

# Mid-West 2 Murray River Crossing, Echuca - Moama

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## Detailed Desktop Land Use Assessment

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Prepared for

VicRoads

January 2013

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# Glossary

CBD	Central Business District
LEP	Local Environmental Plan
NSW	New South Wales

## Executive summary

The long term strategic objective of VicRoads is to provide a second crossing of the Murray River between Echuca (Victoria) and Moama (New South Wales). The new route will provide an alternative access across the Murray River as well as relieving congestion on the existing bridge, which currently provides the only vehicle access between Echuca and Moama.

In undertaking the development of alignment options for the proposed corridor, VicRoads has reviewed and considered information relating to land use impacts, traffic data, environmental effects, heritage implications and land tenure information. These concerns have also been presented in consultation with surrounding land owners and key stakeholders in the area.

The purpose of this report is to revise the findings from the land use study undertaken for the Mid-West 2 Murray River Crossing and also assess four alignment options, which have been developed against a set of project objectives and assessment criteria, for their land use impacts. This includes consideration of background information and State and local planning policy which have implications on the development of a significant roadway.

The four options were assessed against the following key land use impacts using an Objective Based Evaluation Matrix to establish the best performing option:

- Consistency with State Planning Policy
- Consistency with Local Planning Policy
- Avoid and/or minimise adverse impacts on sensitive land use
- Ensure safe access and avoid and/or minimise adverse impacts on property

The preferred alignment was identified to be the Mid-West Option which is approximately 2200m in length, beginning at the intersection of the Murray Valley Highway and Warren Street and progressing in north-easterly direction before connecting into the intersection of the Cobb Highway and Perricoota Road.

The results from the evaluation matrix identified the Mid-West Option to perform Very Well/Well across the four criteria, providing a city centre by-pass route with effective and safe connection to existing road alignments, including major highways, connection with the proposed arterial network servicing future urban development, whilst avoiding areas requiring extensive acquisition of dwellings.

The route will form an integral part of the wider state highway network. This project will address increasing traffic congestion on the existing bridge while accommodating future demand from development within and surrounding the urban areas of Echuca and Moama.

# 1. Introduction

Parsons Brinckerhoff Australia Pty Limited (Parsons Brinckerhoff) has been engaged by VicRoads to undertake investigation and reporting on the land use implications of the four (4) concept designs being considered for the second Murray River crossing between Echuca and Moama. The new link will form an alternative to the existing bridge connection which provides an important strategic link for local traffic between Echuca and southern New South Wales and three major highways which intersect at Echuca and Moama.

The existing bridge structure is narrow with one lane in each direction and has little capacity to cater for the long term traffic needs of the region. Also, the bridge currently experiences operational limitations with delays often experienced during peak tourist periods or when wide loads, including agricultural machinery, need to cross the river.

Therefore the identified second Murray River crossing and arterial road will:

- provide an alternative route for users of the existing bridge;
- address issues in regards to the operational capacity; and
- provide arterial roads support for future development of the urban areas of Echuca and Moama.

The study area for this report generally extends between the intersection of the Murray Valley Highway and Warren Street to the Murray River bank in Victoria. It will also consider the land-use implications to the wider Echuca urban area. A description of these spatial areas is outlined in Section 3.7 of this report.

