

Koo Wee Rup Township Strategy

Adopted 19 October 2015



Prepared by:

Cardinia Shire Council Strategic Planning Unit

With assistance from

Koo Wee Rup Township Strategy Review Reference Group

Hansen Partnerships Pty Ltd

Disclaimer

During the consultation process, a number of issues and community aspirations were discussed that are beyond the scope of Council's responsibility or are covered by other agencies' mandates. In addition, community aspirations were identified that are not accommodated within existing Council plans or strategies and are outside Council's budget capacity. These issues and aspirations have been noted and will be added to the implementation plan only if priorities or funding opportunities from Federal and State governments or other agencies become available. The community should not be discouraged from pursuing these aspirations independently.

Published October 2015

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1. INTRODUCTION

The Koo Wee Rup township is located off the South Gippsland Highway approximately 85 kilometres south east from Melbourne, 12 kilometres north from Lang Lang, 17 kilometres south of Pakenham and some 2 kilometres from Western Port. Dominant activities within the strategy area include residential, commercial developments, open space, and recreational pursuits. The function of the township is to provide services to the surrounding rural areas, including retail and commercial centre, education, community services and recreational activities. In addition to providing a destination for first home buyers the township is has a public hospital that provides acute care, residential care and a broad range of community services. These services appeal to retirees and reinforce Koo Wee Rup as a place to downsize and 'retire in place'. Koo Wee Rup also provides a rural lifestyle, which is a point of difference from the growth areas within Cardinia Shire.

1.1 Purpose of the study

Cardinia Shire comprises 27 townships, each with a distinct identity, character and role. Both the Council Corporate Plan and the Municipal Strategic Statement (MSS) recognise the need for the preparation and implementation of a township strategy for each of the Shire's townships. The township strategies provide a strategic policy framework for the future development of each township. Each strategy provides clear direction in key areas of:

- residential development;
- economic development;
- community development;
- traffic and transport;
- physical infrastructure;
- open space;
- environment; and
- town centre urban design.

This strategy sets out the key issues facing the Koo Wee Rup township and explains why they are important. The strategy then sets out objectives (what we are trying to achieve) and policies and actions (how the objectives will be achieved). Council, with the assistance of local community groups and other government agencies, will play a critical role in implementing the actions set out in this strategy.

1.2 Scope of the strategy

During the consultation process, a number of issues and community aspirations were discussed that are beyond the scope of Council's responsibility or covered by other agencies mandates. In addition, community aspirations were identified that are not accommodated within existing Council plans or strategies and are outside Council's budget capacity. These issues and aspirations have been noted and will be added to the implementation plan only if priorities or funding opportunities from Federal and State governments or other agencies become available. The community should not be discouraged from pursuing these aspirations independently.

1.3 Study area

The area included in the *Koo Wee Rup Township Strategy* involves the land located within the Urban Growth Boundary. The size of the strategic area is approximately 300 hectares.

Figure 1. Study area



2. SNAPSHOT OF KOO WEE RUP

2.1 History

The area of Koo Wee Rup and its surrounds are the traditional home of the Bunurong people. The Bunurong people are one of seven Aboriginal groups that make up the Kulin Nation which inhabited the Port Phillip Bay area. It is from the Aboriginal language that the town's name derives:

- 'Koo Wee Rup' means 'blackfish swimming' or 'plenty of blackfish';
- 'Kowe' indicating water; and
- 'Were' as blackfish.

Koo Wee Rup is located on the floodplains of the Westernport Basin and during the 1800s, the Koo Wee Rup swamp extended over an area of approximately 40,000 hectares. It was covered by dense stands of swamp paperbark (*Melaleuca ericifolia*), reeds (*Phragmites australis*) and bullrushes (*Typha spp*) and provided a natural barrier between Melbourne and West Gippsland.

The Land Act 1865 opened up land along the fringes of the swamp for selection. The availability of the land for farming purposes was limited due to flooding and dense stands of vegetation. By 1870 the government recommended that the Koo Wee Rup swamp be drained, opened for settlement and utilised for horticultural and agricultural pursuits.

In February 1876, Koo Wee Rup Swamp Drainage Committee commenced works on the drainage of the swamp with excavation of a main channel (8 kilometres long and 1.2 metres deep) which tapped the Cardinia Creek and channelled water into Western Port at Moody's Inlet. Other drains, known as the Toomuc Drain and Bunyip Main Drain were also dug, resulting in the network of drains and levee banks still visible today. Nonetheless, extensive flooding has still occurred in the Koo Wee Rup swamp; the biggest flood recorded in Koo Wee Rup occurred in 1934 and resulted in more than 1,000 people being made homeless and the Koo Wee Rup hotel filled with almost 2 metres of water.

The conversion of swampland to farmland began a rich horticultural and agricultural tradition for the areas of Koo Wee Rup that still exists today. The Koo Wee Rup area also retains valuable sand, gravel and stone resources which will increasingly become a major commodity for Melbourne.

Koo Wee Rup's commercial centre is located along Station Street and Rossiter Road between the closed South Gippsland railway line and Gardner Street. It is interspersed with shops, houses, community facilities and two public parks. The pattern of development in the town centre appears relatively random.

Koo Wee Rup Main Street



Source: Koo Wee Rup Swamp Historical Society

2.2 Settlement of Koo Wee Rup township

Koo Wee Rup, originally known as Yallock, was one of the towns that developed after the construction of the Great Southern (South Gippsland) railway in 1890. The Great Swamp was surveyed in 1874 by John Lardner and at the first Government land sales in 1875, almost 8,880 acres were sold for $\pounds 11,740$. A site of just over 35 acres, on land purchased by Christopher Moody, was reserved for the township in June 1889, just before the Koo Wee Rup railway station was opened.

Christopher Moody began selling town blocks in 1890, although few blocks were sold at that stage. The township grew up around the railway station, with early commercial development in Rossiter Road and Station Street where in 1890 John O'Riordan erected Koo Wee Rup's first general store. Among the early residents were workers on the various schemes to drain the Great Swamp and railway workers constructing the Great Southern Line in the late 1880s.

A Village Settlement (one of several established on the Koo Wee Rup Swamp as part of the Victorian government initiative to settle the urban poor during the disastrous depression of the 1890s) stimulated township growth from 1893; however, it would be some years before many of the farms became viable. The period 1899–1911 marked the establishment of the Koo Wee Rup Swamp as an important farming district and by 1914 it was said to be one of the most important potato growing districts in the state.

However, much of the township's development appears to have taken place after World War 1, when a number of the larger surrounding properties were cut up for soldier settlers. The influx of new settlers, both soldiers and private farmers attracted by the post-war 'boom' brought considerable prosperity to the rising towns of Koo Wee Rup and Pakenham East, both of which increased the range and number of their services between 1916 and 1926.

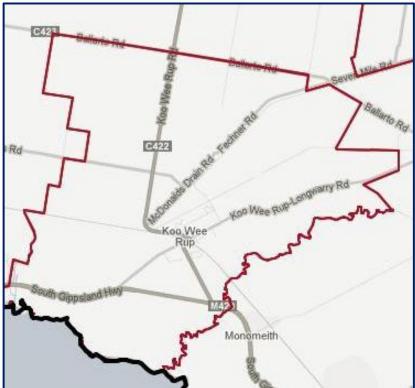
In the 1920s, potato growing became the most important industry in the district and by 1926–7 the Koo Wee Rup district was supplying 20 per cent of Victoria's potatoes. The focus of Koo Wee Rup was the railway yard where thousands of tons of produce were despatched to Melbourne markets on one of 48 passenger and mixed goods or 72 goods trains that passed through each week. In 1926, a staff of 11 was employed at the station.

Consequently, Koo Wee Rup was growing fast while the older centres of Cranbourne (the Shire seat) and Lang Lang were declining in importance – the population of Koo Wee Rup grew by 500 in the first decades of the 20th century while Cranbourne had added only 50. It was in the 1920s that the township boundaries of Koo Wee Rup began to expand beyond the township area first laid out in the 1890s. To the north of the railway line, John Alexander Mickle subdivided his Lauriston Park estate first in 1920 (creating lots fronting Rossiter Road) and then in 1926 extending to the land behind creating Alexander Avenue and John Streets. To the south of the railway 'The Grange' estate was subdivided and Sybella Avenue and Charles Street with building blocks were laid out in 1920s. Such was the development of Koo Wee Rup at that time that an attempt was made to shift the headquarters of the Shire of Cranbourne from Cranbourne to Koo Wee Rup. However, the move did not succeed partly because of concerns about floods that occurred in October 1923. More devastating floods in 1934 and 1937 led to an 'exodus of settlers' after 1937 and for a time Koo Wee Rup was a 'sadly depleted town'. However, Italian migration in the post-war era saw Koo Wee Rup once again become the largest business centre in the Shire and led to 'a period of continued prosperity (Cardinia Heritage Study 2011 Revised).

2.3 Population

The population profile undertaken by the Australian Bureau of Statistics for Koo Wee Rup captures data that includes the Koo Wee Rup township and rural land as described in Figure 2. Although the strategy is concerned with the township of Koo Wee Rup, statistical data relates to the wider area.

Figure 2. ABS small area: Koo Wee Rup



Source: ABSCensus 2011 QuickStats Koo Wee Rup

In 2011, Koo Wee Rup district (as described in Figure 2) had a population of 2,871 people. Between 2006 and 2011, the number of residents increased from 2077. This substantial growth within the Koo Wee Rup township is associated with land being developed for residential purposes. The Koo Wee Rup statistical area is 5,757 hectares in size. In 2011, the population density was 0.50 persons per hectare.

Service age group (years)	2011	2006	Change
0 to 4	204	118	+85
5 to 11	316	221	+95
12 to 17	263	218	+44
18 to 24	257	167	+93
25 to 34	366	191	+175
35 to 49	622	464	+159
50 to 59	293	280	+13
60 to 69	268	166	+102
70 to 84	225	197	+28
85 and over	51	52	-1
Total	2871	2077	+794

Table 1.	Koo Wee Rup population (service age group years)
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Source: ABS, Census of Population and Housing 2006 and 2011.

The age structure of a population is usually indicative of the level of demand for services and facilities (as most services and facilities are age-specific).

In 2011, more than one quarter (27.2%) of Koo Wee Rup residents were aged less than 17 years. Another one third (34.4%) are aged 25-49. People aged over 60 made up 18.9% of the population.

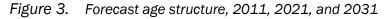
Age structure	Number 2011	Percent 2011	Number 2021	Percent 2021	Number 2031	Percent 2031	Change 2011 to 2031
0 to 4 years	202	6.9	256	6.6	278	6.1	76
5 to 11 years	335	11.5	435	11.2	465	10.2	130
12 to 17 years	255	8.8	346	8.9	410	9	155
18 to 24 years	277	9.5	309	8	370	8.1	93
25 to 34 years	368	12.6	438	11.3	487	10.7	119
35 to 49 years	617	21.2	794	20.5	940	20.6	323
50 to 59 years	301	10.3	490	12.7	550	12	249
60 to 69 years	268	9.2	363	9.4	509	11.1	241
70 to 84 years	229	7.9	328	8.5	434	9.5	205
85 and over years	62	2.1	109	2.8	128	2.8	66
Total	2914	100	3868	99.9	4571	100.1	1657

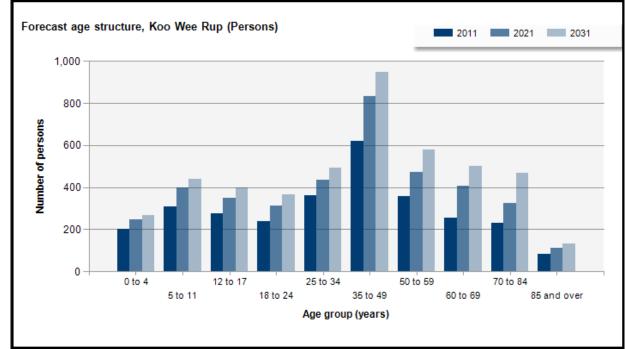
Table 2.	Koo Wee Rup estimated population 2011, 2021 and 2031

Source ID Forecast 2013

The estimated population for Koo Wee Rup in 2021 will be 3868 people and this is estimated to increase to 4571 by 2031. Over this time, the percentage of 0-4 year olds, and 5 - 11 year olds is expected to decrease, along with the 18 - 24 year olds, 25 - 34 year olds and the 35 - 49 year olds. Older age groups are expected to increase their representation in the population of Koo Wee Rup. For more details of household numbers and household size see Section 4 Residential Development.

2.4 Forecast age structure





Source: Cardinia Forecast Age Structure: <u>www.id.com.au</u>

The age structure of the population of Koo Wee Rup is expected to remain similar over the next 20 years. All age groups will experience increases. The age groups 0-15 and 35-49 will compromise the greatest percentage of the population.

2.5 Policy context

Both the Council Plan (*Creating the Future*, Cardinia Council Plan 2014–2015) and the Municipal Strategic Statement (MSS) recognise the need for the preparation and implementation of a township strategy for each of the Shire's townships. The MSS recognises that the pattern of settlement in Cardinia Shire, outside of the South East Growth Corridor is primarily focused in townships ranging from large rural townships to rural localities. Koo Wee Rup has been identified as being a large rural township, with the potential for future growth. The MSS also recognises that each township has a distinct character which should be maintained and enhanced. Strategic directions relevant to Koo Wee Rup to achieve the objective for townships in the MSS are:

- maintain the scenic quality of the town and surrounding landscape by avoiding the scattering of township development into nearby landscapes. An underlying principal of large townships should be to consolidate development to create visual and physical links to existing developments and community facilities;
- provide sewerage treatment and stormwater management systems to minimise the impact of existing township development on the environment and to enable developments to occur in townships in accordance with overall strategy plans; and
- encourage the retention and development of commercial and community services.

2.6 Metropolitan context

Plan Melbourne is the Metropolitan Planning Strategy for Melbourne which sets the vision and guides Melbourne's growth through to the year 2050. It seeks to integrate long term land use, infrastructure and transport planning to meet the population, housing and employment needs of the future.

At a high level, *Plan Melbourne* identifies the importance of peri-urban regions (of which Koo Wee Rup is one of) and the roles that these regions play in terms of townships, agricultural areas, significant biodiversity, recreational and tourist values. *Plan Melbourne* seeks to ensure that the values of the whole peri-urban region are appropriately managed.

Initiative 6.2.1 Better Manage Melbourne's peri-urban regions, including designating towns for growth, identifies the importance of 'managing growth in these areas to optimise their potential to accommodate additional housing and employment, while protecting their productive land, strategic economic resources and biodiversity assets'. A short term action of this initiative is:

• Support local governments to prepare and implement policy statements for the peri-urban region and their potential growth centres and small towns.

At a local level, *Plan Melbourne* identifies Koo Wee Rup Township as an urban area; however it is silent on any specific strategic direction for the township.

3. STRATEGIC OBJECTIVES AND FRAMEWORK PLAN

3.1 Vision

The desired vision for the Koo Wee Rup township for the next 10 years can be summarised as follows:

"Koo Wee Rup is a thriving rural township with a diverse population of 4,000 residents, living in a range of housing which has been developed to respect and enhance the township character and heritage. A lively town centre provides a mix of retail and commercial opportunities for the township and surrounding areas.

Local residents participate in the wide range of community and recreational activities that are available. They have ready access to education, health, aged services, transport options and local jobs. Essential utilities such as water, sewerage and telecommunications have been augmented with the provision of reticulated natural gas. Footpaths, roads, piped drains and consistent quality street landscaping ensures that Koo Wee Rup is a sustainable rural township."

3.2 Strategic objectives

The key objectives for the Koo Wee Rup township to achieve the desired vision are to:

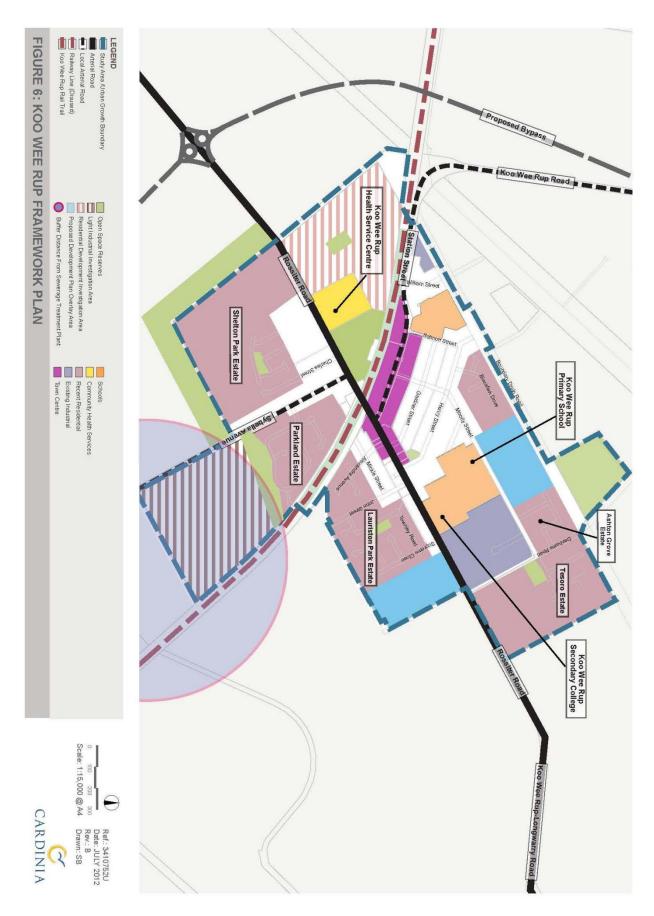
- contain urban development within the current Urban Growth Boundary;
- facilitate developments that respects and enhances the existing rural township character and heritage;
- enhance and strengthen the existing town centre;
- provide essential infrastructure including sealed roads, gas, footpaths, drainage, sewerage and telecommunications throughout the township;
- provide a range of housing options which caters for the needs of a diverse range of ages and households;
- improve local employment opportunities by providing an additional industrial precinct;
- provide and enhance open space to meet the active and passive recreational needs of the community;
- maintain and enhance existing community facilities and services;
- facilitate the establishment of additional accommodation (hostels, retirement village or supported living facility) for disabled or elderly people;
- protect and improve the natural environment and waterways around and within the township;
- provide a safe, functional and interconnected transportation network;
- provide a vehicle bypass around the township; and
- minimise the risk of and damage caused by floods and natural disasters.

3.3 Strategic Framework Plan

The Strategic Framework Plan (Figure4) provides:

- additional industrial zone to provide for local employment opportunities;
- additional residential opportunities with a variety of dwellings to cater for the needs of a wide variety of residents;
- urban design guidelines to guide development within the town centre; and
- urban design guidelines for development within residential developments.

Figure 4. Strategic Framework Plan



4. RESIDENTIAL DEVELOPMENT

4.1 Existing pattern of development

The Koo Wee Rup township is set in a rural landscape setting of flat topography with pockets of remnant vegetation scattered around the edges of the township. The township, of around 300 hectares is contained within an Urban Growth Boundary, which limits urban sprawl. The township is within the Western Port Green Wedge and two large areas of undeveloped land exist within the township. Both of these areas are zoned Farming Zone 1 (FZ1). It is anticipated that the area located adjacent to the Koo Wee Rup Regional Health Service will need to be rezoned to an appropriate residential zone, while the area north of the sewerage treatment plant off Sybella Avenue will be rezoned to an industrial zone to enable industrial development (see Section 5: Economic Development).

4.2 Existing residential development

Residential development in the township generally extends to the north, north-east and south of the town centre along Rossiter Road, Station Street and Sybella Avenue. The township includes housing from the early 19th century through to contemporary architectural designs, on allotments predominately containing single-storey detached brick or weatherboard houses, set well back from the street, on lots ranging in size from 300sqm to 1 hectare or more. One residential zone exists within the township, Neighbourhood Residential Zone (NRZ). This zone 'recognises areas of predominately single and double storey residential development' and 'limits opportunities for increased residential development'. It also seeks to 'manage and ensure that development respects the identified neighbourhood character, heritage, environmental or landscape characteristics and allows for 'educational, recreational, religious, community and a limited range of other non-residential uses to serve local community needs in appropriate locations' (VPP).

4.3 Township character

Township character is very important to Koo Wee Rup residents. Township character is essentially the combination of the public and private realms. Every property, public space or piece of infrastructure makes a contribution, whether great or small. It is the cumulative impact of all these contributions that establishes the township character. In many areas, building style will make an important contribution the character of the area. This includes not just typical form and massing, but may also include details, materials and colours. Township character will change as a result of new social and economic conditions, changing housing preferences and explicit housing policies. When this occurs, it is important that respecting character is not taken too literally, as a new character will emerge in response to these new social and economic conditions (VPP Practice Note 2001).

