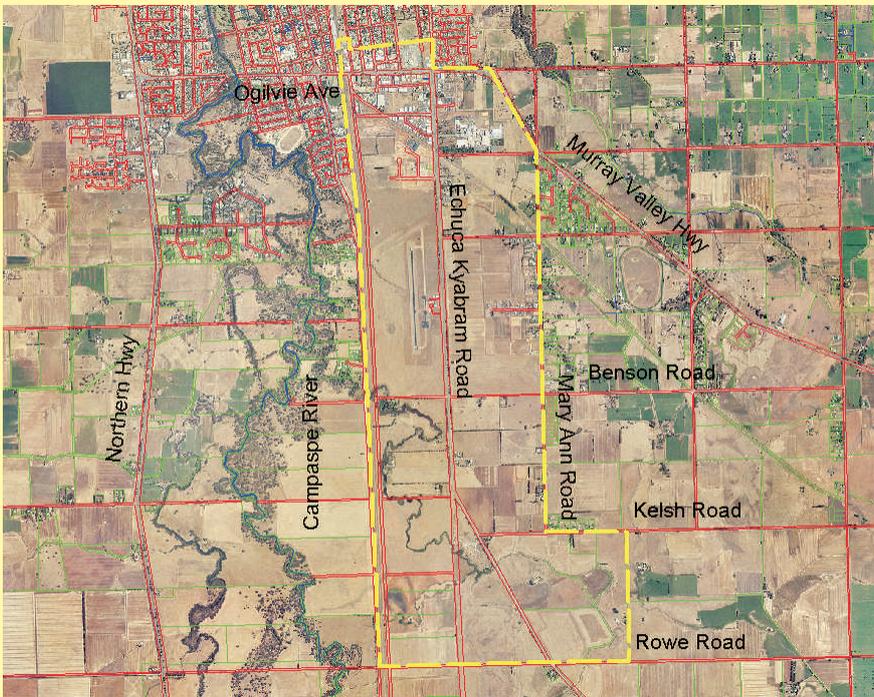


Echuca South East Industrial & Commercial Growth Corridor Land Strategy



Final Report
January 2011

prepared by

centrum
Town Planning

In association with CPG Australia and Terraco

prepared for



Prepared by

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Urban & Regional Planning
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1. Introduction

Purpose

The 'Echuca South East Industrial and Commercial Growth Corridor Land Strategy' ('the Strategy') provides a vision for the future development of the study area over the next 20-30 years.

In accordance with the requirements of the brief, the Strategy provides:

- an 'industrial and commercial land strategy' which identifies areas of land for the long term development of large, medium and small scale industries;
- structure plans identifying areas specifically for large, medium and small scale industrial development and commercial (trade supplies) opportunities;
- design guidelines for private land adjacent to main roads;
- an implementation plan outlining actions, timeframes and responsibilities to guide the implementation of the Strategy.

The Strategy is intended to be used by the following stakeholders in the following ways:

- The Shire of Campaspe ('Council'):
 - as the strategic basis for introducing new policies, zones and overlays into the Campaspe Planning Scheme;
 - to guide in the assessment of permit applications, particularly applications for commercial and industrial development;
 - preparing capital works budgets and delivering services;
 - preparing other strategic documents;
 - preparing development contributions plans;
 - to support funding applications.
- **The community** in understanding how the study area is likely to change in the future.
- **Developers** in understanding opportunities for new development and the expectations of the Shire of Campaspe when applications are made for new development.
- **Government agencies and authorities** in co-ordinating infrastructure requirements relating to roads, water and other services.

Objectives

The objectives of the Strategy, developed in consultation with the Shire of Campaspe, are to:

- estimate the future demand for industrial and commercial land in the study area;
- identify environmental and servicing constraints and the capability of land for development;
- ensure that sufficient land is available for large, medium and small scale industries and industries with special needs;
- ensure that interfaces with sensitive land uses are properly managed and preserved;
- consider transport needs for the movement of people, materials and products to, from and through the south east growth corridor by road and rail;
- identify areas where the industrial 1,2, & 3 and Business 3 & 4 zones may be applied;
- provide direction for how the Strategy should be implemented in the Campaspe Planning Scheme including the development of design guidelines for development along main roads;
- provide strategic justification for amendments to the Campaspe Planning Scheme.

Principles

Structure plans are key planning documents that guide major change to land use, built form and public spaces that together achieve economic, social and environmental objectives.

The Strategy has been developed based on the objectives and strategies set out in the State Planning Policy Framework, with particular reference to Clause 11 (Settlement) and Clause (17 Economic Development).

Clause 17.02 of the Framework aims to '*ensure the availability of land for industry*' and '*facilitate the sustainable development and operation of industry and research and development activity*'. Clause 17.02 contains a series of strategies for the development of industry, as follows:

- *Identify land for industrial development in urban growth areas where:*
 - *Good access for employees, freight and road transport is available.*
 - *Appropriate buffer areas can be provided between the proposed industrial land and nearby sensitive land uses.*
- *Protect and carefully plan existing industrial areas to, where possible, facilitate further industrial development.*
- *Provide an adequate supply of industrial land in appropriate locations including sufficient stocks of large sites for strategic investment.*
- *Protect industrial activity in industrial zones from the encroachment of unplanned commercial, residential and other sensitive uses which would adversely affect industry viability.*
- *Encourage industrial uses that meet appropriate standards of safety and amenity to locate within activity centres.*
- *Avoid approving non-industrial land uses, which will prejudice the availability of land for future industrial requirements, in identified industrial areas.*

Clause 17.02 contains a series of strategies for the design of industrial development, as follows:

- *Ensure that industrial activities requiring substantial threshold distances are located in the core of industrial areas.*
- *Encourage activities with minimal threshold requirements to locate towards the perimeter of the industrial area.*
- *Minimise inter-industry conflict and encourage like industries to locate within the same area.*
- *Provide adequate separation and buffer areas between sensitive uses and offensive or dangerous industries and quarries to ensure that residents are not affected by adverse environmental effects, nuisance or exposure to hazards.*
- *Encourage manufacturing and storage industries that generate significant volumes of freight to locate close to air, rail and road freight terminals.*

Process

The Strategy has been developed in four stages:

- **inception;**
- **analysis**, which included a review of information and key consultation events, as outlined below;
- **draft strategy**, which included public exhibition of the Strategy;
- **final strategy.**

As part of the analysis stage, the *Echuca South East Industrial & Commercial Growth Corridor Land Strategy Issues Paper* (Centrum Town Planning, 2010) was prepared to document the findings of the information review and identify issues and opportunities to assist in gaining feedback from the community and government agencies prior to the development of the Strategy. An issues and opportunities plan was developed to assist in this process (Figure 6).

Consultation occurred with the community, landowners and relevant government agencies and authorities at key points in the development of the Strategy. The consultation involved workshops, face to face interviews and surveys. Key events in the consultation process are listed below:

- **Landowner questionnaire** (July 2009), which sought information from existing industrial and commercial businesses in Echuca and Moama about a range of topics relevant to the Strategy. In total, approximately 380 surveys were distributed and 72 were returned completed. The survey form and a summary of the results of the survey can be found in the *Issues Paper* (Centrum Town Planning, 2010).
- **Interviews with key industries** (November, 2009), which involved face-to-face discussions with four existing industries in Echuca that are understood to be experiencing a range of issues with their current sites. The purpose of the discussions was to identify the land requirements of particular industry sectors so that these could be considered in the development of the Strategy.
- **Workshop with authorities** (November, 2009), which was attended by representatives from relevant government departments, agencies and service authorities. The purpose of the workshop was to inform key stakeholders of the project and to obtain input about key issues and opportunities to help inform the preparation of the Strategy.
- **Community information session** (December, 2009), which was attended by approximately 32 members of the community, predominantly landowners in the study area. The purpose of the discussion was to inform the community of the project and to obtain input about issues and opportunities. The key outcomes of the consultation have been described in relevant sections of the Strategy.

Definitions

For the purposes of this report, the term 'industry' has been used in a broad sense to describe land that is used for all forms of 'industry' or 'warehouse' uses as defined in the Victoria Planning Provisions.

Where it has been necessary to provide recommendations at a more specific level, reference has been made to particular forms of industry and warehousing such as depots, service industry and industries with buffer requirements in Clause 52.10 of the Planning Scheme.

The term 'commercial' is used to refer to non industrial or non warehouse uses that are permitted in the Industrial or Business 3 & 4 Zones. These uses typically benefit from exposure to arterial roads and include, trade supplies, motor vehicle, boat or caravan sales and restricted retail premises such as equestrian supplies, party shop, lighting shop, furniture shop and automotive parts.

Reference should be made to clauses 74 & 75 of the Campaspe Planning Scheme for further detailed information on land use definitions and nesting arrangements.

Planning provisions

Zones

The focus of this strategy is on the Industrial 1, Industrial 3, Business 3 and Business 4 zones. The table below outlines the purpose of the zones that are most relevant to the Strategy. For a description of the existing zone and overlay provisions in the study area, reference should be made to the *Issues Paper* (Centrum Town Planning, 2010).

Zone	Purpose
Industrial 1 Zone (IN1Z)	To provide for manufacturing industry, the storage and distribution of goods and associated uses in a manner which does not affect the safety and amenity of local communities
Industrial 2 Zone (IN2Z)	<p>To provide for manufacturing industry, the storage and distribution of goods and associated facilities in a manner which does not affect the safety and amenity of local communities.</p> <p>To promote manufacturing industries and storage facilities that require a substantial threshold distance within the core of the zone.</p> <p>To keep the core of the zone free of uses which are suitable for location elsewhere so as to be available for manufacturing industries and storage facilities that require a substantial threshold distance as the need for these arises.</p>
Industrial 3 Zone (IN3Z)	<p>To provide for industries and associated uses in specific areas where special consideration of the nature and impacts of industrial uses is required or to avoid inter-industry conflict.</p> <p>To provide a buffer between the Industrial 1 Zone or Industrial 2 Zone and local communities, which allows for industries and associated uses compatible with the nearby community.</p> <p>To ensure that uses do not affect the safety and amenity of adjacent, more sensitive land uses.</p>
Business 3 Zone (B3Z)	To encourage the integrated development of offices and manufacturing industries and associated commercial and industrial uses.
Business 4 Zone (B4Z)	To encourage the development of a mix of bulky goods retailing and manufacturing industry and their associated business services

Regional context

Echuca is located in north central Victoria, approximately 190 kilometres north of Melbourne. It is the largest and most diverse urban centre in Campaspe Shire.

The town is strategically located on the Murray River and has a close functional relationship with Moama (NSW) on the northern side of the river. The town lies in the Murray Darling Basin, which extends to the east and west along the Murray River and south to the Greater Dividing Range.

Echuca is located with good access to major interstate and state highways. The Northern and Midland Highways provide a direct link to Melbourne and the major regional cities of Bendigo, Shepparton and Ballarat.

The Murray Valley Highway provides an east west link along the Victoria/NSW border to Albury Wodonga in the east and Mildura in the West. The Cobb Highway provides a direct link to Deniliquin and southern New South Wales.

Echuca and the other key towns in the Shire are shown on the map below.



Source: Shire of Campaspe

Regional economy

Echuca was established as a river port town in the 1800s. Today, the town is an important industrial, community, health, recreation and transport hub for northern Victoria and southern New South Wales. Together with Moama, its catchment extends approximately 70 kilometres from the town and has a population of approximately 50,000 (Shire of Campaspe, 2009).

Echuca lies within one of the most diverse and intensively developed agricultural regions in Australia. Traditionally, the town relied upon the export of wool and other agricultural goods from the surrounding region. Today, the regional economy is underpinned by irrigated agriculture and the processing of agricultural products. The importance of agriculture to the local economy is reflected in Echuca's manufacturing base, which includes a number of large food processing companies: Simplot, Fonterra, Cedenco and Heinz Watties.

Echuca's regional role now focuses largely on services and retailing, but manufacturing remains an important sector of the local economy. In 2006, 818 residents of Echuca were employed in manufacturing, which represented 15% of the town's workforce (ABS, 2006). Unlike many other areas in Australia, Echuca has maintained its industrial employment base despite a general decline in the manufacturing sector since the early 1980s.

Manufacturing is by far the largest export sector for Campaspe Shire. In 2008, the sector generated almost \$1.2 billion in export revenue for the economy of the Shire. Together, manufacturing and agriculture were responsible for 82% of the Shire's exports in 2008, by value (Compelling Economics / Remplan, 2009).

Manufacturing is the industry sector that generates the most marginal economic value for the local economy. In 2008, the sector generated \$373 million in additional value for the region (Compelling Economics / Remplan, 2009).

Additional information about the regional economy is provided in the *Issues Paper* (Centrum Town Planning, 2010)

2. Existing Conditions

Study area

The study area is located approximately 1.8 kilometres to the south east of the Echuca CBD (refer to Figure 1). It is generally bounded by Service Street and Ogilvie Avenue to the north, Rowe Road to the south, Mary Anne Road to the east and the Melbourne and Murray River Railway to the west.

The study area is approximately 6.8 kilometres long and 2.8 kilometres wide at its widest point. It has an area of 1,125 hectares, excluding road and rail reserves. The study area contains approximately 320 separate lots held predominantly in private ownership.

The northern part of the study area features the established urban area and a number of new industrial subdivisions on the urban fringe. The central part of the study area is characterised by a mix of rural and rural living uses and features the Echuca Aerodrome. The southern part of the study area is characterised by rural land uses and includes the Shire of Campaspe saleyards, pound and waste transfer station.

Additional information about existing land uses is provided in Section 2 of the Strategy.