## 1.1 Project background

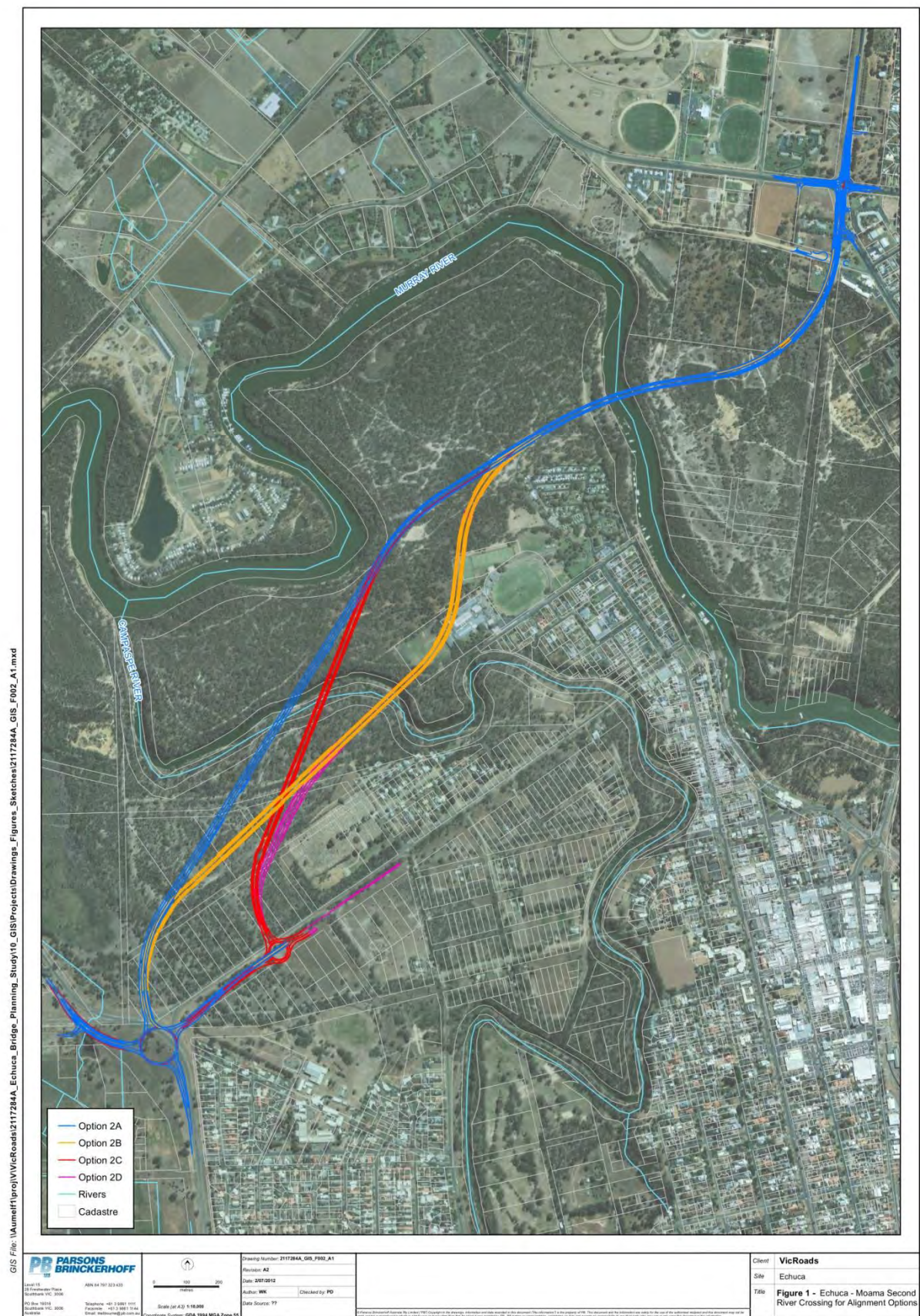
In 2007 VicRoads commenced investigations on options for a potential new second crossing of the Murray River. The need for the arterial road and river crossing has been well documented in a number of strategic studies and reports, including:

- A joint Victorian Environmental Effects Statement (EES) and New South Wales Environmental Impact Statement (EIS) process carried out in 2000/2001;
- *Second Murray River Crossing at Echuca-Moama Land Use Assessment* (URS, 2011)

Since these studies, four route 'alignment options' have been identified. This report examines the four different options presented and suggests the optimum alignment based on land use considerations.

The proposed alignment options are shown in Figure 1.





**Figure 1**      **Alignment Options**{ TC "Figure 1.0"      Alignment Options" \f F \l "4" }

## 2. Methodology

This land use assessment has involved two stages of investigation:

- Scoping and land use impact assessment: identifying land use precincts, potentially sensitive land uses, planning policy implications and the degree of impact of the project.
- Option assessment and recommendations: assessment of each of the four alignment options and the potential land use impacts, including recommended mitigation measures.

This report presents the findings from the land use assessment of the four alignment options being considered for the Mid West 2 Option.

### 2.1 Project objective

As outlined in the project specification of works and confirmed with the VicRoads Project Manager the objective of the land use assessment is:

*“To protect existing land uses and the character of landscapes, open space and recreation values to the extent practicable”.*

### 2.2 Sub-objectives

The project objective was further defined in order to develop the assessment criteria, as follows:

- Consistency with State and local planning policy
- Avoid and/or minimise adverse impacts on sensitive land uses
  - ▶ Extent of change to existing land uses
  - ▶ Extent of impact on proposed land uses
- Ensure safe access and avoid and/or minimise, where practical, adverse impacts on property
  - ▶ Minimise land acquisitions where practical
  - ▶ Minimise disruption to private and public property

The criteria has been based on key land use impacts identified as part of the policy review, site visits and an analysis of land uses along the alignment.

