



G21 REGION ROAD TRANSPORT PLAN

2017 - 2027

TRANSPORT PILLAR

G21 IS THE FORMAL ALLIANCE OF GOVERNMENT, BUSINESS AND COMMUNITY ORGANISATIONS, WORKING TOGETHER TO IMPROVE PEOPLE'S LIVES IN THE GEE LONG REGION.

BACKGROUND

The *G21 Region Public Transport Plan 2017 - 2027* will guide development of regional road transport infrastructure to:

- Support the growth of established and emerging industries
- Respond to structural changes
- Strengthen regional economic and social opportunities
- Promote sustainable transport
- Support population growth in the region.

Developed on behalf of G21 - Geelong Region Alliance, the strategy area covers the five G21 municipalities: Colac Otway, Golden Plains, Greater Geelong, Queenscliff and Surf Coast.

A Steering Committee for the project comprised of senior management of the five G21 municipalities and representatives of State Government departments including Transport for Victoria and VicRoads.



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INTRODUCTION

EXECUTIVE SUMMARY

RECOGNISING OPPORTUNITIES AND CHALLENGES FACING THE TRANSPORT SYSTEM TO PROVIDE ADVOCACY FOR IMPROVEMENTS.

Strong economic and urban growth is placing increasing pressure on land transport infrastructure. Efficient and effective transport routes to key regional and metropolitan locations underpin most of the regions industries, and are critical to ongoing economic viability.

It is therefore increasingly important to plan for the integration of transport with land use, connecting each mode of transport with the other, and ensuring systems flow smoothly across jurisdictional boundaries.

The ***G21 Region Road Transport Plan 2017-2027*** will guide development of regional road transport infrastructure so that it:

- Supports the growth of established and emerging industries
- Responds to structural changes
- Strengthens regional economic and social opportunities
- Promotes sustainable transport
- Supports population growth within the region

The common objective of all transport system customers is to travel from their origin to their destination efficiently, whilst hopefully enjoying the experience; they have little interest in which authority is responsible, or arbitrary geographic boundaries.

The ***G21 Region Road Transport Plan 2017-2027*** has been developed to assist with the development of the transport system by recognising opportunities and challenges, and providing advocacy for improvements.

Actions identified in the 2009 G21 Road Transport Plan that have been implemented include:

- Develop a regional transport model
- Investigate east-west connections across central Geelong
- Investigate the extension of the Geelong Ring Road
- Investigate truck route through Bannockburn
- Removal of proven and potential blackspot intersections
- Provide rail and bus connections to Armstrong Creek growth area
- Lobby for Avalon Airport public transport connections
- Lobby for improved connections to Port of Geelong

1.0 INTRODUCTION

1.1 BACKGROUND

This strategy has been developed on behalf of the G21 Geelong Region Alliance, the formal alliance of government, business and community organisations working together to improve the lives of people within the Geelong region across five municipalities - Colac Otway, Golden Plains, Greater Geelong, Queenscliff and Surf Coast.

The strategy area is bounded by these councils.

The Steering Committee for the project was comprised of senior management of the five municipalities above, and also included representatives from State Government departments, including Transport For Victoria, and VicRoads.

Regionally significant projects currently underway that were identified in the 2009 G21 RTP include:

- Planning for duplication of Midland Highway between Geelong and Bannockburn
- Duplication of the Princes Highway West between Winchelsea and Colac
- Construction of the Drysdale Bypass
- Planning for the Geelong Ring Road Extension

1.2 OBJECTIVES

ECONOMIC

Provision of an efficient transport system that enhances the competitiveness of regional industries in the global market, and supports job creation and retention in the region.

SOCIAL

Provision of an integrated transport system that assists all users to access the full range of community services, activities and economic opportunities in a manner that flows smoothly from the users origin to their destination.

SAFETY

Provision of improved network safety and management of conflict between all road users.

ENVIRONMENT

Provision of a sustainable transport system that considers amenity and environmental impacts.

1.3 PURPOSE

The purpose of this road transport plan is to guide development of regional road transport infrastructure that:

- Supports the growth of established and emerging industries
- Responds to structural changes
- Strengthens regional economic and social opportunities
- Promotes sustainable transport
- Supports population growth within the region

STRATEGIC &
POLICY CONTEXT



2.0 STRATEGIC AND POLICY CONTEXT

2.1 AUSTRALIA INFRASTRUCTURE PLAN

The *Australian Infrastructure Plan* is used to identify infrastructure reforms and investment opportunities to deliver networks and services which strengthen our role in the global economy, enhance the liveability and productivity of our cities and regions, and supports a transition to a more sustainable and resilient economy.

The Plan states that “Geelong ... should be supported by governments, businesses and local communities to grow their populations and economies. Access to new or upgraded infrastructure will be important in enabling these cities to develop strong economic and employment links with our bigger cities”.

2.2 TRANSPORT INTEGRATION ACT (2010)

The Transport Integration Act sets out a vision, objectives and principles for transport in Victoria. It requires all Victorian transport agencies, to work together towards the common goal of an integrated and sustainable transport system. The strategy supports the objectives from the Transport Integration Act, which include:

- Social and economic inclusion
- Economic prosperity
- Environmental sustainability
- Integration of transport and land use
- Efficiency, coordination and reliability
- Safety and health and wellbeing.

2.3 VICTORIA'S ROAD SAFETY STRATEGY 2013-2022

Victoria's Road Safety Strategy 2013-2022 was developed by the road safety partners of VicRoads, the Transport Accident Commission, Victoria Police and the Department of Justice. The strategy sets a target to reduce fatalities and serious injuries by more than 30 per cent. Successfully realising this target will see Victoria's annual road toll fall to below 200, and will require everyone on our roads to take individual responsibility for improving safety by making safe travel choices.

Under Victoria's existing Safe System philosophy, effectively improving road safety requires a multi faceted approach that targets the safety of the road environment, the vehicles in which people travel, and the behaviour of everyone on the road. It provides all types of road users - drivers, motorcyclists, cyclists, pedestrians, heavy vehicle drivers - with information, including the latest research and event and campaign updates, and practical advice on how we can all work to help stop the senseless loss of lives on Victoria's roads.

2.4 GEELONG AUTHORITY

The Victorian Government created the Geelong Authority to advise the Minister for Planning on strategies to attract investment to central Geelong and on major planning

applications to help create jobs and drive growth in Geelong. The Geelong Authority will advise on specific state actions and on major development proposals to implement the central Geelong revitalisation plan.

2.5 G21 REGION PLAN (2006)

The *Geelong Region Plan* presents regional objectives that respond to the challenges and opportunities the region will face over the next 45 years. In order to balance current reality and future vision, the strategy features short, medium and long-term objectives to address each policy.

2.6 G21 REGIONAL GROWTH PLAN (2013)

The *G21 Regional Growth Plan* manages growth and land use pressures to 2050, as the region targets a population of 50,000 people. It pulls together the strategic land use and growth planning already done across the region and builds on this to identify where future residential and employment growth will occur and the critical infrastructure required to support it.

2.7 G21 REGION ECONOMIC DEVELOPMENT STRATEGY (2014)

The regional objectives identified in the *Geelong Region Plan* and the desired future for the G21 region were examined and discussed in detail with a range of regional stakeholders to identify and distil the key focus areas for the *G21 Region Economic Development Strategy*, which include strategic and integrated transport infrastructure, a vibrant and active region, coordinated delivery of critical growth infrastructure, learning & innovation and investment.

2.8 CENTRAL GEELONG ACTION PLAN

The *Central Geelong Action Plan* is a fifteen year blueprint for focused action in Central Geelong to create a smart, vibrant, thriving, liveable and successful 21st century city centre with a strong sense of identity and community, bring transformational change to Central Geelong, building on its strengths and maximising its opportunities for investment, and signal an 'open for business' message stimulating all stakeholders to take positive action.

2.9 OTHER

Other key strategies, acts and documents that impact on the G21 Road Transport Plan 2017-2027 include the following:

- National Land Freight Strategy (2013)
- Smart Cities Plan (2016)
- Planning and Environment Act (1987)
- Road Management Act (2004)
- Road Safety Act (1986)
- Disability Discrimination Act (1992)
- Local Government Act (1989)