An assessment of the township character (conducted in 2006) reinforced the rural setting of Koo Wee Rup. The assessment identified four distinct residential precincts within the township, each with an existing character (see Figure 5). The established precinct (Precinct 1) featured a mix of housing styles, predominantly on small to medium lots of 600 square metres to 1,000 square metres. Building site coverage ranged from 30-60 per cent. The newer residential (Precinct 2) featured new residential estates with small to medium lots sized 600 - 1,000 square metres, with building site coverage of 30 - 40 per cent. The building type in Precinct 2 was predominately modern single storey brick homes. The assessment noted the community concern about small lots of 300 square metres and the desire for quality developments in the new estates. A rural residential precinct (Precinct 3) identified 2 distinct low density areas at the edge of the Urban Growth Area. Large single storey brick buildings of over 300 square metres are located on very large allotments of 7500 square metres up to 3.5 hectares.

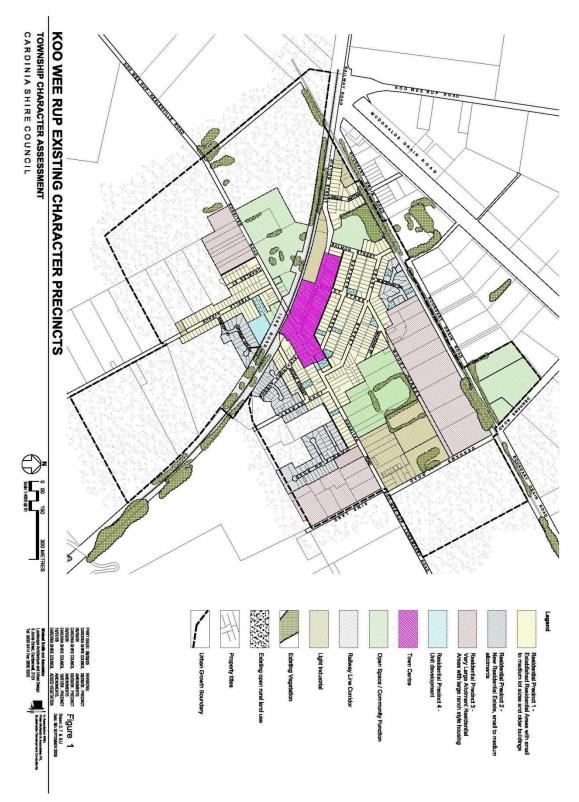
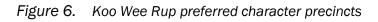


Figure 5. Township character assessment 2006, Koo Wee Rup township precincts

Source: Cardinia Shire Council Township Character Assessment November 2006

The assessment proposed that the existing rural character of Koo Wee Rup will be maintained and enhanced by providing a diversity of housing styles. A diversity of lot sizes should be available with the balance in favour of medium to larger residential allotments. The assessment proposed two future residential precincts; the established residential area and new residential estates (see Figure 6). The established residential area should maintain 70 per cent of lots with sizes over 700sqm, while the new residential precinct should maintain 80 per cent of lots with sizes over 700sqm.

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Source: Cardinia Shire Council Township Character Assessment November 2006

4.4 Development Guidelines: Township Character Assessment 2006 – Koo Wee Rup

The Township Character Assessment suggested development guidelines for Precinct 1: Established Residential Area and Precinct 2: New residential Estates. The following is an extract from the assessment.

Precinct 1: Established residential area

1. Preferred character statement:

The existing characteristics of Koo Wee Rup's established residential areas will be improved. The existing street trees, wide nature strips and overall openness of the existing streetscape will act as a reference point for future development. The connectivity and integration between the town centre and the residential areas will be enhanced. There will be some unit development near the town centre.

- 2. Development guidelines:
 - Maintain 70% of the lots with sizes over 700 square metres;
 - Encourage diversity of development styles;
 - Maintain continuity of building rhythm along streets with appropriate building frontage;
 - Unit development to avoid repetitive and uniform siting and design of dwellings;
 - Locate unit development within vicinity of the town centre;
 - Require a landscape plan to accompany all applications for unit development;
 - Maintain a sense of spaciousness between allotments of the residential areas through;
 - i. No front fences or if fenced, low front fences or open wire fences to allow gardens and nature strips to merge;
 - ii. Providing sufficient open space or garden areas;
 - iii. Retaining existing vegetation ; and
 - iv. Providing new trees and garden spaces.
 - Maintain sense of spaciousness within and between allotments with:
 - i. Providing sufficient open space or garden areas;
 - ii. Retaining existing vegetation;
 - iii. Providing new trees and garden spaces;
 - iv. Encouraging no or, if any, low front fences, to allow gardens and nature strips to merge
 - v. Minimum side setback of 2.5 metres;
 - vi. Minimum front setback of 7 metres or no less than the average setback of adjacent two dwellings;
 - vii. Maximum building site coverage of 40% ; and

- viii. Minimum lot width of 18 metres
- Maintain sense of spaciousness in unit development by:
 - a. Providing a minimum 30% site coverage of the allotment as private open space;
 - b. Retaining existing vegetation;
 - c. Providing new trees and garden spaces;
 - d. Preferably no front fence to allow gardens and nature strips to merge;
 - e. (on larger blocks) orientating driveway along one side of the property than down the middle and curvilinear driveway with tree planting;
 - f. Providing a minimum front setback of 7metres or no less than the average setback of the dwellings on either side;
 - g. Providing maximum building site coverage of 50% of the site; and
 - h. Minimum lot width of 18 metres.
- Ensure protection and conservation of native vegetation including street trees and roadside vegetation;
- Encourage the inclusion of native vegetation and garden space in new development;
- In the case of subdivisions, clearly outline how the new development relates to the existing and intended use and development of adjoining land;
- Maintain a high level of quality in the design and construction of new buildings as well as continuity with the character of the areas existing built form;
- Ensure building height respects the existing character of the surrounding area; and
- Encourage an interconnected street network with links between the town centre and surrounding areas, providing good accessibility and streetscape detailing to make walking and cycling pleasant, efficient and safe.

Precinct 2: New residential estates

1. Preferred character statement:

The open and semi-rural atmosphere of Koo Wee Rup's new residential estates will be retained particularly with provision of larger allotments. Existing asphalt roads with pathways on either side will continue into new developments and maintain existing styles and features including brick paved thresholds and street lighting. Other features which improve the overall appearance and functionality of the existing developments, such as underground power and grassed road verges will be combined with street tree planting, wide footpaths and generous street widths with an overall focus on continuity and quality within all new developments.

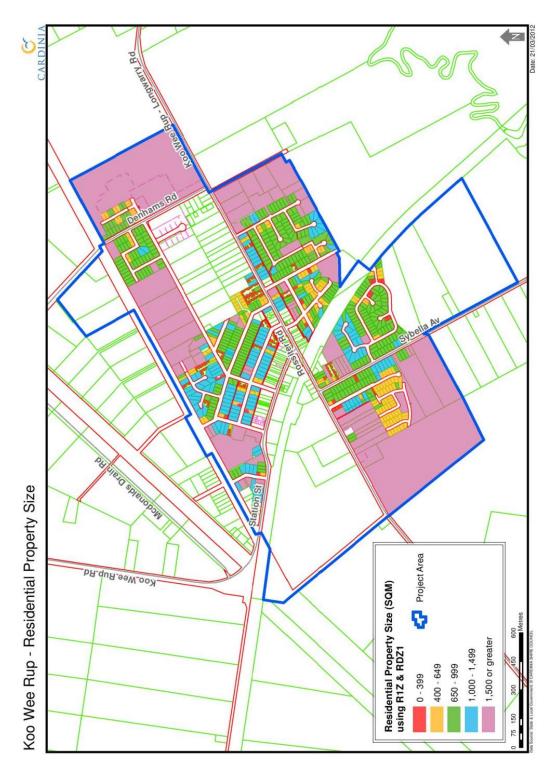
2. Development Guidelines:

- Maintain 80% of the lots with sizes over 700 square metres;
- Orientate dwellings to maximize retention of existing vegetation and allow only one access driveway to the site;
- Maintain a sense of spaciousness between allotments of the residential areas through;

- a. No front fences or if fenced, low front fences or open wire fences to allow gardens and nature strips to merge;
- b. Providing sufficient open space or garden areas;
- c. Retaining existing vegetation; and
- d. Providing new trees and garden spaces.
- Maintain spaciousness in new estates with:
 - a. Providing a minimum front setback of 7 metres or no less than the average setback of the adjoining two dwellings;
 - b. Side setbacks of 2.5 metres minimum;
 - c. Respect for the predominant building height of the neighbourhood;
 - d. No fences or if fenced, only low fences; and
 - e. Minimum lot width of 18 metres.
- Encourage larger allotments of over 1000 square metres towards the edge of the Urban Growth Boundary;
- Discourage small allotments of less than 600 square metres in the new residential estates;
- Ensure protection and conservation of native vegetation including street trees and roadside vegetation;
- Encourage the inclusion of native vegetation and garden space in new development;
- Encourage the inclusion of street trees for shade and aesthetic quality in new developments at an early stage of development;
- Respect the existing styles of street lighting and road treatments;
- In the case of subdivisions, clearly outline how the new development relates to the existing and intended use and development of adjoining land;
- Maintain a high level of quality in the design and construction of new buildings as well as a continuity with the character of the areas with existing built form;
- Ensure building height respects the existing character of the surrounding area;
- Residential developments should not include gated street formats but should connect to the surrounding areas;
- Develop clear, legible road networks which provide a high level of internal connectivity and external linkages for local vehicle, pedestrian and bicycle movements;
- Maintain generous street, footpath and easement widths in new developments. Provide a minimum width for internal streets of 7.3 metres to allow for parking on either side and access for emergency vehicles; and
- Discourage cul-de-sacs and, if used, they should be connected through to another street by a wide reserve and path for safe pedestrian and bicycle access.

4.5 Residential property sizes

Figure 7. Koo Wee Rup residential property sizes



Source: Cardinia Shire Council

Figure 7 shows the distribution of property sizes within the residential zone in Koo Wee Rup. Larger lots are distributed around the perimeter of the township and provide an interface and transition to the Green Wedge Zone surrounding the urban area. Small lots of less than 400 square metres are often associated with infill redevelopment and are generally unpopular with existing residents. Within the more recent developments, lots of 400–659 square metres are appealing to price conscious new home buyers while lots of 650 square metres –999 square metres provide a point of difference for residents seeking larger blocks.

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4.6 Current family and household profile

Household types							
							Change
Households by type	Number	%	Cardinia Shire %	Number	%	Cardinia Shire %	2006 to 2011
Couples with children	365	35.3	38.9	270	36.4	40.2	+95
Couples without children	238	23.1	25.5	180	24.3	25.4	+58
One parent families	134	13.0	11.1	67	9.0	10.8	+68
Other families	15	1.5	0.9	15	2.1	0.8	0
Group household	18	1.8	2.4	11	1.5	1.9	+8
Lone person	231	22.4	17.9	179	24.1	17.4	+53
Other not classifiable	22	2.2	2.8	14	1.9	3.1	+8
Visitor only households	6	0.6	0.5	5	0.8	0.4	0
Total households	1,034	100.0	100.0	744	100.0	100.0	+290

Table 3.Household types

Source: Australian Bureau of Statistics, Census of Population and Housing 2006 and 2011

In 2011 the majority of Koo Wee Rup's residents lived as couples with children (35.3%). This has changed only marginally since 2006. Almost one quarter of Koo Wee Rup's households are couples without children (23.1%) and the number of lone persons is similar (22.4%). Both these household types have decreased slightly since 2006, whilst the percentage of one parent families has increased. Comparing household types between Koo Wee Rup and the broader Cardinia Shire in 2006, reveals that Koo Wee Rup has a smaller proportion of couples with children households as well as couples without children, but a larger proportion of lone-person households and one parent families.

4.7 Changes in household types

Table 4.Forecast changes in household types

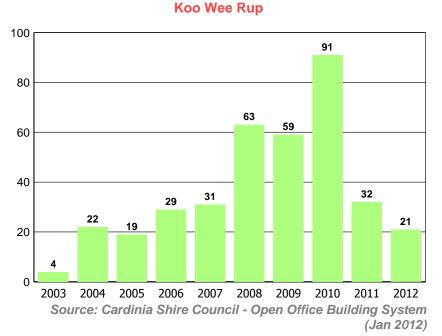
Household types	Number 2012	Percent 2012	Number 2021	Percent 2021	Number 2031	Percent 2031
Couples without dependents	297	26.5	390	26.4	483	26.9
Couple families with dependents	377	33.6	482	32.7	558	31.1
One parent family	96	8.6	124	8.4	148	8.2
Other families	26	2.3	32	2.2	37	2.1
Lone person households	305	27.2	423	28.7	538	30
Group households	20	1.8	26	1.8	30	1.7

Source Cardinia Community and Household Forecasts - www.id.com.au

Between 2011 and 2021, the change in the type of households in Koo We Rup is expected to be the increase in the number of lone-person and the decrease in couple families with dependants. Lone-person households are estimated to increase from 27. 2% of all households in Koo Wee Rup to 30% by 2031. The percentage of couples with dependants is expected to decrease from 33.6% of the population, to 31.1% over the same time frame. The implications will be that the demand for smaller dwellings and units will increase.

4.8 Trends in residential development

Figure 8. Certified building completions for Koo Wee Rup 2000–2012



Certified Residential Building Completions

The number of building completions between 2000 and 2012 demonstrate the increase in the level of investment in the area. The number of dwellings completed in Koo Wee Rup increased by 203 between 2008 and 2010. This is a significant increase from 2000 to 2003, when the number of building completions was in single figures.

Completions decreased significantly in 2011 and in 2012. Most building has occurred in new estates to the north and south west of the township, although some infill development has occurred closer to the town centre.

4.9 Land capability

The soils of the area are dominated by brown podosol soil types. These soils are considered to have slow permeability, tend to have an acidic pH level and are high in organic matter. The land capability for residential activities is largely regarded as being poor to very poor, which results in poor drainage, local ponding following rain, and the risk of engineering difficulties due to the soil type.

4.10 New subdivisions since 2000

The *Koo Wee Rup Township Strategy 2000* sought to provide a choice of lot size and type of accommodation for a mix of household and lifestyle types, while respecting the existing township character and environment. Following the development of subdivisions around Townley Road (Lauriston Park), Mila Way (Ashton Grove), Bailey Road (Parkland), and Shelton Park Estate, plus the infill redevelopments closer to the town centre around Gardner Street and Henry Street, the objective of providing a range of residential options as has been achieved. These developments have provided an opportunity to increase the population base in the township, increase the retail and commercial mix while maintaining the environmental qualities (landscape, water quality, native vegetation, habitat and biodiversity) of the area. While acknowledging that the increased population has delivered improved services and retail to the township, residents are concerned that the small lots (300 square metres) in some subdivisions and pockets of unit development within the older residential precinct have diluted the township's existing character.

Source: Cardinia Shire Council

Given the nature of demographic trends in Koo Wee Rup it is important that appropriate housing options for the various household types are built to accommodate the growing population while respectful of the existing township character and environment. Demand will increase for dwellings suitable for lone-person households and couples without dependents, such as retirees and the elderly as these are estimated to become 55% of the total household types. As a consequence, approximately 60% of all new lots have been around 700 square metres and this guideline should continue.

4.11 Land supply

Approved estate/ subdivision	Total area (ha)	Total area (developable) (ha)	Lots	Estimated population
Tesoro Estate (Denhams Road)	22.2	15.69 (70.6%)	213	511
Shelton Park Estate (Rossiter Rd)	24.72	14.82 (59.9%)	226	542
Total approved	46.92	30.51 (65.0%)	439	1053

Table 5.Approved estates/subdivisions

Source: Cardinia Shire Council, 2012

Within the next 7–10 years, the supply of undeveloped residential land within the existing Koo Wee Rup Urban Growth Boundary will be mostly taken up. As the Denhams Road (Tesoro Estate) and Rossiter Road (Shelton Park Estate) estates are taken up, the only undeveloped land suitable for residential development will be the area to the south of the township, around the Koo Wee Rup Regional Health Service. Land to the north of the sewerage treatment plant is unsuitable for residential development due to its proximity to the South East Water sewerage treatment plant.

The land adjacent to the Koo Wee Rup Health Service is 24.6 hectares and currently zoned Farm Zone 1 (FZ1). It is bounded in the north by the Koo Wee Rup rail trail and the Urban Growth Boundary in the west. The Southern boundary is Rossiter Road and to the east by Koo Wee Rup Regional Health Service and Cochrane Park. The rail trail reserve in particular has significant environmental values as it provides habitat for the endangered Southern Brown Bandicoot. Future development will require an extensive environmental management plan. Due to its close proximity to the township centre and the Koo Wee Rup Regional Health Service, this land is suitable for development and a combination of independent living and assisted living accommodation has been proposed.

4.12 Infill development

It is desirable for sensitive infill redevelopment to occur close to the town centre. Currently small pockets of unit development are occurring within the older residential areas, predominantly to the north of the town centre. Developments of 3–10 single-storey units are occurring on lots of about 350sqm, with site coverage of about 45–60%. Residents have expressed the concern that this density of housing is adversely affecting the township character, but this can be accommodated by attention to good design, site coverage and setback of any further unit development.

In general, infill development will display a sense of spaciousness, with a front set back of 7 metres minimum, driveway orientated along one side of the property. It will provide new trees and garden space, no front fence which enables garden and nature strip to merge and site coverage of 50%.

Table 6.Potential infill land supply

Potential land	Total area (ha)	Total area (developable)*	Lots **	Estimated population ***				
120 Moody St	1.78	1.24	11	26				
65 Moody St	1.75	1.22	11	26				
73 Moody St	2.75	1.92	17	41				
85 Moody St	2.77	1.93	17	41				
394 Rossiter Rd	1.01	0.7	6	14				
400 Rossiter Rd	0.87	0.6	5	12				
404 Rossiter Rd	0.94	0.6	6	14				
22 Simms Lane	1.04	0.7	6	14				
30 Simms Lane	1.03	0.7	6	14				
34 Simms Lane	1.78	1.2	11	26				
Town centre			40	80****				
Total			136	268				
*Assumes development area = 70% of Total area								
** Assumes 9 lots per ha								
*** Assumes household size of 2.4 residents /dwelling								
**** Assumes househol	**** Assumes household size of 2.0 residents / dwelling							

Source: Cardinia Shire Council

Opportunities for infill development may exist by utilising the large blocks at 65, 73 and 85 Moody Street and 120 Boundary Drain Road. These blocks range from 16,000 square metres (4.1 acres) to 23,500 square metres (5.8 acres). Subdividing these blocks to lots of around 700 square metres reduces the buffer effect of the transition to the Green Wedge Zone; however Boundary Drain, McDonalds Drain and the large blocks between the two drains will perform this function. The preparation of a Development Plan Overlay should be considered to ensure that issues of permeability, traffic movement, infrastructure provision and flood mitigation are addresses. If this area is to be subdivided, it is preferred that the lots should be of medium to larger style residential allotments.

Similar opportunities exist for subdividing the large blocks to the west of Simms Lane and south of Rossiter Road, where existing lots range in size from 8,139 square metres to 9,868 square metres. The preparation of a Development Plan Overlay needs to be considered, to address the issues of access, traffic movement, permeability, infrastructure provision and flood mitigation. Again, any subdivision should be of a medium to larger allotment size, to provide a range of housing options which cater for the needs of a diverse range of ages and households.

The key principles of the *Urban Design Study for the Town Centre*, 2013 confirm that the rural character of the township can be maintained, protected and reinforced by encouraging a general double storey profile throughout the town centre, with modest residential consolidation. Within the town centre residential development may occur within the Retail core, Commercial / Mixed Use and Consolidated Residential Precincts. For more details see Section 12 Urban Design.

4.13 Social housing

The State Government's Department of Human Services (DHS) has 29 residential units in Icke Street. The units are fully modified for people aged 55 or older. The waiting list has a turnover of approximately 4–6 per annum. DHS built additional units in 2008 and 'does not have plans' (DHS, 2012) to increase the number in the near future.

4.14 Expansion of the Urban Growth Boundary

The State Government has a stated objective of providing 'a supply of 15 years of land for residential housing within metropolitan areas'. However, this does not apply to settlements like Koo Wee Rup. The current approved subdivisions provide for a housing supply in Koo Wee Rup of approximately 535 lots (see Table 6: Approved estates / subdivisions).