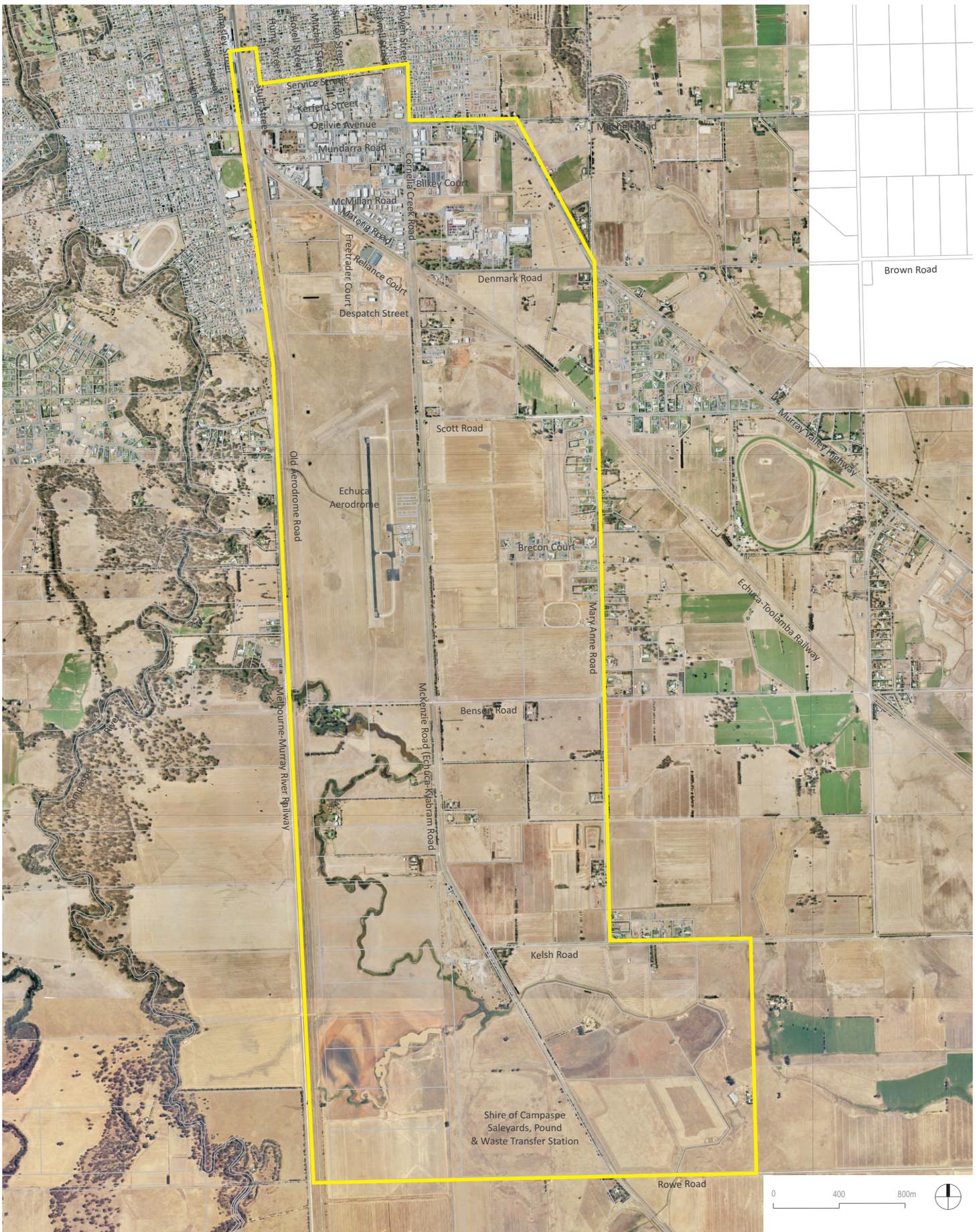


Figure 1
Extent of study area

LEGEND
 Study area

Landscape & waterways

The study area is generally flat, being part of an old alluvial floodplain associated with the Campaspe and Murray Rivers.

The study area is characterised by urban land in the north and cleared farming land in the south. As such, it contains relatively few distinguishing natural features such as large areas of vegetation, hills or prominent creeks. The land immediately surrounding the study area has a more distinctive landscape character that features the floodplains, wetlands and significant native vegetation associated with the Campaspe and Murray Rivers.

There is one waterway of note in the study area, which flows from the Goulburn Murray Drain No.4 through the northern corner of the saleyards site to the Campaspe River (refer to Figure 2). This waterway is most defined on the west side of McKenzie Road (Echuca-Kyabram Road). It crosses the Melbourne and Murray River Railway through a number of culvert and bridge structures prior to discharging into the Campaspe River. Other waterways are located on the Aerodrome land and in the vicinity of Despatch Street and Matong Road. A second irrigation drain (No.11) provides irrigation water to the land in the vicinity of Mary Anne Road and further to the south east of the study area.

As the study area is located on flat land associated with two major rivers, large parts of the study area are subject to flooding. Areas that are most affected by flooding include the land on the north side of Benson Road, the land on the east side of McKenzie Road and land on the south side of Kelsh Road.



Irrigation drain No.11 at Denmark Road.

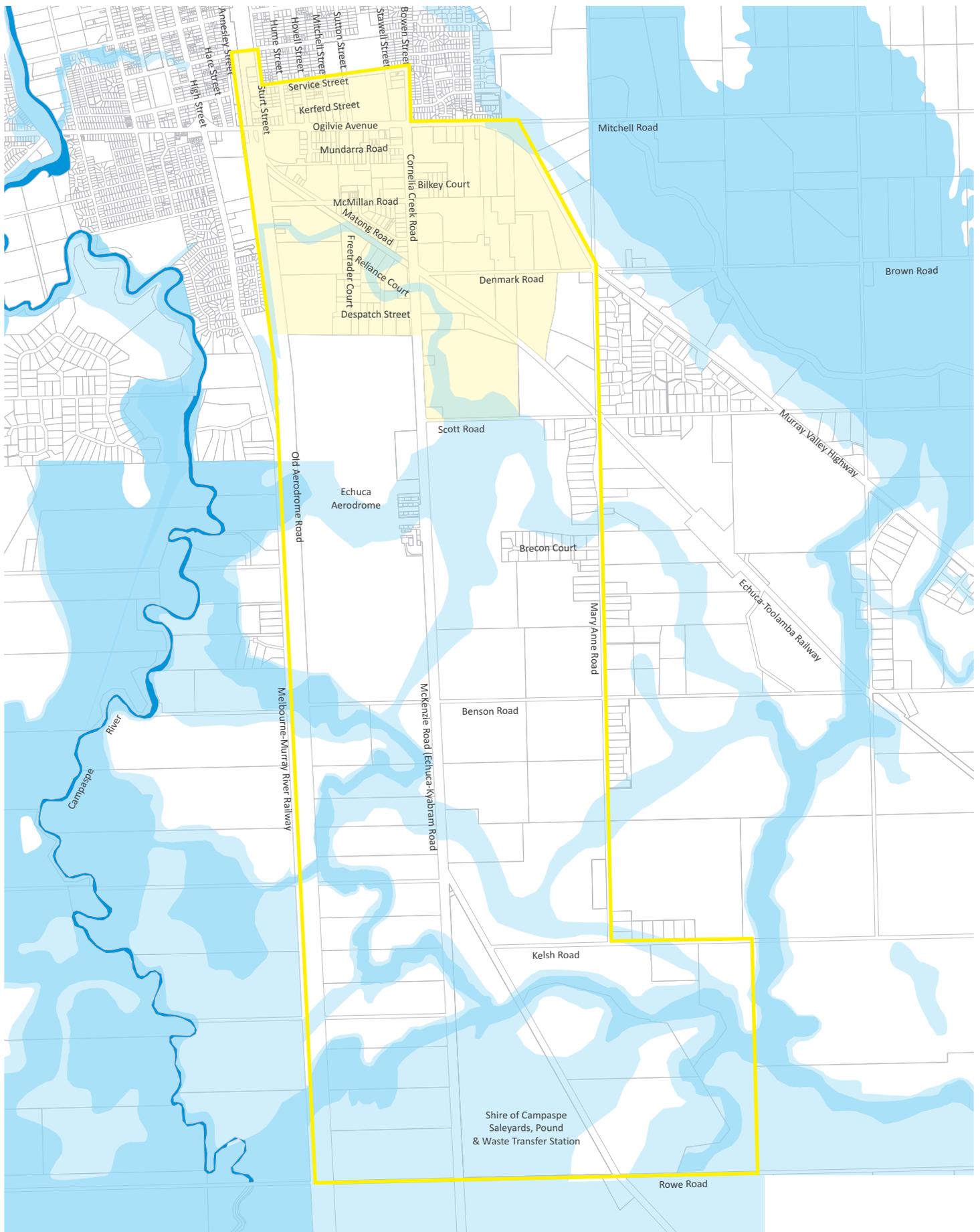


Figure 2
Waterways

LEGEND

- Study area
- Urban area
- Floodway Overlay (FO)
- Land Subject to Inundation Overlay (LSIO)

Flora & fauna

The study area is located in the Victorian Riverina Bioregion. The study area contains two Ecological Vegetation Classes, Floodplain Riparian Woodland along the waterway in the south west of the study area and Plains Grassland on the north side of the Aerodrome site and in various areas on the south side of Benson Road and Kelsh Road, including a number of road reserves. (www.dse.vic.gov.au, NCCMA roadside vegetation mapping). Floodplain Riparian Woodland has a conservation status of vulnerable and Plains Grassland has a conservation status of endangered. Maps showing the extent of these vegetation classes were provided in the *Issues Paper* (Centrum Town Planning, 2010).

The study area contains few areas of mature native trees. Those that exist are mainly associated with the waterways in the south west corner of the study area and in the reservation of the Echuca-Toolamba Railway. Scattered old river red gums are located in the landscaped frontages of a number of the large industrial lots in Cornelia Creek Road.

Council has recently completed two assessments for land in its ownership in Despatch Street (Cheers, 2009) and at the Echuca Aerodrome (Cheers, November, 2009), although no detailed flora and fauna assessments have been carried out for most of the study area.

The assessment in Despatch Street found that no threatened flora or fauna species have been recorded within the new subdivision area, although it noted that various flora and fauna species listed on relevant databases or the *Environment Protection and Biodiversity Conservation Act 1999* may exist within 5 kilometres of the study area (Cheers, 2009).

The assessment of the Echuca Aerodrome site found seven sites of Plains Grassland, with six areas of very high conservation significance grassland present in the vicinity of the existing terminal building (Cheers, 2009). The remnant grassland on the Echuca Aerodrome is listed on the Register of the National Estate and, until 2012, the Minister for the Environment Heritage and the Arts must consider the Register when making decisions under the *Environment Protection and Biodiversity Conservation Act 1999*.



Large, old river red gums contribute significantly to the character of the east side of Cornelia Creek Road

Land use

Land use in the study area is diverse and ranges from fully developed industrial land in the north to rural uses in the south. The extent of land use within the study area is shown in Figure 3. The study area can be broadly divided into three areas, as follows:

Northern area (urban area)

The established urban area in the north of the study area has been developed for a range of industrial and commercial uses. These can be broadly described as follows:

- *Sturt Street & Service Street area:* predominantly service industries such as machinery sales, service and hire, some light manufacturing;
- *Ogilvie Avenue:* predominantly service businesses including rural supplies, building supplies / hardware, automotive retailers, a major fabricated concrete business;
- *McMillan Road & Despatch Street:* predominantly light and service industries such as building material supplies, building products, metal fabrication, future stage of an industrial subdivision being developed by Council;
- *Cornelia Creek Road:* predominantly service industry such as automotive / marine sales, building material supplies and some light industry, large food processing industry on the east side of the road;
- *Denmark Road:* large food processing sites at the western end of the road, rural uses at the eastern end.

Central area

The central part of the study area extends south from the existing urban area to Benson Road. This area contains a mix of rural, rural living and public land uses. Key uses include:

- Echuca Aerodrome on the east side of McKenzie Road;
- vacant land owned by Council on the east side of McKenzie Road, originally set aside for a possible future east-west runway;
- rural living development lining the west side of Mary Anne Road and in Brecon Court.

Southern area

The southern part of the study area, to the south of Benson Road, is mainly used for agricultural / grazing purposes. The main non agricultural uses in this area are the Shire's saleyards, waste transfer station and pound, which are located on a large parcel of land on the west side of McKenzie Road. There are a number of dwellings dispersed throughout the southern area.

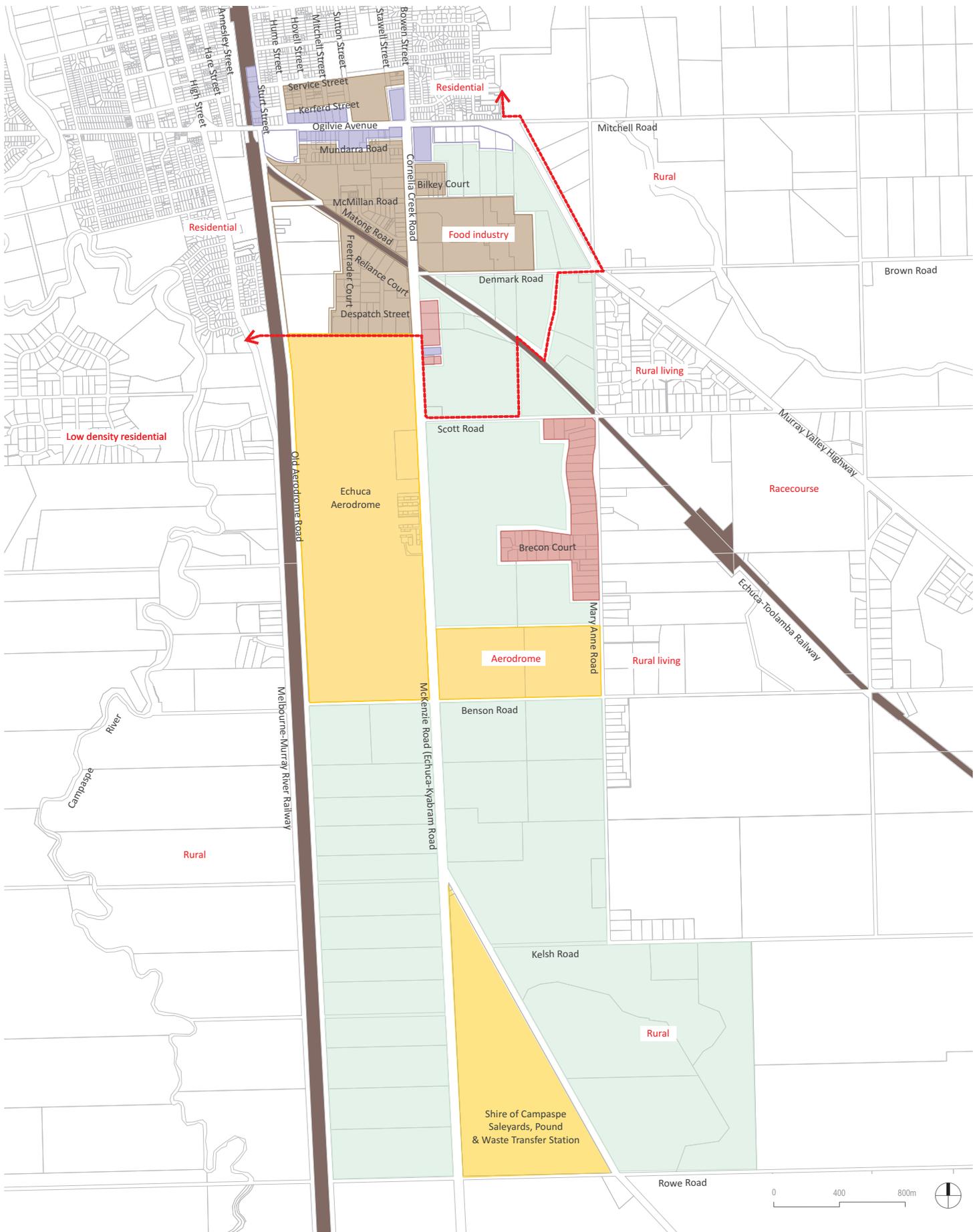


Figure 3
Existing land uses

LEGEND

- Extent of urban zones
- Rural uses
- Industrial uses
- Business uses
- Rural living
- Railway uses
- Local government uses
- Area under development/redevelopment

Access & services

The existing transport network is shown in Figure 4. The study area is serviced by two arterial roads, Ogilvie Avenue (Murray Valley Highway) and Cornelia Creek Road / McKenzie Road (Echuca-Kyabram Road)¹. The Murray Valley Highway provides access to Shepparton and Albury / Wodonga to the east and the Echuca-Kyabram Road provides access to Kyabram to the south east. These roads are managed by VicRoads.