REGIONAL
GROWTH



3.0 REGIONAL GROWTH

3.1 REGIONAL GROWTH PLAN

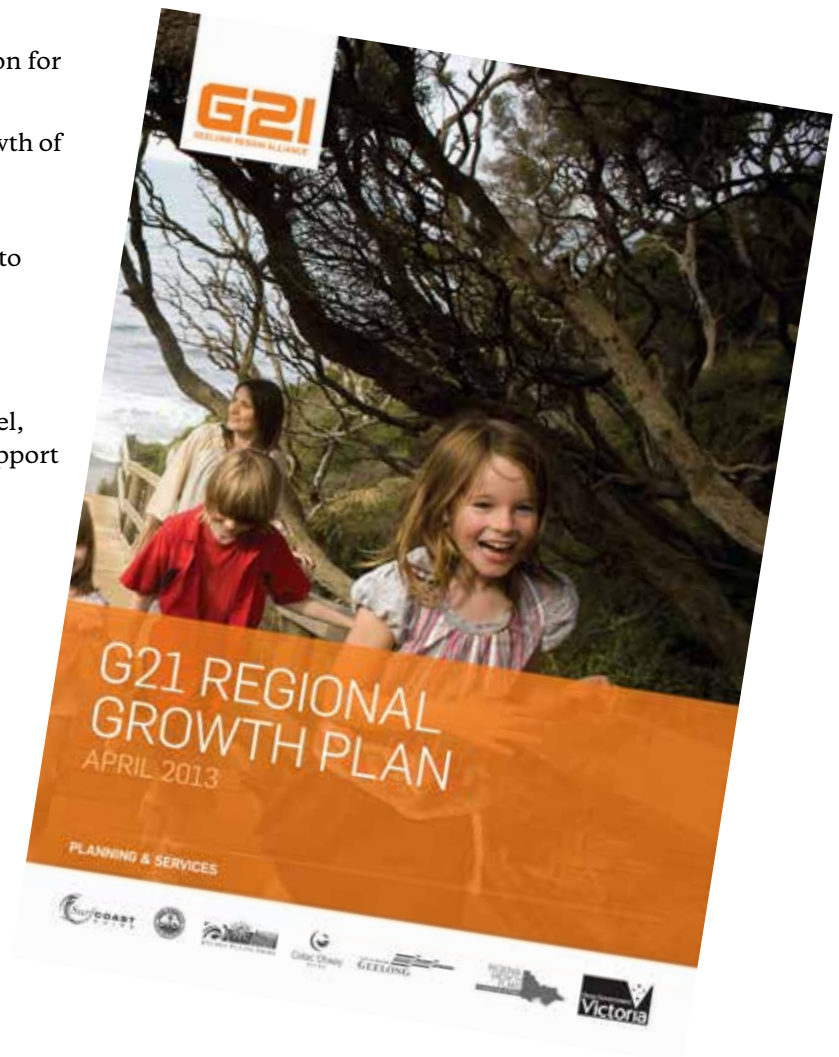
The G21 Region is growing in terms of population, new dwellings and economic activity. Its current population exceeds 294,000 and is forecast to continue growing by at least 1.6% until 2026. By 2031 the population is forecast to be over 400,000.

The *G21 Regional Growth Plan* establishes a framework for strategic land use and settlement planning that can sustainably respond to and accommodate growth at projected and potentially higher growth rates.

The purpose of the Growth Plan is to provide direction for this growth and to:

- identify opportunities for managing the future growth of population, employment and housing
- identify opportunities for supporting regional level infrastructure, providing an essential contribution to the long-term sustainability of the region
- identify natural assets which require protection

The outcomes of the regional growth plan were then modelled in the Victorian Integrated Transport Model, which has confirmed key development projects to support the predicted growth.



3.0 REGIONAL GROWTH

3.2 KEY GROWTH AREAS

The **Armstrong Creek** growth area is the largest contiguous growth area in Victoria, consisting of 2,500 hectares of developable land, and is one of the largest growth fronts in the country. The State Government has recognised the importance of the growth area in accommodating the unforeseen levels of population growth in Victoria. The Armstrong Creek growth area will provide housing for up to 65,000 people, with a current population of 3,300.

Identified key routes that will require improvements include Surf Coast Highway, Barwon Heads Road, Anglesea Road and Mount Duneed Road. Future planning will also be required for the Bellarine Link.

While **Drysdale / Clifton Springs** is a coastal location it still has a strong connection with the rural hinterland which is reflected through the historic village character of the town centre. Services within the town include shopping, business, light industrial, recreation and community facilities that are not only used by the local community but also by residents of Portarlington, Indented Head and St Leonards. It has a mostly permanent population and has been identified as a town that has high growth capacity, and as such it has been designated as one of the urban growth areas for the Bellarine Peninsula. It has a current population of 12,000, and is expected to reach 16,000 by 2036.

Identified key routes that will require improvements include Geelong-Portarlington Road.

Lara has been identified as a growth area, with a current population of close to 16,000 people. While Lara is a designated urban growth location it is subject to a range of physical constraints, both natural and artificial which will influence the opportunities and directions of urban growth. It has an aspirational population of 24,000.

Identified key routes that will require improvements include Geelong-Bacchus Marsh Road, and Heales Road. Future planning will also be required for east-west connections.

Ocean Grove is an attractive and vibrant coastal town that is experiencing strong growth as a popular destination for both permanent residents and tourists. It has a current population of 14,000, and is expected to reach 17,000 by 2036.

Identified key routes that will require improvements include Bellarine Highway and Grubb Road.

Torquay / Jan Juc has an important role on the south-west Victorian coast as a growth centre in a broad strategic context. The population of Torquay, Jan Juc and the immediate surrounding hinterland is expected to increase from 17,700 to 30,000 by 2036.

Identified key routes that will require improvements include Surf Coast Highway.

Bannockburn, located on the Midland Highway, has a current population of 5,000 people, and is expected to reach 10,000 by 2030. Southern Golden Plains is expected to grow at a rate of greater than 2 per cent per annum over the next 20 years.

Identified key routes that will require improvements include Midland Highway, and Shelford-Bannockburn Road. Future planning will also be required for a heavy vehicle alternative route.

3.0 REGIONAL GROWTH

3.3 FUTURE GROWTH

The G21 Region has a predicted annual population growth of 1.6 per cent, which is considerably higher than the Victorian growth rate of 1.3 per cent. Key growth areas are covered in further detail below.

The current development of **Armstrong Creek** is expected to continue, with an expected population of 65,000 people by 2060. This growth will place additional pressure on the road network of the G21 region.

The Northern Geelong Growth Area at **Lovely Banks**, totalling 1,100 hectares, was rezoned by the Minister for Planning in October 2014 to be included in the G21 Regional Growth Plan, given its connection to Melbourne, and links with the proposed national logistics and employment areas. It is expected to house 30,000 new residents, and will include neighbourhood activity centres, private and public schools, improved transport and services infrastructure, and will include provisions for active transport.

Key routes impacted by this proposal include Geelong-Bacchus Marsh Road, the Midland Highway and various local roads in Lara.

Lara West, with an expected population of 10,000 people, is expected to commence construction in 2016, and will include three new schools, community services, sporting facilities and a retail precinct.

The Western Geelong Growth Area at **Batesford South**, is 2,000 hectares of land west of Geelong, and is being proposed as a new residential development site, with the potential for a population of 30,000 people. It offers strong connectivity to Geelong, Ballarat and Melbourne, with its proximity to the Midland Highway.

Key routes impacted by this proposal include the Hamilton Highway and the Midland Highway.

The **Moolap** Coastal Strategic Framework Plan responds directly to the closure of the Alcoa Smelter and Rolling Mill at Point Henry and the conceptual masterplan prepared for the former Moolap saltworks site. The masterplan includes the potential for a commercial and residential precinct with the capacity to accommodate 6,000 people.

Key routes impacted by this proposal include Geelong-Portarlington Road and the proposed Bellarine Link.

The G21 Regional Growth Plan has identified **Winchelsea** as an important growth area, with an aspirational growth target of 10,000 (currently 1,600) people by 2050. Growth and development will be guided by its place-making plan Growing Winchelsea. Significant infrastructure improvements, including the Princes Highway duplication, construction of the Geelong Ring Road and the provision of reticulated gas to the township all add to its appeal for investment and residential growth.

The G21 Regional Growth Plan suggests that **Colac** will have a population of about 20,000 (currently 11,500) by 2050. Drivers for this projected growth include the duplication of the Princes Highway and the Geelong Ring Road, the rapid growth of Melbourne and subsequent spread of population into regional areas, and the growing popularity of the Great Ocean Road. As rail services improve, it is expected that population will grow, and it is important that growth planning is completed ahead of that curve. This growth is managed by the Colac 2050 project.

Key routes impacted by this proposal include Princes Highway West.

To help plan and develop future growth in the G21 Region, additional modelling is required using VITM.

ECONOMY &
INDUSTRY



4.0 ECONOMY AND INDUSTRY

4.1 AGRICULTURE

The G21 Sustainable Agribusiness Strategy identifies a series of actions to improve the road network, including improved access to export and markets, developing Avalon Airport for international air freight, and improved access into the Port of Geelong.

The Golden Plains Food Production precinct at Lethbridge is expected to generate over \$160M in investment and more than 700 jobs in the intensive agriculture sector. There will be a significant flow on to transport, especially larger vehicles including B-doubles.

Surf Coast Shire's agriculture sector injects \$50m pa into the local economy and employs 465 people. The production of beef, sheep, and grain are the most prevalent forms of agriculture in Surf Coast Shire, supplemented by specialty floriculture, wineries, and orchards.

The Colac Regional Saleyards provide a regional focus for livestock trading serving the rural community from Ararat to Geelong with an average throughput in excess of 42,000 head of cattle per annum, generating in excess of \$4.7M each year. Colac Otway Shire committed to the placement of a roof at the Colac Livestock Centre to ensure that the centre remains competitive.

The Golden Plains Food Production Precinct at Lethbridge is currently generating significant primary produce in the form of 4 million eggs, 600,000 chickens, 1,000 pigs and 28,000 litres of goats milk each week. Recent infrastructure investment in this precinct is expected to result in substantial development, product growth and associated transport requirements

To support the agriculture industry in the G21 Region, the following should be considered:

- Improve direct access into the Port of Geelong
- Road network upgrade and improvements

4.1.1 DAIRY

The G21 Region dairy sector has a total output in excess of \$450 million per annum. It employs over 1,200 people, spending \$42 million on wages & salaries and contributing \$125 million to the Gross Regional Product.

The sector is reliant on an efficient road transport system that includes access right from the farm gate, to the regional processing plants for bulk milk transport, as well as the road network between processing plants and distribution centres. The capacity of these routes is important to the sector's overall efficiency.

To support the dairy industry in the G21 Region, the following should be considered:

- Introduction of high performance freight vehicles
- Introduction of higher mass vehicles
- Bridge and structure strengthening

4.1.2 POULTRY

The poultry industry in the G21 Region have an estimated sales turnover of \$350 million, which at 17.8% of the Victorian total makes it the largest food sector in the region and a significant component of the State total.

Poultry production relies extensively on safe and efficient transport routes, with pressure on daily fresh product. Reliable and quick distribution systems are required to enable this to happen.

