model Provisions).

Each of the rural zones treat these differently and in a contradictory manner. All permit tourist facilities with development consent but prohibit some of the component parts of them. This is shown in table 8.1.

Table 8.1: Treatment of Tourist Facilities in each Rural Zone.

Zone	Prohibitions
1(a) General Rural	No tourist related uses.
1(a1) Intensive Agriculture	Caravan Parks Hotel
1(c1) Rural Small Holdings	Caravan Parks Clubs Hotel Motel
1(c2) Rural Residential	Hotel Motel

Source: Mudgee LEP

It can be seen that in each of these zones, although the specific uses are prohibited by themselves, they are permitted as a tourist facility. Case law interprets such a case as permitting the use where there is an ambiguity in the zoning table where a use is prohibit under one definition and permitted under another. So it can be seen that the prohibitions in certain zones are in fact ineffective. There are also contradictions within the zones as to what uses are prohibited. It would be logical to think that the rural residential zone (which is more akin to a residential zone in streetscape and uses than a rural zone) would be the most restrictive and prohibit tourist facilities, as is done with the residential 2(a) zone. As it stands, they are all permitted in the zone which is not the intent as some are listed as being prohibited.

Bed and Breakfast and Farm Stay accommodation also need to be considered in the context of the definition of tourist facilities. It is noted that there is not a specific definition of farm stay and it is acknowledged that it is the same as a bed and breakfast but in a different location and consideration could be given to including a reference to it in the definition of rural residential development.

The issue of the location of tourist accommodation and restaurants in the vineyards area or on land that is suitable for intensive agriculture – high class agricultural land – needs to be considered in the context of rural land use conflict and the retention of the vineyards industry. One option is to ensure that, if they are to be located in the vineyards area, they must be of a small scale – say 20 rooms maximum – and be in conjunction with a vineyard related use (vineyard or winery). This can be either a new vineyard or winery or an existing one. If a restaurant or accommodation facility is permitted to establish next to, or across the road from, an existing vineyard or winery, it could cause conflict because it has no relationship to, nor is reliant upon, the continuation of the vineyard or winery. The scenario could very well be that the vineyards and wineries are forced out because of the conflict issues. It must be pointed out that there are very few blocks of land within the vineyards area that are not in close proximity to a vineyard or winery. One solution therefore, is not to allow tourist facilities to locate in close proximity to a vineyard or winery, unless it is on the same lot as that vineyard or winery.

It has been noted that there is interest in the development of resort style of accommodation and this needs to be considered in the context of its location and

potential impact on the adjoining agricultural production. As a general principle, large scale tourist accommodation should not be located within the vineyards area because of the potential for rural land use conflict, it being noted that vineyards have impacts that cross the property boundary which can cause conflict with non-vineyard neighbours (which discussed in chapter 4). Therefore, the option is to define the use and ensure that it is not located in the same area that intensive agriculture is located.

It is necessary therefore to clarify the issue of tourist facilities. The best way of doing this is to separately define each component and not rely on the broad definition, as has been discussed with the agriculture definitions.

The Council therefore, needs to decide how to deal with each separate component as each has a different impact and scale. Holiday Cabins, for example are considered to be appropriate in the rural zones, but a large 200-room hotel may not be appropriate because of the traffic generation, size and scale of the use as well as the potential for rural land use conflict with intensive forms of agriculture. The rural small holdings zones and rural residential zones are predominantly residential use areas and Hotels, Motels, and Restaurants may not be considered appropriate for these areas, especially the rural residential zones where the houses are at a higher density.

A method that can be used to achieve the desired result of defining tourism uses is to classify them by the scale of the use into low, medium and high scale tourist developments. The definitions are as follows:

- § *Low scale tourist development* –includes Bed & Breakfast and self contained accommodation in an existing single dwelling and not require consent.
- § *Medium Scale tourist Development* – includes cabins, purpose built guest houses, motels with up to 30 rooms and these must be in association with vineyard / winery on same lot if it is within the vineyard designation.
- § *High scale tourist development* – includes resort type development and there should be siting criteria developed such as on the edge and / or not within 500 metres of a commercial vineyard and it should include extensive veg buffers within the site as well as having a community title option for the accommodation units which can only be considered in conjunction with or after construction of the units.

An additional matter that needs to be addressed in the location of tourist development is the need to protect the rural character of the entrances to both Mudgee and Gulgong, particularly along the Castlereagh Highway from ribbon development. This may be addressed through a DCP for Vineyards and provisions in the LEP.

Home Based Businesses

Home based businesses are an emerging employment trend in Australia. They provide an important employment opportunity for people living in rural land on the fringe of metropolitan Sydney. Home based businesses can cover a wide variety of uses ranging from trucking businesses to small home based industrial uses to home office based businesses such as consultants. Small start-up businesses require cheap premises, good exposure, efficient access to complementary services and spatial flexibility. (Morris and Kaufman 1996 p 5)

One of the major issues with home based businesses is that, generally they are not provided for in rural planning instruments. There is a need to recognise the value of home based businesses to the Mudgee Shire economy. Penrith's Urban Land LEP provides a good definition to allow home based businesses to develop. It is as follows:

home business means a business carried out, or partly carried out, in a dwelling house or dwelling, or within the site area of a dwelling house or dwelling, by the permanent residents of the dwelling house or dwelling, and which does not involve:

- (a) *the employment of more than two persons, at any one time, in addition to the permanent residents, or*
- (b) *the exhibition of an advertisement (other than an advertisement exhibited on that dwelling house or dwelling to indicate the name or occupation of the resident), or*
- (c) *the interference with the amenity of the neighbourhood by reason of the emission of noise, vibration, smell, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products, grit or oil, or the like, or*
- (d) *interference with the amenity of the neighbourhood due to the generation of vehicular traffic, the reduction of car parking in the vicinity of the site, visits by customers or clients, or the like, or*
- (e) *exposure to view, from any adjacent premises or from any public place, of any unsightly matter, or*
- (f) *the provision of any essential service main of a greater capacity than that available in the locality, or*
- (g) *a brothel. (Penrith City Council).*

A form of this definition may be appropriate for the Shire.

From a business location point of view, some rural areas lend themselves to limited trucking and building type businesses, where there is space to locate a shed and parking area for trucks and equipment. Insufficient development standards and controls in the past however have allowed these businesses to locate in inappropriate areas or have allowed an unacceptable intensity of activity to occur on certain sites. While it is appropriate that a certain level of home based businesses be encouraged to establish in the rural areas, they need to be adequately controlled both by definition and by specific standards that set a threshold to the use, ensure protection of the environment and amenity of the locality, and give certainty to local residents about what level of non-residential activities that are permissible and appropriate.