### 2.3 Objective Based Evaluation Matrix

The Objective Based Evaluation Matrix (OBEM) will be used to assess how well each alignment option performs against the assessment criteria. In accordance with the OBEM process, the options will be rated according to:



**Table 2.1 The Objective Based Evaluation Matrix**

Rating	Defined Values	Colour
Very well	Best practice, strong level of compliance, major positive impact	Green
Well	Improved practice, good policy compliance, positive impact	Light Green
Moderately well	Partial policy compliance, no distinctive positive or negative impact	Yellow
Poor	Policy non-compliance and negative impact	Orange
Very poor	Major policy non-compliance/ and or negative impact	Red

The land use assessment will provide an overall assessment of how well each alignment option preforms against the project objective, sub-objectives and assessment criteria.

## 2.4 Project tasks

Preparation of the land use assessment report required the following tasks to be undertaken:

- Background data review of previous studies
- Analysis of State and local policies and statutory planning controls including zones, overlays and particular provisions
- Site visit (7 June 2012) to document existing conditions
- Development of land use precincts
- Identification of tenure arrangements
- Land use assessment of options and recommendations.

## 2.5 Report structure

The structure of this report is outlined below:

- Section 1 – Provides an overview and background of the project
- Section 2 – Provides a methodology, including the project objectives and assessment criteria of the land use assessment
- Section 3 – Provides details of the existing land uses
- Section 4 – Outlines the State, regional and local planning context related to the proposed alignment options
- Section 5 – Provides details on future land uses
- Section 6 – Details the land use assessment including potential impacts on existing land uses and mitigation measures
- Section 7 – Provides details of how each alignment option performs against the Objective Based Evaluation Matrix

- Section 8 – Outlines conclusions and recommendations, including the alignment which performs best against the assessment criteria.