To support the poultry industry in the G21 Region, the following should be considered:

- Introduction of high performance freight vehicles
- Introduction of higher mass vehicles
- Bridge and structure strengthening

4.1.3 TIMBER

Annual extraction of 1.2 million gross metric tonnes of timber from the Otways is conveyed via the local and arterial road network, often during the wetter months of the year when many access roads are subject to seasonal closures. The variable nature of the industry requires continuous and frequent input from the various stakeholder groups, including municipalities, VicRoads, the Plantation Committee and industry to assist in investing in priority roads.

To support the timber industry in the G21 Region, the following should be considered:

- Introduction of high performance freight vehicles
- Introduction of higher mass vehicles
- Bridge and structure strengthening
- Support for containerised loads
- Improve direct access into the Port of Geelong

4.1.4 INTENSIVE ANIMAL HUSBANDRY

The G21 Region is home to a wide variety of intensive animal farming, including poultry (broilers and layers), pig and goat farming, transported to Geelong, Ballarat and Melbourne for processing.

4.0 ECONOMY AND INDUSTRY

4.2 MANUFACTURING

The nature of manufacturing in the G21 Region is changing. Whilst job numbers are in decline (dropping 12% from 2006 to 2011), the sector remains important to the regional economy.

Ford has announced plans to close its Geelong manufacturing plant in October 2016, with 500 workers set to lose their jobs. Ford made the decision after a corporate restructure in order to be profitable and sustainable. Locally made products were unprofitable compared to imported products. Over 400 jobs however will be retained in the design engineering fields, even though production has ceased.

In February 2014, Alcoa announced it would permanently close its Point Henry facility after 51 years of operation. The smelter and rolling mill served the domestic and Asian can sheet markets, which have been impacted by excess capacity. The mill previously employed 800 staff, and contributed over \$100 million in the G21 economy annually.

The closure of manufacturing in Geelong will likely result in a change of land use at these locations. Future proposals for these sites will need to be managed to prevent additional strain on the road network.

The G21 Region is embracing the change in the manufacturing sector, supporting the development of skills and intellectual properties, as well as supporting new and innovative products, such as the carbon fibre developments occurring at Deakin University.

To support the manufacturing industry in the G21 Region, the following should be considered:

- Improve direct access into the Port of Geelong
- Last mile improvements
- Improved access onto the arterial road network

4.0 ECONOMY AND INDUSTRY

4.3 QUARRYING

Extractive industries provide raw materials for building and construction, which is vital to the regions development. One of the largest hard rock (basalt) quarries in Victoria operates at Point Wilson, producing 1.5 million tonnes per year of crushed rock & aggregate which supplies the Geelong Region. This is valued at \$20 million, and is approximately 10 per cent of the annual total basalt mined in Victoria. With resources secured for 40 years, an expansion of the site is planned.

This material relies on local roads for access and transport and has a significant impact on the local and arterial road networks.

Gherang Gravel pits operate substantial mining and processing plants producing approximately 750,000 tonnes of gravel and sand supplies annually.

With considerable population growth expected in the region, additional pressure will be placed on quarry material, particularly for the smaller regional quarries, to meet demand. There is a need to ensure that there is sufficient material available at a reasonable cost to meet future demands.

To support the quarrying industry in the G21 Region, the following should be considered:

- Introduction of high performance freight vehicles
- Introduction of higher mass vehicles
- Bridge and structure strengthening

4.4 WASTE

The Barwon Region currently generates 300,000 tonnes of waste per year requiring 410,000 cubic metres of land fill space. Unless major reduction targets are achieved, this will increase to 325,000 tonnes per year by 2018. As the region grows, a next generation waste management system will be required along with increased recycling and reuse and waste to energy production facilities.

Waste in the region is managed through the Barwon South West Waste and Resource Recovery Group and the licensed landfills operating in the region include Alvie (Colac Otway Shire), Drysdale (Greater Geelong) and Anglesea (Surf Coast Shire). Transport of waste to these facilities will continue for a number of years and planning is underway through the Recovery Group to determine the best future waste disposal sites as some of the existing landfills approach closure, and this is likely to involve more road transport of waste through the region.

Colac Otway Shire has operating transfer stations at Avlie and Apollo Bay. Household waste is transported to Naringal for disposal. Green waste is transported to Camperdown for processing and composting.

4.0 ECONOMY AND INDUSTRY

4.5 TOURISM

The G21 Region is a premier tourist resort location. It possesses an abundance of natural and geographic features: the dramatic coastline and beaches of the Great Ocean Road and the Surf Coast; the forests of the Otway and Brisbane Ranges; the Barwon, Moorabool and Leigh rivers systems; National and State Parks; the heritage of the gold field town of Steiglitz; the Victorian-era town of Queenscliffe and the Geelong Waterfront.

The Great Ocean Road is one of Victoria's principal tourist routes, extending from Torquay to Allansford, with a number of key towns and coastal villages along its 240 kilometre length. Tourism in the Great Ocean Road region provides an estimated \$2.1 billion annually to the state's economy. The iconic road is National and State heritage listed and is the world's largest war memorial. The capacity of the Great Ocean Road particularly in the summer periods is an issue and further development of an attractive alternate inland route is a priority.

Key destinations along the Great Ocean Road include the surf town of Torquay, Bells Beach, the coastal towns of Anglesea, Aireys Inlet, Lorne and Apollo Bay, the inland town of Lavers Hill, and the Shipwreck Coast, which includes the iconic Twelve Apostles.

The G21 Region is home to many national parks, including the Brisbane Ranges, You Yangs, Otway Ranges and Angahook-Otway State. Access is reliant on the road network, and can be challenging for visitors unfamiliar with the local road conditions.

Tourism Victoria estimate that 80 per cent of visitors to the G21 region rely on motor vehicles for transport.

To support the tourism industry in the G21 Region, the following should be considered:

- Inland route safety and signage improvements
- Respond to the increase in 'self-driving' tourism

4.5.1 ADVENTURE TOURISM

The G21 Region is home to a wide variety of adventure or active tourism, utilising the natural landscapes and providing unique experiences, such as snorkelling and diving from the Bellarine Peninsula, mountain biking in

the Otways and You Yangs, sailing in Corio Bay, water skiing on the Barwon River, and adventure flights, helicopter rides and skydiving opportunities.

4.5.2 ECOTOURISM

The G21 Region is expanding its EcoTourism (or ecological interest tourism), offering attractions such as the Balyang wildlife sanctuary, bushwalking in the Otways and You Yangs, sightseeing boat tours from Queenscliff, and guided wildlife tours.

4.5.3 EVENTS

The G21 Region manages a wide variety of major events, such as the Great Ocean Road Running Festival, GMHBA Lorne Pier to Pub, Cadel Evans Great Ocean Road Race, Festival of Sails, Run Geelong and Wiggle Amy's Gran Fondo.

4.5.4 WINERIES

Established wineries, berry picking and olive groves provide an added dimension to tourism, with the Moorabool Valley, Bellarine Peninsula, Surf Coast Hinterland and Red Rock (Colac) attracting visitors inland from coastal attractions.

4.0 ECONOMY AND INDUSTRY

4.6 CENTRAL SERVICES

A vibrant and thriving Central Geelong is important to the G21 Region, as a home for employment, services providers, civic pride, recreation spaces, and a transport hub / gateway.

Government directed investment in the form of the TAC, Worksafe, ABS and the NDIS will bring an extra 1000 workers to Central Geelong. 21st century workplaces are relying less on automotive transport but require facilities for cyclists. Amenities within offices are expanding including health care, gymnasiums, child care, sleeping pods and recreational space. Such trends and their translation in to the built form will affect adjoining land uses and the transport system that supports them. The greater numbers of students and staff using and potentially living in the central area will have similar needs.

The potential to build on the critical mass of what might be termed the disability and injury services industry will to an extent depend on the attractiveness of the central area in terms of uses and facilities which bundled together provide good amenity. Transport and connectivity plays a very important part in realising this opportunity.

Within Geelong region, there is significant retail provision, which provides a wide range of retail facilities for Geelong Region residents and for G21 region. There's a economically viable strip retail shopping precinct in each suburb of Geelong. The economic results show that centres performed well when good transport connections are provided and maintained. These precincts need clearly defined accessible freight routes to deliver goods and other arterial connections to provide accessibility to residents and visitors from the region.

Health is one of the main employment sectors in the region. Future growth and an aging population will also create demand for more aged care facilities. The Infrastructure Plan focuses on hospital and higher level community health centre services. These services are provided predominantly by Barwon Heath, Geelong Hospital, St John of God Health Care, Colac Area Health, Bellarine Community Health, Otway Health and Hesse Rural Health.

The education sector is critical for developing the region's skills and facilitating innovation and research. It enjoys strong links between university and TAFE sectors and industry. Key education facilities in G21 Region include Deakin University (Geelong and Waurin Ponds), Centre for Advanced Design in Engineering Training (CADET), and The Gordon.

The Infrastructure Plan focuses on tertiary and advanced education service provision rather than K - 12 facilities other than in the District Town of Bannockburn, which currently does not have these facilities that are important to support the town's growth. Future growth of Winchelsea will require a primary school and ideally a site should be identified as part of the Structure Plan process. Private school providers will continue to play an important part in meeting primary and secondary school options and needs. The Catholic Education Office for example is planning seven schools in the region to meet future growth. The region's growth will also create demand for special needs facilities.