8.4.2. Vineyards and Wineries

The matters related to vineyards and wineries affect the non-vineyard neighbours (both rural residential use and extensive agriculture) and the general public. They can be categorised into the following:

- § *Proximity of plantings to boundaries and dwellings.* This can cause problems with machinery turning onto adjoining properties and roads. It also can cause amenity problems from noise and spray drift.
- § *The size and scale of wineries and bottling plants.* These can resemble large industrial type structures in the rural landscape if not designed and located appropriately. One option is to have them in industrial areas and not in the rural

landscape. This is not favoured because of the locational and transport issues. It is a vineyard area which has a number of large buildings. However, they should be located and designed so that they attempt to blend in with the rural landscape.

- § *Noise and spray drift.* This is most problematical at the harvest time when a number of the larger vineyards will harvest all day and into the night. The spray drift and noise of the sprayer is also a cause of land use conflict with adjoining non-vineyard neighbours.
- § *Truck movements related to vineyards.* This is more of a problem for those vineyards that don't process the grapes on the property. It has to do with the frequency and time of the movements and the potential impact on the adjoining land uses. It can also have an impact on traffic movements. One option is to regulate the time that trucks can enter and leave the property.
- § *Car movements and frequency related to cellar doors.* This is more of a traffic management issue than anything else.

The matters raised above can be dealt with by way of controls on the operation of the vineyards and wineries or by self regulation and strategic planning. Strategic planning can be used to ensure that the vineyards are able to continue without the incursion of rural residential uses as well as providing adequate land to allow for the expansion of the vineyard areas. A lot of conflict can be dealt with by ensuring that the vineyard operator is carrying out best practice management. It must be recognised that it is an intensive form of agriculture that has some off site impacts and as long as these are minimal, it should be able to operate unimpeded as long as it is using best management practice. This could lead to the formulation of a development control plan.

8.4.3. Rural Lot Sizes

The issue surrounding rural lot sizes can be categorised into the subdivision minimum and the minimum lot size for a dwelling house.

Subdivision Minimum

Currently there are a variety of subdivision minimums in the rural areas which is related to the zones. The current minimums are as follows

- § Rural 1(a) zone: 100 ha
- § Rural 1(a1) zone: 20 ha
- § Rural 1(c1) zone: 4 ha to 10 ha
- § Rural 1(c2) zone: 0.4 ha to 2 ha

It should be noted that in the Rural 1(a) zone, under specific circumstances, lots of 20 ha (for intensive agriculture) and 2 ha (concessional lots) can be created. The concessional lot provision ceases to exist after 21 August 2003. The 4 ha minimum for the 1(c1) zone is only effective for those areas that adjoin the urban areas of Mudgee and Gulgong.

The reasons for the differing minimums is related to the use of the land for the variety of agricultural activities, which in turn is related to the agricultural land classification and ability to grow intensive forms of agriculture. For this reason, The 1(a1) zone, which is on the rich alluvial floodplain of the Cudgegong River and therefore can

sustain more intensive cultivation, for lucerne for example and still return a sufficient income to support a family on a smaller lot size. Whereas the rural 1(a) zone, which covers mostly classes 3, 4 and 5 land has a larger minimum because of the limitations of this land and the lower fertility of the soil. Broadacre farming needs a larger land area to return a similar income to the lucerne crop for example.

The concessional lots are also a source of land use conflict because they are not subdivided having regard to the surrounding agricultural land uses. They are also isolated from the towns and the services and facilities provided there. The LEP gives them a sunset clause so that they will not be permitted after August 2003.

This issue needs to be addressed having regard to the various minimas and the ability to vary the lot sizes, particularly in the rural 1 (a) zone, where lots of 20 ha can be created for use as intensive horticulture in an otherwise 100 ha minimum zone. This can cause fragmentation of the land and lead to rural living style uses if the land is on sold and the new owner does not intend to use the land for intensive agriculture and instead uses it for a residential use. This can lead to rural land use conflict and have a detrimental impact on the surrounding farming activities, which are being carried out on larger holdings. Whilst it is difficult to ensure that a prospective owner will carry out intensive agriculture per se, an exception can be made for vineyards, where there is a significant cost in the infrastructure (vines and trellises). Therefore, the clause in the LEP should be amended to allow subdivision in the Agricultural Landscape designation for commercial vineyard purposes with the submission of a total farm management assessment (as for vineyards in the Vineyard designation) with the additional requirement that a dwelling can only be erected after the construction of the vineyard trellises, thus ensuring that the subdivision is a bona fide subdivision for a vineyard use and is not going to be used for a rural residential use.

The issue of an appropriate subdivision minimum is one that is linked to the land's use and the topographic considerations as well as the amount of native vegetation on the land. Generally those uses which can be conducted in a more intensive form of agriculture like vineyards and irrigated cropping such as lucerne growing can do so on a smaller land size than the more extensive forms of agriculture like cropping and grazing. The methodology for identifying the land use designation allows for the application of differing minimum subdivision and dwelling house sizes for the different land use designations that are recommended. It is also important to differentiate between the minimum for subdivision and boundary adjustments and the potential for a dwelling house to be constructed. In the current LEP the minimum subdivision size and dwelling house size is the same.

In order to assess the most appropriate subdivision minimum, the proposed land use designations have been used as a basis for this. The following discussion is based on these and analysis has been carried out on the combined localities that best fit the proposed designations.

The current minimum for the 1(a1) intensive agriculture zone is 20 ha and it is considered that this is appropriate for the proposed vineyards and Intensive Agriculture designations.

There are a number of issues that have to be taken into consideration when considering the most appropriate subdivision minimum for the proposed Agricultural Landscape designation. They area as follows:

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- § Current fragmentation and holding pattern
- § Potential to increase the fragmentation
- § Number of potential subdivisions at the current minimum
- § Impact on the ability to provide services and facilities
- § The impact on the ability to do boundary adjustments

The first matter to consider is whether the current minimum is adequate and whether it should be decreased or increased. The best way to gain an indication of this is to analyse the current holding pattern and assess the number of potential lots that could be created if all current holdings were subdivided to the existing minimum in the LEP, which for the current Rural 1(a) zone is 100 ha. Table 8.2 shows the potential number of lots that would result from a subdivision of the current holding pattern throughout the Shire. Whilst it is noted that this covers all of the land and that some of it is zoned as Environmental Protection and Intensive Agriculture, most of the Shire is covered by the zone and it gives a good indication of the potential for subdivision at a variety of minimums. Public uses such as National Parks, Windamere and Burrendong Dams as well as Travelling Stock reserves have been excluded from the calculations as have the rural small holdings.

It can be seen that under the current subdivision standard, that there would be in excess of 3,000 lots that could be subdivided. At 200 ha the total is approximately 1,800. This drops dramatically at the 400 ha size to a figure of around 300 potential lots.