The study area is serviced by a network of local roads that serve a range of functions. Key east-west routes include McMillan Road, Denmark Road and Benson Road. Mary Anne Road is the only north-south access road of any significant length within the study area.

The study area features a number of unmade road reserves, including the southern section of Old Aerodrome Road, the western section of Scott Road and the extension of McKenzie Road west of the saleyards.

Two rail lines exist within the study area, the Melbourne and Murray River Railway and the Echuca-Toolamba Railway.

The urban area is serviced by water, sewerage, gas and telecommunications infrastructure. The extent of the existing services is shown in Figure 5.



Ogilvie Avenue west of Cornelia Creek Road

¹ The Echuca-Kyabram Road road is known locally as Cornelia Creek Road between Ogilvie Avenue and the Echuca-Toolamba Railway. It is known locally as McKenzie Road to the south of the Railway.

The Murray Valley Highway is known as Ogilvie Avenue up to the bend in the Highway. Where the roads have two names, the local names have been used.

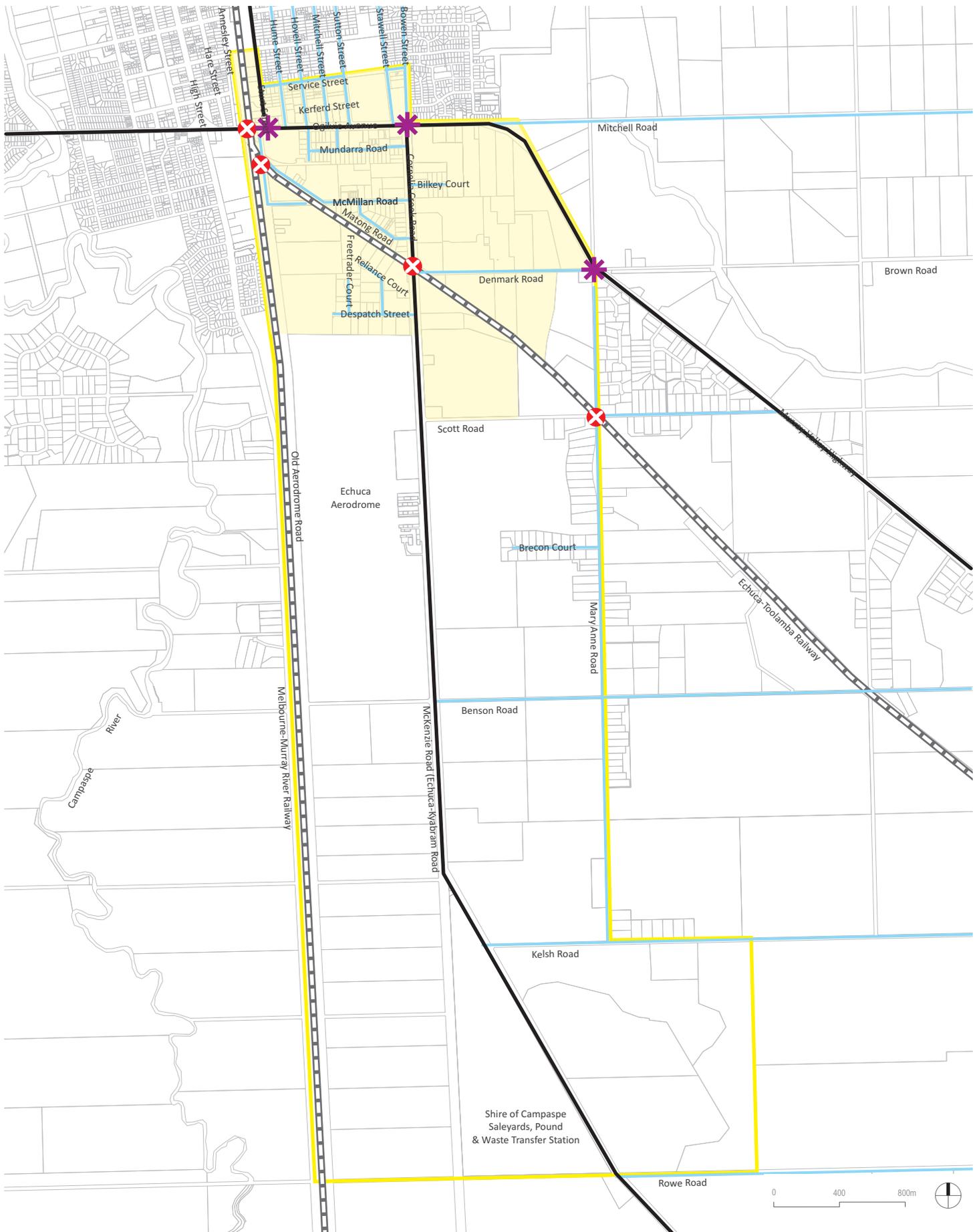


Figure 4
Existing transport network

LEGEND

- Study area
- Urban area
- Arterial roads
- Local roads
- Unmade roads
- Railway
- ✱ Major intersection
- ✕ Level crossing

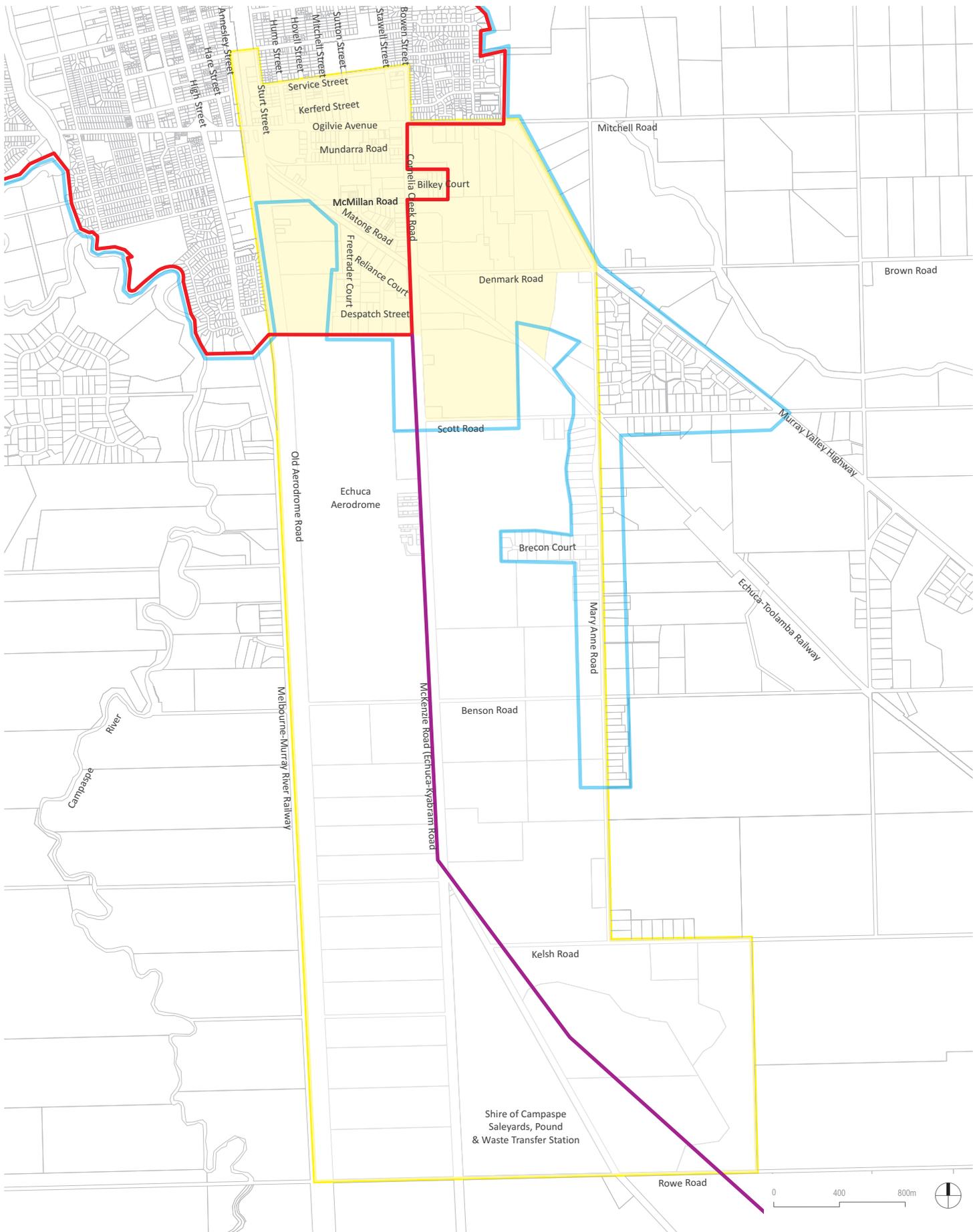


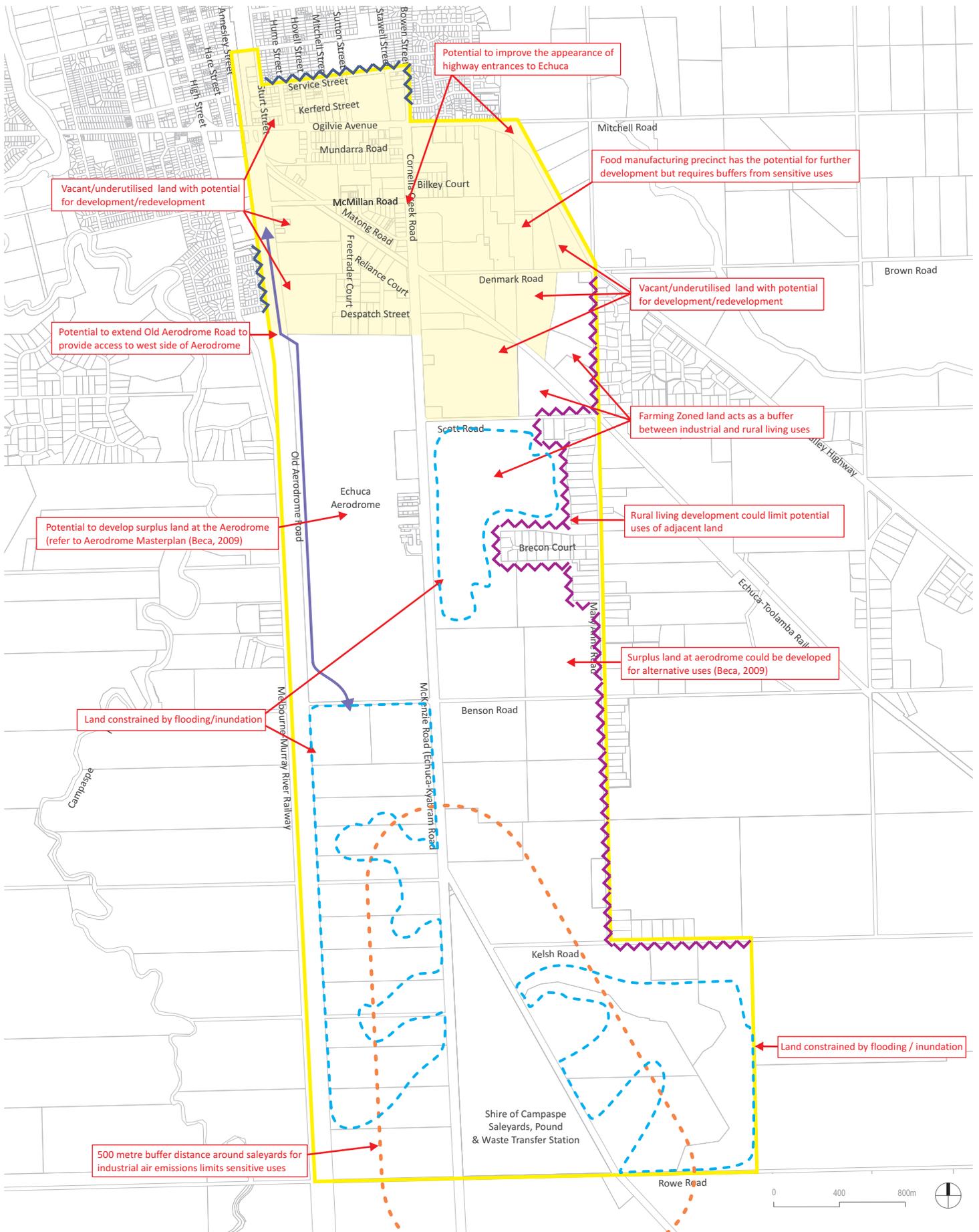
Figure 5
Extent of existing services

LEGEND

- Study area
 - Urban area
 - Sewer
 - Water
 - Gas main
 - Gas
- Areas are approximate and should be used as a guide only

Issues and opportunities

As part of the development of the *Issues Paper* (Centrum Town Planning, 2010), a series of issues and opportunities were identified to assist with the consultation process. These are shown on Figure 6.