To support Central Geelong, the following should be considered:

- Expanded public transport options
- Integrated cycling and walking networks
- Enabling infrastructure that supports the delivery of the Central Geelong Action Plan
- Reviewing capacity of road network in short, medium and long term

KEY
INFRASTRUCTURE



5.0 KEY INFRASTRUCTURE

5.1 ROADS

The G21 Region is serviced by a hierarchy of roads, radiating from the major cities and towns. Freeways and arterial roads are managed and maintained by VicRoads, with the primary routes being:

- Princes Freeway (3 lanes each way) from Melbourne to Geelong
- Princes Highway West (2 lanes each way) from Geelong to Winchelsea and on to Colac, and (1 lane each way with overtaking lanes) from Colac to Warrnambool and onto the South Australian border
- Hamilton Highway (1 lane each way with overtaking lanes) from Geelong to Hamilton
- Midland Highway (1 lane each way with overtaking lanes) from Geelong to Ballarat
- Surfcoast Highway (2 lanes each way) from Geelong to Torquay and Great Ocean Road
- Bellarine Highway (2 lanes each way) from Geelong to Wallington, and (1 lane each way) to Queenscliff
- Great Ocean Road (1 lane each way) from Torquay to Allansford

Municipalities are responsible for the local road network which collects and distributes traffic to the arterial road network.

The arterial road network in the G21 Region is 1,447 kilometres in length and delivers traffic and freight between major destinations. It has generally been designed and constructed for heavy vehicles and higher speeds and user safety, however, it comprises less than 20% of the total road network.

Significant improvements have been made to this network in recent years including triplication of the Princes Freeway, duplication of the Princes Highway West to Winchelsea and beyond to Colac, safety improvements to the Great Ocean Road, construction of the Breakwater Road Bridge and completion of the Geelong Ring Road/ Princes Highway West.

The local roadwork in the G21 Region consists of 6,481 kilometres, providing for a broad range of needs, including residential access, collection of primary produce, distributing supplies, school buses and public transport, active transport, and visitor access to tourist destinations. Of this 6,481km, approximately 43per cent are unsealed.

5.2 RAIL

The rail system is limited to a service along its immediate corridor and connects to a suburban and regional bus service covering the Geelong suburbs and to a lesser extent the coastal townships. Geographical coverage, frequency of service, travel times, connectivity between modes, parking and passenger convenience tend to limit its usage.

The Port has dual gauge connection to Corio Quay (north and south). The grain loop line which crosses port land at Corio Quay south is a dual gauge system for grain only at the present time. Midway has a dual gauge open line for forestry products. There is no port rail connection to Lascelles wharf, Refinery Pier or Point Henry Pier.

The Geelong Port is connected to the rail system except for Lascelles Wharf and is geared to bulk goods handling. It has limited capacity to accommodate longer train lengths without obstructing arterial roads.

Rail infrastructure serving the G21 Region comprises:

- Standard gauge track from Melbourne to Adelaide via North Shore (Note: Dual gauge between North Geelong and Gheringhap)
- Broad gauge track from Melbourne to Warrnambool
- Dual gauge connection to Graincorp's Geelong export grain terminal and Midway's Woodchip terminal adjacent Corio Quay North
- Broad gauge connection to Toll Geelong Port's Corio Quay Terminal. (Note - no connection to Lascelles Wharf)
- The planned Murray Basin rail project will open up new markets for the port of Geelong.

Intermodal hubs have been proposed for the G21 region, in locations such as Colac and Lara. Further studies are being carried out to determine costs and feasibilities.

5.0 KEY INFRASTRUCTURE

5.3 PORTS

5.3.1 AIRPORTS

Avalon Airport is the second airport serving Melbourne and Victoria. It is a curfew free airport with a single runway. It is currently used by Jetstar for domestic passenger flights and offers freight and ground handling services. Avalon's location between Melbourne and Geelong make it both a capital city airport and a regional airport, servicing a large regional catchment in western Victoria and providing connections to tourist destinations. Passenger movements are predicted to reach 9 million by 2031.

Access to Avalon Airport is via the road network, with limited connectivity to the rail and public transport networks. A recently completed planning scheme amendment reserved the land for a future rail line to connect the airport to the Melbourne-Geelong rail line. With significant land holdings, Avalon has the potential to play a significant role as a future international airport, with a capacity to handle freight.

A business plan for the **Colac Aerodrome** has been developed which informs Council of the investment required for the aerodrome to maximise utilisation and provide the best economic return for the local community. The runway at the aerodrome has recently been sealed and widened to provide greater use of this facility for emergency services, and to cater for increased tourism.

The **Lethbridge Airpark** continues to grow following the sealing of the runway and hardstand area, and installation of a permanent fuel supply. There is supply for a 100 lot subdivision, for a range of aviation and support industries. There are plans for a new terminal building, which will include a restaurant and viewing area. The airport is already home to a large recreational fleet, as well as a number of commercial operations including tourism, training, storage and maintenance, with the expected to grow as new facilities become available.

There are also local airfields at Apollo Bay, Barwon Heads, and Breamlea that cater for charter and joy flights and aerial recreation.

5.3.2 MARINE PORTS

The **Port of Geelong** is the largest bulk port in south-east Australia. In 2014/15, it handled over 12.1 million tonnes of cargo, worth a combined \$8.4 billion. This equates to 700+ vessel visits - around a third of the traffic level of the Port of Melbourne - and generated 8,000 direct and flow-on jobs in Geelong and the region.

Existing infrastructure, including channel depths, is

geared to bulk cargo. Neither the infrastructure nor the channels are capable of serving larger container traffic, making connectivity to the road and rail systems extremely important for the Port's ability to compete for bulk freight traffic. Over 135,000 truck movements are generated annually.

Improvement works currently required for the movement of high productivity freight vehicles on the road network include curve widening, roundabout works, structure assessment and improvements, and truck pull-off areas to allow for staging of access in to the port.

Queenscliff Harbour provides an hourly ferry service for cars, coaches and passengers 12 hours/day x 365 days/year linking the Bellarine Highway to Sorrento on the Mornington Peninsula. Capacity is 80 vehicles per trip and 700 passengers.

Several smaller harbours also service commercial fishermen and pleasure craft, including Apollo Bay, Queenscliff, Geelong and Barwon Heads.

The development of a second container port located in Wyndam will service the G21 region, and will require improved connections via road and rail.

5.4 PUBLIC TRANSPORT

The *G21 Region Public Transport Strategy* sets out measures to increase usage of public transport for the next 20 years.

The strategy centres around four themes:

- Access for all - a base level of service for all across the region
- A well-connected region - access to and between the region's centres
- Urban public transport for an urban centre - reshaping and simplifying the current network to develop a 'go anywhere' network
- Improved information, planning and partnerships - G21 to have lead role to find new ways to better public transport, sooner

School buses provide essential transport for most children in the outer areas, as well as increasing numbers within the urban areas. Routes include both arterial and local roads in urban and rural areas with safety and accessibility prime considerations.

Bus stops require good sight distance to enable drivers to recognise the stop, and react appropriately. They also need bus parking areas that are accessible in all weather conditions, where buses can safely decelerate and pull off

5.0 KEY INFRASTRUCTURE

the road to perform pickups and drop offs. Some of these stops also act as interchanges to enable more efficient operation of the bus system.

The bus network also traverses many rural roads with narrow pavements, rough surfaces and poorly aligned bends that are shared with other heavy vehicles servicing local industry. Passing is difficult especially in areas of encroaching vegetation, steep and narrow shoulders and limited sight distance.

Both the suburban and school bus networks share the need for interchange facilities that are safe, provide shelter and do not disrupt other transport system users.

Since the launch of the bus network update in August 2015, services have seen an average increase in patronage of up to 21%, with up to 69% increase on connections to train stations. This has been achieved by using a more flexible and frequent bus service on most routes, improved facilities, and real-time information being made available, with a strong focus on customer interactions.

Passenger rail services comprise:

- Geelong to Melbourne 10 min peak / 20 min off peak services 7 days/week. Eight Geelong suburban stations between Lara and Waurin Ponds are also serviced
- Geelong to Warrnambool & associated G21 Region stops at Winchelsea, Birregurra & Colac - 3 services daily
- Passenger service operates in conjunction with the local bus services in Geelong and the
- Bellarine Peninsula and the coastal VLine bus service along the Great Ocean Road between Geelong and Apollo Bay.
- RRL introduction of new services in April 2015

The top five regional network priorities, as identified in the Regional Network Development Plan - Conversation Report, were:

- Increased frequency of train services, including weekends
- Timetabling to meet the needs of the community
- Increased connectivity, with greater connections between regional towns and cities
- Improved public transport experiences, including security, parking and facilities
- Improved communications for timetables, ticketing and disruptions

The planning for the future growth areas will need to ensure that public transport is prioritised, to reduce the impact on the arterial road networks.

Planning and investigation are required to be undertaken in the short term to protect a public transport corridor, linking Geelong to Torquay. In the short to medium term, the growth in transport demands can be met with regional bus upgrades, but will likely require a higher-capacity bus network or a rail link as population growth continues. This link provides a viable alternative to private vehicle use for local trips, and promotes commuting from high growth areas.

5.5 ACTIVE TRANSPORT

Communities across the region recognize the health & well being benefits of bicycle and walking paths and their necessity for day to day connectivity for local communities. Access is required to a strategic network of urban pathways suited to people of varying abilities including those of lesser mobility. G21 has adopted a regional **Priority Bike Network** (PBN) strategy.

The PBN is a network of existing and proposed cycle routes identified to help people ride to major destinations with a focus on getting people into activity centres and to make more use of local roads and off-road paths.

Bicycle Priority Routes (PBR's) are priority sections of the PBN. They identify those routes that should be elevated to a higher order of priority, mainly on the basis of potential for separation from motorised traffic. BPRs are identified on VicRoads' Road Use Hierarchy (RUH) maps.

Strategic Cycling Corridors (SCC's) are a recent addition to bicycle network planning and are corridors developed to improve cycling to an around major activity centres. They are selected on the basis of providing links to an Employment Cluster or a Major Activity Centre, and are routes that cater for the highest, or potentially highest, cycling volumes.