## **3. Existing Environment**

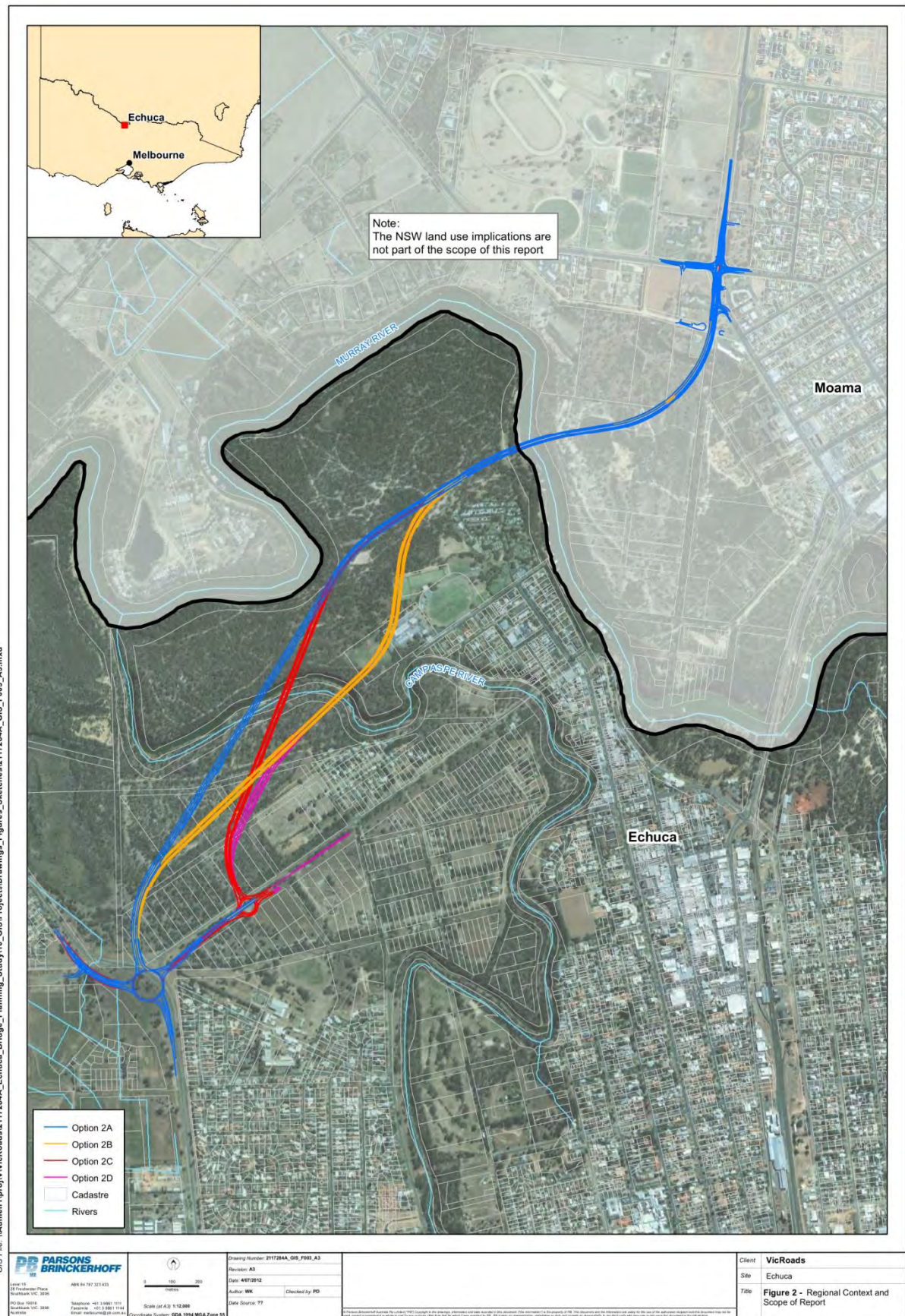
### **3.1 Study Area**

The proposed route alignment options are all located approximately 1.5km north-west of the existing Echuca town centre and approximately 500m west of the Moama town centre.

For the purposes of this report the proposed options have been defined into four different alignments. These have been based on the alignments provided by VicRoads and are more specifically defined below. All four alignment options are proposed to have a common bridge crossing of the Murray River, approximately 1500m downstream (northwest) from the existing river crossing on the Cobb Highway. This report only considers the implications of the Victorian context of the Mid West 2 alignment options.

Figure 2 shows the location of the route alignments in relation to Echuca in Victoria and Moama in New South Wales.

The Echuca-Moama Mid-West corridor, which encompasses the four options, commences at the western end of Warren Street at the intersection with the Northern and Murray Valley Highway. It extends in a north-east direction through Victoria Park Reserve, across the Murray River into New South Wales, and connects to the Cobb Highway, north-west of Moama. The individual alignments are described in more detail below.