When the current land supply is taken up, Koo Wee Rup will have reached its optimal level of sustainable development and population. The township is constrained by the drains to the north, the sewerage plant to the south and the bypass to the west. Any further additional development and population would compromise the sustainability of the existing community, infrastructure, provision of services and the environment. For these reasons the urban growth boundary surrounding Koo Wee Rup should not expand.

4.15 Land Subject to Inundation Overlay (LSIO)

The Koo Wee Rup Township is part of one of Melbourne's largest and most unique floodplains. The township is covered by a land Subject to Inundation Overlay (LSIO) to minimise flood damage and community losses.

4.16 Key issues

The key issues can be summarised as:

- residents are attracted to Koo Wee Rup by the rural township lifestyle and there is a concern that additional development will threaten this lifestyle;
- residents believe that recent subdivisions are eroding the character of Koo Wee Rup, by allowing units and small lots within the new residential precincts;
- development of the land adjacent to the Koo Wee Rup Regional Health Service for the purposes of
 providing a wide range of housing options is an appropriate use of the land provided flood safety and
 environmental constraints can be satisfied;
- while there is a need to provide a variety of housing options for families, couples without dependants, the elderly and lone person households, there is also a demand for medium and larger lots which is currently unmet; and
- development in the vicinity of biolinks and environmental habitat needs to consider the protection of environmental assets.

4.17 Objectives

The objectives are to:

- provide for the staged growth of Koo Wee Rup in order to accommodate a population of 4,000 people by the year 2021 and 4,500 people by the year 2031;
- protect and enhance the rural township character of Koo Wee Rup;
- ensure the long-term sustainability of the community by providing residential development for a range of household groups; and
- ensure that residential development responds to the issues of flood mitigation and environmental constraints.

4.18 Policy

The policies are to:

- ensure any proposed residential development is in accordance with the Koo Wee Rup Township Character Assessment; and
- support the release of residential land in a staged and controlled manner to accommodate the expected population growth.

4.19 Actions

- apply a Development Plan Overlay to the large blocks adjacent to Simms Lane, bounded by Simms Lane, Rossiter Road, Supreme Road and the Urban Growth Boundary to guide development and address the issues of access, traffic movement, permeability, infrastructure provision, flood prevention and the protection and creation of habitat areas;
- apply a Development Plan Overlay to 65, 73 and 85 Moody Street and 120 Boundary Drain Road, to guide development and address issues of access, permeability, traffic movement, infrastructure provision, flood prevention and the protection and creation of habitat areas;
- rezone and apply a Development Plan Overlay to the property surrounding the Koo Wee Rup Regional Health Service, bounded by Rossiter Road, the Urban Growth Boundary and the Great Southern Rail Reserve from Farming Zone 1 to an appropriate residential zone and to address issues of access, permeability, traffic movement, infrastructure provision, flood prevention and the protection and creation of habitat areas; and
- ensure planning controls appropriately reflect the precinct development guidelines in this section.

5. ECONOMIC DEVELOPMENT

5.1 Overview

Koo Wee Rup faces similar issues to most small agricultural service centres around Victoria. These include the difficult trading role of local businesses forced to compete against the regional centres (in Koo Wee Rup's case, of Pakenham and Cranbourne), the rationalisation and withdrawal of services to regional centres, reduced self-sufficiency and increased commuter populations.

Koo Wee Rup has a variety of commercial zones, which includes the Commercial 1 Zone (C1Z), the Commercial 2 Zone (C2Z), a Mixed Use Zone (MUZ) and two industrial precincts (IN1Z). The town centre extends along Rossiter Road from the railway crossing to Henry Street and along Station Street from the corner of Rossiter Road to Salmon Street. New retail developments, including a Woolworth's supermarket and associated specialty shops, were constructed in 2010 and 2011. This has revitalised the retail offering available within the township however purchases are likely to remain in the "basic daily needs" category. The new shops have moved the township's retail centre from its traditional location in Rossiter Road to Station Street. As a result, businesses have closed and the Rossiter Road end of the retail precinct needs revitalisation.

An industrial precinct exists in the area bounded by Rossiter Road, Denhams Road, Moody Street and the Koo Wee Rup Secondary College (see Figure 9). A smaller industrial precinct exists on the corner of Station Street and McNamara Road and these precincts provide a location for light industrial premises.

A rezoning application for a further industrial precinct in the area bounded by Sybella Avenue, the sewerage treatment plant and the Great Southern Railway Reserve is under consideration. The area is subject to a 350metre buffer distance from the sewerage treatment plant to sensitive land uses. This excludes residential, schools and the like, and makes this a suitable location for light industrial, storage and warehousing, transport, construction and agricultural support industries.

A number of home-based businesses located in the township provide employment diversity. These businesses have the potential to provide local employment opportunities.

Infrastructure issues are dealt with in Section 8 in detail. In summary, infrastructure such as gas, sewerage, water and drainage currently limit Koo Wee Rup's ability to attract and retain business and investment.

As the number of local customers is limited, the challenge for businesses in Koo Wee Rup is to plan business and marketing strategies to attract customers from a wider catchment, including the growth corridor.

The study area is surrounded by productive farmland, where dairy and vegetable growing is undertaken. These activities provide some employment opportunities for local residents.

5.2 Labour force

The size of Koo Wee Rup's labour force in 2011 was 1,384 people; of which 438 were employed parttime (35.4%) and 597 were full time workers (59.9%). Unemployment in Koo Wee Rup was 5.1%, which was slightly higher than throughout the rest of Cardinia Shire (4.6%) Between 2006 and 2011 the number of employed Koo Wee Rup residents rose by 380 persons.

5.3 Industries that Koo Wee Rup Residents work in

Industry sector of employment							
Koo Wee Rup	2011			2006			Change
Industry sector	Number	%	Cardinia Shire	Number	%	Cardinia Shire	2006 to 2011
Agriculture, Forestry and Fishing	86	6.5	3.3	83	9.0	4.5	+3
Mining	10	0.8	0.4	0	0.0	0.3	+10
Manufacturing	156	11.8	13.7	138	14.9	15.6	+17
Electricity, Gas, Water and Waste Services	34	2.6	1.2	12	1.3	0.9	+22
Construction	203	15.4	13.6	111	12.0	12.3	+92
Retail Trade	121	9.1	11.4	91	9.8	11.5	+30
Wholesale trade	80	6.1	6.1	49	5.3	6.2	+31
Accommodation and Food Services	43	3.3	4.4	36	3.9	4.4	+8
Transport, Postal and Warehousing	106	8.0	5.0	72	7.8	5.4	+34
Information Media and Telecommunications	11	0.8	1.3	21	2.3	1.6	-10
Financial and Insurance Services	16	1.3	2.2	9	1.1	2.0	+7
Rental, Hiring and Real Estate Services	23	1.8	1.4	12	1.4	1.4	+11
Professional, Scientific and Technical Services	32	2.4	4.6	27	3.0	4.5	+5
Administrative and Support Services	37	2.8	2.8	35	3.8	2.8	+3
Public Administration and Safety	52	3.9	4.0	23	2.5	3.3	+29
Education and Training	77	5.9	7.1	56	6.1	6.6	+21
Health Care and Social Assistance	121	9.2	9.5	71	7.7	8.5	+50
Arts and Recreation Services	21	1.6	1.5	16	1.8	1.4	+5
Other Services	63	4.8	4.4	29	3.2	4.1	+34
Inadequately described or not stated	24	1.9	2.3	29	3.1	2.8	-5
Total employed persons aged 15+ Source: Australian Bureau of Stati	1,325	100.0	100.0	929	100.0	100.0	+395

Source: Australian Bureau of Statistics, Census of Population and Housing 2006 and 2011

The industry structure of the work force is indicative of the skill base and (to some extent) the socioeconomic status and industry structure of an area. In Koo Wee Rup, during 2011, the most industry sectors providing employment were:

- Construction (203 persons or 15.4%);
- Manufacturing (156 persons or 11.8%);
- Retail Trade (121 persons or 9.1%);
- Health Care and Social Assistance (121 persons or 9.2%);
- Transport, Postal and Warehousing (106 persons or 8.0%); and
- Agriculture, Forestry and Fishing (86 persons or 6.8%).

In combination, these industries employed 793 people or 60% of the employed resident population. Since 2006 the industry structure of the work force has changed with the construction sector overtaking manufacturing as employing the largest number of people. More people are now employed in the retail, health care and transport sectors than the agricultural sector.

5.4 Journey to work

Table 8. Journey to work

Employment location of residents						
Cardinia Shire	2011					
	Number	%				
Live and work in the area	10,560	29.1				
Live in the area, but work outside	19,724	54.4				
Work location unknown	5,969	16.5				
Total employed residents	36,253	100.0				

Source: Australian Bureau of Statistics, Census of Population and Housing 2011

ABS Journey to Work data (2011) reveal that 54.4% of Cardinia Shire's residents travel beyond the Shire to work each day. Recent statistics are not available for Koo Wee Rup residents but in would appear that the situation is not vastly different. Anecdotal evidence suggests that a similar situation occurs in Koo wee Rup and about 55% of the working population travel outside the Shire for work. This situation has improved significantly since 2006, when 65% of the working population worked outside of Cardinia Shire.

5.5 Koo Wee Rup residents' occupations

Occupation							
Koo Wee Rup		2011		2006			Change
Occupation	Number	%	Cardinia Shire	Number	%	Cardinia Shire	2006 to 2011
Managers	150	11.3	12.5	139	15.0	13.8	+10
Professionals	114	8.6	13.9	82	8.8	13.3	+32
Technicians and Trades Workers	270	20.4	19.0	157	16.9	18.7	+113
Community and Personal Service Workers	146	11.0	9.0	75	8.1	8.0	+71
Clerical and Administrative Workers	146	11.0	14.5	107	11.5	13.8	+39
Sales Workers	127	9.6	9.8	98	10.5	9.6	+30
Machinery Operators And Drivers	157	11.9	8.6	100	10.8	9.2	+57
Labourers	192	14.5	10.8	156	16.9	11.8	+36
Inadequately described	20	1.6	2.0	14	1.5	1.8	+6
Total employed persons aged 15+	1,325	100.0	100.0	930	100.0	100.0	+395

 Table 9.
 Occupations of Koo Wee Rup residents

Source: Australian Bureau of Statistics, Census of Population and Housing 2006 and 2011

Whilst Table 8 shows the industry sectors which Koo Wee Rup residents are employed in, Table 10 shows the occupations of residents. An analysis of the occupations held by the resident population in Koo Wee Rup in 2011 shows the most popular occupations were:

- Technicians and Trades Workers (270 persons or 20.4%);
- Labourers (192 persons or 14.5%); and
- Machinery Operators and Drivers (157 persons or 11.9%).

In combination, these three occupations accounted for 619 people or 46.7% of the employed resident population. Since 2006, the greatest change in the occupations of Koo Wee Rup residents has been the increase in Technicians and Trade workers, (+113 persons) Community and personal Service Workers (+71persons) and machinery Operators and Drivers.

Table 10.	Qualifications of Koo Wee Rup workforce
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Highest qualification achieved								
Koo Wee Rup	2011			2006			Change	
Qualification level	Number	%	Cardinia Shire	Number	%	Cardinia Shire	2006 to 2011	
Bachelor or Higher degree	82	3.8	11.3	73	4.5	9.7	+10	
Advanced Diploma or Diploma	107	4.9	8.1	66	4.1	6.6	+41	
Vocational	549	24.9	23.9	288	17.6	21.5	+261	
No qualification	1,230	55.8	47.3	1,001	61.3	50.8	+229	
Not stated	235	10.7	9.4	203	12.5	11.4	+32	
Total persons aged 15+	2,206	100.0	100.0	1,632	100.0	100.0	+574	

Source: Australian Bureau of Statistics, Census of Population and Housing 2006 and 2011

Analysis of the qualifications of the population in Koo Wee Rup in 2011 compared to Cardinia Shire shows a smaller proportion of people holding formal qualifications (Bachelor or higher degree;

advanced diploma or diploma; or vocational qualifications) and a larger proportion of people with no formal qualifications.

Overall, 33.4 % of the Koo We Rup residents held educational qualifications and 55.8% had no qualifications. Since 2006 the number of people with vocational qualifications has increased by 261 and the number without qualifications by 229.

5.6 Koo Wee Rup business community

According to a count of the Australian Business Register (ABR), there were 1,344 businesses operating in the Koo Wee Rup postcode area (3981) in December 2012. This represents 6.2 per cent of the 21,360 businesses operating in Cardinia Shire. As the Koo Wee Rup postcode area is larger than the township area, the count includes businesses outside the study area. Most businesses included in the count are involved in agriculture (344 businesses or 18%), construction (238 businesses or 17.7%) and transport, postal and warehousing (128 businesses or 9.5%). Koo Wee Rup has 18.6% of Cardinia shire's agricultural businesses. As of November 2011, there are 68 retailers and service providers in the town centre, with 14 premises vacant.

Many of the operating businesses are home based and should be encouraged to participate in the networking and other business strengthening activities provided by the Shire's Economic Development Unit to develop their potential capacity to generate local employment opportunities.

5.7 Koo Wee Rup Traders Association

The Koo Wee Rup Business Association was established in 1991 and despite numerous achievements, was disbanded in January of 2003. It resumed from 2005 until 2008 and recommenced in 2012.

During its periods of activity, the association achieved success with promotional and marketing activities, including Christmas, Easter and Mother's day promotions. The association also used the Cardinia Business Partnership Program to improve directional signage and an information board at the Swamp Lookout Tower.

The Traders Association can assist businesses to become resilient and sustainable by participating in the business training and support offered by Cardinia Shire's Economic Development Unit.

5.8 Tourism

Koo Wee Rup does not have any significant landscape, environmental or location feature which will attract tourists. However Koo Wee Rup is a uniquely Australian placename and this could be a point of difference when strategies are developed to convince passing traffic to break their journey and use the facilities in the town centre. Other points of interest include the drains associated with the draining of the Koo Wee Rup Swamp, the proposed labyrinth at Cochrane Park, and the Koo Wee Rup Rail Trail.

The trail is the first section of the Great Southern Rail Trail to be constructed. The trail will eventually provide a purpose-built rail trail between Cranbourne East and Leongatha, a distance of 82 kilometres. As Koo Wee Rup will be the first substantial township along the trail from East Cranbourne, potential should exist to entice trail users to break their journey and use the facilities available in the town centre.

Koo Wee Rup has a small motel, but Shire-wide there is a lack of tourist accommodation, which hinders the opportunity for overnight visitors. Koo Wee Rup and Lang Lang may be the only places offering direct access to water from the desalination plant. An opportunity exists for a public art installation, based on a theme of drinking fountains, where 'Direct from the Desal' water can be collected.

Cardinia Shire Council is currently developing a Tourism Strategy, and action plans at the township level will be developed at a later stage.

Businesses in the Koo Wee Rup town centre are in part reliant on tourists using the Koo Wee Rup – Healesville Road as a connector between the South Gippsland Highway and the Princes Freeway.

Parking is available for large vehicles at the clock towers and this should be identified by appropriate signage, to encourage tourists to stop in Koo Wee Rup (see below).

5.9 Future use of former PMP printing site

The former PMP Printing site at 13–15 and 27 Station Street provides an opportunity for mixed business development within the town centre. This use is reinforced in the Koo Wee Rup Town centre Urban Design Study 2013, where the site is identified as Precinct 1a. The site's use, and design guidelines are described in Section 12 Urban Design.

5.10 Signage and gateways

Concern has been expressed about the lack of directional and information signs guiding travellers to Koo Wee Rup. This situation will become more of an issue when the bypass is completed, as the VicRoads guidelines relating to highway and freeway signage specify that signs should be limited to providing directions. As planning for the bypass continues, the type and location of signage will need to be addressed. A notice board is located at the Swamp Lookout Tower on the South Gippsland highway providing information about Koo wee Rup's history. Immediately west of the parking area, a large sign promotes the attractions of Koo Wee Rup.

Koo Wee Rup is proud of its four distinctive welcome signs which were an initiative of the Koo Wee Rup Township Committee. The urban area of Koo Wee Rup is quite clearly defined by significant cross roads and the drains. The definition of the town centre is more subtle, occurring at the kink in Station Street adjacent to the Catholic Primary School when entering from the north, and when crossing the railway crossing on Rossiter Road in the south. The Koo Wee Rup Town Centre Urban Design Study suggests defining the key street corners at 67 Station Street, and the intersections of Station Street and Salmon Street, Moody Street and Rossiter Roads.

The existing Cardinia Shire Council Advertising Sign's Guidelines provides direction for the type and location of signs permitted. An opportunity exists for the local businesses to identify the best locations and designs for promotional and directional signs in and around the township, in accordance with Council's signage policy.

As the Bypass is constructed, the opportunity to create built form and landscape gateway features in the approaches to the township should be investigated.

5.11 Agriculture

The study area is surrounded by productive farmland, on which dairy and vegetable growing is undertaken. The peat soils of the Koo Wee Rup Swamp especially contain some of the most fertile agricultural soils in Victoria and are especially suited to asparagus growing. The Koo Wee Rup district accounts for up to 90 per cent of Australia's total production. In addition to asparagus, potatoes celery, leek, Brussels sprouts, lettuce and parsnip crops are grown. A flourishing movement is occurring towards fresh local produce and Koo Wee Rup has the potential to satisfy market demand for this type of produce through a farmers' market or similar.

5.12 Provision of sufficient industrial land

An industrial precinct exists in the area bounded by Rossiter Road, Denhams Road, Moody Street and Koo Wee Rup Secondary College (see Figure 9). Located within this precinct are a garden supplier, a transport business, and several motor repairers. A smaller industrial precinct is located on the corner of Station Street and Boundary Road. These precincts provide a location for light industrial premises.

An application to rezone the area bounded by Sybella Avenue, the sewerage treatment plant and the Greater Southern Railway Reserve for a further industrial precinct in is under consideration. This will satisfy demand for land for light industrial, storage and warehousing, transport, construction and agricultural support industries. A number of home-based businesses are located in the township that provides employment diversity. These businesses have the potential to provide local employment opportunities.

5.13 Potential land use conflicts

The existing industrial precinct in the vicinity of Rossiter Road and Denhams Road is adjacent to the Tesoro residential estate. There is a potential for conflict between the two land use types due to issues of noise, lighting, traffic, dust, odours and drainage. Landscaping and similar natural barriers should minimise these conflicts. As additional industrial land is developed, there will be an opportunity for current businesses to relocate and the existing precinct to be redeveloped as a business park which will attract office and warehousing uses.

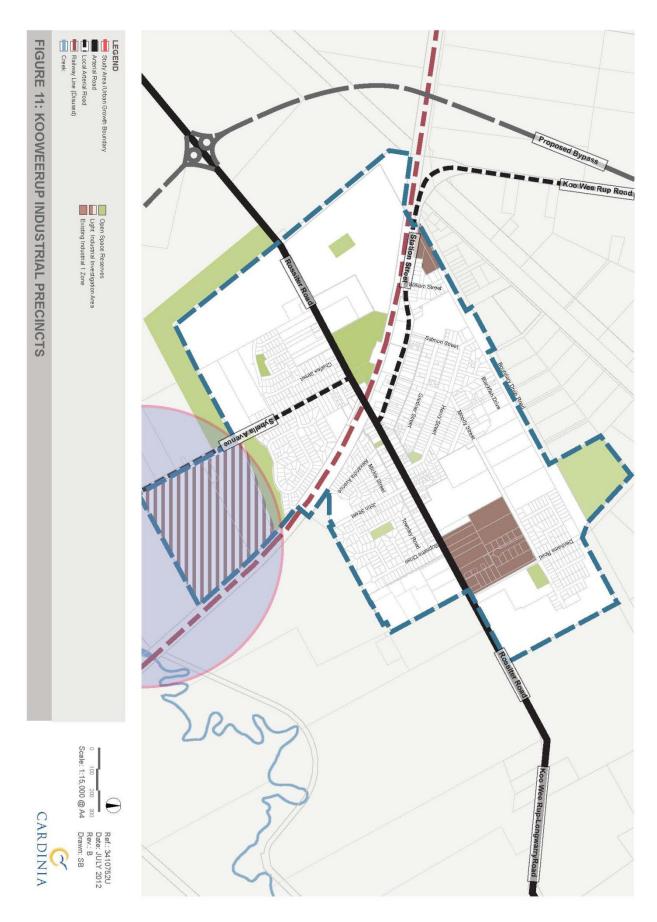


Figure 9. Existing and proposed industrial precincts

5.14 Key issues

The key issues can be summarised as:

- existing businesses face uncertainty, especially due to the expansion of the retail offerings in the township and in competing major centres and the bypass;
- linkages between the Koo Wee Rup Rail Trail and Station Street are a priority;
- future use of the PMP site (13–15 and 27 Station Street) needs to be resolved;
- local employment opportunities need to be encouraged;
- the strengths of the current town centre needs to be maintained and enhanced;
- there is a potential for conflict between activities in the industrial precinct in Rossiter Road and new residential development in Denhams Road;
- the business community needs an active business group to advocate for support of the business community; and
- there is a need for the location of large vehicle (car and caravan) parking to be promoted, to encourage tourists to stop in Koo Wee Rup.