Table 8.2 Subdivision Potential at 100 ha minimum

Locality	100 ha	200 ha	400 ha	500 ha	600 ha	700 ha	800 ha
Goolma	302	111	21	12	7	3	2
Birriwa - Stubbo	347	130	26	11	7	2	2
Bungabah - Cope	109	41	13	12	4	4	0
Gulgong	58	20	4	0	0	0	0
Cooks Gap - Cooyal	102	30	6	4	0	0	0
Ulan - Wollar	201	76	29	19	16	12	9
Home Rule - Frog Rock	32	7	2	0	0	0	0
Eurunderee - Wilbertree	129	44	7	7	5	2	2
Mudgee	31	5	0	0	0	0	0
Botobolar - Lue	232	95	28	21	15	12	11
Piambong - Grattai	610	160	54	27	18	8	2
Windeyer - Pyramul	369	147	40	24	14	7	6
Mt Frome - Cudgegong	98	28	4	0	0	0	0
Hargraves	655	291	110	77	51	34	26
T O T A L	3,275	1,185	344	214	137	84	60

It should be pointed out that there are two components to a subdivision minimum:

- § The minimum for the creation of a lot, and
- § The minimum size for the construction of a dwelling house.

Usually, these are the same, however they can be different. In the case of Mudgee, where there is an existing high proportion of rural residential development and a clear history and desire for 'hobby farms', a case can be made for separating the minimum for creating a lot and the minimum for constructing a house. It is recommended that this course of action be pursued. The minimum for the construction of a dwelling is recommended to be 400 ha. However, farm adjustments are to be permitted on vacant land only where no additional lots are created. This is also called a boundary adjustment where the boundaries of two lots so as to create two new lots without the creation of an additional lot.

The main reason for recommending the increase in the minimum lot size is the potential for a large number of lots to be created under the current subdivision minima of 100 ha. It is not based on any analysis of a "viable" or "sustainable" farm size – as this would be considerably larger. Table 8.2 shows that there is the potential for a large number of lots to be created. It has to be assumed that the potential owners of these lots will have employment that is not related solely to agriculture on the property itself – in short, they are likely to be purchasing it for lifestyle rather than agricultural use. They are therefore likely to travel to work at another location. The data provided in chapter 4 shows that the localities with the highest number of large holdings are those that are not close to the centres of Mudgee and Gulgong, where the services are provided. It will create an additional financial burden on the Council of providing services and facilities. It also has the potential to create more need for road construction and maintenance as a result of increased traffic generation. It should be pointed out that each new dwelling (for a non-farm income) creates between 4 and 8 traffic movements per day based on a family with 2 adults working off the site and children attending school. The Council already has problems with the upgrading of roads and provision of services to the large number of rural small holding areas and to allow for this to increase will only compound the problem, not solve it. It is also apparent that the increase in revenue generated by subdivision (in the form of rates) is unlikely to offset the additional cost of providing facilities, services and road maintenance costs.

Dwelling Houses

The construction of a dwelling house is limited to either the minimum subdivision size or an existing holding (all adjoining or adjacent lots held in one ownership as at 29 November 1967) or a concessional lot.

There are various options to consider in association with dwelling houses on rural land. They are discussed below.

Breaking the nexus between subdivision and the dwelling house can be used to create lots that can be used for agriculture only and do not have a dwelling entitlement or expectation attached to the subdivision of the land. This would allow for the creation of lots that are less than the minimum in the zone and which could be sold for investment purposes in relation to an agricultural use of the land. This would be more suited to the more intensive forms of agriculture than the extensive forms.

The Council can allow for more lots to be released onto the market by relaxing the dwelling house restrictions on existing parcels by allowing one dwelling to be constructed on each lot in a certain area. To do this, the Council would have to have

regard to the potential for impact on intensive forms of agriculture and it would not be considered appropriate to do it in such areas

Rural Cluster subdivision

The provision of rural cluster development is a mechanism that can be used to provide development whilst preserving the rural landscape quality of the area. It is done in other Council areas using the community title system. It involves the clustering of lots within a part of the parcel and providing for open space to be preserved around the dwellings by having a large residue lot that is not built upon and owned by the community association. It is only permitted in areas that do not have a significant amount of high-class agricultural land. It is also only allowed after an assessment of the area has been carried out to identify the constraints such as slope of the land, soil type, good agricultural land, surrounding land uses and potential land use conflicts, visual landscape features, water courses, native vegetation as well as distance from the towns for social facilities and services and the economic impact on roads and waste collection.

In the case of Mudgee, the provision of cluster subdivision will cause a higher demand on the services and facilities provided by the Council in areas that are isolated from the centres of Mudgee and Gulgong. It also has the potential to create further demands on the upgrading and construction of roads. For this reason, cluster subdivision is not considered appropriate at this time.

One exception can be made for resort type uses. It is common for these uses to have each unit owned by an investor who has some visitation rights but the whole resort is managed by one company. In such circumstances, the accommodation is provided on a non-permanent basis and the subdivision can only be done once the dwellings have been constructed or in parallel with the construction of the resort.

Rationalisation of Zone Boundaries

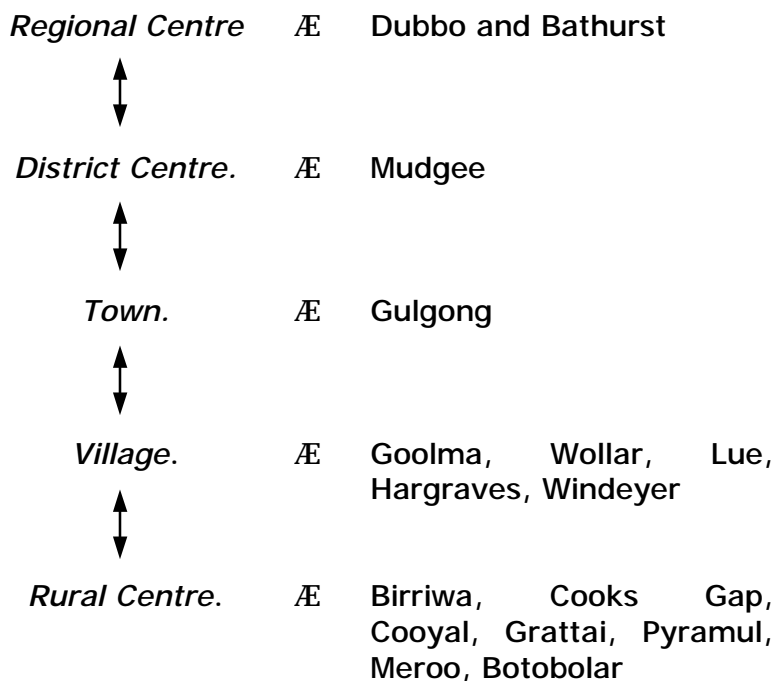
There are a number of parcels that are located near to the boundaries of zones, particularly near to the current rural small holding zones. These areas can be considered to be rezoned provided they meet the criteria identified for rural residential development which is outlined in the next section.