**Figure 2 Aerial/Alignment Diagram** { TC "Figure 3.0

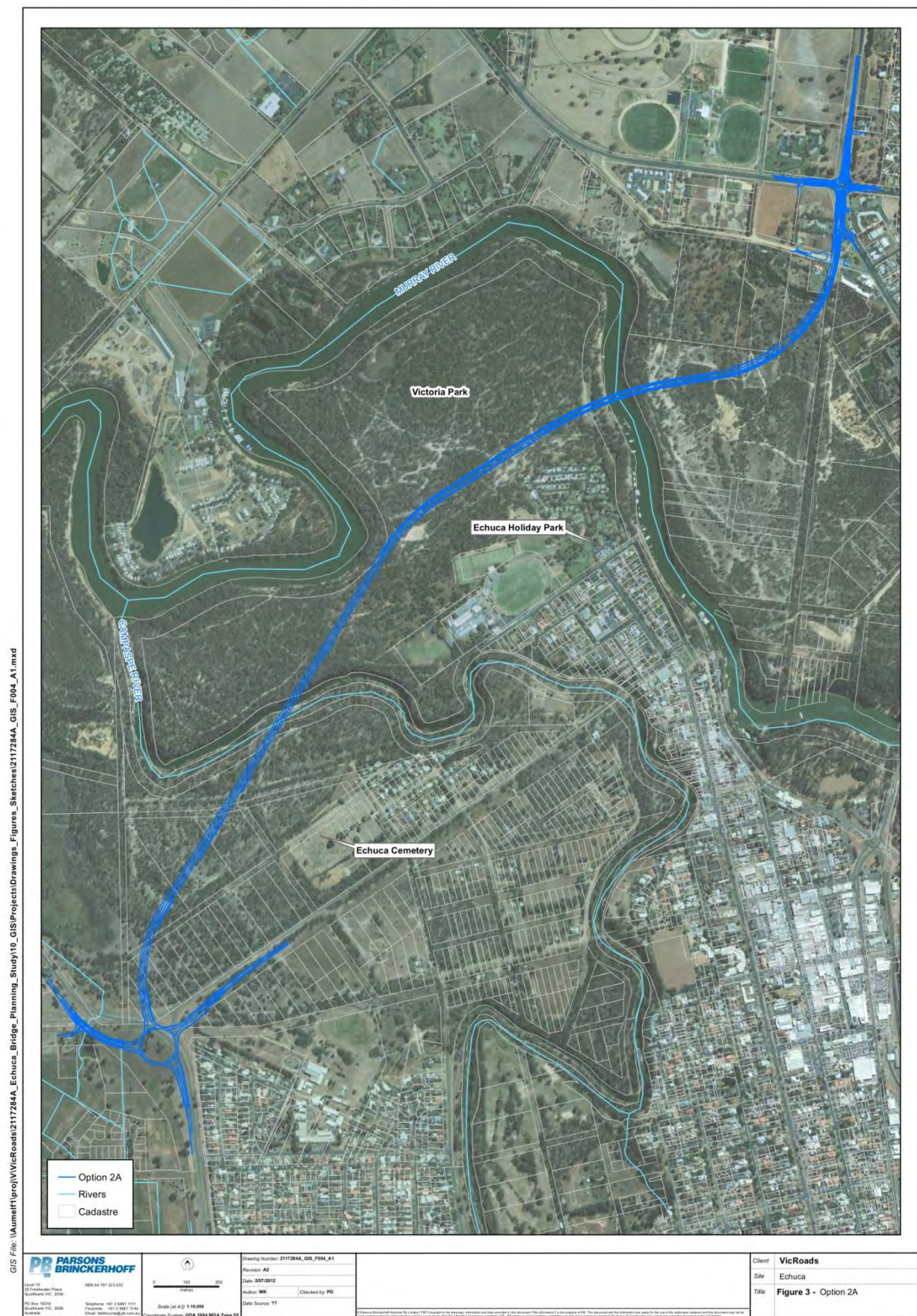
Aerial/Alignment Diagram" \ F \ "4" }



## **3.2 Mid-West Option 2A**

Option 2A is proposed to begin at the intersection of the Murray Valley Highway and Warren Street. A new roundabout intersection treatment would be required to accommodate the works; refer to Figure 3.

For approximately 1500m, the alignment heads generally in a north-east direction across Campaspe Esplanade and the Campaspe River into the Victoria Park Reserve. The alignment then turns and continues in an easterly direction for approximately 1200m, north of the Echuca Holiday Park, and crosses the Murray River into New South Wales. Finally it then turns for a third time to continue in a northerly direction for approximately 500m and connect into the Cobb Highway at the intersection with Perricoota Road.



**Figure 3**      **Option 2A{ TC "Figure 3.0**

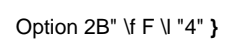
Option 2A" \f F \l "4" }



### **3.3 Mid-West Option 2B**

Option 2B is proposed to begin at the intersection of the Murray Valley Highway and Warren Street. A new roundabout intersection treatment would be required to accommodate the works; refer to Figure 4. This is the same arrangement as Option 2A.

For approximately 1400m, the alignment heads generally in a north-east direction (south of the Option 2A alignment) across Campaspe Esplanade and the Campaspe River and into the former Echuca College – Crofton Street Campus site. The alignment then turns and continues in a northerly direction adjacent the western end of the Echuca Lawn Tennis Club for approximately 500m. It then turns again in an easterly direction just north of the Echuca Holiday Park and crosses the Murray River into New South Wales. Finally, it then turns for a fourth time to continue in a northerly direction for approximately 500m and connect into the Cobb Highway at the intersection with Perricoota Road.