Vacant/underutilised land with potential for development/redevelopment

Potential to improve the appearance of highway entrances to Echuca

Food manufacturing precinct has the potential for further development but requires buffers from sensitive uses

Potential to extend Old Aerodrome Road to provide access to west side of Aerodrome

Vacant/underutilised land with potential for development/redevelopment

Farming Zoned land acts as a buffer between industrial and rural living uses

Potential to develop surplus land at the Aerodrome (refer to Aerodrome Masterplan (Beca, 2009))

Rural living development could limit potential uses of adjacent land

Surplus land at aerodrome could be developed for alternative uses (Beca, 2009)

Land constrained by flooding/inundation

Land constrained by flooding / inundation

500 metre buffer distance around saleyards for industrial air emissions limits sensitive uses

Figure 6
Issues & opportunities

- LEGEND**
- Study area
 - Urban area
 - Existing sensitive interfaces
 - Potential sensitive interfaces

3. Land Strategy

Vision

The vision for the Echuca South East Industrial and Commercial Growth Corridor is for it to be an area that:

- **is the focus** of industrial and large scale commercial development in Campaspe Shire;
- **is an attractive gateway** to Echuca from the south and east;
- **exhibits high quality built form** that embraces best practice sustainability principles;
- **contains a diversity** of small and large industries that service both the local economy, interstate and export markets;
- **accommodates industries with larger buffer requirements** so they can establish, operate and expand without causing unreasonable amenity impacts on sensitive uses;
- **supports significant food processing industries** that generate significant employment, and export income, for the community;
- **accommodates public uses** that serve important community needs; and
- **draws inspiration** from the landscape character of the surrounding area including the Campaspe and Murray Rivers and native vegetation associated with these areas.

Elements of the Strategy

The Strategy comprises two plans, a 'Structure Plan' and a 'Strategic Framework Plan'. These plans are supported by a series of themes.

Structure Plan

The Structure Plan (Figure 7) provides the planning framework for future land use and development within the existing urban area.

The Structure Plan identifies areas that are anticipated to experience change over the life of the Strategy, including new subdivision areas, key infill sites and strategic sites that have potential for redevelopment.

The Structure Plan also shows preferred future land uses, preferred lot sizes and road access arrangements. The areas on the plan that have not been designated for a particular use are not anticipated to experience major change.

Strategic Framework Plan

The Strategic Framework Plan (Figure 8) provides a long term (20 plus years) land use planning vision for the areas beyond the existing urban area, although some of strategies identified in the themes could be implemented in the short to medium term, in certain circumstances.

The main role of the Strategic Framework Plan is to preserve long-term opportunities for expansion of the existing urban area and to protect public and sensitive land uses from the encroachment of incompatible uses.

Themes

The themes provide the objectives, strategies and implementation tools that support the Structure Plan and Strategic Framework Plan.

The eleven themes are:

- Land use - industrial areas
- Land use - commercial areas
- Land use - public uses
- Sensitive interfaces
- Transport & access
- Built form – industrial areas
- Built form – commercial areas
- Highway entrances

- Biodiversity
- Physical services

The themes are structured in the following way:

- **Issues & influences:** an overview of key policies, principles and other findings that have influenced the development of the Strategy, generally as identified in the *Issues Paper*.
- **Objectives:** what the Strategy seeks to achieve over the course of the Plan.
- **Strategies:** the recommended action or policy position for achieving the objectives.
- **Design guidelines:** performance measures for design that should be followed when implementing the strategies.
- **Implementation:** tools or tasks that should be pursued to implement the strategies in the planning system over the short to medium term.
- **Plan reference:** the figures most relevant to each theme. Each theme should be read in conjunction with the relevant figures.



Figure 7
Structure plan

LEGEND

- Urban area
- General industry (IN1Z)
- Light industry (IN3Z)
- Commercial
- Drainage reserve
- Reserve
- Preferred minimum lot size
- Food manufacturing precinct
- Planning permit issued for subdivision/development

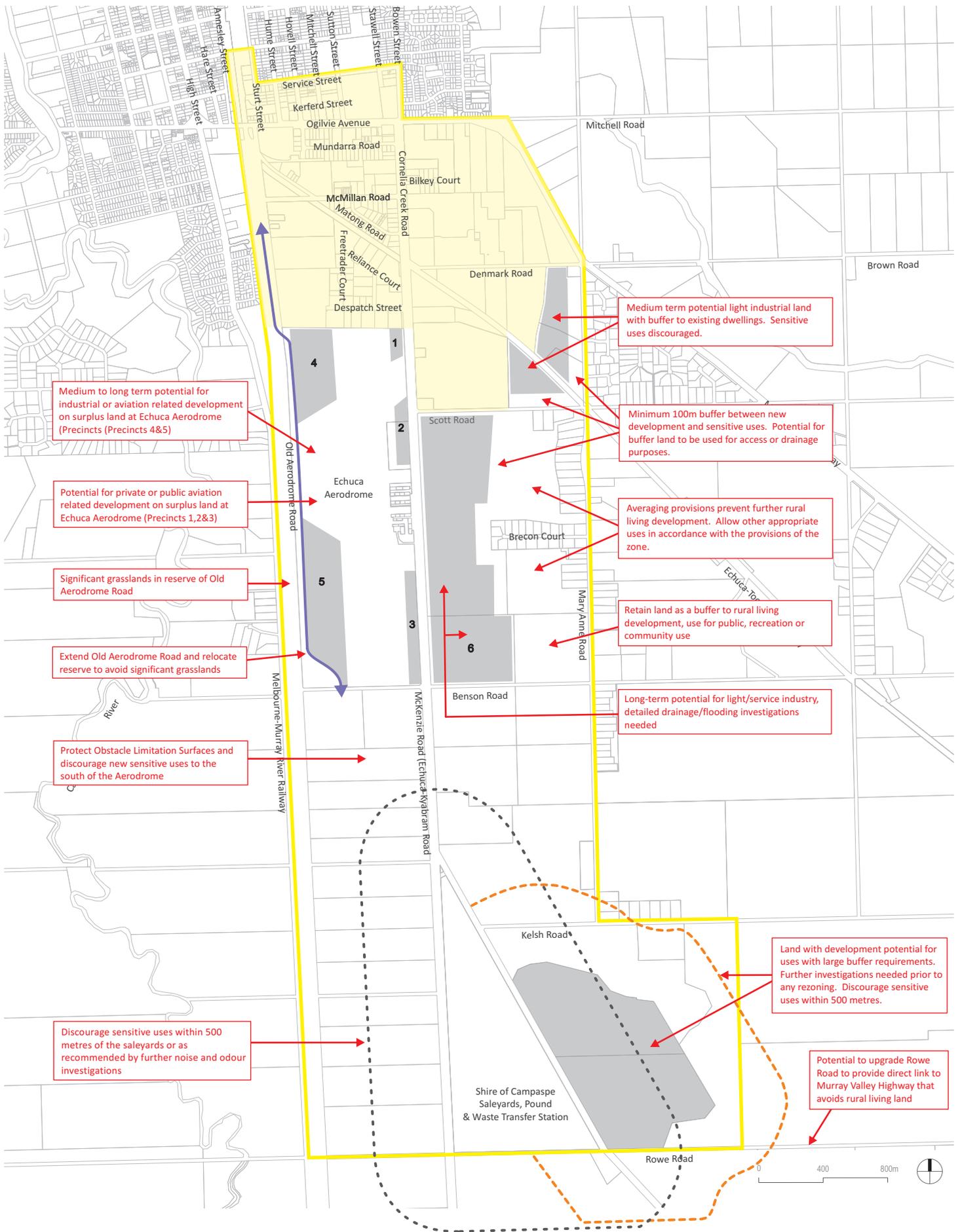


Figure 8
Strategic framework plan

LEGEND

- Study area
- Urban area
- Potential future development area
- Buffer to sensitive uses

4. Themes

Land use - industrial areas

Key issues and influences

Industrial and commercial activities are very important for Echuca's local economy, however, to date, Council has not had the benefit of a comprehensive long term strategic plan to guide commercial and industrial development in the study area and safeguard opportunities for growth.

At present, the town contains a mix of light, service and general industry, including a cluster of food processing industries in Denmark Road that provides significant employment for the local community and export income for the local economy.

Echuca currently has approximately 125 hectares of vacant land zoned for industrial purposes. The majority of this land is located in the vicinity of Denmark Road and Despatch Street / Old Aerodrome Road. Large areas of industrial land are being developed in Moama, which effectively represents additional land supply for Echuca, due to the close functional relationship between the two towns.

The background research undertaken for the Strategy suggests there is likely to be consistent demand for industrial land in Echuca in the foreseeable future. The key driver of much of this demand is likely to be attributed to an increased demand for goods and services associated with population growth in the local area. Some demand for land is also likely to be driven by the relocation of businesses from established industrial areas to new industrial areas, as established areas such as Ogilvie Avenue are redeveloped for other uses.

Over the short to medium term, the background research also concluded that the existing supply of zoned industrial land is likely to be sufficient to satisfy the demand associated with projected population growth for the Shire to 2026. In the long term, there is potential for industrial development at the Echuca Aerodrome and along the McKenzie Road.

Within the existing urban area, the research undertaken for the Strategy has revealed that there is a need to improve the range of industrial lots available in Echuca. For industries that require buffers of more than 500 metres to residential areas, limited opportunities exist in the areas currently being subdivided for industrial development on the west side of McKenzie Road. There are also limited opportunities for enterprises seeking small lots. Whilst the specific attributes of new industrial lots will ultimately be determined by the property market, a precinct wide structure plan will assist in guiding this process.

Echuca has a number of competitive advantages that make it ideally placed to attract large industrial and commercial investment from outside the region in the future. Until firm interest is expressed by these users, it is difficult to plan strategically for these uses as they often have specific needs and fund new development infrastructure as required. In planning strategically for these uses, a level of flexibility is therefore likely to be required to ensure that these uses can be accommodated in suitable areas.

Objectives and strategies

Objectives		Strategies
L11	Protect and promote the south east industrial and commercial growth corridor generally bounded by Ogilvie Avenue, the Melbourne-Murray River Railway, Mary Anne Road and Rowe Road as the primary commercial and industrial area in Echuca.	<ul style="list-style-type: none"> Discourage land uses that may restrict future industrial and commercial development in the area, including dwellings, accommodation and other sensitive land uses.
L12	Make more efficient use of existing fully serviced industrial land to minimise infrastructure costs associated with new greenfield development.	<ul style="list-style-type: none"> Encourage the subdivision of large under-utilised industrial allotments in established industrial areas. Encourage the extension of Bilkey Court to facilitate the development of under-utilised land at the rear of lots fronting Ogilvie Avenue.
L13	Facilitate the development of a diverse range of industrial lots to ensure that the needs of a wide range of industries can be accommodated in the south east industrial and commercial growth corridor.	<ul style="list-style-type: none"> Encourage lots to be developed in accordance with the preferred minimum lot sizes shown on the Structure Plan (Figure 7). Encourage new industrial developments to provide a mix of lot sizes, particularly for larger subdivisions of 8 lots or more.
L14	Protect opportunities to expand the food manufacturing precinct to allow for growth of this important industry sector.	<ul style="list-style-type: none"> Discourage the development of non-food related uses on land identified for the future development of the food precinct. Discourage small lot subdivisions in the area identified for the future development of the food precinct.
L15	Ensure that land is available in the existing urban area for general industrial uses that require large lots or large buffers from sensitive uses.	<ul style="list-style-type: none"> Encourage uses listed in the schedule to Clause 52.10 of the Campaspe Planning Scheme to locate in central locations within new subdivisions. Discourage subdivisions consisting mainly of small lots (1,200m² or less) in areas zoned Industrial 1 that are located at least 500 metres from existing dwellings.

	Objectives	Strategies
LI6	Ensure that proper planning of major parcels of land occurs prior to the issue of any planning permits for new subdivisions.	<ul style="list-style-type: none"> • Apply a Development Plan Overlay to broadacre industrial land to manage, amongst others matters: <ul style="list-style-type: none"> – development staging; – access arrangements; – lot sizes; – drainage and physical infrastructure; – industry type; – setbacks to waterways as per Goulburn Murray water requirements; – other relevant strategies in this theme, as appropriate.
LI7	Ensure that new industrial development occurs in a staged manner to minimise infrastructure costs associated with out of sequence development.	<ul style="list-style-type: none"> • Release land for development generally in a north to south direction (refer also to LI9).
LI8	Encourage opportunities for alternative energy production.	<ul style="list-style-type: none"> • Support the development of alternative energy production facilities on the south side of Denmark Road that provide energy to businesses in the food manufacturing precinct or other nearby industries.
LI9	Ensure an adequate supply of land to accommodate demand over a 15 year period based on population projections and industry trends.	<ul style="list-style-type: none"> • Review land supply and demand indicators every five years or more frequently in response to industry trends. • In the medium to long term (beyond 2020) and subject to demonstrated need based on land supply and lot take up rates, progressively investigate and rezone land to the south of the existing urban area to accommodate new industrial development. • In the long term and subject to demonstrated need based on land supply and lot take up rates, investigate the potential to rezone the following land to the Industrial 3 Zone with a buffer of at least 100 metres to any rural living development: <ul style="list-style-type: none"> – land on the west side of Mary Anne Road zoned Farming; – western portion of surplus land at Echuca Aerodrome (Precinct 6).

	Objectives	Strategies
LI10	Accommodate major industries with requirements for large buffers to sensitive uses in appropriate greenfield locations to the south of the existing urban area.	<ul style="list-style-type: none"> • Investigate the potential for part or all of the land at 495 McKenzie Road and Lot 4 LP146264 to be developed for industries with buffer requirements of 500 metres or more from sensitive land uses. These investigations should identify: <ul style="list-style-type: none"> – areas within the site that have a 500 metre buffer to existing dwellings and any restrictions this may impose on activities that can be conducted within the site; – traffic impacts on the road network and requirements for road upgrades or infrastructure works; – infrastructure requirements (including gas, electricity, sewerage); – setback requirements to declared waterways; – drainage requirements, with drainage to be retarded to pre-development levels; – strategies to mitigate potential amenity impacts on dwellings in the surrounding area; – the preferred planning tools for managing use and development on the site. • Subject to the findings of the above investigations, rezone the land to the Industrial 1 Zone with a Development Plan Overlay to facilitate the development of this land. • Discourage sensitive uses within 500 metres of 495 McKenzie Road and Lot 4 LP146264 as shown on Figure 8 (Strategic framework plan) to protect industrial development opportunities on these sites.