It is not considered appropriate for a study of the entire Shire to deal with individual properties. As such, each case will be dealt with on its merits and can be handled as part of the LEP preparation which is to follow this project.

8.5 Settlement Hierarchy

A four-order hierarchy is suggested for Mudgee Shire. It is based on the criteria listed in chapter 7 and is as follows:

A hierarchy of settlements can be based on this as well as other factors and for an area like Mudgee Shire should take the following form:



Map 8.3 shows the hierarchy.

The purpose of the hierarchy is to acknowledge that some settlements because of their lack of services and facilities are not able to expand. For a settlement to be able to expand, there is a need for basic services and facilities including weekly shopping and a school. The regional centre and towns are usually able to grow with a mixture of rural residential use and urban development subject to constraints and the villages and rural centres, because of the lack of services and facilities don't have the potential to grow. Growth of the Mudgee and Gulgong are dealt with by the other study.

Map 8.3: Proposed Settlement Hierarchy

8.6 Rural Residential Use Development

Rural fringe development is being considered by the Residential Strategy and therefore is not being looked at by the Rural Strategy except where it will encroach on existing rural land.

It is important that any rural residential use development does not impact on existing and potential agricultural land and that it does not cause an increased demand on the State Government and Council provided services and facilities. The Council can limit any future rural fringe development to the environs of Mudgee and Gulgong having regard to the constraints. It should also adopt the following criteria for any future rural residential use development:

- § Close to residential areas
- § Good road access to a sealed or formed gravel road
- § High proportion of existing rural residential uses
- § Not on class 1 or 2 agricultural land
- § Not in areas where there is a high proportion of intensive agricultural uses
- § The ability to minimise environmental impacts
- § Develop to the land's capability
- § Capable of disposing of onsite effluent
- § Not cause rural land use conflict
- § Minimise impact on native vegetation and biodiversity

8.6.1. Rural Living

Rural Living development includes the existing rural small holdings zones and these should be fully developed before any more land is released. These areas were originally subdivided in the 1970s, when there was a 10 ha minimum across the Shire. There are approximately 2,000 of them scattered throughout the Shire.

There are a number of problems with these areas at the present and they include:

- § Isolation from facilities and services
- § Poor soils which erode easily and are difficult to construct roads
- § Rural land use conflict with adjoining agricultural production
- § Traffic generation and the impact on road surfaces and the ability to adequately fund the necessary maintenance
- § Clearing of vegetation for dwelling houses
- § The owner not living on the land full time
- § Domestic pets which are only there intermittently injuring and killing wildlife and sheep and cattle on adjoining properties.

All of these issues need to be addressed before any decision is made to create any more of these types of lots.

8.7 Biodiversity Conservation

It is important therefore to provide a policy framework in which the biodiversity of the Shire can be conserved.

It is noted in chapter 5 that the Council is legally obliged under the provisions of the Local Government Act to consider Ecologically Sustainable Development (ESD) in the carrying out of all functions in relation to the rural lands. It is noted that the Mudgee LEP does not mention this and it should be amended to incorporate the concepts of ESD.

First of all there needs to be an assessment of the value of the biodiversity. Once this has been done the Council can consider the implementation of a number of policy options, which are as follows:

- § A specific zone in a Local Environmental Plan (LEP).
- § Provisions within a Development Control Plan (DCP).
- § Identification of linkages.
- § Incentives.

Each will be discussed as options to be considered.

8.7.1. Zone in LEP

A "Nature Conservation Zone" within an LEP could contain certain provisions that would ensure the preservation of significant habitats with identified biodiversity values. This zone could place restrictions on the clearing of land, and the uses that would be permissible to be carried out on such land. This could be seen as being a drastic step and could have a significant impact on the future use of the land. It would have to be backed up by a specific study of the area that would identify the land and its biodiversity value. The identification of land as a nature conservation zone could also be used as a requirement for some form of incentive scheme that will be discussed below. Such a zone is being proposed in the City of Shellharbour as part of its draft rural LEP.

An alternative way to conserve the biodiversity and not specifically zoning the land is to have a zone that reflects use or character of the land – Agricultural Landscape for example – and create an overlay hatching. This would be tied to a clause in the LEP that would have restrictions on the uses and activities that can be carried out on the land. This has the advantage of not creating a specific zone, but the disadvantage of not highlighting the biodiversity significance of the land in question.

The boundaries of these zones or hatchings need to recognise the topography and vegetation boundaries rather than merely following a cadastral (lot) boundary. The benefit of this approach is that it allows the land to be protected and the other land to be used for appropriate agricultural uses, rather than restricting a large part of land or allowing significant vegetation areas to be degraded by inappropriate land management practices.

8.7.2. Provisions in a DCP

Provisions within a Development Control Plan could provide specific details on the preservation of biodiversity within the area. This could include issues such as the construction of fences, the proximity of buildings to native vegetation areas as well as clearing of land.

8.7.3. Habitat Linkages

It is noted that there are a number of existing habitat linkages within the Shire. The presence of these linkages provides the ability of wildlife to move between one area and another and therefore contribute to the preservation of biodiversity within the Shire and wider region. The conservation of biodiversity within the Shire is integral to the future of the rural land and the wildlife linkages therefore are also integral with any rural planning policy to be prepared. The identification and protection of these linkages via a LEP would be a mechanism and would also put the wildlife linkages in the context of the rural land uses within the whole of the Shire. There is also a need to provide some detail as to how these linkages can be preserved and maintained as well as identifying specific ones that may need to be enhanced. This can be done by way of specific provisions within a DCP.

Incentives for biodiversity conservation are discussed in the next section, which deals with the whole issue of incentives.

It should be pointed out that one mechanism alone will not achieve the desired end of preservation of biodiversity and that a combination of two, three or all four of the above mechanisms may be required.

8.8 Incentives

The provision of economic incentives encompasses such things as a rate rebate, transferable development rights and purchase of development rights. They can be used for the preservation of agricultural land and agricultural production as well as biodiversity conservation, landscape preservation and heritage conservation.

The amounts of money paid by farmers for the Council rates is one of the largest single outlays for the farming business. The amount of rates charged is based on the value of the land. It has been noted previously that as the land becomes more desirable for a rural lifestyle, the value of the land is artificially inflated because people will purchase farms and not use them as farms, rather they use them as mostly lifestyle living with some part time farming occurring. This part time use of the land has a corresponding increase in the amounts of rates that the full time farmers must pay, as a result of the value increasing. However as this cost to the farming community has increased there has not been a corresponding increase in the value of the production and therefore this is causing an economic hardship for the farmers. One way to compensate the farmers for this is to offer a rate rebate. The rebate would only be available to full time agricultural operations and there would be a specific criteria applied to ensure that the rebate goes to legitimate farming activities. It would also be tied to performance measures and be annually renewed.