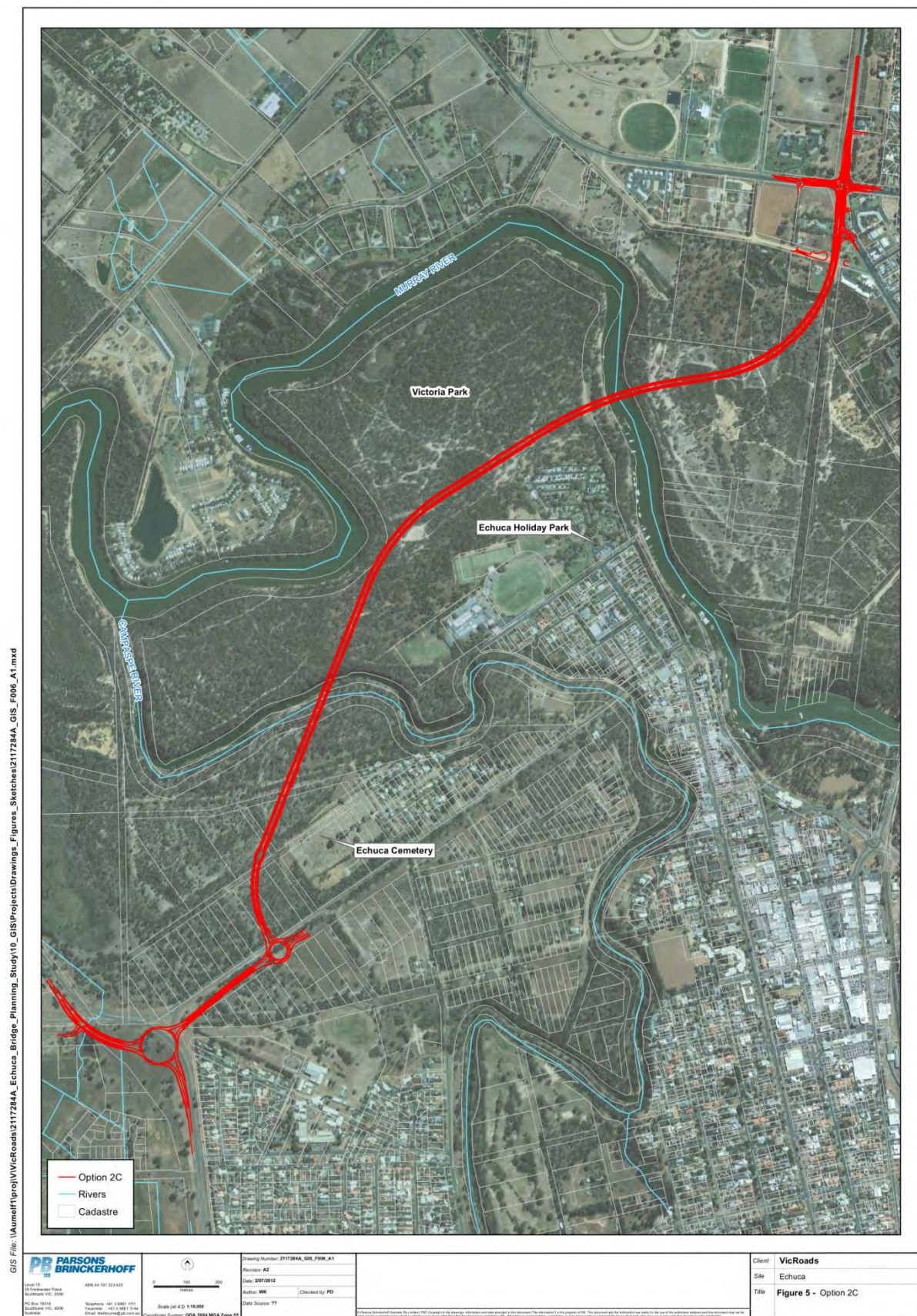


### **3.4 Mid-West Option 2C**

Option 2C is proposed to begin at the Murray Valley Highway / Warren Street intersection, and proceed along Warren Street approximately 200m west of the Echuca Cemetery and the Nolan Street road reserve. Two new roundabout intersection treatments would be required to accommodate the works; refer to Figure 5.

For approximately 1200m, the alignment heads generally in a north-east direction across Campaspe Esplanade and the Campaspe River into the Victoria Park Reserve. The alignment then turns and continues in an easterly direction for approximately 1200m, north of the Echuca Holiday Park, and crosses the Murray River into New South Wales. Finally, it then turns for a third time to continue in a northerly direction for approximately 500m and connect into the Cobb Highway at the intersection with Perricoota Road.





**Figure 5 Option 2C** TC "Figure 3.0

Option 2C" \ F \ "4" }

### **3.5 Mid-West Option 2D**

Option 2D is proposed to begin at the Murray Valley Highway/Warren Street intersection, and proceed along Warren Street to approximately 200m west of the Echuca Cemetery and the Nolan Road road reserve. Two new roundabout intersection treatments would be required to accommodate the works; refer to Figure 6.