5.15 Objectives

The objectives are to:

- strengthen the role of the Koo Wee Rup town centre in order to meet the needs of the local community;
- encourage local employment opportunities;
- facilitate the development of an additional industry and service industry precinct within the Koo Wee Rup township; and
- support industry relating to agriculture to the area.

5.16 Policy

The policies are to:

- provide additional industrial land to the south of the township, to encourage local employment opportunities;
- advocate for the provision of adequate infrastructure (especially reticulated gas, water and sewerage) to support business expansion;
- support existing businesses to plan and manage future threats and opportunities; and
- To develop diverse local employment opportunities to meet the needs of a growing residential population.

5.17 Actions

- rezone properties to the south of the township, bounded by Sybella Avenue, the South East Water sewerage treatment plant and the Great Southern Rail Reserve from Farming Zone 1 to an appropriate industrial zone to provide land for local employment opportunities;
- engage with owners of the former PMP site determine future uses of the site;
- in partnership with Koo Wee Rup Traders Association, encourage businesses to identify and respond to business opportunities and threats posed by the bypass;
- encourage Koo Wee Rup businesses to participate in the networking and other business strengthening activities provided by the Shire's Economic Development Unit;
- support the creation of distinctive built form and landscape gateway treatments as major entry points to the township;

- investigate the provision of large vehicle (car and caravan) parking at the clock towers, to encourage travellers to stop in Koo Wee Rup; and
- secure the link between the Rail Trail and Station Street, to provide for the construction of a safe connection for pedestrians and cyclists between the north and south of the township.

5.18 Medium to longer term actions

- support business activities associated with the development of the Great Southern Rail Trail; and
- advocate for the speedy completion of the Great Southern Rail Trail.

6. COMMUNITY DEVELOPMENT

6.1 Overview

Koo Wee Rup is described by residents as a 'great place to live', due to its 'country town feel'. Koo Wee Rup has a range of community services and facilities, many of which are community based rather than provided by State Government agencies or Cardinia Shire Council. This reflects a strong sense of community which is an important part of the township character. Koo Wee Rup is a service centre for the surrounding districts; however, public transport is extremely limited which restricts the ability of local residents to access regional facilities and services located elsewhere. Transport is discussed in detail in Section 7 Traffic and Transport.

The services and facilities presently available in Koo wee Rup are shown in Table 11.

Community services	Koo Wee Rup's provision						
Early Childhood services	Westernport Child Care and Kindergarten						
Early Childhood Services	Koo Wee Rup Regional Health Early Parenting program						
	Koo Wee Rup Primary School						
Education	St John the Baptist Primary School						
	Koo Wee Rup Secondary College						
	1x Public swimming pool						
	8x Sporting clubs						
	1x playing field						
	1x Community Complex						
	1 x Skate Playground						
Recreation	2x Tennis Courts						
	2x Netball Courts						
	Bowls Rink						
	1 x CFA Competition Track						
	Equestrian Facility						
	Mobile Library						
	1x public regional hospital offering acute medical, residential care and community services						
	A 72 bed facility providing:						
	Palliative Care (inpatient/community)						
Health	Post-surgical care (inpatient)						
	Transitional care						
	Medical beds						
	Respite care						
	Residential care (both Hostel/ Nursing Home)						

 Table 11.
 Community services and facilities in Koo Wee Rup

Community services	Koo Wee Rup's provision						
	Specialist services using the Health Service include:						
	Early parenting education						
	District Nursing						
	Pathology services						
	Allied Health:						
	-Social Work						
	-Physiotherapy						
	-Occupational therapy						
	-Diabetes education						
	-Foot clinic						
	-Podiatrist						
	GP Clinic onsite						
	Specialist Consulting rooms for visiting specialistsHealth promotion and Community Development						
	Bus hire (wheelchair accessible)						
	Hall Hire (community)						
	Council services						
	L2P						
Youth	Afterschool Program						
	Youth Worker						
	Recreation and sporting clubs						
	Scouts,						
	Senior Citizens Club						
Aged	Mecwacare						
	Strength Training						
	Walking Groups						
Emergency services	Police Station						
	CFA brigade						
Service clubs Source: Cardinia Shire Council	Lions Club, Rotary Club						

Source: Cardinia Shire Council 2013

6.2 Early years

The 2011 ABS Census shows 204 children are aged 0 - 4, representing 7.1% of the total population of Koo Wee Rup in 2011 (See Table 1: Population and age structure).

Koo Wee Rup is considered to be a great place to raise a family in a supportive and close-knit community. Cardinia Shire Council's maternal and child health is part of a broader service system that builds on the identification of individual, family and community needs at a local level. It is a universal service available for all families with children from birth to school age through a schedule of consultations at key ages and stages. The emphasis is on prevention, health promotion, early detection and intervention where necessary, assessments, referral, support and strengthening local community connections. A maternal and child health nurse services Koo Wee Rup for 1.5 days per week. New parents are welcome to attend new parent group held at the Maternal and Child Health Centre, which sometimes joins other groups depending on numbers.

The Best Start programs are being delivered in Koo Wee Rup, to improve the health, development, learning and wellbeing of all children from conception to eight years of age.

An Early Parenting Program is provided at Koo Wee Rup Health Service. The program supports families with newborn babies up to one year old in a broad range of parenting issues such as sleep/ settling and breastfeeding. The program is supported by a Psychologist and Social Worker.

6.3 Kindergarten

Koo Wee Rup has a kindergarten which offers programs for both 3 and 4year-olds. In consultation with the parent volunteer committee of management, enrolment numbers are increasing; a direct reflection of the number of new families moving into the community. Children are eligible for 10.75 state funded hours of 4-year-old kindergarten per week. Three-year-old kindergarten is not a state funded program, except for some eligible families in the early start, aboriginal or refugee status.

From 2013, the Council of Australian Governments (COAG) is committed to increasing state funding to 15 hours of kindergarten per week for children the year prior to school entry, which may impact on current service delivery models. Cardinia Shire, in partnership with Kinders Together continually monitors the demand for kindergarten places and currently all demands for 4-year-old kindergarten places are being met.

6.4 Education

Table 12. Student enrolments 2011

School	Student population			
	2012	2011		
Koo Wee Rup Secondary College	1060	1028		
Koo We Rup Primary School	210	207		
St John's Catholic Primary School	196	187		

Source: Koo Wee Rup Secondary College, Koo Wee Rup Primary and St John Catholic Primary School, March 2013

Koo Wee Rup has two primary schools, Koo Wee Rup Primary School No. 2629 (established 1884) and St John the Baptist's Catholic Primary School. These two schools had a combined enrolment of 394 in 2011. There were 316 children aged 5-11 (11.0%) in Koo Wee Rup in 2011(ABS 2011) and the primary education provision is considered adequate.

There were 263 secondary schoolers (12-17 years) resident in Koo Wee Rup in 2011 (ABS2011). Large number of young people from Pakenham, Cranbourne and surrounding areas travel to Koo Wee Rup each day for education, demonstrating Koo Wee Rup's role as a service centre for the surrounding area.

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6.5 Adult education

The Koo Wee Rup community has expressed a desire to have access to a range of adult education and recreation programs. A range of programs are offered by organisations outside of Koo Wee Rup such as Pakenham Living and Learning, Blind Bight Community Centre, Lang Lang Community Complex, U3A Pakenham and U3A Cranbourne. One issue is the lack of a suitable venue. A model which could be explored is the Extended Schools Model, which utilises existing classrooms and equipment outside school hours.

6.6 Health

The Koo Wee Rup Health Service provides a wide range of health services to the residents of Koo Wee Rup and surrounding locations. The hospital is a 72 bed service which offers a broad range of acute, residential care, palliative care and respite care in addition to District Nursing, Health Promotion/Community Develop Allied Health Services, Early Parenting and Diabetes Support Services. Currently a Cardiologist and Podiatrist consult in the Specialist Rooms. The service also has part time Pathology on site as well as its own GP Clinic which is open to the public

The Koo Wee Rup Regional Health Service is seeking to develop a 12-acre site adjacent to their current location to provide up to 90 retirement units. This will require the land to be rezoned from its current Farming Zone 1 to a suitable residential zone.

The township is generally well serviced for medical and ancillary services as general practitioners, pharmacist, dentist, and optometrist practice within Koo Wee Rup. Emergency patients need to travel to Warragul or Berwick.

6.7 Youth

Cardinia Shire Council's youth policy and youth strategy demonstrate Council's desire to support young people to achieve their aspirations to be active, valued members of the community. The policy and strategy is focused on improving the overall health and wellbeing of young people and aims to provide diversities and opportunities which support and connect young people to their family, community,

Council supports the Koo Wee Rup Regional Health Service to deliver a weekly after school program to young people from The Men's Shed. Support also includes assisting with promotion and use of Council resources.

Other services and programs operated by Council for Koo Wee Rup's young people include personal development programs and workshops to both primary and secondary school students. Programs include; Drum Beat, Shout Out, Party safe and sexual health. The MYBus attends Koo Wee Rup regularly during school holidays and after school. Koo Wee Rup is a pick-up point for most school holiday activities.

Cardinia Shire conducts biannual Youth Forum surveys, to determine what issues affect young people. Responses from the 2011 survey suggested that young preferred the opportunity to socialise in large shopping centres and watch movies. Participation in music activities, skating at local skate parks and undertaking volunteer activities were other popular pursuits.

6.8 Ageing in place

In 2011, there were 544 (18.9%) of Koo Wee Rup's residents aged 60 and older (see Table 1: ABS 2011). Koo Wee Rup has a higher proportion of older people than for the Cardinia Shire as a whole (15.6%). There is an Australia wide trend for people to live longer and live independently in their homes. Alternatively older residents are 'downsizing' to age-friendly accommodation in a location which provides easy access to family, friends and support networks. Many older residents from the surrounding districts have decided to 'retire' in Koo Wee Rup, handy to their previous residence, with access to more services. The need for a variety of housing options is further discussed in Section 4 Residential Development.

The Koo Wee Rup Regional Health Service provides a wide variety of medical services, assisted accommodation and recreational programs for residents of Koo Wee Rup and surrounds. The Service is considering providing up to 90 additional affordable retirement units in close proximity to their premises.

Cardinia Shire Council's *Positive Ageing Strategy Action Plan 2009* outlines actions to deliver outcomes for the community. As Council is not directly involved in delivering the majority of human services to the mature-aged residents, the strategy takes a collaborative approach involving local service providers and community actions to provide the best outcomes for this section of the community.

Mecwacare delivers a range of health and aged care programs in Koo Wee Rup on behalf of Cardinia Shire. These programs include in home support, personal care, respite, home maintenance and social support. Meals on Wheels service is distributed from the Koo Wee Rup Community Complex. Mecwacare conducts a transport service for disadvantaged and socially isolated residents which uses volunteer drivers.

A review of seniors housing needs was completed in 2013 and this will inform future strategies. Council supports residential development which meets local housing needs. Opportunities exist to support ageing in place, potentially through integration with the services of Koo Wee Rup Regional Health Service.

6.9 Volunteerism

The level of volunteering can indicate the cohesiveness of the community and how readily individuals are able to contribute to that community.

Location	Percentage undertaking voluntary work
Koo Wee Rup	17.8%
Cardinia Shire (LGA)	17.6%
Greater Melbourne (SD)	15.8%
Victoria (State)	17.9%

 Table 13.
 Percentage of Koo Wee Rup population undertaking voluntary work

Source: ABS 2011

According to the 2011census, 17.8% of Koo Wee Rup residents undertake voluntary work for a group or organisation. These levels of volunteers in the community demonstrate a pride, commitment, involvement and a sense of looking out for one another. The 2011 Youth Forum Survey confirmed that volunteering was important to young people.

6.10 Koo Wee Rup Township Committee

The township committee was formed in 1998 as a conduit between Council and delegates from local community organisations. Meeting monthly, it provides the community with a collective voice on issues of concern. Since the township committee's inception, the Koo Wee Rup Community Complex has been built along with the new police station, the war memorial, the new bowling green and traffic signals installed. The maintenance group has ensured that through close liaison with Council, scheduled and unscheduled works are kept up-to-date. Works include the sealing of the swimming pool car park, installation of the skate park and barbecue at Cochrane Park, together with footpath and playground construction.

The township committee participates in a variety of Cardinia Shire Council programs, including Carols by Candlelight, Australia Day celebrations and the Commonwealth Games Baton Relay.

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6.11 Blackfish

The *Koo Wee Rup Blackfish* is the free, monthly community newsletter distributed to every residence in the township. The newsletter, which can be up to 28 pages, is auspiced by the Koo Wee Rup township Committee and is virtually self-funded from advertising revenue. Blackfish contributes to the township's social cohesion, by providing timely relevant local information. Blackfish supports the local economy by providing an advertising opportunity for local enterprises. Recent community consultation revealed that senior residents (in particular) prefer receiving information in written form as they are less computer literate with less ability to access online information.

6.12 Arts and culture

The community noted that artistic and cultural activities in Koo Wee Rup were limited. However, Cardinia Shire Council's Cultural Development Officer is able to consult, develop and deliver local projects. The local arts community is also able to be engaged in the Cardinia Shire Arts Network.

6.13 Koo Wee Rup Community Complex

The Koo Wee Rup Community Complex is located within Cochran Park. It has a large hall, kitchen and several meeting rooms. The complex is managed by a Section 86 Committee of Council. The community has expressed concern that the complex is underutilised as it is expensive to hire, has limited meeting rooms and offers no storage to groups wishing to store equipment.

6.14 CAN II project

The Cardinia Active and Nutritious II (CAN II) project is a two-year healthy eating and physical activity project. By offering a range of activities, CAN II aims to reduce the high rate of obesity and diabetes in Cardinia Shire. CAN II works with recently or long-term unemployed residents, part-time or casual employees, older residents, residents who have a disability or care for someone with a disability, residents who are at risk of weight-related chronic disease. The project focuses on residents who live in Cockatoo, Koo Wee Rup, Lang Lang and Pakenham. In addition to supporting the Community Garden, the CAN II project has installed outdoor exercise equipment in Cochrane Park, near the Rail Trail. Can II promotes walking and cycling as an alternative to short distance car trips

6.15 Internet connection

A fast internet connection is increasingly required for accessing essential information and undertaking domestic and non-domestic business. Households with dial-up or no internet service are being left behind in the digital divide as both government and the private sector are increasingly conducting their business, or aspects of it, on-line.

Table 14. Internet connection in Koo Wee Rup

Dwelling internet connection							
Koo Wee Rup	2011			2006			Change
Connection type	Number	%	Cardinia Shire	Number	%	Cardinia Shire	2006 to 2011
Total internet connection	697	67.5	77.8	375	50.5	62.5	+322
Broadband connection	617	59.7	70.6	208	28.1	38.6	+409
Dial-up connection	37	3.6	3.3	165	22.3	23.4	-128
Other connection	42	4.1	3.9	1	0.2	0.5	+41
No internet connection	267	25.9	16.3	330	44.5	31.9	-63
Not stated	68	6.7	5.8	37	5.0	5.6	+32
Total households	1,034	100.0	100.0	743	100.0	100.0	+291

Source: Australian Bureau of Statistics, Census of Population and Housing 2006 and 2011

In 2011, 67.5% of Koo Wee Rup residents were connected to the internet, with 59.7% utilising a broadband connection service. Anecdotal evidence suggests that older residents are less likely to have internet connects, however a Public Internet Access Program is run from Koo Wee Rup Health Service's Men's Shed. Members of the public have free access to computers and education is provided. Promotion strategies should use a variety of media to ensure that residents without internet connections are not excluded for information provision.

6.16 Key issues

The key issues can be summarised as:

- opportunities exist to support residents to 'age in place' potentially through integration with the services provided by Koo Wee Rup Health Service;
- older residents are less computer literate and rely more on printed material than on emails, websites and social media for their information;
- there are insufficient opportunities for residents to participate in artistic and cultural activities locally;
- there is an opportunity to broaden the range of uses for Koo Wee Rup Community Complex; and
- there are currently no adult education opportunities in Koo Wee Rup.

6.17 Objectives

The objectives are to:

- support and foster a partnership approach to achieving a strong, healthy and integrated community;
- provide appropriate, accessible and quality facilities and services;
- ensure efficient management of existing community services and facilities;
- ensure all residents have access to appropriate services to meet their needs; and
- develop mechanisms for government and other organisations to partner with the Koo Wee Rup community.

6.18 Policy

The policies are to:

• in partnership with the community, implement neighbourhood development initiatives designed to promote community connections, community leadership and community spirit in Koo Wee Rup; and

• establish community facilities in the most accessible location, having regard to their service catchments and in response to community needs.

6.19 Actions

- enable residential development that supports housing needs in the area;
- explore with the Committee of Management a variety of activities and programs in the Koo Wee Rup Community Complex, to maximise it usage;
- deliver an arts and culture program within Koo Wee Rup; and
- promote the exercise equipment as a CAN 11 initiative, including providing 'come 'n' try' opportunities.

7. TRAFFIC AND TRANSPORT

7.1 Overview

A high proportion of Koo Wee Rup residents are dependent on motor vehicles for transport due to the rural location of the township and limited public transport services presently available. The township is intersected by Station Street, which connects to Koo Wee Rup–Healesville Road. This is the main connection between the Pakenham Bypass (Princes Freeway) and the South Gippsland Highway. Plans are underway to upgrade the road to freeway standard over time. The first stage will include a bypass of Koo Wee Rup.

In addition to identifying opportunities to address traffic and public transport issues, this strategy also identifies actions to improve the pedestrian and bicycle connectivity as a measure to reduce car dependency for short trips within the township and as a measure to promoting good health.

7.2 Public transport

VLine has two coach services which stop at Koo Wee Rup; the Melbourne–Leongatha service, which runs express from Koo Wee Rup to the bus interchange at Southern Cross Station, Melbourne; and the Dandenong–Cowes service which runs from Koo wee Rup to Dandenong Station. Both services are described as 'reasonably frequent'. An additional service operates between Koo Wee Rup and Pakenham Station. This service is well used by secondary school students commuting to Koo Wee Rup in the morning and returning to Pakenham Station in the evening. However, the service does not provide the flexibility required by workers seeking to commute.

Cardinia residents are able to pre-book minibuses from Koo Wee Rup Regional Health Service, which offers one 12-seater bus with wheelchair access and one 11-seater bus with wheelchair access. The Cardinia Shire Council Community Bus is also able to be pre-booked by residents. A taxi service is available in Koo Wee Rup.

In April 2008, the (State) Department of Transport announced that 'passenger rail will not be returning to Leongatha. Although the rail line has been closed to passenger rail, parts of it may be opened for passenger or freight transport in the future. As such, the primary rail corridor must be retained by VicTrack. In the interim period, a rail trail is to be established between Cranbourne East and Nyora' (CPG Australia, 2008). Council supports the rail trail as an appropriate use of the of the rail corridor.

7.3 Road network

The majority of roads in the Koo Wee Rup township are sealed, with Sims Lane and parts of Moody Street and Icke Road being unsealed. The local community has expressed a desire to have all roads within the township constructed to an acceptable standard. The road networks in new estates provide a permeable, legible and convenient road network.

Table 15. Vehicle ownership

Vehicle ownership							
Koo Wee Rup	2011			2006			Change
Number of vehicles	Number	%	Cardinia Shire	Number	%	Cardinia Shire	2006 to 2011
No motor vehicles	51	5.0	3.2	42	5.8	3.6	+9
1 motor vehicle	259	25.2	26.7	208	28.2	25.8	+50
2 motor vehicles	425	41.3	41.3	276	37.3	42.1	+149
3 or more motor vehicles	246	23.9	23.7	175	23.6	22.7	+71
Not stated	47	4.6	5.1	38	5.1	5.8	+9
Total households	1,029	100.0	100.0	741	100.0	100.0	+289

Source: Australian Bureau of Statistics, Census of Population and Housing 2006 and 2011

Koo Wee Rup residents are very dependent on private transport, with 65.2% of households having 2 or more cars (ABS, 2011).