The rebate could also be tied to a specific zone. It is noted that council currently offers a rate rebate however this rate rebate should be a realistic rebate. This could be as much as half of the current rate or even more. This would have a corresponding impact on the other ratepayers of the Shire in that their rates would increase. However the increase would not be as high because of the larger number of urban ratepayers than rural ones. This matter needs further investigation should Council consider it worthwhile pursuing.

Purchase of Development Rights involves a farmer selling the development rights to the farm to a government or non-government organisation. In return a covenant is taken out over the land to ensure that the land is only used for agricultural purposes. The purchase of development rights can also be used to require soil and water management to be undertaken on the property. The property is inspected regular intervals to ensure that it is being used properly. Transfer of Development Rights occurs where land is declared to be in a preservation zone and kept for agriculture. The development rights to this land can be purchased by developers who wish to gain an increase in the development potential of land declared to be in a development zone. Both of these methods exist in the United States. Of the two, the Purchase of Development Rights is the more successful. Both are applicable to the Australian situation with the issues of Transfer of Development Rights already in existence for heritage sites in the city of Sydney. Its application to agricultural land is problematical under the existing EP&A Act because the Department of Urban Affairs is of the opinion that there are no rights to develop land in NSW, merely the right to lodge a development application which is then assessed on its merits. However, this issue needs clarification as there is a transfer of development rights scheme in the City of Sydney for the preservation of heritage buildings (mentioned above).

The provision of incentives for biodiversity conservation provides a good opportunity to conserve this important resource within the SHIRE. Financial incentives could be provided for people to conserve biodiversity on their property. The financial incentives could be by way of a rate rebate for people who have entered into an agreement with the Council to conserve and / or enhance a biodiversity corridor that has been identified. There would have to be a separate category for ecological significance and currently, there is no such categorisation in the Local Government Act. The only way that it could be applied at present would be through an environmental levy on all ratepayers that would include a component for biodiversity conservation. Once this has been collected, a financial assistance grant can be made under the provisions of section 356 of the Local Government Act. This is a complex way of achieving the outcome and it would be easier if there was to be an amendment to the act to insert a provision for a rating category for ecological significant land preservation. It would also be possible for the State Government to contribute to this, as the biodiversity resource is a Sydney regional and state significant one. For particular properties which have been identified as having potential for further development, it is possible that an incentive could be provided to the developer to gain a higher density for the conservation of specific parts of biodiversity or the provision of an enhancement of a biodiversity corridor. Such a scheme operates in the Hunter Valley Vineyards area of the Cessnock City Council where a density bonus is given for tourist accommodation in return for a planting of particular wildlife corridors.

There are significant policy and financial implications for the Council to consider if it is to embrace these. However, it should be discussed and considered.

8.9 Economic Development and Tourism

Economic development is an important component for the rural strategy. It is important to recognise the contribution of the existing rural economy to the Shire and the Council should take positive steps to encourage this. It can also provide policies that will allow them to expand.

The wine industry and tourism associated with this as well as the other attractions within the Shire are the best way of generating more economic development in the rural areas.

To enable the economic development to occur, there is a need to review the policies dealing with development applications for such uses as tourist facilities, bed and breakfast establishments and other tourist accommodation uses.

The area produces a variety of produce which can be sold to the local residents as well as the tourist. This can be done through the establishment of farmers markets. Alternatively, promotion of the local produce can be done through specific events in Sydney, such as the Pyrmont and Fox Studios' Farmers Markets and the Mudgee Wine and Food Fair at Balmoral Beach. These could be expanded. The Hawkesbury Harvest Farm Gate Trail concept could be modified and used, particularly during the September Wine Celebration.

There would be many opportunities for supporting activities to be co-ordinated that would assist in achieving the region's potential as a centre for wine and food excellence.

This co-ordination could be undertaken by the local economic development body or perhaps by the establishment of a regional local producers' association. This latter option would empower local producers and give them more ownership of their future and the potential for continued regional success.

Some activities that would add value could include:

- § Food and Wine Trail
- § Capability Directory / Asset Register
- § Regional Support for Food and Wine Festivals
- § Regional Website
- § Regional Branding
- § Training and Development

Each of these will be discussed below.

Food and Wine Trail

While there is a lot of information about agricultural related activities available for tourists in the Mudgee region, there would be clear benefits in compiling this into some summary documents and in the development of a well-promoted food and wine trail.

Capability Directory (Asset Register)

The asset register is the flagship tool for promoting regional produce, a premier publication that acts as a guide to the region's finest fare. It would provide an accurate and comprehensive picture of what is available in the region and where. This may include a harvest calendar, a locality map and a database of how to contact local producers. The register would also provide information to restaurants, other growers and potential investors in production, tourism and other industries who need access to what the region has to offer.

Regional support for Food & Wine Shows, Festivals etc

An excellent way of exposing regional products is to participate in a food show or trade exhibition. The Mudgee region already has a presence in some of these events, but there is scope for more impact with a more co-ordinated and comprehensive effort.

Benefits from this approach include:

- § Access to premium events in professional setting.
- § Cheaper exhibiting costs.
- § Creating a more significant presentation by exhibiting with others.
- § Generate a better marketing impact.

Regional Web site

This would provide a contact point for users as well as a direct link to local producers. The website would explain the concept of the regional producers group, introduce local producers, notify of forthcoming events, describe food and wine trails, and reinforce the region's brand.

Benefits to local producers would include:

- § On-line services provide a way to serve the customer 24 hours per day, 7 days per week.
- § Providing a communication and information base for local producers.
- § Providing a home for loyal customers;
- § Enhancing the professional image of producers; and
- § Enabling more customers know about regional products and services.

Regional Branding

Consumers worldwide are turning to food products that have an identifiable link to a region known for its particular qualities. This direct link between paddock and plate generates greater confidence in food safety. This changing trend toward consumption of differentiated food products has led governments to rethink their agricultural policies, focusing now primarily on food products and secondarily on food safety and health. This change in focus impacts upon production systems, which are now treated as the third tier of agricultural policy.

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Regional branding offers some unique opportunities for producers of food and related products, as well as in a wider regional development context. A regional brand will allow participating producers to distinguish their products so as to create a premium factor that can lead to higher prices and preferred purchase in a tight market. This should result in customer loyalty and repeat business. Working together has some more indirect benefits too - group members develop a camaraderie which may promote other cooperative opportunities and activities.

Mudgee producers have already demonstrated an interest in development of a regional brand. For example, Mudgee wines have an increasing profile and reputation, and Mudgee honey has a long history in the market place.

A successful regional brand will differentiate quality products and services and promises greater market share and/or price differential to local producers.

Benefits include:

- § Marketing can be more aligned with current trends in consumption;
- § Increased recognition, demand and value of regional products;
- § Increased recognition by buyers and demand for your produce;
- § Cost sharing of an otherwise expensive marketing task that could probably not be afforded individually; and
- § Satisfies sophisticated buyer needs of having access to a complete range of products.