For approximately 1000m, the alignment heads generally in a north-east direction (south of the Option 2A alignment) across Campaspe Esplanade and the Campaspe River and into the former Echuca College – Crofton Street Campus site. The alignment then turns and continues in a northerly direction adjacent the western end of the Echuca Lawn Tennis Club for approximately 500m. It then turns again in an easterly direction just north of the Echuca Holiday Park and crosses the Murray River into New South Wales. Finally, it then turns for a fourth time to continue in a northerly direction for approximately 500m and connect into the Cobb Highway at the intersection with Perricoota Road.



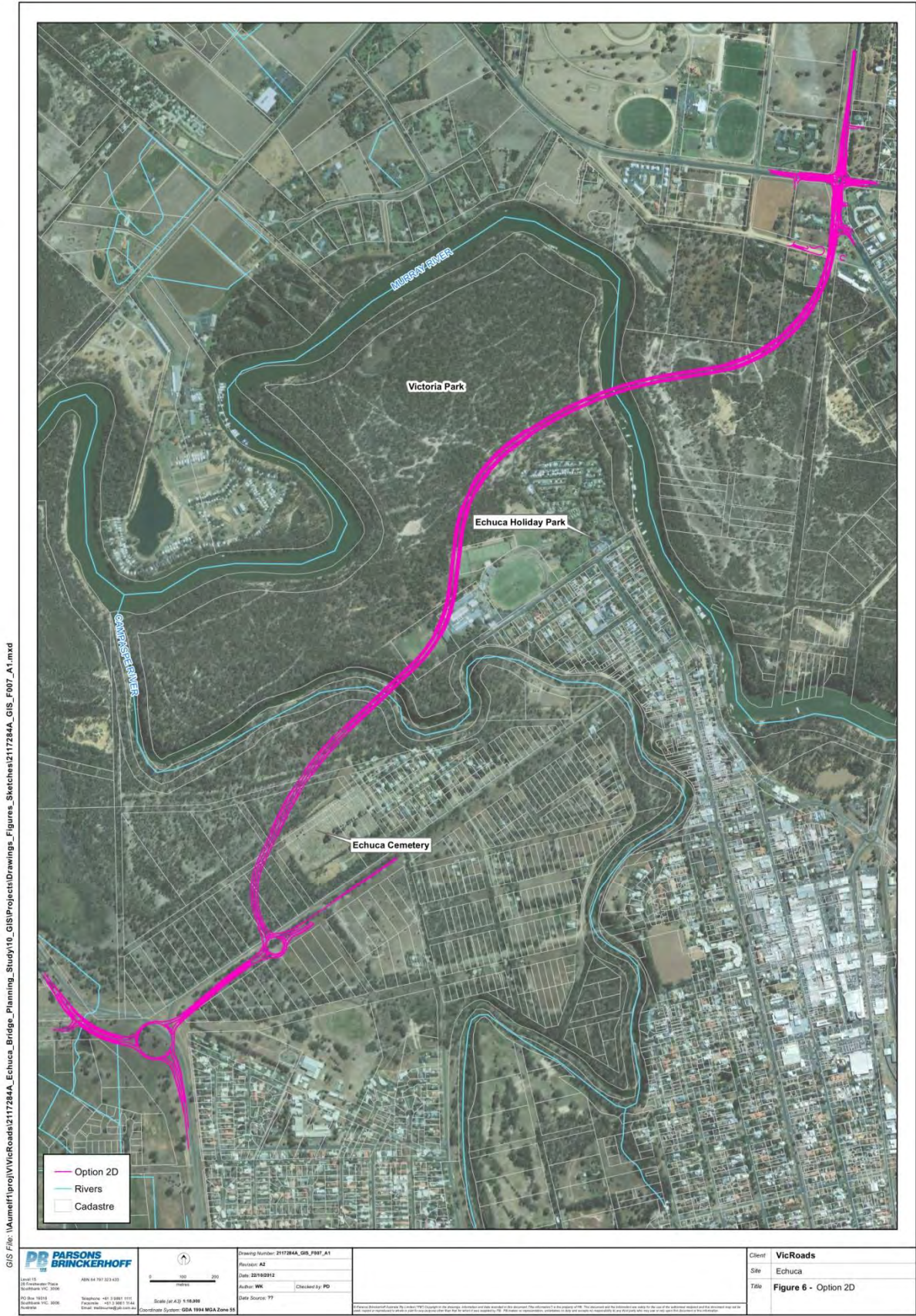


Figure 6 Option 2D{ TC "Figure 3.0

Option 2D" \f F \ "4" }

## 3.6 Existing Land Use

### 3.6.1 Echuca

Echuca, an aboriginal name meaning "*Meeting of the Waters*" is indicative of the role that rivers have played in the town's existence. Echuca is situated close to the junction of the Goulburn, Campaspe and Murray Rivers.