7.4 Traffic movement

VicRoads conducted a 2-way count of traffic volumes for Station Street, Rossiter Road and Sybella Avenue, Koo Wee Rup in June 2011. In 24 hours, the number of vehicles in Station Street was 7,800, of which 1,400 (19%) were commercial vehicles. The Rossiter Road count was 2,600, of which 416 (16%) were commercial vehicles and the count in Sybella Street was 5,300, of which 1060 (20%) were commercial vehicles. These volumes of traffic have increased substantially since 2000, when traffic in the main streets was identified as an issue in the previous strategy. VicRoads has announced that Koo Wee Rup Road will be upgraded in stages to freeway standard. The first stage will include a bypass of the Koo Wee Rup township. Planning for the bypass commenced in 2012. The first stage of the bypass proposes to connect with Rossiter Road, to the west of the subject area. Traffic is expected to turn right into Rossiter Road and join the South Gippsland Highway, which will be upgraded to a roundabout. Traffic coming from the South Gippsland is expected to continue past the current turn off at Sybella Avenue and turn right at Rossiter Road before joining the bypass. The initial stage of the Bypass is currently planned as a single carriageway in each direction. There is concern that "bottlenecks" will still occur during peak periods such as weekends and holiday periods.

Traffic lights were installed at the intersection of Rossiter Road and Station Street in 2009 and this has assisted traffic flows around the intersection. Large vehicles turning at the intersection of Rossiter Road and Sybella Avenue continue to be a concern to residents. Large vehicles turning left into Sybella Avenue from Rossiter Road and right into Rossiter Road find the intersection is difficult to negotiate.

7.5 Pedestrian and bicycle network

Town trails and routes

The Cardinia Shire Council *Pedestrian and Bicycle Strategy May 2003* aims to make all roads and trails in the Shire safe and suitable for walkers and cyclists. The strategy proposes that the Great Southern Rail Trail, the Bunyip River Trail and the Koo Wee Rup Road (called Pakenham Road in the strategy), Sybella Avenue and South Gippsland 'on-road routes' be developed.

In May 2011, the Department of Transport entered into an agreement with Cardinia Shire Council to construct a concrete bicycle and footpath as part of the *Cranbourne–Koo Wee Rup Rail Trail Master Plan 2010*. The 2 kilometre trail, from Main Drain Road to Bailey Boulevard, was completed in 2012. It provides a safe east-west connection. This trail will connect with the planned pathway within Cochrane Park and in turn with a path alongside the Koo Wee Rup Regional Health facility. A link to connect the rail trail with Station Street needs to be developed. In the longer term, the completion of the rail trail between Cranbourne east and Nyora will increase pedestrian and bicycle connections with Lang Lang (and beyond) to the east and Clyde to the west.

Town pathways and footpaths

There is a well-defined network of footpaths within the town centre, the established Residential Precinct 1 and the newer Ashton Park, Lauriston Park, Parkland and Shelton Park estates (see Figure 10). Footpaths are monitored and maintained through council's footpath maintenance schedule. Obstacles such as footpath hazards and low lying branches are actioned when reported to Council.

Council has constructed a network of pathways as part of the Cochrane Park Masterplan. The pathways provide connections between the Koo Wee Rup Regional Health Service and the rail trail. Recently approved development to the south of Rossiter Road includes the provision of shared paths which extend the connections with existing residential and community facilities.

Other pathway connections would improve permeability throughout the township, including:

- Tesoro Estate connections to Town Centre, and to the Koo Wee Rup Recreation Reserve; and
- Sheldon Park connections to the Koo Wee Rup rail trail and Cochrane Park.

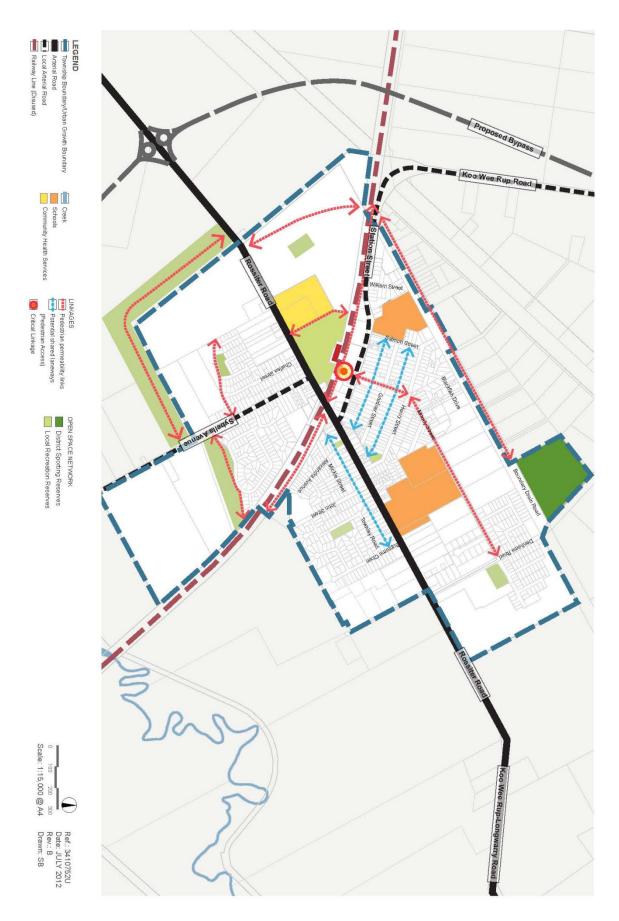
As the number of older residents is expected to rise, there will be more expectations of seniors using mobility aids to access the town centre; the option of a recharge point for electric scooters should be investigated. There is a need for footpaths and linkages to be accessible to people with different levels of ability.

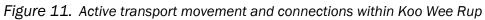
There are laneways in the existing residential areas at the rear of properties to the south of Rossiter Road as well as to the rear of properties on both sides of Gardner Street. These could provide safe connections within the established residential precinct as well as access to car parking at the rear of properties within the town centre. The strategic importance of these lanes is expanded in Section 12 Urban Design.

Figure 10. Footpaths within Koo Wee Rup



Source: Cardinia Shire Council, 2013





7.6 Car parking

Within the township centre, parallel parking spaces (mostly two-hour) are available along both sides of Rossiter Road, and 16 spaces are available in Station Street. Off-street parking is available on the north side of Rossiter Road at the rear of the ANZ bank and the Royal Hotel. On the south side of Station Street, parking is available at the rear of 23 Station Street. Spaces are also located near the public toilets in Alexander Street and at the bus station near the clock towers in Rossiter Road. The Koo Wee Rup Town Centre Urban Design Study suggested that parking solutions within the retail core could be delivered by consolidating rear yards to provide combined parking courts at the rear of buildings, access via the orderly arranged laneways.

Observations on Wednesday 2 November 2011, between 4pm and 5pm indicated that only 50–60 % of the available spaces were occupied. This indicates that the town centre is well provided with parking to service its current demands. However, during consultations, residents have commented that with the volumes of traffic along Station Street, access into and out of the off-street car parks are proving difficult. Discussions are currently underway with VicRoads regarding improvements to the pedestrian crossing in the vicinity of Moody Street. Older Koo Wee Rup residents have commented that car parking is difficult in Rossiter Road due to the reduction in spaces required to accommodate the traffic signals on the corner of Station Street.

7.7 Key issues

The key issues can be summarised as:

- the most pressing traffic and transport issue in Koo Wee Rup is the number of vehicles travelling through the township. Although planning for the bypass has commenced, traffic management and pedestrian safety in the interim is of major concern to residents;
- footpaths throughout the township need to provide a safe surface, free from overhanging branches and similar obstructions;
- footpaths need to be constructed throughout the township, to provide safe permeability and connections;
- all streets in the township need to be sealed; and
- parking for larger vehicles, such as caravans is available at the Clock Towers This needs to be promoted, to encourage travellers to access the town centre.

7.8 Objectives

The objectives are to:

- achieve a safe, functional and well maintained road network within the township;
- encourage pedestrian and bicycle usage to reduce car dependency for short trips within the township;
- non-local traffic should be directed to the bypass and away from the local road network;
- provide a safe and well-maintained network of footpaths provides access for all ages, from mothers pushing prams through to elderly using mobility aids;
- provide a reliable and regular public transport network which enables Koo Wee Rup residents to access services, education, employment and community networks; and
- provide sufficient car parking within the town centre to meet local needs.

7.9 Policy

- provide a safe, functional and well maintained local road network;
- provide a well-connected network of paths to encourage walking and cycling;
- ensure all pathways are well constructed and maintained;
- progressively upgrade all local roads to a sealed standard; and

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• make all trails safe and suitable for walkers and cyclists.

7.10 Actions

- secure the link between the rail trail and Station Street, to provide for a safe connection for pedestrians and cyclists between the north and south of the township;
- develop a Special Charges Scheme to seal the remainder of Moody Street;
- investigate additional works at the pedestrian crossing in Station Street in the vicinity of the Woolworths supermarket;
- investigate the need for a recharge point for mobility aids to be located in the town centre; and
- advocate for the Koo Wee Rup Bypass to be duplicated between the Pakenham Bypass and the South Gippsland Highway.

8. PHYSICAL INFRASTRUCTURE

8.1 Overview

Much of Koo Wee Rup has been developed with the usual physical infrastructure that is generally expected for residential areas, such as sealed roads, underground drainage and sewers. Through a collaborative approach with key stake holders, reticulated sewage, water, drainage facilities, telecommunications and electricity can be extended to cater for future development in the township.

Koo Wee Rup has two overriding environmental conditions issues, soils and drainage which present challenges for development. Koo Wee Rup's soils expand and contract, which means that physical infrastructure including roads, footpaths and pipes are prone to maintenance issues and require regular inspections, especially where newer developments abut older developments. Koo Wee Rup is built on the site of the Koo Wee Rup swamp, which is a tectonically depressed basin. The area is very flat with little fall, which effects drainage and places the township at risk from flooding. The township is liable to flooding from local floodwaters and overflows of Bunyip Main Drain. Subsequently the entire township is covered by a Land Subject to Inundation Overlay (LSIO).

8.2 Sewerage network

A majority of properties in the Koo Wee Rup township are connected to reticulated sewage which is managed by South East Water. All sewage from the township is currently treated in a lagoon based plant with winter storage of effluent. Treated waste water is used to irrigate South East Water's onsite tree plantations.

Both the Lang Lang and Koo Wee Rup sewerage treatment plants are approaching capacity. Planning is underway to upgrade the system to a capacity of 2ML a day. By using a hi-tech plant, development of the new facility will be accommodated within the current treatment boundaries. A final decision on the exact configuration of the system is yet to be made. The capacity of 2ML per day is planned to cater for the anticipated growth of Koo Wee Rup and Lang Lang until at least 2025.

The South East Water Treatment Plant is a critical service to the growing communities of Koo Wee Rup and Lang Lang and the protection of its ongoing viability is an important consideration.

To control the impact of odour from the South East Water Treatment Plant, buffer distances between the treatment plant to sensitive land uses (e.g. residential development) have been established. Currently, the minimum buffer distance accepted by the Environment Protection Authority from the treatment plant to sensitive land uses is approximately 350m (EPA 2013). The proposed upgrade to the South East Water Treatment Plant may reduce the buffer distance between the treatment plant and all sensitive land uses to approximately 300 metres. In the meantime, all proposed sensitive land uses will be required to comply with South East Water and the Environment Protection Authority requirements. This buffer can be formalised through the application of an Environmental Significance Overlay (ESO) which will exclude sensitive uses and create a buffer from inappropriate in order to ensure the ongoing operation of the treatment plant.

The transfer sewer main from Koo Wee Rup to Lang Lang is currently under construction and due to be completed by mid-2015 with all growth being diverted to Lang Lang.

8.3 Water

Reticulated water is supplied to the Koo Wee Rup township by South East Water. The township was originally supplied from the Tarago system and is now supplied from Melbourne Water's Cardinia Reservoir. The supply distribution system comprises of a 4.4ML low level reservoir, a 5.5ML/d pumping station and a small elevated tank.

In 2011, South East Water announced it would be connecting Koo Wee Rup and Lang Lang to an additional water source via the pipeline currently being constructed between the Victorian Desalination Plant and Cardinia Reservoir by off takes at Rossiter Road and McDonalds Track.

Figure 12. Water connections to desalination pipeline



This long-term sustainable solution will provide both towns with more reliable water sources which will meet the future needs of these growing towns, regardless of rainfall or storage levels. It will deliver an increase to water pressure in Koo Wee Rup by up to 50 % – a similar level to what is currently experienced in Lang Lang. There is a concern that the additional pressure will cause the existing system to fail. Continued consultation with South East Water will be required to ensure they have adequate risk mitigation measures in place to deal with potential damage associated with an increase in water pressure.

Once connection is complete the source of water for both towns will change. The pipeline is two-way and will supply water from the desalination plant or Cardinia Reservoir. The existing supply from Tarago Reservoir will be available, and Koo Wee Rup and Lang Lang will continue to receive high quality drinking water.

Construction of the South East Water connection to the pipeline has commenced with Koo Wee Rup and Lang's additional source of water expected to be available at the end of 2014.

8.4 Gas

In February 2014, The Minister for Regional and Rural Development announced a project to extend natural gas to Koo Wee Rup. The Government will contribute \$5.25 million to provide natural gas to more than 1,300 homes and businesses in Koo Wee Rup. The project includes the construction of approximately 14 kilometres of supply pipeline and at least 10 kilometres of reticulation pipeline, with natural gas expected to reach Koo Wee Rup by 2017.

8.5 Telecommunications

The telecommunication system to all new estates must be designed in accordance with the requirements of the relevant telecommunications servicing agency and should be consistent with any approved strategy, policy, or plan for the provision of advanced telecommunications infrastructure. To

achieve this, all new estates in Koo Wee Rup will be constructed with the necessary conduits to receive fibre optic cable and National Broadband Network.

8.6 Electricity

Electricity is provided by SP AusNet and transmission is available through both overhead lines and underground cables, depending on the area, with voltage ranging from 420 kilovolts for residential and 430 kilovolts for businesses. Upgrades to the system were undertaken in 2007 and has capacity to meet future increases in residential and commercial demands.

8.7 Drainage

Cardinia Shire Council is the responsible authority for the majority of the drainage infrastructure within the Koo Wee Rup township. Within the Koo Wee Rup community, flooding, new developments and drainage issues are the main concerns.

The main challenge for development in Koo Wee Rup is however the fact that the majority of the landscape south of the Princes Freeway is subject to 1in100 year flooding (as designated by Melbourne Water) which includes the township of Koo Wee Rup.

As such, all developments within a 1in100 year flood area and as specified in the Land Subject to Inundation Overlay of the Cardinia Planning Scheme require approval from Melbourne Water and Cardinia Shire Council prior to any works commencing. There is a legacy of older developments that do not meet the current standards for flood levels.

Flooding events of 2011 and 2012 have highlighted Koo Wee Rup's vulnerability to inundation from overland flows. This is due in part to the lack of fall, as water is unable to escape quickly once the existing drains are full to capacity.

In an attempt to deal with some of these challenges the Flood Management Framework for Cardinia Shire Council and Melbourne Water, November 2012 has been prepared. This framework outlines the roles and responsibilities and describes (at a high level) Cardinia Shire Council, and Melbourne Water's key flood management planning and management activities.

The above mentioned framework has informed the development of the *Cardinia Flood Emergency Plan* (A sub plan of the *Municipal Emergency Management Plan*) will ultimately inform the development of a Flood Asset Management Plan.

8.8 Key issues

The key issues can be summarised as:

- provision of reticulated natural gas to the township remains a high priority;
- maintenance of drainage infrastructure;
- efficient management of physical services as continued growth occurs; and
- flood mitigation.

8.9 **Objectives**

The objectives are to:

• provide or upgrade utility services to improve the health, environment and amenity of residents and to minimise environmental impacts.

8.10 Policy

The policies are to:

- sensitive land uses (residential subdivision and dwellings) must not be located within 350m from the South East Water Treatment Plant unless permitted by South East Water, the Environmental Protection Authority and Cardinia Shire Council;
- support water conservation measures (including water tanks) in all new dwellings to reduce water use and stormwater runoff; and
- integrate stormwater treatment into the landscape, protect water quality of water entering Western Port and reduce the overall cost of drainage infrastructure.

8.11 Actions

- in partnership with the Koo Wee Rup Township Committee advocate for the provision of reticulated gas to the Koo Wee Rup township;
- continued liaison with South East Water regarding the Cardinia South Sewage Treatment Strategy to ensure facilities are upgraded to accommodate future growth in the township;
- investigate the preparation of a planning scheme amendment in conjunction with South East Water to introduce an Environmental Significance Overlay (or similar tool) around the Koo Wee Rup Water Recycling Plant
- ensure any development or works adjacent to a waterway or drainage path does not impede the passage of stormwater or flood water to the detriment of other properties; and
- in partnership with the Victoria State Emergency Service and Melbourne Water, and other agencies develop the Flood Management Framework and the Flood Emergency Plan.

9. OPEN SPACE AND RECREATION

9.1 Overview

The Koo Wee Rup community places a high priority on the provision of sufficient sport and recreation facilities. Like many rural townships, the traditional competitive sports of cricket, football, netball and bowls provide the focus for community participation.

Koo Wee Rup Recreation Reserve, which is home to football, cricket, netball and equestrian activities, is located just over one kilometre from the Koo Wee Rup town centre. Cochrane Park provides tennis courts, a bowls club, an outdoor (seasonal) swimming pool, off-leash dog park, skate playground and a CFA competition training track.

Smaller open spaces with play equipment are located throughout the township to provide walkable access to passive recreation opportunities and locations. Koo Wee Rup Regional Health Service provides a variety of recreational activities for older residents, including a community garden and men's shed in addition to regular walking groups.

9.2 Open space strategy

Council's current Open Space Strategy was adopted in December 2000.

The current Strategy is under review and these actions, together with new actions will be developed by Council in conjunction with the community in the near future.

9.3 Recreation facilities

The Koo Wee Rup Community regards the provision of a variety of passive and active recreational opportunities as a high priority. The following open space reserves are available in Koo Wee Rup.

9.4 Koo Wee Rup Recreation Reserve

Situated within the Urban Growth Boundary, to the north of the township, the Koo Wee Rup Recreation Reserve occupies approximately 8.6 hectares of land which is managed by the Koo Wee Rup Recreation Reserve Committee of Management on behalf of the Department of Sustainability and Environment (DSE). The Koo Wee Rup Recreation Reserve provides for a football and cricket oval, netball courts and an equestrian facility. The playing oval is floodlit, and the reserve has a pavilion and social rooms. There are practice cricket nets in the north-west corner of the reserve.

The oval was recently upgraded with the provision of a swale perimeter drain while the playing surface was converted to warm season grass. The oval will be upgraded further by installing sub-surface drainage and a sub-surface irrigation system after the completion of the 2014 football season. The space for car parking at the reserve is sufficient.

There are two floodlit asphalt netball courts in the southern corner of the reserve. The courts require upgrading to comply with the required standards of Netball Victoria. Adjacent to the courts is an enclosed children's playground area, with colourful adventure play equipment and rocker.

The equestrian facility at the Koo Wee Rup Recreation Reserve comprises two arenas (a small rectangular yard and a small round yard) with a third rectangular arena currently under construction. The equestrian facilities also include an unpowered garage and equipment shed plus 12 small yards and wash bays.

The south east corner of the reserve is underutilised, and there are various recreational groups competing to use this space. A concept plan is required to determine to the future use of this land.

9.5 Cochrane Park

Cochrane Park is located close to the town centre. It occupies approximately 6.6 ha and is bounded by Rossiter Road, the Great Southern Rail Trail reserve, and the Koo Wee Rup Regional Health Service. A Cochrane Park Landscape Master plan has been finalised and recommendations for the park's development are included in Council's capital works program for progressive implementation.

In addition to the Koo Wee Rup Community Complex, the park provides outdoor (seasonal) swimming pools, lawn bowls, a small skate playground, off-leash dog park, tennis courts and CFA training track. Public toilets and Koo Wee Rup's War Memorial are also located within the park. The outdoor swimming pools are currently managed by an external organisation on behalf of Council and were partially refurbished in 2011. Council, with the assistance of a State Government grant, recently replaced the former lawn bowls grass surface with a new synthetic grass surface that allows for year-round usage. The skate playground was established in 2002 and part of the park was declared an off-leash dog park in 2008.