Training & Development.

To support this regional program, there is an opportunity to empower producers in the Mudgee region to be professional, smart and aware about their marketing.

Typical areas include retailing, packaging and presentation, customer relations, new market driven developments in farming, quality assurance, value adding and many others.

Benefits would include:

- § Being kept at the leading edge of marketing developments
- § Being trained in professional marketing.
- § Specific training programs that address shortfalls.
- § Cost sharing.

8.10 Social Sustainability

An integral component of ESD is social sustainability. Defining social sustainability has been the subject of considerable debate but has broadly focussed on ensuring *quality of life* or *community wellbeing*. It is considered as being achieved through a balance of economic, social and environmental issues resulting in a better *quality of life* for the existing and future community. The NSW Office of Social Policy (see Office of Social Policy, *Quality of Life - A Social Policy Approach*, July 1994) recommends that the following factors are integral to achieving this balance:

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- § *Social justice* needs such as equal access to education, health, welfare, personal safety, housing and broader community and cultural services and facilities
- § *Economic development* particularly in terms of employment, quality of working life and personal economic situation
- § *Environmental policy* related to the physical aspects of communities such as livability, community values and ecological sustainable development.

More recent work undertaken by Wills (2001) identifies seven key outcomes for achieving *quality of life* and *community wellbeing*. These focus on social/cultural, economic and environmental outcomes and are described as:

- § *Livability* – natural and built environments for healthy and easy living
- § *Equity* – equal opportunity for the development of human potential
- § *Conviviality* – people living well together
- § *Adequate prosperity* – consuming less but with sufficiency
- § *Sustainability* – sufficient development without threatening viability
- § *Viability* – remaining within the ecological limits and maintaining species diversity
- § *Vitality* – resulting from activity, participation and interaction between people

For the rural areas of the Shire it is important to ensure that social sustainability is a key component of the strategic planning framework for this community. Quality of life and community wellbeing are key outcomes to be integrated into a holistic planning approach for this community. However, it should be pointed out that a lot of people move to the rural areas for a lifestyle knowing that certain facilities and services are not there.

To be socially sustainable, the Rural Strategy should to address the issues raised above and provide adequate level of services in the rural areas for those residents.

Chapter 9: Conclusion

Mudgee has traditionally been an agricultural area based on the cropping and grazing forms of agriculture. Although the vineyards have been in existence, it has only been over the past 30 or so years that they have become a major land use and economic contributor to the Shire. Tourism based on the wine industry as well as the other attributes of the Shire are becoming a significant issue as well as the desire of a number of people to move into the Shire for lifestyle choice.

There is a need to plan for the future of the Shire's rural lands to ensure that they are conserved for future generations and so that the environmental, social and economic issues can all be addressed to achieve a balanced and sustainable future.

This document has outlined the existing situation with regards to the physical, social and economic environment of the rural lands within Mudgee Shire. It has discussed the following as it relates to the rural lands:

- § The variety of physical, social and economic features of the Shire
- § The planning policy framework;
- § The existing development pattern; and
- § Ecologically Sustainable Development;
- § The environmental opportunities and constraints as well as the social and economic factors that have to be taken into consideration when considering the future of the rural lands.

The accompanying Mudgee Rural Strategy provides the recommended actions to achieve the vision as outlined in the Council's Management Plan.

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Appendix 1: Brief

1. Introduction

Mudgee Shire Council is undertaking a comprehensive Strategic Planning Program which, in addition to the Rural Strategy, includes the development of a Recreation Strategy and Industrial, Residential and Rural Residential Land Use Study.

The purpose of the Rural Strategy is to provide Council with direction in terms of development within the rural areas of the Shire consistent with the Department of Urban Affairs and Planning Rural Lands Policy having regard to the historic fragmentation of rural land and agricultural development, natural resource management and future trends in rural land use and management.

2. Background

The foundation documents for strategic planning in Mudgee consist of a Local Environmental Study undertaken by Latona Masterman and Associates in 1981 with a Environmental Study and Structure Plan prepared in 1994 by Hoynes Wheeler and Thorne. The Mudgee Local Environmental Plan was gazetted in 1998 and was primarily a consolidation instrument adopting the strategies established in the existing planning instruments.

Mudgee Shire has consistently experienced a stable growth and it is recognised that the fundamental directions and strategies need to be revisited in light of that growth, the changing expectations and demands of the community and emerging environmental concerns.

3. Issues

There are a number of specific issues which need to be addressed in the Strategy;

3.1 Subdivision

Existing subdivision practices and the impact on future small holding subdivision – in 1972 Council adopted a 10ha minimum subdivision policy across the Shire. As a result between 1973 –1977 small holding subdivision occurred at random with some 1,950 lots, the majority of which were 10ha, were created.

The study should include an assessment of the impact of this policy, the number of such existing and occupancy rate of same.

The appropriateness of general subdivision provisions in the LEP needs to be addressed.

Community Titles subdivision in association with vineyard or other intensive agriculture development has been mooted as having potential in Mudgee.

3.2 Vineyard Development

In the past 20 years since 1982 the area within the Shire under vineyards has increased from 440ha to approximately 2000ha and still growing. The strategy should address the impact of this type of intensive agriculture and associated land use activities (eg tourist facilities). The strategy should broadly define the “vineyard district” based on current development trends and environmental indicators (soil, water, slope aspect). Existing infrastructure and proximity to Mudgee/Gulgong may also have a role in defining the area given the accessibility required for viable associated land use activities.

The strategy should identify the spectrum of issues associated with this type of development in the Shire.

It is envisaged that the Rural Strategy will provide the basis for the development of a Vineyard Districts Development Control Plan.

3.3 Infrastructure

Mudgee Shire Council maintains in excess of 1200 km of local roads (excluding RTA funded Regional roads) of which 987km area unsealed. The Strategy needs to look at the relationship between small holding subdivision and servicing of same.

3.4 Natural Resource Management

The current planning instrument has been developed with limited reference to physical and environmental characteristics of the Shire. Attention to issues such as location of remanent vegetation, habitats supporting or likely to support rare, endangered or threatened species, protected land, areas of high water tables and salinity are increasingly relevant in land use planning decisions. Constraints mapping is required to identify and apply appropriate controls based on identified information.

4. Outcomes

Assessment of the general physical characteristics of the rural area including environmental constraint mapping

Land capability assessment of rural land

Categorisation of significant rural land use activities.

Review of existing subdivision provisions.

Investigate impact of existing rural subdivision and need for further submissions and minimum size lots suitable in rural areas.

Identification of irrigated agriculture existing and opportunities for future development.

Identification of vineyard district based on physical characteristics and existing landuse.

Identification of land use associated with vineyard development and assess suitability/capability of land for this "complementary" development.