Plan references

- Figure 7 - Structure plan.
- Figure 8 - Strategic framework plan.

Implementation

- Apply a Development Plan Overlay to the following undeveloped industrial land:
 - all land zoned IN1Z between Denmark Road and the Echuca-Toolamba Railway;
 - all land zoned IN1Z bounded by McKenzie Road, the Echuca-Toolamba Railway and Scott Road.
- Update the Municipal Strategic Statement with the key issues, objectives and strategies identified in this theme, as appropriate.
- Incorporate the 'Strategic Framework Plan' into the Municipal Strategic Statement.

Land use - commercial areas

Key issues and influences

Echuca's main commercial area is the Echuca CBD, which contains a mix of specialty retail, supermarket, office and restricted retail uses. The northern part of the study area, focused on Ogilvie Avenue, plays an important complementary role in the town's commercial hierarchy. Although it was traditionally an industrial area, Ogilvie Avenue now accommodates a broad range of land uses including uses that benefit from highway exposure.

Council's vision is for Ogilvie Avenue to become an area for restricted retail and other compatible uses². In line with this vision, restricted retail uses are beginning to emerge, although change is occurring slowly and industrial and warehouse uses are likely to exist in this area for many years.

There is no vacant land available in the Business 4 Zone in Ogilvie Avenue, however, previous research by Council indicates that sufficient land exists elsewhere in the Township to satisfy requirements until 2020 (Essential Economics, 2006). The Strategy accepts these findings, and, accordingly, provides direction for how Council should prepare for the demand that is likely to arise in the medium to long term, beyond 2020.

The eastern part of Ogilvie Avenue and land along Cornelia Creek Road play secondary, but still significant roles, as areas for businesses that value exposure to an arterial road and that are able to establish in an industrial zone. The Strategy has found that a more consolidated precinct would offer a range of benefits for pedestrian accessibility and traffic management and could assist in the promotion of the precinct as a destination for bulky goods retailing.

Objectives and strategies

Objectives		Strategies
LC1	Consolidate large format restricted retail development along Ogilvie Avenue between Sturt Street and Cornelia Creek Road.	<ul style="list-style-type: none"> Encourage the redevelopment of industrial sites in the Business 4 Zone on Ogilvie Avenue for restricted retail and other compatible uses. Discourage restricted retail uses in the Industrial 1 Zone and proposed Industrial 3 Zones on Ogilvie Avenue and Cornelia Creek Road (<i>refer to Objective SI2 for detail on the proposed Industrial 3 Zones</i>).

² Refer to Clause 21.04 of the Campaspe Planning Scheme.

Objectives		Strategies
LC2	Ensure that the supply of restricted retail land is adequate to accommodate projected demand based on population growth and population projections.	<ul style="list-style-type: none"> • Develop a 'Retail Strategy' for Echuca to guide the future supply of business land in the precinct. • In the medium to long-term and subject to the findings of the 'Retail Strategy', rezone the southern part of 98-110 Ogilvie Avenue to the Business 4 Zone in the event that the land is no longer used for concrete manufacturing. • In the medium to long-term and subject to the findings of a 'Retail Strategy', rezone the southern part of 92-96 Ogilvie Avenue to the Business 4 Zone. • Review land supply and demand indicators for restricted retail uses every five years or as required.
LC3	Ensure that restricted retail and other business uses in the south east industrial and commercial growth corridor do not undermine the long-term role of the CBD as the main business area in the township.	<ul style="list-style-type: none"> • Support requests to rezone land to the Business 4 Zone only if in accordance with this strategy and the adopted Retail Strategy. • Discourage the development of large format variety stores that sell products that do not fall within the definition of 'restricted retail' uses in the Planning Scheme. • Discourage office related uses in the south east industrial and commercial growth corridor that are not ancillary to an industrial or business use.

Implementation

- Update the Municipal Strategic Statement with the key issues, objectives and strategies identified in this theme, as appropriate.

Plan reference

- Figure 7 - Structure plan.

Land use - public uses

Key issues and influences

The study area contains important public land uses including the Echuca Aerodrome and Shire of Campaspe saleyards, pound and waste transfer station. In order to safeguard the long term operation of these uses, they need to be protected from the encroachment of sensitive uses or inappropriate development.

In response to the need for a strategic vision for the Aerodrome, Council recently adopted the *Echuca Aerodrome Master Plan*. This study found that the Aerodrome has adequate capacity for the next 10-15 years (Beca, 2010, 6). The Master Plan identifies six areas of surplus land at the Aerodrome that are not required for existing or future aviation purposes, including a large parcel of land on the east side of McKenzie Road that was originally acquired by Council for the development of an east west runway. Subject to some further investigations, the Master Plan identifies the potential to use and develop a number of these parcels land for non-aviation industrial or commercial purposes, provided the development does not prejudice the ongoing operation of the Aerodrome (Beca, 2010, 13).

Objectives and strategies

Objectives		Strategies
LP1	Protect the Echuca Aerodrome's primary function for aviation and ensure that activities associated with aviation are allowed to continue on the site.	<ul style="list-style-type: none"> • Ensure that any new development at the Echuca Aerodrome occurs in accordance with the 'general principles' for the use and development of surplus land in the <i>Echuca Aerodrome Master Plan</i> (Beca, 2010, Section 2.5.7) to ensure that development does not compromise the operations of the Aerodrome. • Protect the Obstacle Limitation Surfaces identified in the Echuca Aerodrome Master Plan (Beca, 2010). • Discourage the construction of new dwellings in the Farming Zone to the south of the Aerodrome.
LP2	Encourage aviation related development at the Echuca Aerodrome.	<ul style="list-style-type: none"> • Support the development of private and public aviation uses on Precincts 1,2 & 3 as identified in Figure 8 and discourage the use of this land for other purposes.

Objectives		Strategies
LP3	Further investigate and utilise surplus parcels of land at the Echuca Aerodrome for development that is compatible with the operations of the Aerodrome.	<ul style="list-style-type: none"> In the medium to long term (beyond 2020), and subject to demonstrated need, progressively investigate and rezone land Precincts 4&5 as identified in Figure 8 for industrial or aviation related development.
LP4	Protect the operations of the saleyards, pound and waste transfer station from encroachment by sensitive land uses, particularly dwellings	<ul style="list-style-type: none"> Further investigate noise and odour issues at the saleyards site in accordance with the recommendations of Ward (2009). Discourage the development of dwellings in an area extending 500 metres around the saleyards site, or as recommended by the further investigations into noise and odour.

Implementation

- Rezone the Echuca Aerodrome site from the Public Use Zone (PUZ4) to the Special Use Zone in accordance with the recommendations of the Echuca Aerodrome Master Plan (Beca, 2010), with appropriate overlay controls to protect significant native vegetation (refer to 'Biodiversity' theme).
- Apply the Design and Development Overlay (DDO) to the Obstacle Limitation Surfaces identified in the Echuca Aerodrome Master Plan (Beca, 2010).
- If confirmed by further investigations, apply the Environmental Significance Overlay to land within 500 metres of the boundaries of the Public Use Zone (Schedule 6).
- Update the Municipal Strategic Statement with the key issues, objectives and strategies identified in this theme, as appropriate.
- Incorporate the 'Strategic Framework Plan' into the Municipal Strategic Statement.

Plan reference

- Figure 8 - Strategic framework plan.

Sensitive interfaces

Key issues and influences

The need to separate industry and sensitive land uses has long been one of the primary purposes of land use planning. The most common impacts of industry on sensitive uses are odour, dust and noise emissions. Industries are also affected as expensive amelioration works may be required to minimise noise and air emissions.

Sensitive interfaces exist to the north of Ogilvie Avenue where land in the Residential 1 Zone directly abuts land in the Industrial 1 Zone. Sensitive interfaces also exist in the eastern part of the study area where rural living zoned land is separated from industrial zoned land by tracts of rural land.

In the long term, any industrial development to the south of the existing urban area will need to provide appropriate protection for rural living land in the area bounded by Scott Road, Bensons Road, McKenzie Road and Mary Anne Road. In this area, there is a desire amongst landowners to retain the 'rural' character of the land, and, in response, the Strategy attempts to balance these expectations with the need to make efficient use of well located land that has good access to road infrastructure and which can be readily serviced.

Objectives and strategies

Objectives		Strategies
SI1	Discourage new heavy industry or industries with adverse amenity potential from locating near existing residential areas.	<ul style="list-style-type: none"> Apply the Industrial 3 Zone to industrial land abutting or in close proximity to residential areas to encourage compatible industrial uses and enable consideration of amenity impacts through the planning permit process. Rezone the northern part of 98-110 Ogilvie Avenue to the Industrial 3 Zone in the event that the land is no longer used for concrete manufacturing.
SI2	Protect the food manufacturing precinct from the encroachment of sensitive or non-compatible uses.	<ul style="list-style-type: none"> Discourage the development of dwellings in the Farming Zone on the west side of Mary Anne Road and on the east side of the Murray Valley Highway opposite the food precinct. Give notice of planning applications for sensitive uses in the area surrounding the food precinct to the owners and operators of land in the food precinct.

Objectives		Strategies
SI3	Protect existing rural living uses from unreasonable amenity impacts from industry	<ul style="list-style-type: none"> Maintain a buffer of at least 100 metres from existing rural living development to any new industrial lots, with roads, drainage or similar uses allowed within the buffer. Retain part of surplus aerodrome land at the east of McKenzie Road (precinct 6) as a buffer to rural living development and use this land for public, recreation or community uses, as shown on the Strategic Framework Plan (Figure 8).

Implementation

- Rezone all land zoned Industrial 1 generally north of Ogilvie Avenue to the Industrial 3 Zone.
- Rezone all land zoned Industrial 1 on the south side of Ogilvie Avenue east of Cornelia Creek Road to the Industrial 3 Zone, with the exception of land in the 'food manufacturing precinct' shown on Figure 7.
- Update the Municipal Strategic Statement with the key issues, objectives and strategies identified in this theme, as appropriate.

Plan reference

- Figure 7 - Structure plan.
- Figure 8 - Strategic framework plan.

Transport & access

Key issues and influences

Industrial and commercial uses rely heavily on the transport system. The study area is serviced by a network of local roads that have good access to the arterial roads, Ogilvie Avenue and Cornelia Creek Road/McKenzie Road. The study area also has good access to the Melbourne and Murray River and Echuca-Toolamba railways, although the Strategy has not revealed any demand for improved access to rail infrastructure.

At present, vehicle travel to the study area is predominantly from the north and west along Ogilvie Avenue, which is used heavily for Echuca's internal travel needs. Ogilvie Ave currently carries approximately 14,000 vehicles per day at the Melbourne to Murray rail crossing. The Shire of Campaspe and VicRoads have agreed on a master plan for the duplication of Ogilvie Avenue between Sturt Street and Cornelia Creek Road, although the timing of construction works is subject to funding. McKenzie Road currently carries approximately 3,100 vehicles per day at the Echuca-Toolamba rail crossing.

In order to ascertain likely road infrastructure requirements over the next 30 years, a traffic generation and distribution assessment has been undertaken for the study area (CPG, 2010). The assessment found that several important roads and intersections will need to be improved or upgraded over the next 30 years to maintain suitable capacity. The assessment also found that several roads will need to be duplicated to facilitate the full development of the areas shown in the Strategic Framework Plan, although the land demand analysis undertaken for this study indicates that need for some of these works is likely to occur well beyond the 30 year planning horizon of this study and are therefore not possible to plan for with any certainty at this time.

In the long term, alternative access arrangements to the Murray Valley Highway may need to be identified to avoid rural living uses if industrial development occurs to the south of the existing urban area.

Open space and walking/cycling paths have significant potential to contribute to community well-being and health, although they do not feature strongly in the study area due to the industrial and rural land uses that predominate and low density pattern of settlement. Council has identified a number of opportunities to establish trails in the study area through the preparation of the *Echuca Spatial Network Plan (2006)* and *Campaspe Walking & Cycling Strategy (2007)*. These opportunities have been incorporated into the Strategy.

Objectives and strategies

Objectives		Strategies
TA1	Create a local road network to service new development that is well laid out, highly inter-connected and provides convenient access to arterial roads and the rail network.	<ul style="list-style-type: none"> • Apply the Shire of Campaspe's Infrastructure Design Manual for the development of industrial roads. • Construct or extend local roads as shown on Figure 7 (Structure Plan). • Discourage the development of long cul-de-sacs in new subdivisions. • Progressively upgrade Old Aerodrome Road as a 2 lane / 2 way road as development occurs along its length.
TA2	Improve the capacity of the arterial road network to accommodate industrial and commercial development in the existing urban area	<ul style="list-style-type: none"> • Provide four lanes on Ogilvie Avenue between Sturt Street and Cornelia Creek Road in accordance with the <i>Murray Valley Highway Echuca East – Master Plan for Duplication and Service Roads 2010</i>. • Upgrade the following intersections, as required: <ul style="list-style-type: none"> – Ogilvie Avenue & Sturt Street (high priority); – Ogilvie Avenue & Cornelia Creek Road (medium priority); – Cornelia Creek Road & Denmark Road (medium priority). <p><i>All works on arterial roads to be designed and constructed to the satisfaction of VicRoads.</i></p>
TA3	Create a transport network that is efficient and safe for all forms of transport including pedestrians, cyclists, cars, buses and light or heavy transports.	<ul style="list-style-type: none"> • Construct new roads in accordance with the road hierarchy information provided in Appendix A. • Provide an inter-connected network of high standard roads and bicycle and pedestrian routes.
TA4	Limit the number of intersections on arterial roads	<ul style="list-style-type: none"> • Prevent direct access to the Murray Valley Highway from the food manufacturing precinct.
TA5	Limit the number of access points on arterial roads	<ul style="list-style-type: none"> • Require new subdivisions that front Ogilvie Avenue and Cornelia Creek Road/McKenzie Road to provide access via service roads and the local road network as shown on Figure 9.