Council's Mobile Youth Service bus, MYBus is located at Cochrane Park when it visits Koo Wee Rup.

9.6 Other open space

Other linear passive open space occurs in corridors along the drains and in parks throughout the township. O'Riordan Park, off Henry's Street would benefit from enhancements including revitalised landscaping and new play equipment. Lauriston Estate Park (Townley Road) is well-appointed with play equipment and is well-regarded by residents, who would like to see all reserves enhanced to this standard. There is open space to the south of the township associated with Bailey Boulevard, which links with the Sheldon Park Estate off Catani Avenue. As Shelton Park is developed further, open space will connect with Rossiter Road.

9.7 Opportunities for young people

In addition to the organised activities (e.g. sport, scouts) Council supports the Koo Wee Rup Regional Health Service to deliver a weekly after school program to young people from The Men's Shed. Support includes assisting with promotion and use of Council resources.

Other services and programs operated by Council for Koo Wee Rup's young people include personal development programs and workshops to both primary and secondary school students. Programs include; Drum Beat, Shout Out, Party safe and sexual health. The MYBus attends Koo Wee Rup regularly during school holidays and after school. Koo Wee Rup is a pick-up point for most school holiday activities.

A FReeZA live music event will take place at Koo Wee Rup in 2013. Cardinia Shire conducts biannual Youth Forum surveys, to determine what issues affect young people. Responses from the 2011 survey suggest that young people preferred opportunities to socialise and watch movies. Participation in music activities, skating at local skate parks and undertaking volunteer activities were popular requests.

9.8 **Connections to recreation facilities and locations**

There is a need for well-maintained footpaths and bike paths to link recreation facilities, the town centre and all sections of the township (see Figure 11). Council's existing pedestrian and bicycle strategy will be updated in the short term and will provide Council with a strategic approach to the delivery of new pathways and connections across the Shire.

9.9 Key issues

The key issues can be summarised as:

- a concept plan is required for Koo Wee Rup Recreation Reserve to provide clear direction for its future use;
- the oval at Koo Wee Rup Recreation Reserve requires subsurface drainage and irrigation to ensure that the surface is maintained to a suitable standard;
- the netball facilities will need to be upgraded to Netball Victoria's playing standards; and
- existing pedestrian and multi-use trails need to be extended and link existing and future open space

9.10 Objectives

The objectives are to:

- provide open space to meet the active and passive recreational needs of the community;
- provide a legible and permeable interlinked open space network;
- ensure the adequate provision of land for the protection of areas with environmental significance; and
- support upgrades and explore opportunities at the Koo Wee Rup Recreation Reserve.

9.11 Policy

The policies are to:

- develop new, and maintain existing parks, gardens and reserves in a sustainable manner;
- consider a range of uses and facilities when designing new local reserves;
- facilitate co-location of community and recreation facilities and joint management of these facilities;
- provide recreation areas, which retain the local character and complement existing natural and cultural values; and
- all facilities should normally incorporate provisions to accommodate people with disabilities.

9.12 Actions

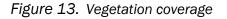
- upgrade the oval surface at Koo Wee Rup Recreation Reserve by undertaking drainage and irrigation works;
- upgrade the netball courts to meet Netball Victoria's playing standards;
- progressively implement the Cochrane Park Master Plan;
- progressively undertake improvements of existing local reserves and open space to a consistent level of equipment at each location, with an upgrade to O'Riordan Park as a priority; and
- investigate opportunities for utilising publicly owned land for passive recreation, sporting facilities or environmental conservation.

10. ENVIRONMENT

10.1 Overview of Koo Wee Rup flora and fauna

Koo Wee Rup has been substantially cleared of native vegetation due to the conversion of swampland to farmland during the 1890s until the present time. Presently only 1% of the original vegetation of the Koo Wee Rup swamp area remains intact. Many plants and animals are not simply locally extinct from the area but also lost from living memory to have ever existed in the region. Notwithstanding this, Koo Wee Rup does retain environmental qualities with conservation significance, including several species which are listed on the Department of Environment and Primary Industries *Flora and Fauna Guarantee Act* 1988 Threatened List (July 2012).

10.2 Vegetation coverage and status





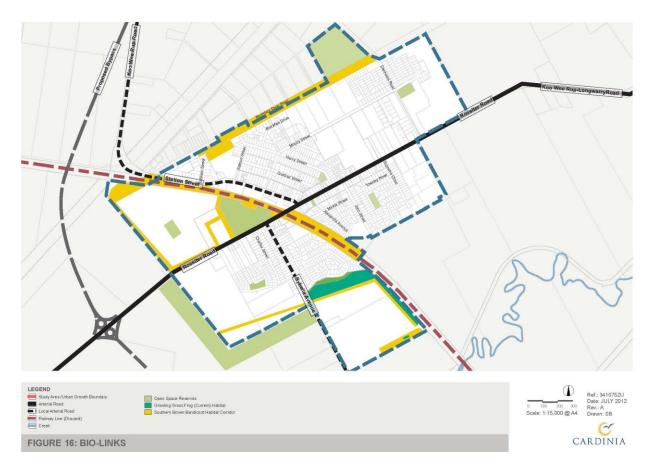
The Koo Wee Rup township is adjacent to two bio-sites of national significance. A bio-site is a physical area of land or water containing biological assets with particular attributes, such as the presence of rare or threatened flora, fauna or habitat required for their survival and rare or threatened vegetation communities. Knowledge of these assets and location of bio-sites are held in a Department of Sustainability and Environment (DSE) database; Biosite 4729: Bunyip River to Yallock Creek, and Biosite 6976, Greater Pakenham Habitat. Biosite 6978: the South Gippsland Koo Wee Rup Rail Reserve (sic) has regional significance, while Westernport Bay is of regional, national and international significance.

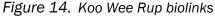
Various flora and fauna species as identified in the national, state and regional significance classifications are located within the Koo Wee Rup township, predominately along road reserves, the Great Southern Rail Trail Reserve, and the Bunyip River. Previous studies have observed various species including spotted quail thrush, great egret, royal spoonbill, pied cormorant, musk duck, harhead, Cape Barren goose, Caspian tern, little egret, pacific gull, eastern curlew, and regent honeyeater. Significant species that are regularly encountered in the area include Lewin's rail,

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Australian grayling, veined speargrass, dwarf galaxia, growling grass frog, southern toadlet, southern brown bandicoot, swamp skink and glossy grass skink.

Roadsides with intact native vegetation are of value to the community as they act as linkage corridors or 'biolinks' for wildlife to travel through, they can act as a reference point for land managers to assist in appropriate indigenous native species selection for landscaping and revegetation. Roadsides also add to the rural landscape of the local township. The southern brown bandicoot illustrates the importance of linkages.





Important strategic biolinks that exist within or around the township include Great Southern Rail Reserve, Boundary Drain Road and the waterways that connect to these corridors (See Figure 14). Any development that is located in the vicinity of a biolink must have regard to the habitat function that they provide. Suitable buffers must be incorporated at the development biolink interface. Indigenous planting should be prioritised within and building from these biolinks.

The removal and degradation of indigenous vegetation, especially as a result of land subdivision and from private land holdings is of environmental concern to the community. The State Government's *Permitted clearing of native vegetation - Biodiversity assessment guidelines* (the Guidelines) guide how impacts on biodiversity should be considered when assessing an application for a permit remove, lop or destroy native vegetation. The objective for permitted clearing of native vegetation in Victoria is 'No net loss in the contribution made by native vegetation to Victoria's biodiversity' which means that permitted clearing of vegetation has a neutral impact on Victoria's biodiversity.

Council encourages private land holders to protect remnant native vegetation on their land using a range of incentive programs and supports schemes such as Landcare and Land for Wildlife. State Government initiatives such as Bush Broker (a native vegetation credit registration and trading system) and Bush Tender (auction-based approach to improving the management of native vegetation on private land) also seeks to encourage private land owners to protect native vegetation on their land.

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10.3 Western Port

The mangrove-salt marsh and sea grass forest vegetation of Western Port is of regional, national and international significance in recognition of its natural habitat values, particularly for migratory birds. This vegetation plays an important role in stabilising the coastal system, in nutrient cycling and in providing wildlife habitat.

10.4 Waterways and waterway management

Significant environmental features of Koo Wee Rup are the drains, which are the result of drainage works undertaken over the past 100 years. The key risks to the region's waterways include degradation of the streamside zone, land use change, hydrological stress, native vegetation removal, pollutants that reduce water quality, barriers (such as dams, weirs and road crossings), erosion of bed and banks, stock access, introduced species and climate change.

Most stormwater from the shire discharges to Western Port. Cardinia Shire Council has only a minor direct role in the management of Western Port however, 80 per cent of the municipality's run-off drains into Western Port via waterways and drains, which has a direct impact on the health of the bay. Any development needs to embrace catchment and waterway management principles to limit sediment runoff into the drainage system and stormwater system, while maintenance of the drainage system to protect against flooding is important. New developments are required to limit runoffs to predevelopment levels and regulate discharge in the catchment.

Current waterway management activities are generally focused on flood mitigation. Select Melbourne Water grazing leases still remain over sections of waterways, which result in stock grazing and walking in the waterways. The vegetation that is currently retained is located on the riparian edge of the waterways.

An integrated land management approach is needed for the waterways. Integrated land management will allow multiple land management outcomes including flood mitigation as well as the retention of indigenous vegetation biolinks for the benefit our native flora and fauna.

10.5 Land and soil

The soils of the area are dominated by brown sodosol type. These soils are considered to have slow permeability, tend to have an acid pH level and are high in organic matter. The soils are highly expansive and contractive, which means that roads and footpaths present maintenance issues and require more inspections, especially where new developments abut old developments.

10.6 Weeds

At present, Cardinia Shire Council's prime focus on weed management has been guided by the *Pest Plant Management Strategy 2012–17*. Cardinia Shire Council has an important role to play in planning, coordinating and monitoring weed control actions and supporting the community to manage weeds. To achieve this, Council has two main areas of action: the annual control of weeds in bushland reserves and roadsides of high conservation value; and, the control of weeds on private land through the Weed Control Grant Scheme and other relevant programs and initiatives. The challenge for Cardinia Shire Council is to continue these programs in a manner that meets the weed invasion and control challenges in a rapidly urbanising Shire.

Under the pest plant strategy, 20 roadsides in the Koo Wee Rup area were assessed during a roadside vegetation survey conducted by Council during 2009. This survey was restricted to rural roads and did not include roadsides that are part of the actual township. None of the roadsides scored as 'very high', even though some of them did contain patches of swamp scrub vegetation which is a class of vegetation that is slowly diminishing in the area.

10.7 Fauna

The southern brown bandicoot (*Isoodon obesulus*) is listed as endangered under the federal Environmental Protection and Biodiversity Conservation Act. The bandicoot is highly adaptable and can live in any habitat of really thick and dense plants. Such planting maximises its chances of escaping predation from cats and foxes. Planting indigenous (locally) native plants optimises the chances for success.

Bandicoots are commonly seen in the township and currently use all of the listed biolinks in Figure 14. The presence of this species demonstrates the conflicts associated with urbanisation. There is a section of the community who support strengthened environmental restrictions on domestic animals, especially cats. Currently all cats throughout Cardinia Shire are required to be secured within the owners premises at all times. Council has procedures for nuisance animals. Fox control programs being implemented by Melbourne Water and DSE. Bandicoot numbers are generally increasing in and around Koo Wee Rup.

The growling grass frog (GGF) (*Litoria raniformis*) is listed as vulnerable under the federal *Environmental Protection and Biodiversity Conservation Act* and 'endangered' within Victoria. GGF is known to move from the waterways surrounding the Koo Wee Rup township. They have the ability to move hundreds of metres over a night and are predominantly associated with permanent or semi-permanent still or slow-flowing bodies of water that contain a diverse mix of vegetation on the bank and within the water. Council has developed a conservation management plan to guide the management of the species.

The dwarf galaxias (*Galaxiella pusilla*) is listed as vulnerable under the federal *Environmental Protection and Biodiversity Conservation Act*. They can be found in the waterways and drainage lines around the Koo Wee Rup township. Greatest threats are the loss of suitable aquatic habitat and the deterioration of water quality.

Another vulnerable fish species is the Australian grayling. This species is listed as 'vulnerable' under the *Environmental Protection and Biodiversity Conservation Act 1999* and listed under the *Flora and Fauna Guarantee Act 1988*. Habitat for this species is found in Koo Wee Rup in the Bunyip River and it may also be associated with other drains in the Koo Wee Rup area. This species is migratory; in autumn it migrates downstream into the Koo Wee Rup area where it spends a few weeks, then spawns and swims back up stream. The eggs and larvae drift out to sea for 4–5 months and then the juveniles migrate upstream.

10.8 Climate change

The Victorian Coastal Strategy 2008 identifies that during this century coastlines will be impacted by climate change. Impacts such as possible sea level rise and an increase in the frequency and severity of storm events are projected. These are likely to lead to greater coastal inundation and erosion, which may cause damage and loss to property, infrastructure and the environment Climate change is complex and it will create threats and challenges and opportunities for townships such as Koo Wee Rup, due to its being in close proximity to the Western Port coastline, low lying location and the proximity to the main drains.

While some impacts such as possible sea level rise are gradual and occur over a long timeframe, extreme weather events can occur at any time. When storm surges and high tides occur simultaneously with elevated water levels in rivers and drains due to heavy rainfall, heavy flooding may occur as a result. The implications for Koo Wee Rup are a possible increase in frequency and severity of flooding events and damage to infrastructure.

In June 2012, the Minister for Planning released the Coastal Climate Change Advisory Committee Report (2010), which included key responses and recommendations. The State Planning Framework, Clause 13.01 was amended to include planning and managing the potential coastal impacts of climate change as an objective. The Amendment also sought to assist the protection of life, property and community infrastructure from flood hazard and the natural flood carrying capacity of rivers, streams and floodways. Flooding events of 2011 and 2012 have highlighted Koo Wee Rup's vulnerability to inundation from overland flows. In an attempt to deal with some of these challenges, Cardinia Shire Council, Melbourne Water, Victoria State Emergency Service and other agencies in partnership are

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developing a Cardinia Flood Management Framework.

10.9 Future environmental controls

The Strategic Framework Plan identifies investigation areas for light industrial and residential development as well as two areas for the introduction of a Development Plan Overlay (DPO) to areas identified for infill redevelopment. As all of these areas are adjacent to or contain significant bio links and habitat it is essential that the DPO's identify, retain and protect all existing environmental assets.

10.10 Key Issues

The key issues can be summarised as:

- balancing environmental issues against Koo Wee Rup's development;
- maintenance of drains and waterways to ensure they continue to operate effectively;
- weed infestation and feral animal invasion;
- sediment runoff in waterways;
- environmental effect of township on surrounds: and
- any potential risks of climate change impacts need to be considered when considering development applications.

10.11 Objectives

The objectives are to:

- protect existing remnant indigenous vegetation, given its environmental significance;
- identify and protect places of environmental value; and
- Plan for and manage the potential impacts of climate change.

10.12 Policy

The policies are to:

- ensure that the siting and design of new buildings and works avoids or minimises the removal and fragmentation of indigenous vegetation;
- maximise opportunities for habitat corridors and open space along creeks and waterways while maintaining drainage capacity;
- prevent soil and waterway degradation resulting from incompatible development;
- require future developments to maintain urban stormwater velocity to predevelopment levels; and
- prevent and minimise weed infestation.

10.13 Actions

- In conjunction with Melbourne Water and Department of Sustainability and Environment, develop a management plan for the drains which balances the function of the drains with environmental considerations; and
- When drafting the Development Plan Overlays for the areas identified in the Strategic Framework Plan and the areas identified as Light Industrial Investigation Area and Residential Development Area, ensure that existing habitat areas are retained and protected and new habitat areas created.

11. HERITAGE

11.1 Overview

The Koo Wee Rup community has a strong connection with its cultural heritage. The township has a variety of sites that have shaped Koo Wee Rup into the township it is today. There is a desire within the community to maintain and enhance the heritage values of the area.

11.2 Aboriginal cultural heritage

Aboriginal cultural heritage appreciation and protection is a priority for Council as reflected in its active role in the Inter-Council Aboriginal Consultative Committee.

Cardinia Shire is located near a boundary between two dialect groups of the Kulin clans. Traditional custodianship of land in the Koo Wee Rup area has been attributed to the Bunurong people, one of several clans speaking the Wurundjeri dialect of the East Kulin Language. The Bunurong g people claim all country south of the Yarra River, whose creeks and inlets fall into the sea from the Werribee River west to the Tarwin River, east of Cape Paterson. This would include the catchments of Cardinia Creek, Toomuc Creek, Bunyip River and Lang Lang River.

Anecdotal local history suggests that Aboriginal people moved down from the hills during summer months, probably following paths along waterways such as Cardinia Creek and Toomuc Creek and finally entering the Koo Wee Rup Swamp during the driest season.

As the Koo Wee Rup Plain and the declared RAMSAR wetlands are regarded as areas of cultural heritage sensitivity, all proposed developments, re-developments and subdivisions need to be mindful of the requirements specified by the *Aboriginal Heritage Act 2006* and Aboriginal Heritage Regulations 2007 governing the management of pre- and post-contact Aboriginal sites.

11.3 Post-contact heritage

Koo Wee Rup developed as a town with the clearing of the Great Swamp. Further, the construction of the Great Southern Railway spawned further growth of the township and a number of sites from that period remain.

The Cardinia Shire Heritage Study 1996 identified one site of heritage significance in Koo Wee Rup, which was The Grange, Lot 1, LP318270, Walker Street, Koo Wee Rup. This has been incorporated into the Cardinia Planning Scheme through the Heritage Overlay as HO 127 (Butler, G and Associates, 1996).

11.4 Cardinia Local Heritage Study Review

Cardinia Shire Council completed the *Cardinia Shire Local Heritage Study Review* in 2011. The purpose of the study was to complete the identification, assessment and documentation of places of post-contact cultural significance within Cardinia Shire and to make recommendations for future conservation. In relation to Koo We Rup, the study identified 10 sites on nine titles and two additional precincts, with five associated individually significant properties within the subject area. In addition, a section of the Great Southern Railway precinct runs through the investigation area.

The precincts are:

- Koo Wee Rup Commercial Precinct (including four individual buildings); and
- Koo Wee Rup Rossiter Road Residential Precinct.

11.5 Koo Wee Rup commercial precinct

Koo Wee Rup commercial precinct comprises much of the main commercial centre of Koo Wee Rup, which contains a number of early to mid-twentieth century commercial buildings in Station Street and Rossiter Road. The precinct includes four buildings that are individually significant. They are the:

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- former Dustings Garage at 272 Rossiter Road;
- former Wattle Theatre at 284-6 Rossiter Road; and
- G & L Light Mechanical repairs at 68 to 70 Station Street.

The precinct comprises 277–297 and 272–300 Rossiter Road and 2–16, 56–86 Station Street.

11.6 Koo Wee Rup Rossiter Road residential precinct

The Koo Wee Rup Rossiter Road residential precinct is an inter-war residential precinct, which comprises the houses at 360–376 Rossiter Road.

11.7 Key issues

The key issues can be summarised as:

- ensure any future development is sensitive to the established heritage values of the surrounding areas; and
- protection of sites and precincts of heritage significance.

11.8 Objectives

- Ensure that sites of heritage significance are valued and protected;
- · Restoration or adaptive reuse should be supported; and
- Ensure that future development enhances the existing township characteristics.

11.9 Policy

• All proposed developments, redevelopments and subdivisions need to fulfil the requirements of the requirements specified by the *Aboriginal Heritage Act 2006* and *Aboriginal Heritage Regulations 2007* governing the management of pre- and post-contact Aboriginal sites.

11.10 Actions

• Implement the recommendations of the Cardinia Shire Local Heritage Study Review May 2011 pertaining to the identified precincts and sites.

12. URBAN DESIGN

12.1 Overview

The overall objective of urban design within Koo Wee Rup is to provide an attractive, functional and safe township. The township of Koo Wee Rup is flat with limited landscape variety. This determines that all the parts of Koo Wee Rup need to be connected by design elements to provide the consistent look and feel and retain the rural character which is valued by residents. The flat topography also contributes to the threat of flood undulation. The LSIO provisions, including the requirement to build above flood levels limit the extent of architectural creativity and variety, which also contributes to the uniformity of built form.