6.0 REGIONAL SNAPSHOT



6.0 REGIONAL SNAPSHOT

TABLE KEY

Arterial = VicRoads Local = Council Short = 0-5 years Medium = 5-10 years Long = 10+ years

6.1 BOROUGH OF QUEENSCLIFFE

2015 Population: 3,017

2031 Estimate Population: 3,300

Area: 9km²

The Borough of Queenscliffe is located at the eastern tip of the Bellarine Peninsula and forms one side of Port Phillip Heads - opposite Point Nepean on the Mornington Peninsula. It is surrounded by Bass Strait, Port Phillip Bay and Swan Bay on three sides. On its fourth side, it has a land boundary with the City of Greater Geelong.

It is one of the most popular historic precincts of Victoria. It has a unique blend of old and modern architecture and a special charm which attracts many thousands of tourists each year.

The Borough of Queenscliffe provides first-rate community facilities across the two town centres of Queenscliff and Point Lonsdale, both of which are highly sought after residential areas.

KEY ARTERIAL ROAD NETWORK ROUTES

ROAD	RANKING	NOTES
Bellarine Highway (including Flinders St, King St, Hesse St and Wharf Rd)	1	Provides direct connection to Geelong, access to Queenscliff town centre, Queenscliff Harbour and Ferry Terminal
Point Lonsdale Rd	2	Connects to Point Lonsdale

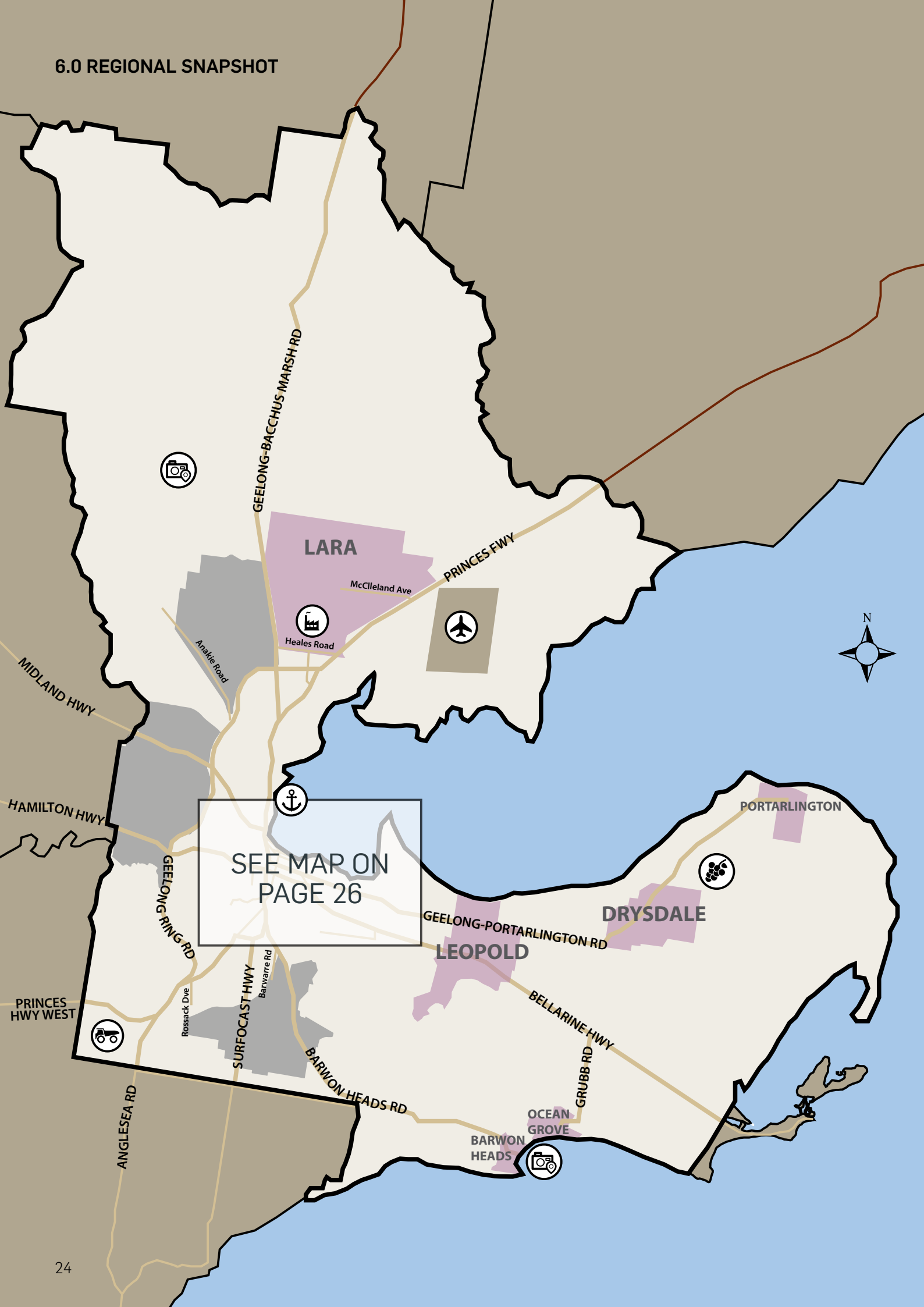
KEY LOCAL ROAD NETWORK ROUTES

ROAD	RANKING	NOTES
Lawrence Road	1	Part of the Shell Road connection to Ocean Grove
Gellibrand Street / King Street	2	Alternative access to Queenscliff Harbour precinct
Fellows Road	3	Provides strong central spine and connections
Ocean Road	4	Access to Point Lonsdale Lighthouse and parking
Hesse Street	5	Access to Queenscliff lighthouse / foreshore development

REQUIRED UPGRADES

ROAD / TOWNSHIP	OUTCOME	TIMEFRAME
Point Lonsdale Road	Ocean Road Intersection Improvements	Short
Bellarine Highway	Fellows Road Roundabout	Short
Bellarine Highway	Point Lonsdale Road Intersection Drainage Improvements	Short
Bellarine Highway	Hesse Street Pedestrian Crossing and associated improvements	Short
Bellarine Highway	Henry Street Pedestrian Crossing	Short
Bellarine Highway	Duplication	Medium

6.0 REGIONAL SNAPSHOT



SEE MAP ON
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6.0 A REGIONAL SNAPSHOT

6.2 CITY OF GREATER GEELONG

2016 Population: 234,999
2036 Estimate Population: 320,791
Area: 1,248km²

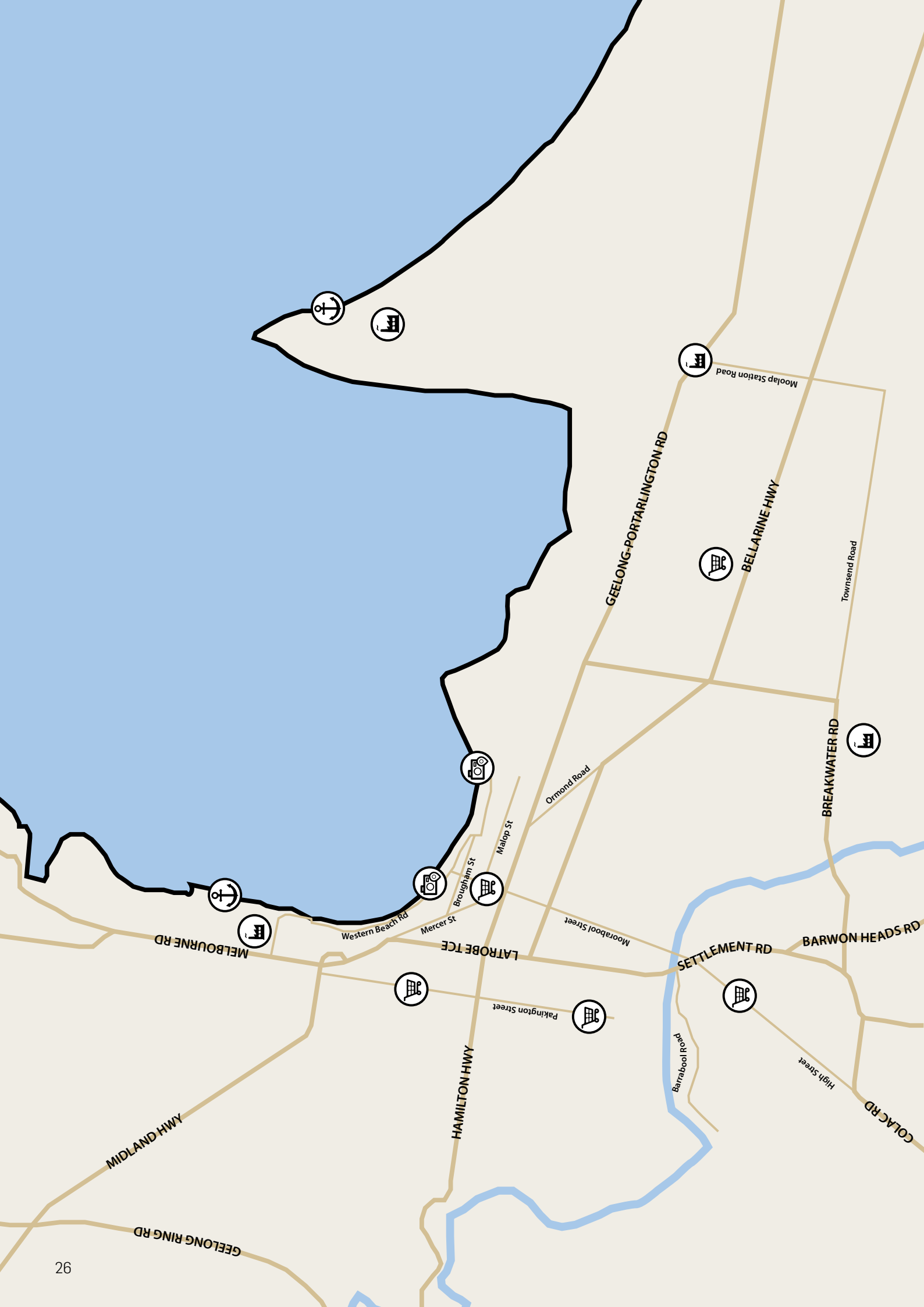
Geelong combines all the best elements of a major city with bayside flair. Quality housing, wide ranging recreational choices, a strong economy, a cosmopolitan vibrant community and comprehensive health-care services are just part of the picture.