5. The Process

Council will give preference to innovative approaches that will promote efficient achievement of the desired outcomes of the study. It is expected that close consultation will be required with the planning staff and that the consultant will develop a thorough understanding of the local nuances. To this end, it is envisaged that the majority of the study will be conducted within Mudgee.

It is expected that the consultant will submit a detailed study approach identifying project tasks. This study approach will be further refined in consultation with planning staff upon appointment of the suitable consultant. In preparing this brief Council has not identified basic project tasks (it is envisaged that these will be identified by the consultant in their study submission) but the following tasks have been identified as core tasks that must be undertaken above and beyond the basic tasks.

5.1 Consultation

- As indicated previously, several strategic planning studies will be undertaken concurrently and it is essential that each consultant participate in planning workshops. These workshops will be used to brief the planning staff and Councillors on the progress of the study and provide the opportunity for the

exchange of information and ideas between consultants. The Strategic Planning Programme has been divided into sections to allow concentration of expertise in particular fields whilst the planning workshops provide the benefit of a broad base of experience and expertise across the programme. This may result in necessity for consultants to work in collaboration, particularly during public consultation and to a strict time table. Timing of workshops will be defined during the refinement of the work programmes however at this stage three workshops are proposed:

1. Workshop 1 – to be held at the instigation of the strategic planning programme after literature and resource review.
 2. Workshop 2 – Progress report and exchange of ideas involving Councillors, and major community stakeholders
 3. Workshop 3 – Conclusion and presentation to Councillors and major stakeholders.
- Community consultation is viewed as central to the process. The following consultation has been identified as crucial:
 - Land holders, general community and environmental groups.
 - Local developers and estate agents to determine the community needs and indication future demands.
 - Consultation with current major industrial leaders, mining, viticulture, building, etc to determine possible future industrial trends.
 - Consultation with local designers and developers to allow input into appropriate design criteria for development.

5.2 Highest and Best Use of Land

The physical characteristics of Mudgee and current growth may result in a number of land uses being suitable for a particular area. In the case of this eventuality Council would prefer the formulation of a clear set of criteria, perhaps in a matrix format, to provide a transparent means of determining the highest and best use of a particular site.

6. Indicative Timetable

As previously outlined that study will need to be strictly schedule to coincide with the other components of the Local Environmental Study. It is envisaged that the study will commence 29 October 2001.

7. Output

Twenty (20) bound copies of the draft Study and one (1) photocopy master plus computer disk storage in Microsoft Word.

8. Fee Basis

The consultancy will be undertaken on a lump sum fee basis. The following payment schedule is applicable:

Completion of Workshop 2	50%
Completion of Project	50%

9. Terms of Engagement

9.1 Acceptance

After consideration of the proposals from Consultants, Council will select a Consultant for the project. Council shall not be bound to accept the lowest price or any proposal.

9.2 General Conditions of Engagement

The Consultant is to complete the tasks as identified in the Consultancy brief, the Consultant's proposal and the terms agreed by both parties in Council's letter of acceptance.

If the Consultant proposes any deviation from the agreed tasks or methodology during the course of the project, such deviations must be agreed by Council in writing before the Consultant is to proceed with such deviations.

9.3 Termination

Council reserves the right to terminate the project by giving two weeks notice in writing if the Consultant fails to carry out the required tasks in accordance with the Consultancy brief and the agreed proposal.

9.4 Confidentiality of Information

The Consultant will, at all times, maintain professional integrity and the work that is undertaken will remain confidential unless and until released by Mudgee Shire Council.

9.5 Copyright

The ownership and copyright of any information and data supplied by the Consultant pursuant to this commission shall be vested in Council.

9.6 Return of Materials

The Consultant must return all documents, reports, photographs, books and any other items loaned by Council for the purposes of this project by the completion date of the project.

9.7 Payment

Payment for the project will be made on the basis of the progress payment schedule described in the Consultancy brief.

No claim for additional costs above the agreed lump sum fee will be recognised without prior agreement in writing by Council.

9.8 Insurance

The Consultant shall have current professional indemnity insurance to a value of \$2 million. Documentary evidence of this insurance is to be submitted to Council prior to commencement of the project.

9.9 Late Work

In the event that the Consultant fails to deliver the output as specified in the agreed timetable which will be finalised upon appointment of the consultant, Council shall deduct from the agreed fees the amount of 5% per week delay. The Council may, at the sole discretion of the Project Manager, dispense with this provision of the engagement if good reason is shown, in writing, for the delay.

9.10 Acceptance of Conditions

After issue of Council's letter of acceptance, commencement of the project by the Consultant will be deemed by Council to represent an acceptance of the requirements of the Consultancy brief unless separately advised in writing by the Consultant prior to commencement.

10. Assessment Criteria

- Relevant experience and expertise, for example in NSW planning law, urban design and environmental management.
- Demonstrated effective community consultation.
- Methodology used to undertaken project.
- Availability to undertake study in terms of schedule and capacity to work from Mudgee for reasonable period of consultancy.
- Value for money.
- Track record

11. Alternative Proposals

The tasks described in this brief are based on Council's assessment of the requirements for the preparation of the community plan.

Consultants may submit alternative or varying proposals which they believe will better facilitate achieving the study objectives.

12. Submission of Proposals

Envelopes containing proposals must be endorsed "TENDER –Rural Strategy" and placed in Council's Tender Box or be forwarded to reach:

The General Manager

Mudgee Shire Rural Lands Study

Mudgee Shire Council
PO Box 156
MUDGEE NSW 2850

Attention: Elizabeth Densley

By 4.00 pm on Tuesday 25 September 2001.

Council's contact officer in regard to this brief is Elizabeth Densley

Appendix 2: Land Use Survey Methodology

Mudgee Shire Rural Lands Study

A major component of this study has been a land use survey of all of the land within the rural parts of the Shire. The purpose of the land use survey is to gain an indication of the land use trends.

The preparation of a land use survey is one of the most important components when zoning rural land. Each parcel of land within the rural lands has been inspected and given a land use designation. This has been entered into Council's Property Information database and mapped using a GIS.

The first step was to identify a set of spatial boundaries which would form the basic level of data representation. The geographical localities were used. This has two benefits, the first being that the area is generally mapped and can be identified easily and secondly it is easier for the public to understand the data once it has been collected and published.