12.2 Connections and movement

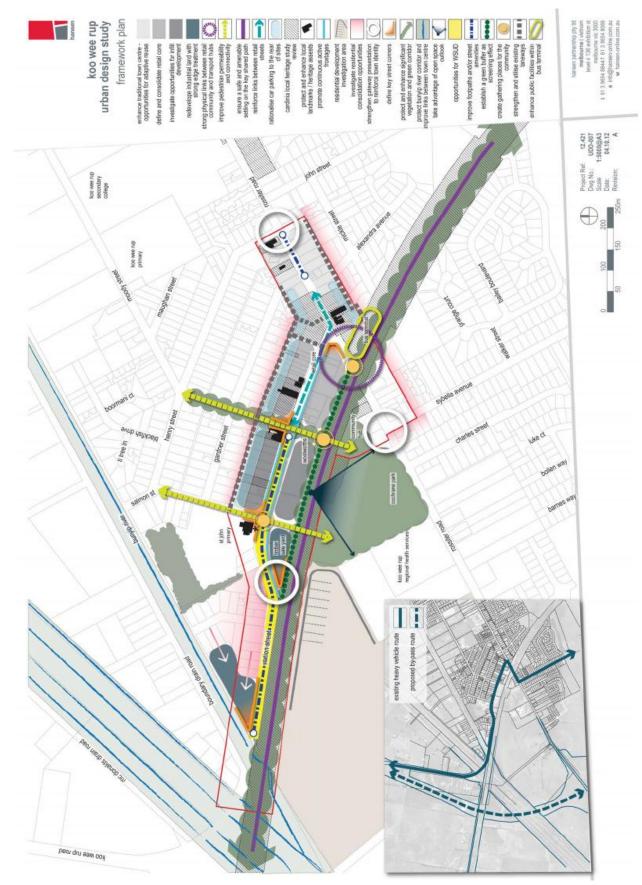
Koo Wee Rup residents are highly car dependant, so this section seeks to encourage walkability within the township. The Koo Wee Rup Rail Trail provides a central east-west axis and can link with existing and future shared pathways to provide a safe integrated shared pathway network, connecting Bailey Boulevard, Catani Avenue, the Koo Wee Rup Regional Health Service, and Cochrane Park to the south. Moody Street and Main Drain Road can provide a link with the schools, recreation reserve and Denhams Road. A link to the Townley Road estate should be investigated, to complete the network. As the Tesoro estate develops, good footpath connections will encourage walkability between the estate and the town centre (see Figure 11).

12.3 Town centre design

Koo Wee Rup's town centre is undergoing change. The establishment of new retailing outlets towards the western end of Station Street, anchored by Woolworths, has seen a shift away from the older retailers in Rossiter Road. While it can be expected that this end of the town centre will re-establish itself over time, all options should be investigated to speed up this process, including the contribution urban design can make. By providing attractive outdoor areas, the economic performance of businesses located there can improve and public usage can increase.

There is a mixture of business uses along the north side of Station Street towards Moody Street and the Heritage Overlay provides for consideration of the heritage value of these buildings and their contribution to the streetscape. Enhancements to landscaping, building treatments and the continuation of the 'blackfish motif' footpath treatment will contribute to a consistent streetscape and reinforce the vibrant rural town centre feel.





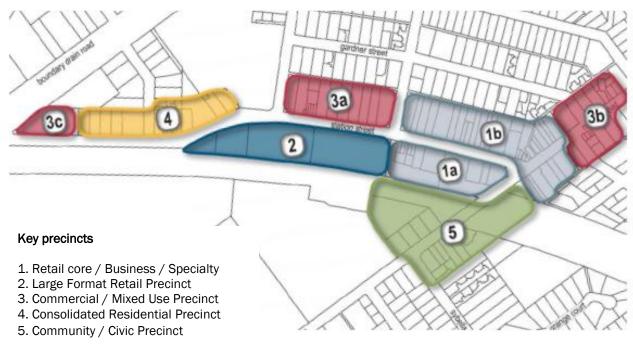
Source: Koo Wee Rup Town Centre Urban Design Study, 2013

12.4 General design guidelines (Town centre)

The Koo Wee Rup Town Centre Urban Design Study, undertaken in 2012 provided a set of key principles to guide development in the town centre. These principles are:

- maintain the rural character of the town;
- enhance traditional town centre of Rossiter Road;
- create a community focal point in the town centre;
- protect and reinforce the town's low building scale encouraging a general double storey profile;
- provide pedestrian links through shared trail to provide permeability and connectivity across railway reserve;
- create pedestrian focal areas gathering spaces;
- manage floor level changes within building foot prints;
- respect heritage assets;
- investigate modest residential consolidation opportunities; and
- improve signage/ landscape effects and lighting.

Figure 16. Key township precincts



Source: Koo Wee Rup Town Centre Urban Design Study, 2013

The Koo Wee Rup Town centre Urban Design Study 2012 identified 5 key precincts within the town centre, and provides particular design objectives and design guidelines for each precinct.

Precinct 1: Retail core / business / speciality uses precinct

Precinct description

The core retail precinct within the Koo Wee Rup Town Centre is the activity focus and includes a suite of supermarket and speciality retail uses, supermarket combined with offices, mechanic uses and limited shop top activity. Identified core of retail/ business on both Station Street and Rossiter Road are characterised by a 'fine grained' subdivision pattern with attached and semi-detached building form typically set hard to the street frontage. The streetscapes within the core retail area accommodate development of typically 1-2 storeys in traditional format, a scale comparable to 3 storeys in a contemporary format. This precinct also includes a number of heritage buildings and is graced with a

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strong and orderly arrangement of laneways (used for vehicle access and pedestrian movement) that traverse the urban blocks. Within the retail core there are three sub-precincts. The sub-precincts would not necessarily be expected to develop differently to each other in terms of scale and form, however, they have developed their own characters which we have identified in this process.

Design objectives

- To maintain the rural town character of Station Street and Rossiter Road and reinforce the low profile of buildings to either side of the main street;
- To ensure that development in retail core supports the traditional rhythm of the town and presents an active street address;
- To provide for active street level retail with office / residential above;
- To respect heritage values and ensure that development does not have an impact to the significance of heritage places;
- To support a highly amenable and attractive main street spine along Station Street and Rossiter Road with an emphasis on the pedestrian experience;
- To adopt an architectural design theme and palette drawn from the existing rural qualities of the town setting;
- To retain substantial street trees that contributes to the streetscape;
- To encourage permeability across the block especially at the western end of the precinct; and
- To deliver parking solutions for development by consolidating rear yards to provide combined parking courts at the rear of buildings, accessed via laneways.

Precinct 1a - Former PMP site

Design guidelines

Building height:

- Residential townhouse style development or further office space should be up to 2 storeys with aspect to the shared trail;
- One or two storey retail office could be contained along Station Street frontage; and
- Upper level decks or terraces should not dominate the streetscape.

Building form:

- Active frontages and activated edges should be achieved by regular placement of doors (street level), windows with transparent glazing and balconies above should provide passive surveillance of the public realm;
- A sense of address for residential townhouses should be created with entries oriented to the principal routes and high quality pedestrian paths;
- Development integration with shared trail should be encouraged with windows, balconies and building detailing oriented to this interface, and supported by visually permeable fencing treatments;
- Buildings should be articulated via a combination of varied building massing, horizontal and vertical detailing, and with materials and finishes that reflect the local palette and a town centre image; and
- Ground level retail uses should be largely glazed and activated with display and building entry.

Setbacks:

• New retail development should present an active street frontage with 2m setback to the Station Street to ensure public realm treatments such as upgraded paths, canopies, articulated and active edges along Station Street;

- Some variation in front and rear setbacks for townhouse development and other non-retail uses along the shared trail are supported, subject to the provision of landscape treatments;
- Frontage car parking or service areas presenting to Station Street are to be avoided;
- Retail development fronting Station Street may incorporate side setbacks to the support pedestrian connectivity to views and landscaping through open surroundings to the south; and
- Connections from Station Street to Civic / Community Hub should be encouraged as an extension of Moody Street.

Precinct 1b - Traditional town centre

Design guidelines

Building height:

- Maintenance of the existing single and double storey profile of the main street is preferred;
- Development on the north side of Station Street may be up to 3 storeys providing that it can be demonstrated that there will be no impact on adjoining sensitive uses and streetscape presentation;
- Consolidated development form in retail streetscapes should be encouraged to a preferred maximum scale of 2-3 storeys; and
- Development scale should be moderated in the context of key views, sight lines or heritage settings.

Building form:

- Variation in frontage form within the retail core should be supported with punctuations at corners;
- Historic buildings and frontages within the precinct should be retained and the restoration and adaptive reuse should be supported;
- The integrity of identified heritage streetscapes should be retained without mimicking heritage styles;
- Upper level and rear extensions to historic buildings should be contemporary in design and clearly distinguishable and respectful of surrounding buildings;
- A minimum of 70% of the street frontage should be transparent to enable a dialogue with passing pedestrians; and
- Awnings to retail streetscapes should be provided at a consistent height in the order of 3.5-4m and should be cantilevered.

Setbacks:

- Buildings in the precinct 1b should reflect a zero lot line to achieve good retail activation at ground level;
- 2 storey street wall with a recessive third can be provided where required;
- Upper level setbacks to the street frontage may be warranted above the second level and where it is necessary to match abutting parapet;
- Building setback of 18m should be provided to the rear to provide access for service and loading and parking purposes. The potential to combine rear yards to consolidate car parking to the rear of retail uses should be investigated;
- Additions/ alterations to historic buildings in the retail core should be setback behind the original form; and
- All buildings within the precinct should be attached and built hard to side boundaries to the front.

Precinct 2 - Large format retail precinct

Precinct description

The southern edge of the town centre along Station Street is currently dominated by light industrial uses and large format retail use and associated car parking. The western end of the spine is also the primary entrance (and exit) to Koo Wee Rup from north and an important approach to the retail core. While this area currently consists of timber sale yards, it is likely that over time these uses will coexist within large format buildings selling trade and other goods. The southern side of Station Street, between Moody Street and Salmon Street is an area preferred for such development, as there are large lots in place and excellent access. The precinct with a long term capacity to deliver large format retail buildings in an integrated manner will complement the function of the retail core to the east and north. It will be necessary to ensure that 2-3 storey development of this type is well presented, so that they effectively defines and communicate town centre public realm.

Design objectives

- To recognise the robust nature of the sheds and light industrial uses which are currently in use;
- To establish a high quality development with respect for the rural town and village character of the setting;
- To support the transition of the precinct into a clearly defined entrance into Koo Wee Rup from Koo Wee Rup Road;
- To recognise the long term large format retail requirements;
- To ensure an amenable, active and attractive presentation to Station Street and a concealment of service activities; and
- To encourage a prominent built form at the western end of the precinct to enhance 'sense of arrival' into Koo Wee Rup Town Centre.

Design guidelines

Building height:

- Consolidated development on the southern side of Station Street should be encouraged to a maximum scale of 2–3 storeys; and
- A scale of at least 2 storeys to the street front with service yards/ car parking located to the sides of sites should be achieved.

Building form:

- The design of the western corner of the precinct should be visually interesting and defining the key entrance of Koo Wee Rup;
- High quality contemporary forms should reflect and compliment the traditional 'grain' of the streetscape;
- Horizontal definition of levels and articulation with the front and side elevations is required;
- Traditional building materials can be utilised in an innovative manner in creation of contemporary forms that integrates with the character of Koo Wee Rup;
- Large glazed openings for access and egress and display areas are necessary;
- A skin of active frontage in front of the large format store should be located to conceal the visual bulk;
- A minimum of 50% of the frontage should be glazed. If higher basement levels are required ramp / stair arrangements should create DDA compliant ground level transition from internal spaces to footpaths wherever possible;

- Cantilevered awnings should be provided along Station Street for weather protection and to mitigate the presence of larger forms and integrate with the retail core precinct to the north and east;
- Consolidated development on the southern side of Station Street should be encouraged to a maximum scale of 2-3 storeys; and
- A scale of at least 2 storeys to the street front with service yards/ car parking located to the sides of sites should be achieved.

Setbacks:

- Large format retail buildings on Station Street should reflect a zero lot line to achieve good activation. There can be variations to create north facing outdoor dining uses and public realm improvements;
- Side setbacks are warranted only to create pedestrian connection from Moody and Salmon Street through the shared trail. These connections should be created adjoining Woolworths and Timber Sale Yard to the east;
- Building setbacks to the rear are acceptable providing activation to the shared trail; and
- Car parking should be located to the rear of the sites or in basement format away from the Station Street frontage.

Precinct 3 - Commercial / mixed use precinct

Precinct description

Mixed use areas identify of the town entrance from Rossiter Road and Station Street where housing, offices in Precinct 3a and select retail and community uses in Precinct 3b can coexist within a relatively uniform building stock. It is not necessary in these areas for such a rigorous application of attached buildings set hard to the street frontage, indeed these are locations where front setbacks, courtyards and stepped building arrangements may be warranted due to the particular requirements of (non-retail) uses.

Land on the northwest side of Rossiter Street have a particular capacity to deliver development of between 1-3 storeys, with strong frontage and landscape treatments that emphasise the 'transitional' nature of these spaces. The potential for medium density residential development offers alternative housing types in this precinct.

Precinct 3c is acknowledged to be in an industrial zoned land. Given its location at the town entrance and proximity to residential and commercial uses; more harmonious uses such as light industry are preferred.

Design objectives

- To support flexible building modules that can serve as either residential, office, retail or community uses. Limitation of retail only to Precinct 3b is preferred;
- To provide transition between the core retail area and the residential surrounds;
- To ensure moderation of the scale and intensity of forms with an increased role for landscape; and
- To create a sense of arrival to the town centre via Rossiter Road and Station Street.

Design guidelines

Building height:

- Consolidated development form in mixed use locations should be encouraged to a preferred maximum scale of 2 storeys;
- Prevailing height in a streetscape should be reflected, especially where there is predominant street character such as Koo Wee Rup Swamp Community Museum and Presbyterian Church;
- Variation in scale within the mixed use areas should be supported with projection in scale at corners;
- The scale of potential development to the west of Moody Street (Precinct 3a) should be benchmarked with Royal Hotel building maintaining prominence wherever possible; and
- 1-2 storeys forms to the west of Royal Hotel should be encouraged to avoid compromising key views to the local landmark when viewed from town entrance.

Building form:

- Buildings within the mixed use areas should be carefully sited to ensure an active interface and sense of address;
- If the proposed mixed use development abuts an existing street parapet, the design should seek to connect;
- A range of activities can be encouraged to be vertically separated over levels;
- Ground levels of commercial uses should be glazed, visually permeable and activated at street level;
- All types of uses should be presented with a building entry;
- A residential entry at ground level should be defined with a canopy and a rising profile up the front elevation;
- Building frontages should achieve rhythm of spacing;
- Horizontal definition of levels with the front and side elevations is required. In Precinct 3a, the front façade of a retail form should be defined by a horizontal parapet that matches the first floor alignment of Royal Hotel to ensure a continuity of frontage form;
- Historic buildings within the mixed use precinct should be retained and restoration and adaptive reuse should be supported;
- Mixed use forms may present a more diverse arrangement of roof form;
- Buildings should include integrated signage with the mixed use area which provides directional guidance through retail core; and
- Buildings should be designed and constructed so they can adapt to accommodate a range of uses over time.

Setbacks:

- Non-residential buildings in the mixed use areas may be set hard to the site frontage to achieve good retail activation at ground level;
- In Precinct 3a a front setback of 5m should be provided to the west of Royal Hotel building to ensure views to the landmark;
- Side building setbacks are supported above the ground level to ensure amenity and aspect to potential upper level housing;
- Upper level setbacks should be applied that ensure good northern orientation to upper level dwellings;
- Building setbacks to the rear are preferable for car parking, service and loading purposes. Laneways should be enhanced where necessary;
- Building setbacks for upper level private open space is acceptable;

- Where a site abuts a heritage form further setbacks may be required; and
- Straighten and utilise the lane between Alexandra Avenue and bus car park as a connection to rear of buildings parking.

Precinct 4 - Consolidated residential precinct

Precinct description

The town centre is presently bound by established residential areas which have a strong suburban character and an excellent landscape contribution. Existing residential areas to the north east of Station Street have considerable capacity for infill. There is the opportunity for townhouse or dual occupancy subdivision within the NRZ. Buildings will be generally 1 and 2 storeys in scale and there will be a strong presence in the suburban streetscape. This simple approach to consolidation can in time result in an increase in dwelling density around the town centre adding greater activity and street life. Vegetation protection and front and side setback treatments are key in this precinct.

As per the recommendation of the Residential Zones (Stage One) Standing Advisory Committee Report – Cardinia Draft Amendment C187, Council will consider varying the provisions of the NRZ through the implementation of a schedule which will specify a higher limit on the number of dwellings per lot. The schedule will provide provisions that will suit the local circumstance and increase dwelling density and diversity around the town centre in accordance with the design objectives of this precinct

Design objectives

- To improve the town centre entry presentation towards the western end of Station Street, with enhanced landscape and frontage effects;
- To allow for optimal use of town centre fringe with minimum impact on the domestic streetscapes that surrounds Koo Wee Rup; and
- To recognise the potential for townhouse, duplex and dual occupancy forms on existing lots.

Design guidelines

Building height:

- Consolidated domestic development in town centre fringe should be encouraged to a scale of 1-2 storeys;
- Consolidation on more substantial lots (i.e. east of William Street) of more consistent 2-3 storeys should be supported subject to visual impacts to key heritage aspects;
- Variation in domestic scale along residential streetscapes with upper level form setback from frontage should be supported; and
- Upper levels can be contained and concealed within pitched roof forms.

Building form:

- The form of consolidation can be double storey townhouse forms for west and dual occupancies to the east of William Street;
- Ground level form should incorporate a clearly defined building entry;
- Horizontal definition of levels with the front and side elevations is required;
- Contemporary design that draws inspiration from the existing architectural traditions of Koo Wee Rup can be encouraged;
- Integrity of Station Street streetscape should be retained without mimicking traditional styles; and
- Where appropriate a familiar roof form should be adopted into the predominant streetscape skyline.

Setbacks:

- Frontage forms in residential consolidation areas should reflect the prevailing setback condition;
- Buildings in the residential consolidation area should reflect the pattern of traditional neighbourhood development;
- Townhouse and dual occupancy forms should reflect the established suburban setbacks with landscaped gardens;
- The configuration of site consolidation will be determined by the position of significant vegetation and assets on the site;
- Side setbacks should reflect the pattern of breaks in the streetscape; and
- Garages should be located away from Station Street frontage and appear recessive in facade design.

Precinct 5 – Community / civic precinct

Precinct description

The community hub of Koo Wee Rup town centre currently includes Clock Tower Square, Cochrane Park, Koo Wee Rup Community Complex and Koo Wee Rup Regional Health Service. The design of the consolidated community hub typically relates to the design of parks, gathering spaces, streets and a suite of activities which require to demonstrate a 'fit' within the Koo Wee Rup township setting. The public realm of Koo Wee Rup, including the spaces, furnishings, pavements and artworks presents an outstanding opportunity to celebrate the culture and history of the town and at the same time serve as an inviting forum for all resident and visitor.

Design objectives

- To support concentration of community and related civic, health and social services in a central convenient location with in Koo Wee Rup town centre;
- To create a civic and community hub that enables residents and visitors to meet and interact;
- To build on and celebrate the important landscape that exists within Cochrane Park;
- To provide a pedestrian prioritised space across the road scapes included within the precinct;
- To ensure the integration of the existing and future civic/ community uses to strengthen precinct's role within the town;
- To manage better pedestrian connectivity to and between community facilities, retail core and bus terminal; and
- To create a focal point that increase tourism and associated commercial capacity of the town centre.

Design guidelines

- Integration of a civic and community hub within an 'urban plaza' space both informal and formal gatherings of community members is encouraged;
- Celebrate the important heritage assets of the town integrating public art elements into the civic/community precinct;
- The integration of shared trail into broader cycling networks will create the opportunity to generate increased tourism from within the wider region. An urban plaza area could support a range of events to attract people to Koo Wee Rup;
- The redundant railway infrastructure should be rationalised;
- Playgrounds and passive recreation spaces should be regularly maintained;
- Traffic calming measures should be applied at Station Street and Rossiter Road intersection and safer pedestrian crossing should be provided;

- The Rossiter Road section with the civic/ community hub Precinct should be considered as a shared space and pedestrian access to community facilities should be improved;
- The development of community facilities, art, events should be encourages within the precinct to increase activity;
- Retain and further develop Koo Wee Rup Community Complex as a key attractor to the precinct;
- Create a high quality plaza space at the existing Clock Tower Square to provide a flexible space capable of hosting a variety of community events;
- This precinct would also be appropriate for complementary service based businesses, such as cafes and restaurants with outdoor dining, which would enhance activation;
- Activation of shared trail edges within this precinct is supported. This part of the shared trail can be treated as a stoping point supported with amenity including seating, water fountains, bike racks with associated signage which invite cyclists stop off and visit the town centre; and
- Implement the Cochrane Park Master plan.