Only a one hour drive from Melbourne, Geelong offers a range of lifestyle choices - inner city, suburban, waterfront, coastal and rural - with greater value-for-money than equivalent properties in Melbourne.

Whether your lifestyle preference is a waterfront apartment, character period home, new executive home, rural or coastal living, Geelong has it within 25 minutes of the city centre. Geelong boasts a range of leading education facilities, from primary through to secondary schools right up to university. It has a diverse economy based around large and smaller manufacturing, scientific research, education, tourism and service industries.

KEY ARTERIAL ROAD NETWORK ROUTES

ROAD	RANKING	NOTES
Latrobe Terrace	1	Direct access to Geelong CBD
Melbourne Road	2	Connection from Princes Freeway to Geelong CBD, industrial precincts, Port of Geelong, residential growth areas
Princes Freeway	3	Direct connection to Melbourne, Avalon Airport
Barwon Heads Road	4	Connection to Armstrong Creek growth area, industrial precinct
Surfcoast Highway	5	Connection to Torquay and Armstrong Creek growth areas
Settlement Road	6	Connection to Geelong CBD
Grubb Road	7	Access to Ocean Grove growth area
Geelong-Bacchus Marsh Road	8	Key freight route to central Victoria, access to Port of Geelong
Bayside Road	9	Direct access to Port of Geelong
Breakwater Road	10	Heavy vehicle route, connection to Moolap industrial precinct
Ryrie Street	11	Key freight route to Moolap industrial precinct and Bellarine Peninsula, retail precinct
Colac Road	12	Access to Princes Highway West, Waurn Ponds growth area
Bellarine Highway	13	Access to Bellarine Peninsula
Anglesea Road	14	Alternative access to Great Ocean Road
Geelong Ring Road	15	Bypass of Geelong CBD, connection to Melbourne
Geelong-Portarlington Road	16	Access to Bellarine Peninsula



6.0 REGIONAL SNAPSHOT

KEY LOCAL ROAD NETWORK ROUTES

ROAD	RANKING	NOTES
Heales Road	1	Connection to major industrial centre
Barwarre Road	2	Major collector route through Armstrong Creek growth area
Rossack Drive	3	Major collector route, connects to emergency services and train station
High Street	4	Retail precinct, alternative to Settlement Road
Barrabool Road	5	Connects to retail precinct, part of connection to Geelong Ring Road
Broderick Road	6	Connection from major industrial centre to Geelong Ring Road
Sydney Parade / Ormond Road	7	Connects Geelong-Portarlington Road to Bellarine Highway
Anakie Road	8	Connects Geelong-Ballan Road to Geelong Ring Road
Station Lake Road / McClelland Avenue	9	Connects Lara to Princes Freeway
Pakington Street	10	Major retail precinct
Mercer Street / Malop Street	11	Key retail precinct / access to Melbourne Road
Moorabool Street	12	North-south connections, connects to High Street precinct
Brougham Street	13	East-west traffic route through Geelong CBD
Western / Eastern Beach Road	14	Access to Geelong Waterfront precinct
Townsend Road / Moolap Station Road	15	Extension of Breakwater Road, connection to Moolap industrial precinct, heavy vehicle route

REQUIRED UPGRADES

ROAD / TOWNSHIP	OUTCOME	TIMEFRAME
Barwon Heads Road	Duplication (Corio-Waurn Ponds Road to Reserve Road)	Short
Anglesesa Road	Duplication (Princes Highway West to Mount Duneed Road)	Short
Bayside Road	Access Improvements	Short
Mount Duneed Road	High Speed Link Upgrades	Short
Geelong CBD	Truck Restrictions	Short
Surfcoast Highway	Reserve Road Signalisation	Short
Central Geelong	Deliver Strategic Cycling Corridors (SCC) strategy	Short
Municipal wide	Deliver SCC strategy	Medium
Bellarine Highway	Moolap Station Road Intersection Upgrade	Medium
Latrobe Terrace	Intersection Upgrades	Medium
Surfcoast Highway	Intersection Upgrades	Medium
Bellarine Link	Construction	Medium
Lara	Heavy Vehicle Route	Medium
Breakwater Road	Bridge Duplication	Medium
Geelong-Bacchus Marsh Road	Duplication	Long
Grubb Road	Duplication	Long
Fyans Street	Capacity Improvements	Long



6.0 A REGIONAL SNAPSHOT

6.3 COLAC OTWAY SHIRE

2016 Population: 21,168

2036 Estimate Population: 23,725

Area: 3,438km²

The Colac Otway Shire is one of the most picturesque municipalities in Victoria, covering a diverse area from volcanic lakes, craters and plains in the north, through the hinterland forests of the Otway Ranges to the Great Ocean Road coastline.

Colac is the key industrial, commercial and services centre for the Shire and surrounding region with a population of 12,000.

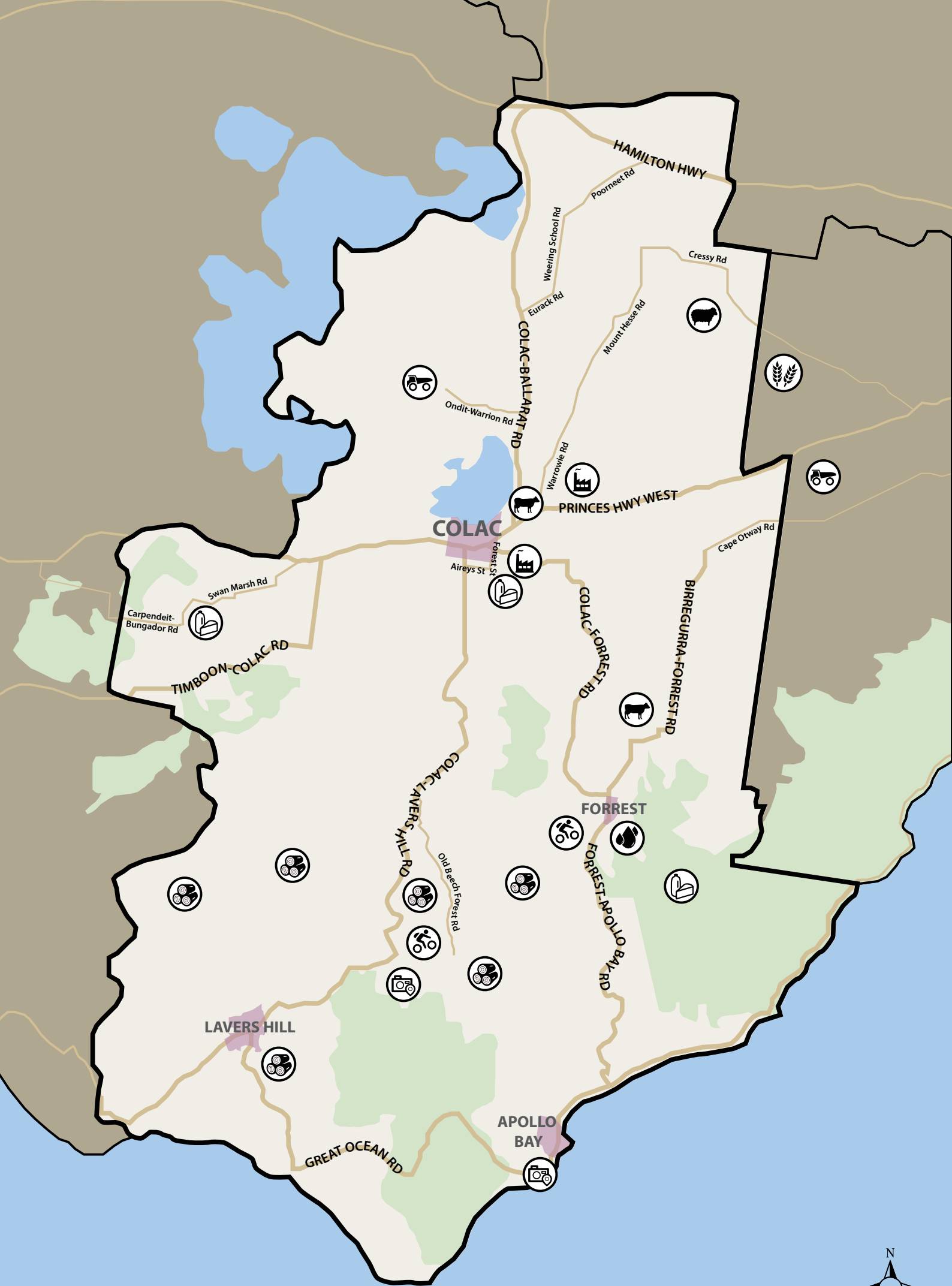
Apollo Bay is the other major urban centre with a permanent population of 1000, which swells to more than 15,000 during the summer season.