Originally established as a port town in the 1840s, Echuca is the largest centre in the Shire of Campaspe, with a population of around 12,983 people<sup>1</sup> and an estimated regional population catchment of around 50,000 people. Echuca is located on the southern banks of the Murray River, just south of the confluence of the Campaspe River. The assessment area topography is generally flat.

The Echuca centre established when a punt began operating in the 1850s across the Murray River and the town quickly became the largest inland port in Australia. The centre served a local as well as regional role bringing supplies in and exporting goods out of northern Victoria. The construction of the railway line in 1864 and the first combined rail/road bridge crossing over the Murray River in 1878 resulted in a decline in port activities as trade via railway and road transport became more dominant. However, despite the reduction in river trade, population growth continued through to the 1990s and has remained stable since the early 2000s. The area still continues to be a popular destination for retirees and tourists who provide significant economic benefit to the region.

#### Land use

Development within Echuca initially occurred around the port and then south along the railway line to the east of the Campaspe River and along High Street. Recent development has expanded to the west of the Campaspe River. It is noted that the extensive low-lying flood-prone areas surrounding the Campaspe River have historically restricted urban land use and development.

The commercial centre of Echuca, is located south-east of the alignment options, south of Warren Street, extending east and west along High Street to the Murray Valley Highway. The centre is an important commercial, industrial, recreational and transport hub for Campaspe and northern Victoria, providing employment, commercial, business, services and community facilities to service the local and regional catchments. In addition, the area is a popular tourist destination, containing a number of heritage listed buildings from the 1800's reflective of Echuca's history as a successful port. Paddle steamer cruisers and house boats still operate along the river, serviced through the port.

Recreational facilities such as the Echuca Golf Course, located to the west of the CBD, Echuca South Reserves, to the south and east of the CBD, and Victoria Park sporting facilities and recreational park, to the north of the CBD, also attract local and regional visitors on a regular basis. The Echuca Airport, situated to the south-east of the Echuca CBD provides alternative access from the main highways and Murray River to the region.

<sup>1</sup> Australian Bureau of Statistics: Classification code 240101371



Residential development within Echuca mainly consists of single detached houses, located primarily to the south, south-west and south-east of the CBD. Over time lower density development has established along the southern boundary of Echuca, and west of the Campaspe River.

Rural agricultural land, mainly dairy, wheat, sheep, cattle farming and viticulture surrounds the Echuca centre. These activities are important to the economic base of the area and support the commercial functions in the centre. Industrial development, such as Nestle Simplot and Heinz, is located to the south-east of Echuca, south of Ogilvie Avenue, in close proximity to the railway line.

Other land uses within Echuca include educational facilities (St Joseph's College, Echuca East Primary School and Echuca West Primary School), medical and health care facilities, entertainment facilities, churches, and a cemetery.

### **3.6.2 Moama**

Moama, located on the northern banks of the Murray River and along the southern boundary of New South Wales, is a relatively small town, with approximately 5,038 people<sup>2</sup>. The township, like Echuca was originally established in the 1840's when the punt began operating on the Murray River and an inn was established in Moama. While initially growth within Moama exceeded that of Echuca, gradually Echuca became the more dominant centre due to the construction of the wharf and port in Echuca.

Population growth and development occurred throughout the 1800's and 1900's with the most significant boom during the 1970's. Since the 1990's the population has increased steadily and growth is still evident today.

The commercial centre of Moama lies directly north of the existing Murray River bridge crossing and has over time expanded in a northerly direction along Meninya Street. The centre contains a mixture of retail and commercial business and some tourist activities

## **3.7 Land Use Precincts**

For the purposes of this study the land use assessment area has been divided into 13 precincts. This is to enable areas with common land use and development to be grouped together and assessed accordingly. Refer to Figure 7 for a map showing the location of the land use precincts.

A description of the current land use in each precinct is outlined below.

### **3.7.1 Precinct 1 – Murray Valley Highway Business Precinct**

The Murray Valley Highway Business Precinct is located to the south-western end of the land use assessment area and includes land adjacent to the Murray Valley Highway that is zoned for business purposes. The land north of Elizabeth Street, approximately 800m south of Warren Street is currently vacant.

<sup>2</sup> Shire of Campaspe Community Profile - Moama