	Objectives	Strategies
TA6	Ensure that the amenity of rural living uses is not unreasonably affected by the movement of traffic generated by industry.	<ul style="list-style-type: none"> When land to the north of Scott Road is developed, construct Scott Road to provide preferred access to McKenzie Road and limited access to Murray Valley Highway.
TA7	Avoid areas of environmental significance in the location of new roads or transport routes.	<ul style="list-style-type: none"> Prior to any development on the west side of the Echuca Aerodrome, relocate Old Aerodrome Road to the east to avoid significant grasslands.
TA8	Ensure that new road infrastructure is funded by developers if the need for the infrastructure will arise as a result of the proposed development.	<ul style="list-style-type: none"> Require developers to fund the cost of construction of new local roads to service development. Require developers to fund new service roads, or enter into appropriate agreements with VicRoads and/or Council to fund the construction of the service roads at an appropriate time.
TA9	Provide opportunities for overnight parking of trucks that are convenient to residential areas and that do not affect the function of roads or the amenity of residential and recreation areas.	<ul style="list-style-type: none"> Establish an overnight truck parking bay in the Cornelia Creek Road / McMillan Road area.
TA10	Provide opportunities for trucks using the saleyards to park outside the opening hour of the facility that are convenient to driver facilities and food outlets and that do not affect the function of roads and amenity of residential and recreation areas.	<ul style="list-style-type: none"> Establish a stock truck parking bay in the industrial area with suitable access to Cornelia Creek Road.
TA11	Provide opportunities for integrated pedestrian and cycling paths to encourage alternative forms of transport to places of employment and destinations within the south east industrial and commercial growth corridor.	<ul style="list-style-type: none"> Construct an off-road walking and cycling path along the Echuca-Toolamba Railway in accordance with the recommendations of the Municipal Walking & Cycling Network in the <i>Echuca Spatial Network Plan 2006</i> and <i>Campaspe Walking and Cycling Strategy 2007 (p51)</i>. Refer also to Figure 9. Link new walking and cycling paths in the south east industrial and commercial growth corridor with the proposed new road bike/walking links along Anderson Road shown in the <i>Campaspe Walking and Cycling Strategy 2007 (p51)</i>. Refer also to Figure 9.

Implementation

- Liaise with VicRoads to improve capacity on Ogilvie Avenue by providing four lanes west of Cornelia Creek Road.
- Liaise with VicRoads to improve standards on McKenzie Road to the north of the Echuca Aerodrome.
- Undertake more detailed investigations into the establishment of an overnight truck parking bay in the Cornelia Creek Road / McMillan Road area.
- Update the Municipal Strategic Statement with the key issues, objectives and strategies identified in this theme, as appropriate.

Plan reference

- Figure 8 - Strategic framework plan.
- Figure 9 - Proposed transport and access network.



Figure 9
Proposed transport
and access network

LEGEND

-  Arterial roads
-  Proposed collector roads
-  Proposed access roads
-  Proposed off road walking/cycling paths
-  Railway line
-  Level crossing
-  Upgraded intersection (roundabout/signals)
-  Upgraded intersection (turning lanes)

Built form – industrial areas

Key issues and influences

Together with the treatment of streetscapes, built form has the most significant impact on the appearance of urban places.

Traditionally, industrial development has given little consideration to how buildings relate to one another and how they contribute to the streetscape. This is evident in the study area, where the siting of buildings and the treatment of landscaping, fencing and signage often do not contribute positively to the overall appearance of the area.

In planning for new industrial development, responsible authorities must balance the practical requirements of businesses with the need to encourage development that contributes positively to the presentation of its urban areas.

The Campaspe Planning Scheme already recognises that the built form adjacent to the arterial roads in the study area makes a major contribution to the overall appearance of the township. The Strategy has found that the existing provisions need to be strengthened and expanded upon to deal with a more comprehensive range of design elements.

Objectives and strategies

Objectives		Strategies
BI1	Improve the appearance of new industrial and commercial sites in Echuca	<ul style="list-style-type: none"> Require building setbacks to be in accordance with the relevant design guidelines set out in the Strategy. Encourage high quality buildings on the 'landmark sites' shown in Figure 10. Encourage development on corner sites to address the street along both street frontages. Encourage signage in accordance with the design the relevant design guidelines set out in the Strategy. Discourage buildings where the facades are painted entirely or substantially in corporate colour schemes or bright colours. Encourage utility areas to be located in areas that are least visible from the street. Discourage fencing that is imposing or which detracts from the appearance of the street. Minimise car parking in the most prominent areas on the site.

Objectives		Strategies
BI2	Create urban spaces that can be easily maintained and that contribute to public safety through passive surveillance	<ul style="list-style-type: none"> Apply the relevant design guidelines for front, side and rear setbacks.
BI3	Provide for new development that maximises energy efficiency and water re-use	<ul style="list-style-type: none"> Encourage passive solar design principles in the siting of buildings, windows and landscaping. Encourage natural ventilation to cool large commercial buildings. Encourage the use of water tanks for the capture of water to be used in landscaping and for on-site amenities.

Design guidelines

Refer to Appendix B.

Implementation

- Apply the Design and Development Overlay to the Industrial 1&3 Zones fronting Cornelia Creek Road, Ogilvie Avenue and Sturt Street based on the objectives, strategies and design guidelines as set out in Appendix B.
- Update the Municipal Strategic Statement with the key issues, objectives and strategies identified in this theme, as appropriate.

Plan reference

- Figure 10 – Built form.



Figure 10
Built form

- LEGEND**
- Design & Development Overlay (commercial areas)
 - Design & Development Overlay (industrial areas)
 - * Landmark sites

Built form – commercial areas

Key issues and influences

Like industrial land uses, commercial development in out-of-centre locations have traditionally given little consideration to how buildings relate to one another and how they contribute to the streetscape.

The study area contains a range of vacant and under-utilised sites that have potential for commercial redevelopment. At the western end of Ogilvie Avenue, the recent development of a major restricted retail shopping centre has the potential to stimulate the redevelopment of other sites in the area. In order for these sites to become urban places that contribute positively to the appearance and of the area, new commercial buildings will need to relate to the street and achieve a greater sense of visual cohesion than has occurred in the past.

Objectives and strategies

Objectives		Strategies
BC1	Improve the appearance of new commercial sites in the Business 4 Zone on Ogilvie Avenue in recognition of the street's role as a key gateway to the town.	<ul style="list-style-type: none">• Encourage innovative architectural forms and materials on 'landmark sites' shown in Figure 10.• Encourage development on corner sites to contribute positively to the street along both street frontages.• Encourage utility areas to be located in areas that are least visible from the street.• Encourage rooftop and ground level plant and equipment to be located and screened so as to minimise visibility from the street.• Encourage signage in accordance with the design guidelines of this clause.• Discourage extensive, prominent colour schemes that act as advertising signage.

Objectives		Strategies
BC2	Ensure that new buildings in the Business 4 Zone on Ogilvie Avenue relate to the street and other public spaces.	<ul style="list-style-type: none"> • Require building setbacks to be in accordance with the relevant design guidelines in Appendix C. • Encourage 'active' frontages on the most prominent aspects of new buildings when viewed from the street and major areas of car parking. • Discourage car parking on areas of areas of new development sites that are most prominent to streets. • Discourage fences that are imposing or which create a visual barrier between buildings and the street.
BC3	Provide for safe, legible and useable pedestrian connections in the Business 4 Zone on Ogilvie Avenue.	<ul style="list-style-type: none"> • Encourage new developments to provide footpaths along street frontages. • Encourage footpaths that are designed and sited to accommodate a range of users, including trolleys, prams and disabled access.
BC4	Avoid the creation of urban spaces that are difficult to maintain, serve little functional purpose or which do not allow for passive surveillance.	<ul style="list-style-type: none"> • Encourage buildings to be constructed to at least one side boundary. • Discourage small side and rear setbacks and apply the relevant design guidelines.
BC5	Provide for new development that maximizes energy efficiency and water re-use.	<ul style="list-style-type: none"> • Encourage passive solar design principles in the siting of buildings, windows and landscaping. • Encourage natural ventilation to cool large commercial buildings. • Encourage the use of water tanks for the capture of water to be used in landscaping and for on-site amenities.

Design guidelines

Refer to Appendix C.

Implementation

- Apply the Design and Development Overlay to the Business 4 Zone containing relevant objectives, strategies and design guidelines set out in Appendix C.
- Update the Municipal Strategic Statement with the key issues, objectives and strategies identified in this theme, as appropriate.

Plan reference

- Figure 10 - Built form.

Highway entrances

Key issues and influences

Highway entrances play an important role in creating positive impressions of a township. Many elements contribute to the appearance of entrances, including the built form adjacent to the road, gateway treatments and the physical and landscape treatment of road reserves.

There are two highway entrances in the study area: Ogilvie Avenue is the eastern entrance to Echuca and McKenzie Road is the entrance to Echuca from the south east. There are a number of design elements that detract from the appearance and road safety function of these entrances such as a lack of street trees, poorly defined verges and property access points and overhead powerlines.

Both entrances benefit from identifiable gateways at the edge of the urban area; on Ogilvie Avenue, the bend in the highway marks the gateway; on McKenzie Road the gateway is the Echuca-Toolamba Railway crossing. Whilst speed restrictions currently create some sense of arrival at these gateways, they could be better defined through a range of design and landscape treatments. Upgrading the gateway on McKenzie Road is likely to be a longer term prospect as this gateway will move when the land to the south is developed.

In 1998, Council prepared the *Campaspe Entrances Strategy*, which identified a range of strategies that should be pursued to enhance the entrances and gateways (TBA Planners Pty Ltd et al, 1998). Despite the time that has elapsed since the document was prepared, most of its recommendations remain valid.

Objectives and strategies

Objectives		Strategies
HE1	To create a positive, memorable visual experience along Ogilvie Avenue and improve road safety along these roads.	<ul style="list-style-type: none"> • Implement Design Strategies 1-3 of the <i>Campaspe Entrances Strategy 1998</i> for Ogilvie Avenue, i.e., <ul style="list-style-type: none"> – boulevard treatment of the highway west of Cornelia Creek Road; – replace existing gum trees on the north side of the road; – introduce a consistent roadside planting theme; – highway improvement works including duplication with a centre median to the west of Cornelia Creek Road and intersection construction at Sturt Street. <p>Refer also to Appendix D.</p> <p>Source: TBA Planners et al, 1998, p25.</p>
HE2	<p>To create an identifiable entrance point along the Murray Valley Highway that welcomes visitors with references to Echuca's landscape.</p> <p>To reinforce the landscape character of the entrance point along the Murray Valley Highway.</p>	<ul style="list-style-type: none"> • Implement Design Strategies 4-6 of the <i>Campaspe Entrances Strategy 1998</i> for Murray Valley Highway, i.e., <ul style="list-style-type: none"> – establish an entry point at the urban side of the bend in the alignment of the highway; – undertake supplementary low level planting south of the bend in the alignment of the highway; – landscaping of the roadside island formed by the highway and Mitchell Road as a feature of the entry. <p>Source: TBA Planners et al, 1998, p25.</p>
HE3	Improve the appearance of Cornelia Creek Road and McKenzie Road to create a balanced, attractive urban streetscape.	<ul style="list-style-type: none"> • Implement Design Strategies 1-2 of the <i>Campaspe Entrances Strategy 1998</i> for Cornelia Creek Road, i.e., <ul style="list-style-type: none"> – landscaping of the service bay on the west side just north the rail crossing; – landscaping the frontage of the power supply sub station at the intersection with Ogilvie Avenue. <p>Source: TBA Planners et al, 1998, p22.</p>

Objectives		Strategies
HE4	Establish a new gateway to Echuca along McKenzie Road.	<ul style="list-style-type: none"> Prepare a landscape design concept for a new gateway treatment along McKenzie Road at Scott Road when development occurs in this area. The concept should incorporate the landscape character elements recommended for Cornelia Creek Road and Murray Valley Highway in the <i>Campaspe Entrances Strategy 1998</i>.

Implementation

- Update the Municipal Strategic Statement with the key issues, objectives and strategies identified in this theme, as appropriate.

Biodiversity

Key issues and influences

Native vegetation is important for its contribution to biodiversity, as habitat for native fauna and for the strong contribution it makes to landscape character.

The state government's strategy for native vegetation is to protect, enhance and revegetate. This is expressed in Victoria's Native Vegetation Management: A Framework for Action (DNRE, 2002). The main goal of the 'Framework' is to achieve a reversal, across the entire landscape of the long term decline in the extent and quality of native vegetation, leading to a net gain (DNRE, 2002).

Significant native grasses exist in parts of the Echuca Aerodrome and within the road reservation of Old Aerodrome Road. Other roads such as Benson Road and McKenzie Road are also likely to contain significant roadside vegetation (NCCMA mapping). These grasslands have a conservation significance of 'very high' and, as such, State Government approval is required for any removal.

It is unlikely that native vegetation will be a constraint to the future development of land in the study area, although detailed studies will be required prior to any rezoning of land for industrial development.

Objectives and strategies

Objectives		Strategies
BO1	Protect native vegetation of medium, high or very high conservation significance in the study area.	<ul style="list-style-type: none"> • Prior to supporting any rezoning of land from a non urban zone to a zone that supports urban development, require that the proponent prepare a flora and fauna assessment, that: <ul style="list-style-type: none"> – is carried out by a suitably qualified and experienced practitioner; – is based upon site assessments, preferably conducted in spring; – is carried out in consultation with the Department of Sustainability and Environment; – contains spatial information about the Ecological Vegetation Classes of the vegetation and their conservation significance; – contains a statement of environmental significance to assist in the preparation of overlay controls. • Apply the three step approach for land with 'medium' conservation significance and other native vegetation, in accordance with <i>Victoria's Native Vegetation Management – a Framework for Action</i>. • Apply the Vegetation Protection Overlay (VPO) to native vegetation of 'high' and 'very high' conservation significance. • Apply the Environmental Significance Overlay (ESO) to native grassland of 'high' and 'very high' conservation significance³.
BO2	Protect native grassland that has been identified at the Echuca Aerodrome and along Old Aerodrome Road.	<ul style="list-style-type: none"> • Avoid the removal of significant native grassland at the Echuca Aerodrome. • Apply an Environmental Significance Overlay to grassland of 'very high' conservation significance at the Echuca Aerodrome.

³ As recommended in the guidelines for applying overlays in the Practice Note *Biodiversity* (Department of Infrastructure, 2002).

Implementation

- Apply the Environmental Significance Overlay to grassland of very high conservation significance at the Echuca Aerodrome as part of any planning scheme amendment to rezone the Aerodrome site.
- Update the Municipal Strategic Statement with the key issues, objectives and strategies identified in this theme, as appropriate.