KEY ARTERIAL ROAD NETWORK ROUTES

ROAD	RANKING	NOTES
Princes Highway West	1	Provides connections to Melbourne, Geelong, Colac and Warrnambool
Great Ocean Road	2	Key tourist destination
Hamilton Highway	3	Provides connections to Geelong, Inverleigh, Mortlake and Hamilton
Forrest-Apollo Bay Road	4	Access to Great Ocean Road
Colac-Lavers Hill Road	5	Access to forestry industry, Otway National Park
Timboon-Colac Road	6	Access to forestry industry
Colac-Forrest Road	7	Access to forestry industry
Colac-Ballarat Road	8	Direct access to Ballarat
Birregurra-Forrest Road	9	Connection between Cape Otway Road and Forrest

KEY ARTERIAL ROAD NETWORK ROUTES

ROAD	RANKING	NOTES
Eurack Road / Weering School Road / Poorneet Road	1	Heavy vehicle connection between Colac-Ballarat Road and Hamilton Highway
Swan Marsh Road / Carpendeit Bungador Road	2	Direct connection to key dairy farms.
Cape Otway Road	3	Alternative heavy vehicle route to Colac
Cressy Road / Mount Hesse Road / Warrowie Road	4	Emergency bypass route of PHW.
Forest Street / Aireys Street	5	Access to key local industry producers. Alternative link between Princes Highway West and Colac-Lavers Hill Road
Ondit -Warrion Road	6	Connection between Colac-Ballarat Road and Coragulac-Beeac Road. Access to major quarry.
Old Beech Forrest Road	7	Key timber logging route. Part of Old Beechy Rail Trail tourist and cycling route.



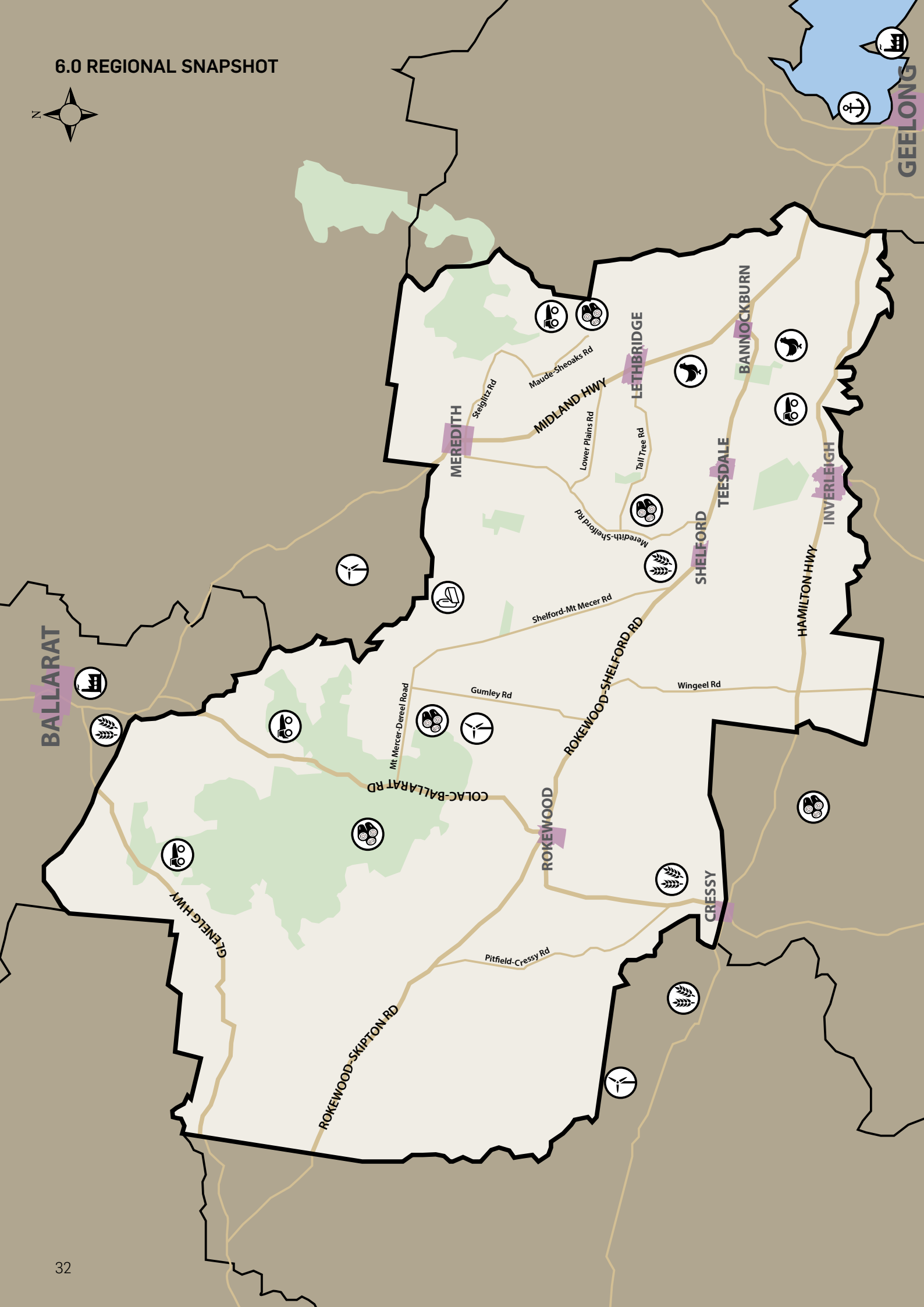
6.0 A REGIONAL SNAPSHOT

6.3 COLAC OTWAY SHIRE (CONT.)

REQUIRED UPGRADES

ROAD / TOWNSHIP	OUTCOME	TIMEFRAME
Great Ocean Road	Inland Route Improvements	Short
Princes Highway West	Tomahawk Creek Road Intersection Improvements	Short
Forrest-Apollo Bay Road (Skenes Creek Road)	Widening	Short
Forrest-Apollo Bay Road (Skenes Creek Road)	Slow Vehicle Turn Out Bays	Short
Colac	Economic, social and environmental impact study for Princes Highway West bypass	Short
Cloac-Lavers Hill Road	Pavement Strengthening	Short
Timboon-Colac Road	Pavement Strengthening	Medium
Colac-Ballarat Road	Pavement Strengthening	Medium
Colac	Plan future route of Princes Highway West in/around Colac	Medium
Princes Highway West	Duplication	Long

6.0 REGIONAL SNAPSHOT



6.0 A REGIONAL SNAPSHOT

6.4 GOLDEN PLAINS SHIRE

2016 Population: 20,809

2036 Estimate Population: 32,375

Area: 2,703km²

Golden Plains is a vibrant and progressive municipality situated between Geelong, Ballarat and Melbourne, offering residents and businesses access to the city services while enjoying a country lifestyle.

Rolling green hills, golden fields of canola and wheat, rugged bush landscapes and rocky plains span from its historic gold mining towns in the north and east, to the river valleys in the south.

New residents, including many young families, are taking advantage of the proximity to services and employment in nearby Ballarat and Geelong. Rapid growth in the north-west and south-east of Golden Plains complement the traditional rural base and the natural environment.

The Golden Plains Shire has a strong tradition in wool and grain growing, while intensive animal farming is now increasing. Growth in the home-based business sector is providing healthy employment and lifestyle opportunities.

Wine is an emerging industry, with the Moorabool Valley being home to a well-established and growing wine industry.

KEY ARTERIAL ROAD NETWORK ROUTES

ROAD	RANKING	NOTES
Midland Highway	1	Direct connections between Geelong and Ballarat
Hamilton Highway	2	Provides connections to Geelong, Inverleigh, Mortlake and Hamilton
Shelford-Bannockburn Road	3	Connection to Bannockburn and Shelford growth areas
Rokewood-Shelford Road	4	Access to local industries
Glenelg Highway	5	Provides connections between Ballarat and Hamilton
Rokewood-Skipton Road	6	Access to local industries
Colac-Ballarat Road	7	Connections between Colac and Ballarat