12.5 Township entrances

Koo Wee Rup has welcome signs in four locations and residents are proud of these signs. However there are industrial precincts at the western, eastern and southern entrances to the township which provide a less attractive entrance to the township. There is an opportunity to work with public and private land owners to improve the amenity of these areas and contribute to the vibrant rural township feel

12.6 Impacts of the bypass

The Koo Wee Rup bypass will significantly reduce the number of vehicle movements through the town centre. It may also have some negative impacts on the economic prospects of businesses, by reducing the passing trade. The bypass may also influence the landscape of the township due to visual impact of the ramps and bridges on the surrounding environment. Council could assist the community to provide feedback to VicRoads regarding landscaping, signage and opportunities for use of open space for recreation.

12.7 Key issues

The key issues can be summarised as:

- movement and connections throughout the township;
- preservation of the rural town character of Koo Wee Rup;
- enhance entrances to the township;
- fragmented network of paths for pedestrians and cyclists; and
- a consistent streetscape is necessary throughout the township to reinforce the vibrant rural feel of the township.

12.8 Objectives

The objectives are to:

- create a sense of identity and place for the community;
- create a consolidated town centre which has active retail, commercial and civic uses; and
- create an attractive, functional and safe township that responds to the needs of the community.

12.9 Policy

The policies are to:

- encourage urban design which creates a strong character and identity for the township, provides for a functional built environment and promotes community and personal safety; and
- encourage urban design that reinforces the character of the town, through sympathetic building design and standard design elements which are in keeping with the rural atmosphere of the town.

12.10 Actions

- Develop a landscape program for the planting of additional landscape trees and shrubs to provide a consistent streetscape that reinforces the vibrant township character;
- Develop the creation of distinctive gateway treatments as major entry points to the township through built form design and landscaping; and
- Encourage owners to utilise the Heritage Grants Program to maintain private buildings within the town centre.

12.11 Medium to longer term actions

• Develop a shared pathway network which connects all areas within the township.

13. IMPLEMENTATION AND REVIEW

13.1 Recent achievements

Since the beginning of the review process, a number of issues that were raised have been addressed, or actions have commenced. These include:

- construction of the Koo We Rup section of the Great Southern Rail Trail;
- works at Cochrane Park, including the installation of CAN 11 exercise equipment;
- commencement of preliminaries associated with the Koo Wee Rup Bypass;
- works at Koo Wee Rup Recreation Reserve;
- pedestrian crossing at Woolworths;
- commencement of the amendment of the Land Subject To Inundation Overlay (LSIO);
- the Koo Wee Rup Business Association has reformed;
- turn lanes have been delineated in Station Street, to direct traffic; and
- options for the connection from Station Street to the rail trail are under consideration.

13.2 Catalyst projects

There are a number of actions or projects which should be delivered as a priority within the agreed timeframes and budget considerations following the adoption of the Review of the Koo Wee Rup Township Strategy.

The first set of actions will contribute to improved public safety and improve connections and movement within the township:

- secure the link between the Rail Trail and Station Street, to provide for a safe connection for pedestrians and cyclists between the north and south of the township;
- develop a Special Charges Scheme to seal the remainder of Moody Street, to provide a safe shared connection between the town centre, schools and Denham Road; and
- investigate additional works at the pedestrian crossing in Station Street in the vicinity of the Woolworths supermarket.

Other catalyst projects should provide planning controls which facilitate developments and subdivisions which respect and enhance the existing rural township character and heritage:

- apply a Development Plan Overlay to the large blocks adjacent to Simms Lane, bounded by Simms lane, Rossiter Road, Supreme Road and the Urban Growth Boundary to address the issues of access, traffic movement, permeability, infrastructure provision and protection and creation of habitat areas; and
- apply a Development Plan Overlay to the large blocks at 65, 73 and 85 Moody Street and 120 Boundary Drain Road t and Southern Boundary Drain, to address issues of permeability, traffic movement, flood prevention and protection and creation of habitat areas.

In response to community concerns that the Koo Wee Rup Community Complex is underutilised, actions should commence which may lead to the introduction of additional programs and services using this community asset.

• explore with the Committee of management a variety of activities / programs in the Koo Wee Rup Community Complex to maximise its usage.

13.3 Short term actions **1**–5 years

The following actions are those which will be delivered within the next five years. Actions appear in the order that they appear in the Koo Wee Rup Township Strategy and this does not imply any priority.

Table 16. Short term actions

	Action	Time
1.	Apply a Development Plan Overlay to the large blocks adjacent to Simms Lane, bounded by Simms Lane, Rossiter Road, Supreme Road and the Urban Growth Boundary to address the issues of access, traffic movement, permeability, infrastructure provision and protection and creation of habitat areas	2-3 years
2.	Apply a Development Plan Overlay to 65, 73 and 85 Moody Street and 120 Boundary Drain Road, to guide development and address issues of permeability, traffic movement, flood prevention and protection and creation of habitat areas	2-3 years
3.	Rezone and apply a Development Plan Overlay to the property surrounding the Koo Wee Rup Regional Health Service, bounded by Rossiter Road, the urban growth Boundary and the Great Southern Rail Reserve from Farming Zone 1 to an appropriate residential zone, to enable residential development to meet local housing needs.	2-3 years
4.	Engage with owners of the former PMP site determine future uses of the sites.	1-2 years
5.	Support the creation of distinctive built form and landscape gateway treatments as major entry points to the township.	2–3 years
6.	Rezone properties to the south of the township, bounded by Sybella Avenue, the South East Water sewerage treatment plant and the Great Southern Rail Reserve from Farming Zone 1 to an appropriate industrial zone to provide land for local employment opportunities.	1-2 years
7.	In partnership with the Koo Wee Rup Traders Association, encourage business to identify and respond to the threats and opportunities posed by the Bypass.	1-2 years
8.	Investigate the provision of large vehicle (car and caravan) parking at the clock towers, to encourage travellers to stop in Koo Wee Rup.	3-4 years
9.	Work with the Koo Wee Rup Traders Association, businesses and other partners to revitalise the Rossiter Road end of town centre.	1-3 years
10.	Encourage local businesses to participate in the networking and other business strengthening activities provided by the Shire's Economic Development Unit.	ongoing
11.	Investigate the need for a recharge point for mobility aids to be located in the town centre.	1 year
12.	In conjunction with Cardinia Shire's Cultural Development Unit, deliver an arts and culture program to Koo Wee Rup.	2-3 years
13.	Explore with the Committee of Management a variety of actions / programs in the Koo Wee Rup Community Complex to maximise its usage.	1-3 years
14.	Promote the outdoor exercise equipment as a CAN II initiative including providing come 'n' try opportunities.	Short term
15.	Investigate additional works to provide for a safer pedestrian crossing in Station St in the vicinity of the Woolworths supermarket.	2 years

	Action	Time
16.	Secure the link between the Rail Trail and Station St, to provide for a safe connection for pedestrians and cyclists between the north and south of the township.	2 years
17.	Develop a Special Charges Scheme to seal the remainder of Moody Street.	4-5 years
18.	In partnership with the Victoria State Emergency Service and Melbourne Water, and other agencies develop the Flood Management Framework and the Flood Emergency Plan.	1-2 years
19.	Continued liaise with South East Water to ensure the treatment plant facility is upgraded to accommodate future growth in the township.	ongoing
20.	In partnership with the Koo Wee Rup township Committee, advocate for the provision of reticulated gas to the township.	ongoing
21.	Upgrade the oval surface at Koo Wee Rup Recreation Reserve by undertaking drainage and irrigation works.	2-3 years
22.	Upgrade the netball courts to Netball Victoria's playing standards.	2–3 years
23.	Undertake improvements of existing local reserves and open space, with an upgrade to O'Riordan Park as a priority within the short term.	2–3 Years
24.	Investigate opportunities for utilising publicly owned land for passive recreation, sporting facilities or environmental conservation.	ongoing
25.	Implement the recommendations of the <i>Cardinia Shire Local Heritage</i> <i>Study Review May 2011</i> pertaining to the identified precincts and sites.	1-2 years
26.	Encourage the creation of distinctive gateway treatments as major entry points to the township.	3-4 years
27.	Encourage owners to utilise the Heritage Grants Program to maintain private buildings within the town centre.	ongoing
28.	Develop a landscape program for the planting of additional landscape trees and to provide a consistent streetscape that reinforces the township character.	3-4 years
29.	In conjunction with the Department of Transport, landscape and maintain the rail trail, to provide visual appeal which will contribute to the rural character of the township.	1-2 years
30.	In conjunction with Melbourne Water and Department of Sustainability and Environment, develop a management plan for the drains which balances the function of the drains with environmental considerations.	1-2 years
31.	Investigate the preparation of a planning scheme amendment in conjunction with South East Water to introduce an Environmental Significance Overlay (or similar tool) around the Koo Wee Rup Water Recycling Plant.	1-2 years

13.4 Medium- to long-term actions

The following actions require more preparation time or will require significant resources to implement. They are beyond the scope of delivery in the next five years. These actions will be reviewed and added to an implement plan as priorities change or funding becomes available:

- Support business activities associated with the development of the Great Southern Rail Trail from Cranbourne East to Nyora;
- Advocate for the Koo Wee Rup bypass to be duplicated between the Pakenham Bypass and the South Gippsland Highway;
- Encourage and support the development of 'water-wise' indigenous gardens in public places;
- Encourage residential, commercial and industrial developments to utilise recycled water from grey water systems, water tanks or sustainable water sources;
- Encourage future residential, commercial and industrial developments to utilise sustainable building practices;
- Investigate funding opportunities to install underground power lines throughout the township, with a priority on installation in the town centre; and
- Review the current Pathways Connections Plan, to link all sections of the township by footpath and bicycle paths.

13.5 Review process

This is the first full review of the Koo Wee Rup Township Strategy that has been undertaken since the preparation and adoption of the strategy in 2000. At that time, the strategy provided a plan for the township to grow to a population of around 3,000 residents, which would drive the provision of services within the township. This review has provided an opportunity for Council to update the strategy in light of new and emerging issues and the declaration of the Urban Growth Boundary (UGB). The content of the review has been informed by feedback from the community and during the community consultation process. To ensure that the strategy is relevant in light of any changes in the assumptions for development, it is recommended that Council undertake a full review of the strategy in five years.

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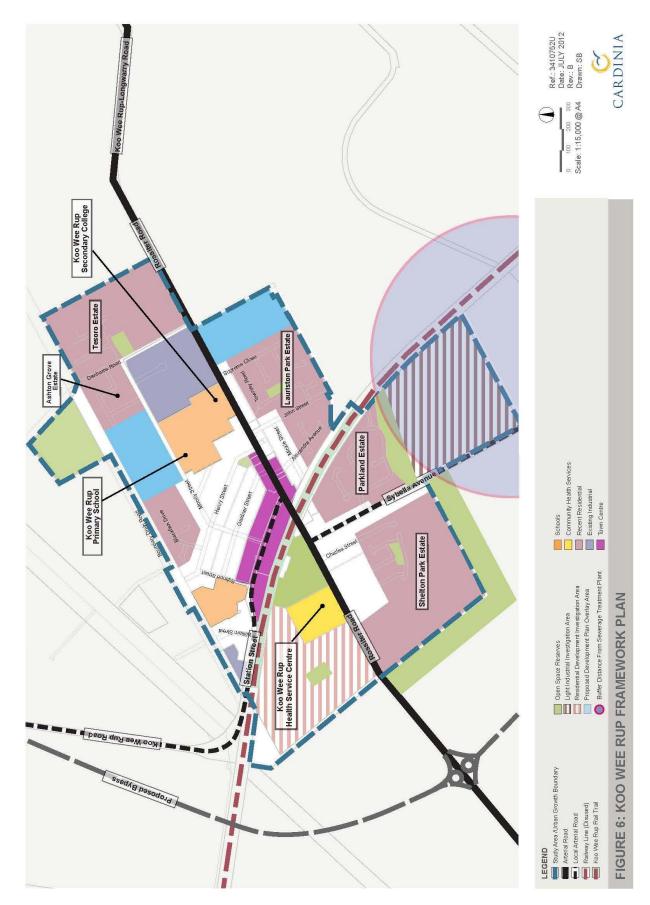
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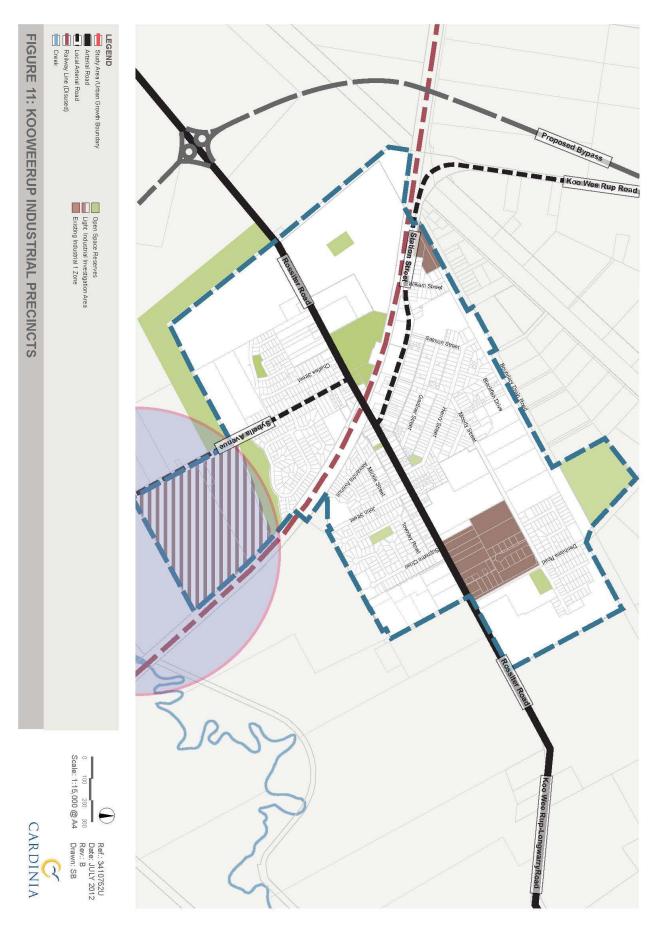
15. APPENDICES

Appendix 1: Koo Wee Rup Framework Plan

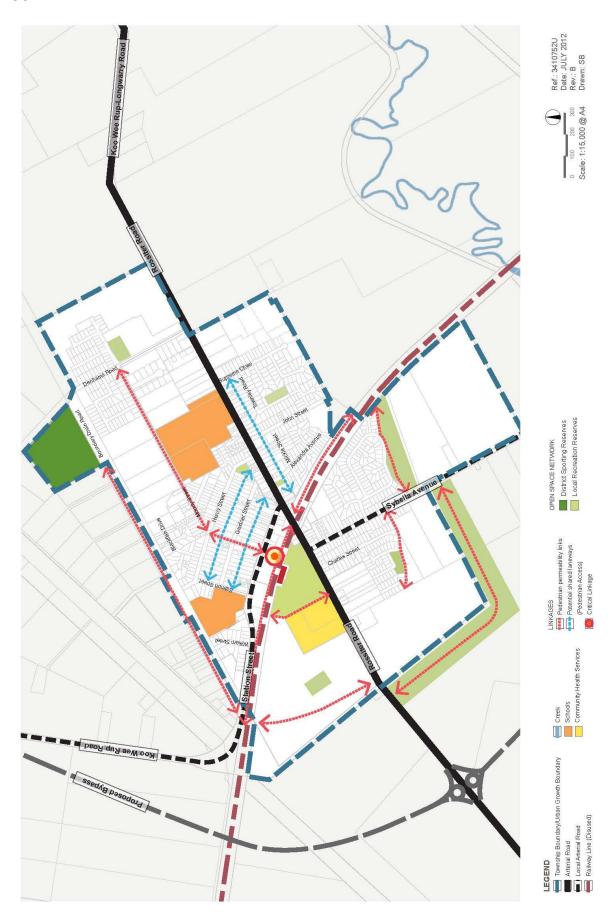


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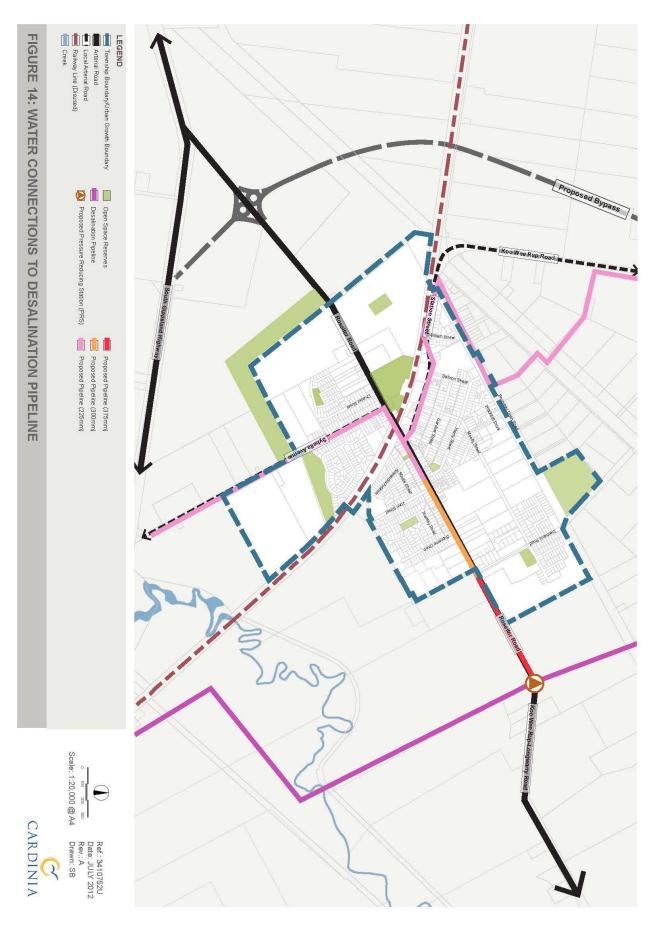
Appendix 2:



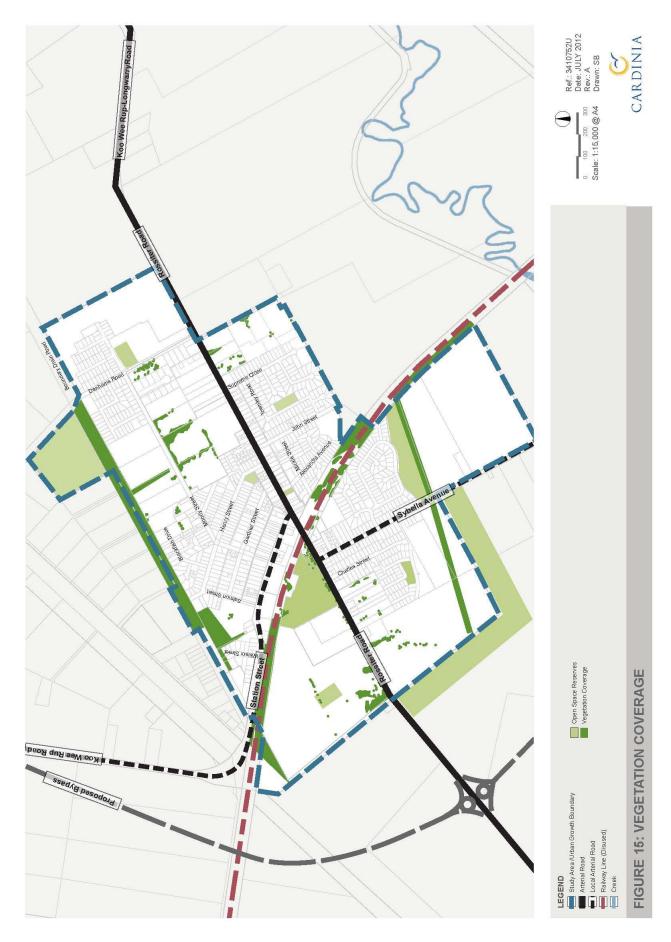
Appendix 3: Connections and movements



Appendix 4: Water connections to desalination plant



Appendix 5: Vegetation coverage



Appendix 6:

Habitat links