Physical services

Key issues and influences

Historically, major flooding has occurred fairly frequently in the lower reaches of the Campaspe River, which includes the study area. The study area is generally very flat, which makes proper drainage of new urban development problematic. In the past the planning of drainage infrastructure in the study area has tended to take place on a site specific basis rather than from a strategically based approach. This has contributed to a number of drainage problems in the existing urban area.

The capacity to reduce flood risk in new development areas is dependent on reliable information. The current overlay controls in the Campaspe Planning Scheme that identify areas subject to flooding are understood to be fairly accurate, although no detailed flood study or modelling has been undertaken to date to provide flood levels. A number of potential new development areas will require careful consideration of drainage and flooding issues as part of more detailed design and planning.

There are no major physical constraints to extending reticulated water, electricity and gas infrastructure to the study area, although a number of short and long term challenges exist. In the short term, water pressure for fire fighting is likely to be a significant issue for future development in the study area. At present, a lack of water pressure has meant that individual landowners have had to provide their own fire fighting facilities, which can be costly and inefficient. Alternative approaches to resolving this issue are likely to be needed if the area is to be developed to its full potential.

Coliban Water has advised that, in the long term, the existing sewerage system is unlikely to have the capacity to service new development to the south of the existing urban area and a separate system will be required if development is to occur in this area.

Objectives and strategies

Objectives		Strategies
PS1	Provide new urban services in a coordinated manner based on sound strategic planning	<ul style="list-style-type: none"> • Design and locate service infrastructure in accordance with the requirements of the relevant service authority. • Investigate the potential to upgrade the water reticulation system to increase water pressures required for fighting purposes in the study area, including the potential for a centrally located elevated storage system. • In the long term, or if required by a new major industry, initiate a sewerage strategy for the study area that: <ul style="list-style-type: none"> – identifies the capacity of the existing system to cater for further development; – considers options for the expansion of the urban area over the long term including possible pump station locations and routes for a new rising main to the existing treatment plant. • Encourage energy efficient street lighting such as solar, LED lighting.

Objectives	Strategies
<p>PS2 Provide appropriate stormwater systems including the consideration of detention / retardation for all new industrial development and include Water Sensitive Urban Design (WSUD) techniques.</p>	<ul style="list-style-type: none"> • Plan for stormwater detention on a catchment basis where possible • Prepare a Drainage Master Plan (DMP) for the study area. This may be undertaken in stages, with priority to be given to the northern part of the existing urban area. The Master Plan should: <ul style="list-style-type: none"> – retain natural drainage lines as overland flow paths and incorporate them within road reserves; – consider reducing the capacity of the piped drainage system from that required in the Infrastructure Design Manual for new developments, with additional capacity to be accommodated in above ground corridors; – provide recommendations for the location and size of a retention basin on the north side of Mitchell Road to address constrained outfall discharge rates to the major Goulburn Murray Water drain, particularly for the industrial area at the eastern end of Ogilvie Avenue; – develop a strategy to address existing drainage problems in Sturt Street, which may include updating the system as part of an upgrade of Sturt Street or the use of the Bowen Street drainage system; – investigate the need for a retardation basin opposite the Echuca Aerodrome; – account for reduced discharge rates and larger detention requirements if outfalls to Goulburn Murray Water drains are needed; – include a strategy for Water Sensitive Urban Design (WSUD) for water quality requirement, including the strategic locations of wetlands, swales, gross pollutant traps, which would preferably be at the bottom of catchments such as the corner of Anderson Road and High Street on the western side of the Melbourne and Murray River Railway. • Review the existing Infrastructure Design Manual to include the outcomes of the Drainage Master Plan. • Require developers to set aside land for detention purposes in those locations identified in the Drainage Master Plan.

Objectives		Strategies
PS3	Ensure that flooding is appropriately managed in any new development	<ul style="list-style-type: none"> • Undertake a review of flooding controls to confirm their accuracy, which could include a LIDAR survey. • Update the existing Floodplain Development Plan to specify the requirements for granting of permits for development in the LSIO and FO areas, if appropriate.
PS4	Promote the re-use of water in local industries to reduce the demand for precious water resources	<ul style="list-style-type: none"> • Support initiatives to re-use water generated by local food manufacturing industries for irrigation and other appropriate purposes, subject to satisfactory agreements with Goulburn Murray Water. • Encourage the use of lower quality raw water rather than potable water for landscaping and fire fighting purposes, particularly in remote locations.
PS5	To ensure that physical infrastructure is funded in a fair and equitable manner	<ul style="list-style-type: none"> • Investigate potential funding sources for upgrading the water reticulation system and the acquisition and construction of land for major detention basins including: <ul style="list-style-type: none"> – development contributions plan; – grant funding opportunities.

Implementation

- Update the Municipal Strategic Statement with the key issues, objectives and strategies identified in this theme, as appropriate.
- Amend the Infrastructure Design Manual following the completion of key strategic work identified in this theme.

5. Implementation

Implementation Plan

Planning & development

	Implementation task	Priority	Responsibility
1	Further investigate noise and odour issues at the Echuca Saleyards in accordance with the recommendations of Ward (2009).	High	Shire of Campaspe
2	Prepare a planning scheme amendment to update the Campaspe Planning Scheme with the implementation items identified under each theme.	High	Shire of Campaspe
3	Investigate the potential for part or all of the land at 495 McKenzie Road and Lot 4 LP146264 to be developed for industries with buffer requirements of 500 metres or greater from sensitive land uses.	Medium	Shire of Campaspe
4	Develop a 'Retail Strategy' for Echuca to guide the future supply of business land in the precinct.	Medium	Shire of Campaspe
5	Review land supply and demand indicators for industrial and commercial land.	Every five years	Shire of Campaspe

Transport & access

	Implementation task	Priority	Responsibility
1	Establish a truck parking bay in the Cornelia Creek Road / McMillan Road area.	High	Shire of Campaspe in consultation with VicRoads
2	Commence planning for the upgrade of Old Aerodrome Road in accordance with the Echuca Aerodrome Master Plan (Beca, 2010).	Medium	Shire of Campaspe
3	Provide four lanes on Ogilvie Avenue between Sturt Street and Cornelia Creek Road in accordance with the <i>Murray Valley Highway Echuca East – Master Plan for Duplication and Service Roads (2010)</i> .	Medium	VicRoads in consultation with the Shire of Campaspe
4	Upgrade the intersection at Ogilvie Avenue & Sturt Street in accordance with the <i>Murray Valley Highway Echuca East – Master Plan for Duplication and Service Roads (2010)</i> .	Medium	VicRoads in consultation with the Shire of Campaspe
5	Upgrade the intersection at Ogilvie Avenue & Cornelia Creek Road in accordance with the <i>Murray Valley Highway Echuca East – Master Plan for Duplication and Service Roads (2010)</i> .	Low	VicRoads in consultation with the Shire of Campaspe
6	Upgrade the intersection at Cornelia Creek Road & Denmark Road.	Low	VicRoads in consultation with the Shire of Campaspe and VicTrack

Parks & gardens

	Implementation task	Priority	Responsibility
1	Undertake detailed landscape design work for Ogilvie Avenue from Sturt Street to Cornelia Creek Road and set aside funds in the Shire's capital works budget for construction of the works.	High	Shire of Campaspe in consultation with VicRoads
2	Undertake detailed landscape design work for Cornelia Creek Road from Ogilvie Avenue to Echuca-Toolamba Railway and set aside funds in Council's capital works budget for construction of the works.	Medium	Shire of Campaspe in consultation with VicRoads
3	Undertake detailed landscape design work for Ogilvie Avenue east of Cornelia Creek Road (entry treatment and plantings) and set aside funds in Council's capital works budget for construction of the works.	Medium	Shire of Campaspe in consultation with VicRoads
4	Undertake detailed landscape design work for a new gateway treatment and plantings on Cornelia Creek Road at Scott Road and set aside funds in Council's capital works budget for construction of the works.	Low	Shire of Campaspe in consultation with VicRoads

Physical services

	Implementation task	Priority	Responsibility
1	Investigate the potential to upgrade the water reticulation system to increase water pressures to levels required for fire fighting purposes in the study area.	High	Shire of Campaspe in consultation with Coliban Water and CFA
2	Investigate potential funding sources for upgrading the water reticulation system and the acquisition and construction of land for major detention basins including: <ul style="list-style-type: none"> • development contributions plan; • grant funding opportunities. 	High (following completion of Task 1)	Shire of Campaspe
3	Prepare a Drainage Master Plan for the study area.	High - medium	Shire of Campaspe in consultation with NCCMA and GMW
4	Undertake a review of flooding controls to determine to ensure accuracy.	Medium	Shire of Campaspe in consultation with NCCMA
5	Update the existing Floodplain Development Plan.	Following completion of the review of flooding controls and drainage masterplan	Shire of Campaspe in consultation with NCCMA

Review

It is anticipated that the key assumptions of the Strategy and its effectiveness will be evaluated as part of the four year review of the Planning Scheme, or as part of other appropriate review processes.

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- Websites:
- www.dpcd.vic.gov.au
- www.dse.vic.gov.au

Appendices

Appendix A. Road hierarchy

Road Type & Name	Road Reservation	Existing Function & Configuration	Estimated 2009 VPD (Vehicles Per Day)	Ultimate Function & Configuration	Ultimate VPD (Vehicles Per Day)
Arterial Road Ogilvie Avenue, Sturt Street to Cornelia Creek Road	30 metres at Sturt Street, 52 metre reservation at Mundarra Road	2 lane / 2 way, with service road on south side	14,000 vpd (at rail crossing)	<ul style="list-style-type: none"> • 4 lane divided road • Centre median • Outer separator • Service roads with bicycle lanes both sides • Bus route 	29,000 vpd
Arterial Road Ogilvie Avenue, east of Cornelia Creek Road	30 metres	2 lane / 2 way	4,100 vpd (South of Denmark Road)	<ul style="list-style-type: none"> • 2 lane / 2 way road • Bicycle lanes • Bus route 	5,500 vpd

Road Type & Name	Road Reservation	Existing Function & Configuration	Estimated 2009 VPD (Vehicles Per Day)	Ultimate Function & Configuration	Ultimate VPD (Vehicles Per Day)
Arterial Road McKenzie Road south of Echuca-Toolamba Railway	60 metres	2 lane / 2 way	4,700 VPD (South of Ogilvie Avenue)	<ul style="list-style-type: none"> • 4 lane divided road • 7 metre centre median • 2 x 3.5 m traffic lanes in each direction • 2 x approximately 7m wide outer separators • Service road, including traffic, bicycle and parking lanes both sides • Footpath and nature strip both sides • Bus route 	20,000 - 24,000 vpd
Arterial Road McKenzie Road south of Echuca-Toolamba Railway – near Benson Road	60 metres	2 lane / 2 way	2,740 VPD (at railway crossing)	<ul style="list-style-type: none"> • 2 lane / 2 way road • Service roads when required to control access • Bicycle lanes • Bus route 	9,000 VPD

Road Type & Name	Road Reservation	Existing Function & Configuration	Estimated 2009 VPD (Vehicles Per Day)	Ultimate Function & Configuration	Ultimate VPD (Vehicles Per Day)
Collector Road Old Aerodrome Road	30 metres	2 way gravel road	< 50 vpd (Old Aerodrome Road)	<ul style="list-style-type: none"> • 2 traffic lanes (7m) • Bicycle lane (1.6m) • Parking lane (2.4) • 2 x nature strips • Bus route 	1,500 vpd at Benson Road
Collector Road Denmark Road	20 metres	2 lane / 2 way	1,400 vpd	<ul style="list-style-type: none"> • 2 traffic lanes (7m) • Bicycle lane (1.6m) • Parking lane (2.4) • 2 x nature strips • Bus route 	<5,000 vpd
New Local Access Roads				<ul style="list-style-type: none"> • 25 metre reserve • 2 traffic lanes • 2 x nature strips 	

Notes:

Ultimate vpd (vehicles per day) is an estimate based on a Traffic Generation and Distribution Assessment (CPG, 2010). It assumes the full development of existing areas zoned for industrial purposes shown in Plans 7 & 9 with traffic generation at 75 vpd per developed hectare. The need to construct roads in accordance with this table will depend on take up rates for land and may occur beyond 2040.

Appendix B. Design guidelines (industrial areas)

Design guidelines – industrial areas

Front setbacks

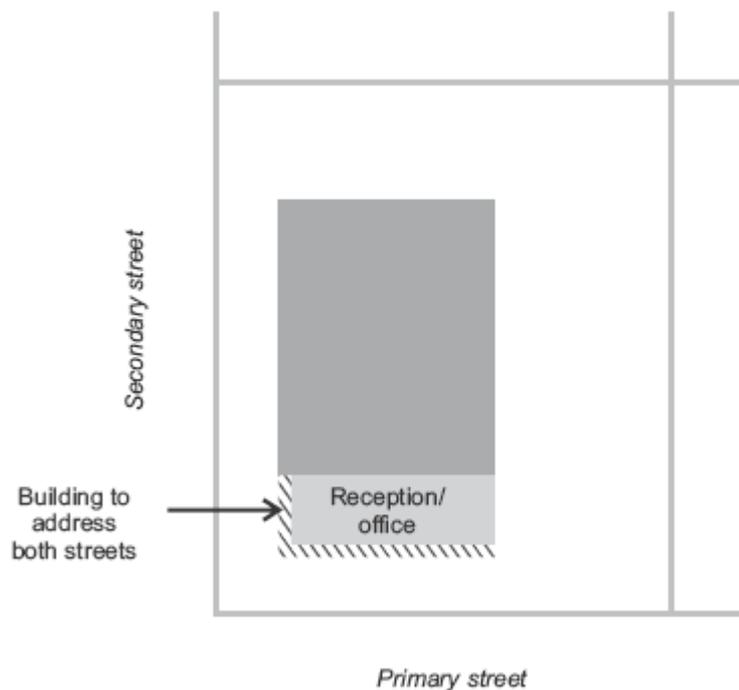
- should be 5 to 20 metres with landscaped areas and visitor parking within the frontage
- should relate to the front setbacks of adjoining buildings

Side and rear setbacks

- should not be less than 2 metres if buildings are not constructed to a boundary

Relationship with street

- any reception, sales or office component of a building on a corner lot should be designed to address both streets by incorporating elements of the front elevation such as doors, windows or verandahs (refer to diagram below).