6.4 GOLDEN PLAINS SHIRE (CONT.)

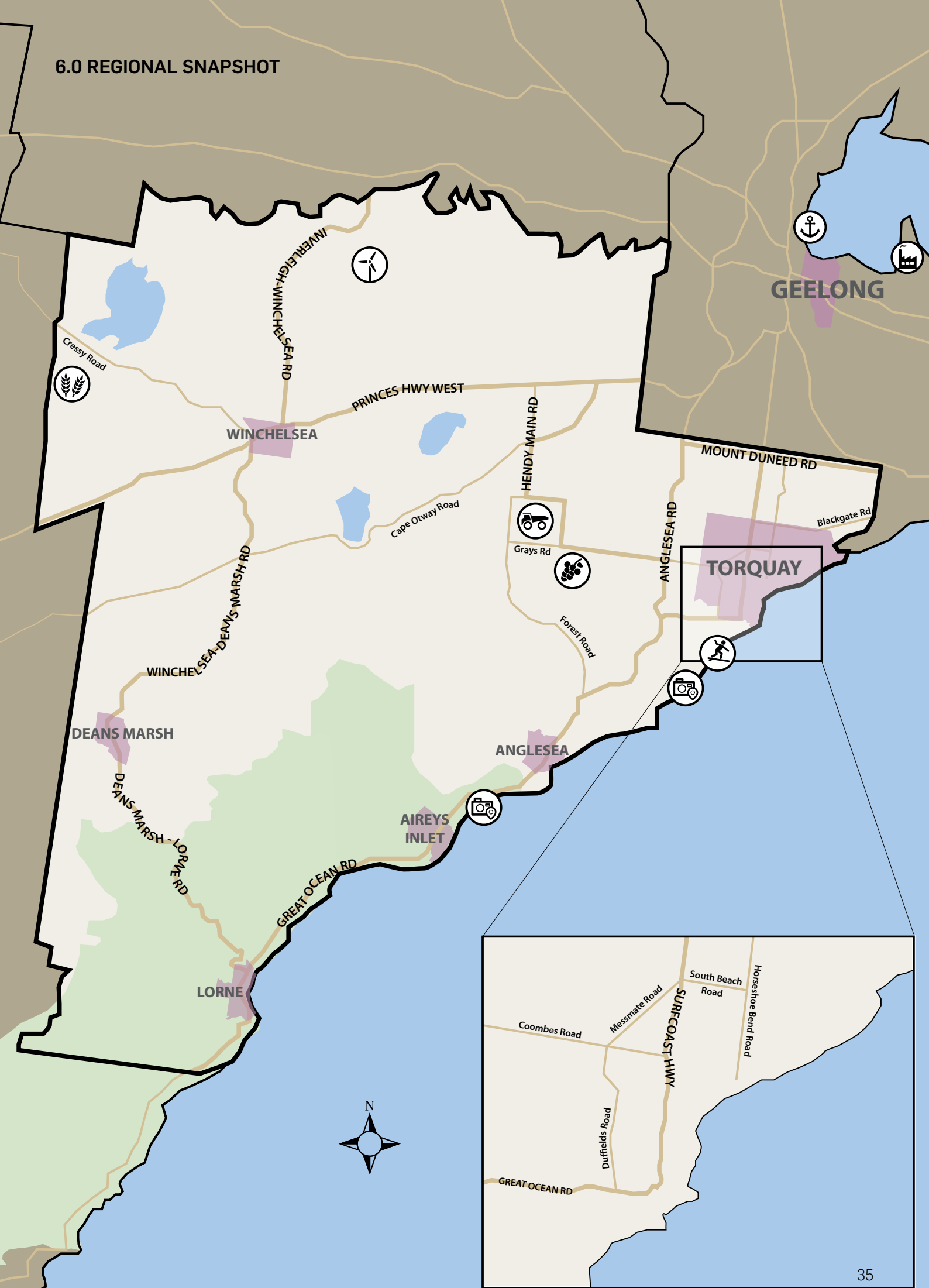
KEY ARTERIAL ROAD NETWORK ROUTES

ROAD	RANKING	NOTES
Lower Plains Road,	1	Provides connection for grain freight to Midland Highway
Tall Tree Road	2	Provides connection for grain freight to Midland Highway
Meredith-Shelford Road	3	Provides connection for grain freight to Midland Highway
Maude-She Oaks Road	4	Provides connection from quarry to Midland Highway
Steiglitz Road	5	Provides connection from quarry to Midland Highway
Shelford-Mt Mercer Road	6	Provides connection for timber freight to arterial road network
Dereel- Mt Mercer Road	7	Provides connection for timber freight to arterial road network
Pitfield-Cressy Road	8	Provides connection for grain freight to Midland Highway
Gumley Road	9	Provides connection for timber freight to arterial road network
Wingeel Road	10	Connects Shelford-Bannockburn Road and Hamilton Highway

REQUIRED UPGRADES

ROAD / TOWNSHIP	OUTCOME	TIMEFRAME
Midland Highway	Overtaking Lanes	Short
Shelford-Bannockburn Road	Clyde Road / Kelly Road Intersection Upgrade	Short
Hamilton Highway	Upgrades	Short
Midland Highway	Clyde Road Intersection Upgrades	Short
Bannockburn	Heavy Vehicle Alternate Route	Long
Midland Highway	Duplication	Long

6.0 REGIONAL SNAPSHOT



6.0 REGIONAL SNAPSHOT

6.5 SURF COAST SHIRE

2015 Population: 29,346

2031 Estimate Population: 43,763

Area: 1,553km²

Victoria's Surf Coast with its spectacular coastline, scenic rainforests and magnificent beaches, is one of the tourist drawcards of Australia.

The Surf Coast Shire is among the fastest growing regional municipalities of Victoria. It is popular both as a permanent place to live and as a second home.

The main population centres include Torquay, well known for its surf-related industries and Bells Beach, Winchelsea, gateway to the fertile western district, leafy Anglesea and the beautiful resort town of Lorne. Its permanent population more than trebles at peak holiday season. The Great Ocean Road, which starts at Torquay, attracts more than 2.5 million visitors each year.

The Surf Coast Shire is working to enhance and protect the natural environment while encouraging appropriate new development.

KEY ARTERIAL ROAD NETWORK ROUTES

ROAD	RANKING	NOTES
Princes Highway West	1	Provides connections to Melbourne, Geelong, Colac and Warrnambool
Surfcoast Highway	2	Provides direct connection to Geelong / Armstrong Creek
Anglesea Road	3	Alternative access to Torquay and Great Ocean Road
Mount Duneed Road	4	Connection to Barwon Heads / Ocean Grove
Great Ocean Road	5	Key tourist destination
Winchelsea-Deans Marsh Road / Deans Marsh-Lorne Road	6	Inland route to Great Ocean Road
Inverleigh-Winchelsea Road	7	Regional township connections
Cape Otway Road / Hendy Main Road	8	Access to local industry hubs

KEY LOCAL ROAD NETWORK ROUTES

ROAD	RANKING	NOTES
Cape Otway Road	1	Alternative heavy vehicle route to Colac
Horseshoe Bend Road	2	Access to Torquay growth areas, alternative route to Geelong
Blackgate Road	3	Part of the Thirteenth Beach connection to Barwon Heads
Forest Road / Grays Road	4	Provides connection from quarry to Anglesea
Coombes Road	5	Access to Torquay from Anglesea Road
South Beach Road / Messmate Road / Duffields Road	6	Access to Torquay growth areas
Cressy Road	7	Allows for movements of heavy vehicles from grain depot. Emergency bypass route of PHW.

6.5 SURF COAST SHIRE (CONT.)

REQUIRED UPGRADES

ROAD / TOWNSHIP	OUTCOME	TIMEFRAME
Hendy Main Road	Upgrades	Short
Deans Marsh-Lorne Road	Passing Lanes and stability works	Short
Cape Otway Road	Upgrade	Short
Blackgate Road	Upgrades	Short
Forest Road / Greys Road	Upgrades	Short
Winchelsea-Deans Marsh Road	Cape Otway Road Intersection Improvements	Short
Anglesea Road	Duplication	Medium
Horseshoe Bend Road	Upgrades	Medium
Winchelsea-Deans Marsh Road	Upgrade	Medium
Mount Duneed Road	Rail overpass improvements	Medium
Coombes Road	Upgrade	Medium
Inverleigh-Winchelsea Road	Upgrade	Long
Great Ocean Road	Duplication	Long

7.0 GAPS AND GAME CHANGERS

7.1 RECENT DEVELOPMENT

ARMSTRONG CREEK DEVELOPMENT

Out of sequence development impacting heavily on road network

BARWON HEADS ROAD TRAFFIC GROWTH

Creating congestion on Barwon Heads Road. Flow on effect is creating congestion on other key arterial routes

PRINCES HIGHWAY DUPLICATION

Geelong to Winchelsea

DRYSDALE BYPASS

Remove traffic from Drysdale town centre

GREAT OCEAN ROAD UPGRADES

\$50M Package

7.2 EMERGING ISSUES

FUTURE GROWTH AREAS

The development of new growth areas on the outskirts of Geelong will require intensive planning for the future of the road networks, with a focus to be placed on public transport and connections to the Geelong CBD.

BELLARINE PENINSULA GROWTH

With an expected population growth equal to that of Armstrong Creek, traffic growth on the Bellarine will need to be managed to ensure that it is not negatively impacted.

BELLARINE LINK

Following the completion of the planning study, the construction of the Bellarine Link will remain a priority to remove traffic from the Geelong CBD and provide direct connections to the Bellarine Peninsula.

POINT HENRY

While the future of this site remains undecided, it is critical that any development planning includes the impact that land use changes will have on the road network.

PRINCES HIGHWAY DUPLICATION

Encourage population and economic growth in Colac by completing the construction of the Princes Highway West from Winchelsea to Colac

GREAT OCEAN ROAD AND INLAND TOURING ROUTES

Support the continued growth of tourism by improving safety and wayfinding on the Great Ocean Road and connecting inland routes.

8.0 APPENDICES


STRATEGIC IMPORTANCE RANKING OF ARTERIAL ROADS


ROAD	ECONOMY	ACCESS	GROWTH	SUPPORT	MODE CHOICE	TOTAL
Latrobe Terrace	11	15	38	2	0	66
Melbourne Road	15	15	30	0	2	62
Princes Freeway	18	14	27	2	0	61
Barwon Heads Road	7	14	25	11	4	61
Surfcoast Highway	9	15	24	7	4	59
Midland Highway	13	17	15	11	0	56
Princes Highway West	20	10	14	11	0	55
Settlement Road	11	15	26	0	2	54
Grubb Road	5	14	21	9	4	53
Geelong-Bacchus Marsh Road	10	14	20	7	0	51
Bayside Road	14	13	15	9	0	51
Breakwater Road	8	13	23	2	4	50
Ryrie Street	7	14	17	9	2	49
Colac Road	10	15	22	0	2	49
Bellarine Highway	9	15	20	0	4	48
Anglesea Road	5	13	23	7	0	48
Geelong Ring Road	14	14	19	0	0	47
Geelong-Portarlington Road	9	15	18	0	4	46
Mount Duneed Road	5	15	16	9	0	45
Great Ocean Road	6	9	14	11	2	42
Hamilton Highway	6	9	9	7	0	31
Shelford-Bannockburn Road	6	8	5	7	0	26
Forrest-Apollo Bay Road	6	10	2	7	0	25
Winchelsea-Deans Marsh-Lorne Road	4	10	3	7	0	24
Rokewood-Shelford Road	5	7	1	7	0	20
Glenelg Highway	4	7	7	0	2	20
Inverleigh-Winchelsea Road	5	6	7	2	0	20
Rokewood-Skipton Road	5	6	1	7	0	19
Colac-Lavers Hill Road	7	7	5	0	0	19
Colac-Ballarat Road	3	6	8	0	0	17
Timboon-Colac Road	5	9	0	2	0	16
Colac-Forrest Road	4	7	5	0	0	16
Hendy Main Road	4	7	2	0	2	15
Point Lonsdale Road	4	6	1	0	0	11
Birregurra-Forrest Road	3	6	0	0	0	9



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