The next step is to identify the categorisation of the land uses to be surveyed. The land use has been categorised into primary and secondary land use categories. The primary land use categories are as follows:

- § Rural Residential
- § Intensive Plants
- § Intensive Animals
- § Extensive Agriculture
- § Vacant
- § Commercial
- § Extractive industries
- § Public Use
- § Village
- § Native Vegetation

The detailed categorisation is presented in the following table:

LAND USE SURVEY CODES

PRIMARY		SECONDARY	
Description	Code	Description	Code
Rural Residential	RR	Dwelling	DW
		Vacant	RV
		Home Business	HB
		Horses	RH
		Native Vegetation	NV
		Truck	TR
		Bed & Breakfast	BB
		Olives	OL
Vacant	VA	Cleared Land	CL
Native Vegetation	NV	Native Vegetation	NV
		National Park	NP
Intensive Plants	IP	Vineyard	VN

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PRIMARY		SECONDARY	
		Flowers	FL
		Igloos	IG
		Lucerne	LU
		Market Garden	MG
		Nurseries	NU
		Olives	OL
		Orchard	OR
		Turf	TU
		Dwelling	ID
Intensive Animals	IA	Cattle Feedlot	CF
		Horse Stud	HS
		Poultry	PO
Commercial	CO	Accommodation	AC
		Abattoir	AB
		Art Gallery	AG
		General Store	GS
		Hotel	HL
		Manufacturing	MF
		Petrol Station	PS
		Restaurant	RS
		Rural Produce Store	RP
		Tourist Facility	TF
Village	VI		VI
Extractive Industry	EI	Sand Mining	SA
		Hard Rock	HR
		Limestone	LI
		Clay	CA
		Coal Mining	CM
Extensive Agriculture	EA	Grazing	GR
		Dwelling	ED
		Forestry	OF
		Native Vegetation	NV
Public Use	PU	Bushfire Brigade	BF
		Cemetery	CY
		Church	CH
		Dam	DM
		Hall	HL
		Playing Field	PF
		Rifle Range	RT
		School	SL
		Water / Sewerage	WS
		Electricity	EL
		Telephone	TL
		Institute of TAFE	TA
		Airport	AP
		Race Course	RC

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PRIMARY		SECONDARY	
		Showground	SG
		Public Reserve	PR
		Hospital	HL
		Railway	RL
		Travelling Stock Route	TS
		Field Days Site	FD

There are 3 components to the carrying out of the land use survey as follows:

- § Preliminary identification of land use.
- § Study area inspection.
- § Data entry and mapping.

Preliminary identification of land use occurred in the office prior to the field inspection. Aerial photography was used to identify the land use. The major things to be picked out are extensive Agriculture, intensive plants (particularly vineyards), Horse Studs, dwellings on small lots, vacant land, lots which are totally covered with native vegetation, and extractive industries. Only one major land use was identified. An assumption can be made that a dwelling house rural residential uses except where they are vacant. An assumption was also made that lots less than 20 ha which did not have an intensive agricultural or commercial, industry, public or government use were rural residential.

This information was entered into the database using the coding that has been identified for the primary and secondary land uses.

The study area inspection was carried out by windscreen survey of all of the roads within the rural parts of the Shire. This was done to check the primary land use categories and also to enter secondary ones that could not be identified from the aerial photos. As each road is driven on the land use is clarified against the preliminary identification. Signage, which gives an indication that the property may be use for a secondary use such as a home business or a commercial use was also noted.

The data was entered into the Council property information database using the coding. However this was not always possible because of the lack of street numbering in the database and only those uses, which could be identified from the database, were entered. This did not affect the integrity of the data as the primary uses are the ones used in the identification of the land use designations.

Appendix 3 – Comparative Information on Selected Population Characteristics for Mudgee Rural Lands in 1996

Mudgee Shire Rural Lands Study

Comparative Information on Selected Population Characteristics for Mudgee Rural Lands in 1996

Population Characteristic	Total Rural Lands	Northern Rural Lands	Southern Rural Lands	Mudgee LGA	NSW
Total Popn	6861	4314	2547	17074	na
Age Profile					
0-4	7%	7%	7%	8%	7%
5-12	14%	14%	13%	13%	11%
13-19	9%	9%	10%	9%	10%
20-24	3%	4%	3%	5%	7%
25-54	43%	43%	41%	41%	43%
55-64	13%	13%	14%	10%	9%
65-74	7%	7%	9%	8%	7%
75+	3%	3%	3%	6%	5%
Aboriginality	0.3%	0.2%	0.4%	0.2%	0.08%
Resident Mobility	36% at different address	38% at different address	34% at different address	44% at different address	43% at different address
NESB	4%	5%	4%	3%	16%
Labourforce Participation	58%	58%	60%	57%	61%
Total Occupied Private Dwellings	2487 (55 other)	1540 (34 other)	947 (18 other)	6293 (161 other)	na
People with Degrees	10%	9%	11%	11%	25%
People with Diplomas	14%	14%	15%	16%	15%
People with Voc Qualifications	41%	42%	38%	39%	32%
People with No Qualifications	33%	32%	34%	32%	26%
Main Employers by Industry	Ag/For 27% Retail 11% Man. 9%	Ag/For 27% Retail 10% Man. 10%	Ag/For 30% Retail 13% Health/CS7%	Retail 16% Ag/For 14% Man 10%	Retail Man. Health/CS
Median Weekly Household Income (\$1996)	\$300-\$499	\$300-\$499	\$500-\$699	\$300-\$499	\$500-\$699
Single Parent Households	7%	7%	7%	9%	10%
Lone Person Households	19%	19%	19%	22%	23%
Couples with Children Households	39%	40%	38%	34%	36%
Couples with No Children Households	31%	31%	31%	26%	24%
Households with no vehicle	4%	4%	5%	11%	14%
Households with one vehicle	37%	38%	36%	43%	42%

Source: Australian Bureau of Statistics, CLIB 96

Appendix 4 – People Interviewed

Mudgee Shire Rural Lands Study

Ellen Riley, Bungaba Women's Progress Association
Chris Connor, Principal, Goolma Public School
Bev Smiles, Wollar
Charles Mitchell, Wollar
Dorothy Mitchell, Wollar
Bob Van Patten, Wollar
Donna Hogan, Wollar
Veronica Rheinberger, Wollar
Terry Rheinberger, Wollar
Mudgee Interagency

Appendix 5 – Methodology to Assess the most appropriate Land Use Designation for Rural Land

Mudgee Shire Rural Lands Study

The following method is used to identify the land units and designations discussed in chapter 3.

1. Data Gathering

- § Land Use Survey
- § Lot size analysis
- § Slope mapping
- § Fauna And Flora Study / Vegetation cover
- § Soils mapping
- § Drainage and Catchments
- § Agricultural land classification
- § Landscape features
- § Water quality and quantity

2. Identify Constraints

- § Urban expansion areas
- § Rural residential areas
- § Intensive agricultural uses
- § Land use conflicts
- § Native vegetation areas
- § Water courses
- § Steep land

3. Identify Land Units

- § Similar topographic features
- § Clusters of land uses

4. Assess Agricultural Potential

- § Identify high class land
- § Rank areas for land uses
- § Identify lot sizes and land uses

5. Consider the Appropriate Zone

- § Agriculture
- § Mixed Use / Agricultural landscape
- § Nature conservation
- § Rural living
- § Rural urban fringe