Energy efficiency

- buildings should incorporate louvres, eaves or other design elements to shade large windows facing east, west and north
- buildings should be designed to allow for natural ventilation

Colours, materials and finishes

- tilt slab concrete should be painted, rendered, patterned, articulated or otherwise treated to provide visual interest on walls that front streets (refer to photograph below as an example of how this could be achieved)
- buildings should not be painted entirely or substantially in corporate colour schemes or bright colours
- main buildings constructed predominantly of colourbond should incorporate treatments to provide visual interest on exterior walls such as different paint colours, masonry walls or dado walls



Car parking

- customer and visitor parking should be located within the front setback or at the side of buildings
- staff parking should be located at the side or rear of buildings
- car parking at the front and side of buildings should be fully sealed and constructed with drainage to the legal point of discharge

Footpaths

- should be provided along building edges that adjoin customer parking areas
- should have a minimum width of 1.2 metres and be designed to accommodate disabled persons

Landscaping & lighting

- all applications should include a landscape plan

Plant and equipment

- should be located at the back of the building, screened or incorporated into the roof design, to minimise visibility from the surrounding area

Utility areas

- waste disposal areas should be located at the side or rear of the building or within the building and screened from view

Fences

- fencing should be located behind the building line of the main building (refer to photograph below)
- fencing should be black plastic coated or pool type and should not include barbed wire (refer to photograph below)
- fences should not be constructed of solid materials such as brick or masonry

Signage

- should be located on buildings and not on poles or similar structures
- should not protrude above the front parapet
- should not be located on fences



Appendix C. Design guidelines (commercial areas)

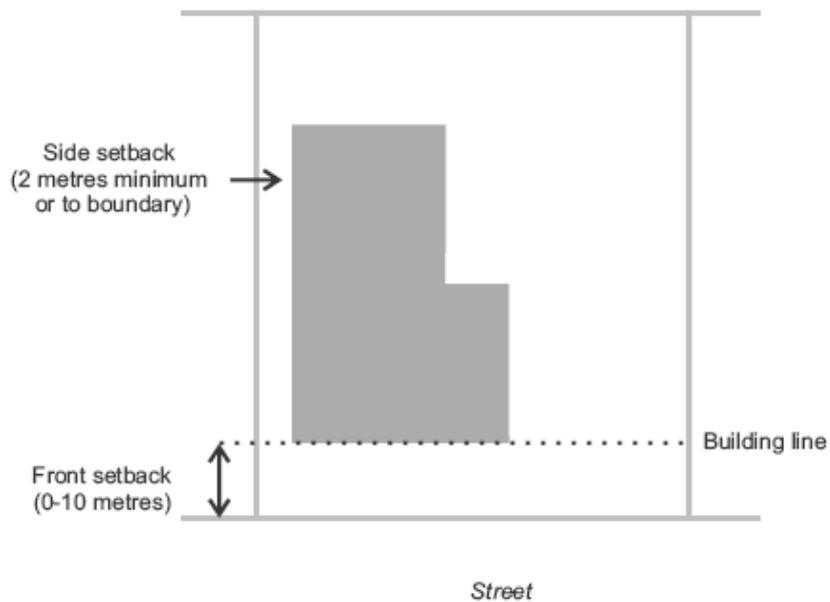
Design guidelines – commercial areas

Front setbacks

- should be 0 to 10 metres (refer to diagram below)
- should be derived from the front setbacks of the adjoining buildings unless the setbacks of these buildings are greater than 10 metres
- should be 0 to 5 metres on both the primary and secondary streets for corner sites
- should be landscaped, with a mix of suitable plants

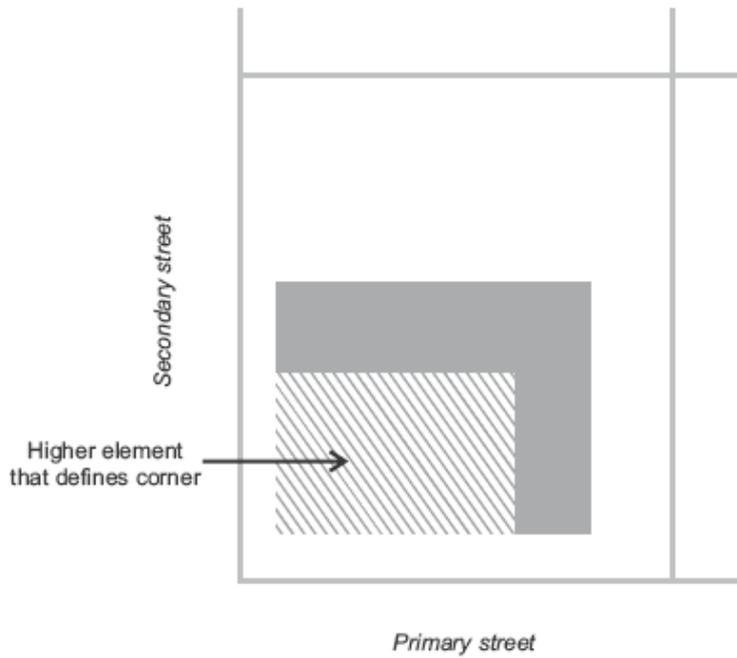
Side and rear setbacks

- should be at least 2 metres if buildings are not constructed to a boundary (refer to diagram below)

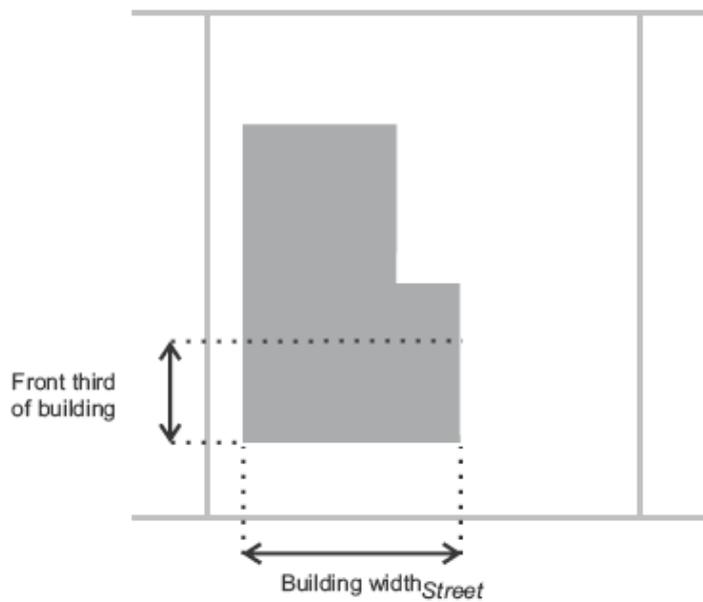


Scale and massing

- buildings on 'landmark sites' may include higher building forms or elements if they define the corner and are not used to display large signs (refer to example shown in diagram below)

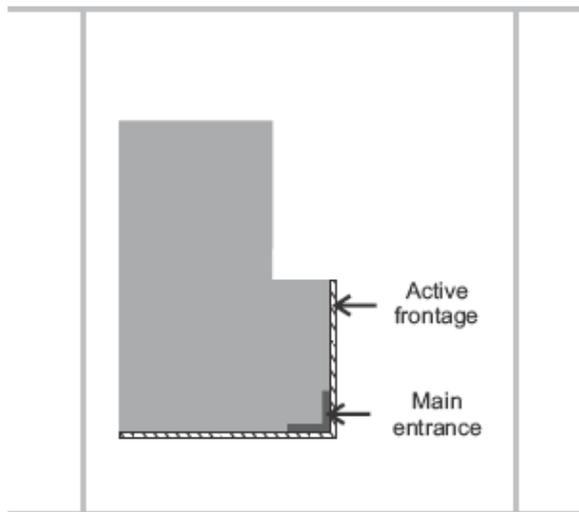


- buildings that present to one street frontage should have a width that is equivalent to at least 50% of the lot frontage for the front third of the building (refer to diagram below)



Relationship with street

- main entrances should front the street or be located within the front third of the building (refer to example shown in diagram below)
- freestanding buildings should have substantial areas of 'active' frontages along at least two sides of the building (refer to example shown in diagram below)
- buildings on corner sites should incorporate areas of 'active' frontages along both streets (refer to photograph of 'inactive' frontage below)
- buildings constructed to both boundaries should have a substantial 'active frontage' along the street frontage (refer to photograph of 'inactive' frontage below)



Street



Energy efficiency

- buildings should incorporate louvres, eaves or other design elements to shade large windows facing east, west and north
- buildings should be designed to allow for natural ventilation

Colours, materials and finishes

- buildings should not be painted entirely or substantially in corporate colour schemes or bright colours
- main buildings should be constructed of brick, masonry or glass
- main building should not be constructed entirely or substantially of coloubond
- tilt slab concrete on elevations that front streets should be painted, rendered, patterned, articulated or otherwise treated to provide visual interest

Car parking

- should be located at the side or rear of new buildings
- should be fully sealed and constructed with drainage to the legal point of discharge
- should contain shade trees on the perimeter for smaller sites or located centrally for larger car parks

Footpaths

- should be constructed by the developer in the road reserve across the full frontage of the lot
- should be designed to link the street with the main entrance
- should be raised above car park level or clearly marked as pedestrian paths
- should be provided along building edges that adjoin customer parking areas
- should have a minimum width of 1.2 metres and be designed to accommodate disabled persons

Landscaping & lighting

- all applications should include a landscape plan
- lighting should be sited and baffled so as not to spill onto adjacent properties or roads

Plant and equipment

- should be located at the back of the building, screened or incorporated into the roof design, to minimise visibility from the surrounding area

Utility and storage areas

- waste disposal areas should be located at the side or rear of the building or within the building
- outdoor display areas should be located at the side of the building and screened from view

Fences

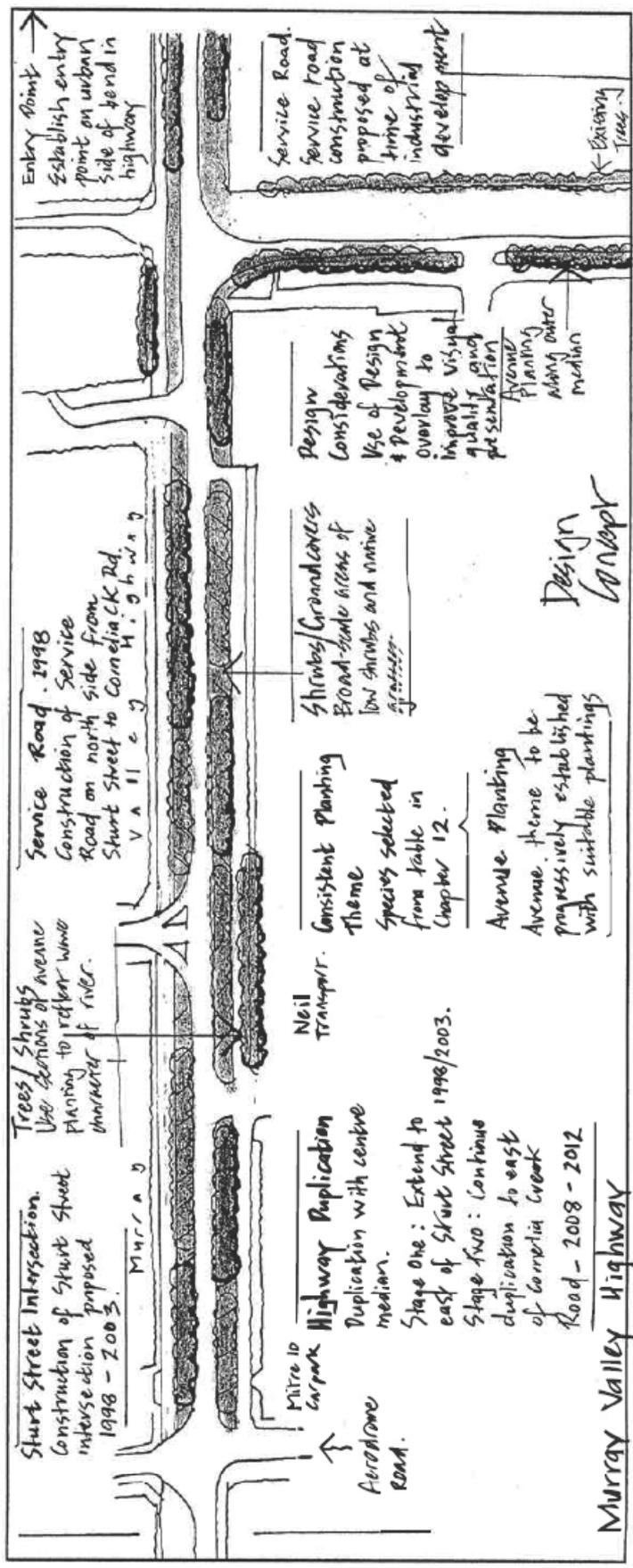
- all fences should be located behind the building line
- should be constructed of transparent materials
- should not be constructed of solid materials such as brick or masonry
- security fencing should be plastic coated or pool type fencing and should not include barbed wire
- should not impede views of pedestrian paths

Signage

- should be located on buildings and not on poles or similar structures
- should not protrude above the front parapet
- should not be located on fences

Appendix D. Murray Valley Highway design concept

From Highway Entrances Strategy (TBA Planners et al, 1998)



Sturt Street Intersection.
Construction of Sturt Street intersection proposed 1998 - 2003.

Trees/ Shrubs of Avenue
Use sections of avenue planting to reflect wide character of river.

Service Road - 1998
Construction of Service Road on north side from Sturt Street to Cornelia CK Rd.

Entry Point
Establish entry point on urban side of bend in highway

Aerial Road.

Mitre 10 Carpark
Highway Duplication
Duplication with centre median.
Stage One: Extend to east of Sturt Street
Stage Two: Continue duplication to east of Cornelia Creek Road - 2008 - 2012

Neil Transport.

Consistent Planting Theme
Species selected from table in Chapter 12.
Avenue. Planting theme to be progressively established with suitable plantings

Shrubs/ Groundcovers
Front-edge areas of low shrubs and native grasses.

Design Considerations
Use of Design & development overlay to improve visual quality and presentation
Avenue planting along outer median

Service Road.
Service road construction proposed at time of industrial development

Design Concept

Murray Valley Highway

Existing Trees