



Regional priorities

Victoria's infrastructure  
strategy 2021 – 2051

# Barwon Summary

August 2021



## Victoria's infrastructure strategy 2021–2051

In 2016, Infrastructure Victoria developed Victoria's first ever 30-year infrastructure strategy. The 2016 strategy was evidence-based, covered all types of infrastructure, and we consulted widely with stakeholders and the community. To stay relevant and reflect Victoria's evolving infrastructure needs, we update the strategy every three to five years.

Victoria's infrastructure strategy 2021–2051 builds on the 2016 strategy, revising many of our original recommendations and adding others in response to Victoria's changing circumstances. But we retain a long-term view of Victoria's infrastructure needs over the next 30 years, remembering that infrastructure lasts many decades, and must meet both immediate needs and those in the future. The strategy can be downloaded from our website at [infrastructurevictoria.com.au](http://infrastructurevictoria.com.au)

### Aboriginal acknowledgment

Infrastructure Victoria acknowledges the traditional owners of country in Victoria and pays respect to their elders past and present, as well as elders of other Aboriginal communities. We acknowledge the Eastern Maar and Wadawurrung peoples, whose traditional lands are in the Barwon Region. We recognise that the state's infrastructure is built on land that has been managed by Aboriginal people for millennia.

## Infrastructure Victoria listened to regional Victorians

Over the last four years, we built a deeper understanding of the Barwon region's infrastructure needs, industry composition, and social disadvantage, in our *Regional infrastructure needs* and *Infrastructure priorities for the regions* projects. We have consulted widely with Barwon communities, industries and local government to build our regional knowledge, and examined the unique opportunities and challenges that face each of Victoria's regions.

This work produced a *Barwon regional profile*, a *Barwon regional industry profile*, and a *Factsheet on Barwon regional disadvantage*, all available on our website. We used this evidence to develop strategy recommendations that can apply to the Barwon region.

### Engagement timeline



During the consultation period for the draft strategy, we provided more opportunities for Barwon communities and stakeholders to offer feedback on our draft recommendations, including through surveys, submissions, and hosting a Barwon regional roundtable discussion.

Combined, this comprehensive process of consultation and engagement guided the development of this Barwon regional summary and the relevant strategy recommendations. It focusses on infrastructure-related opportunities to build on Barwon's economic and industry advantages, and to strengthen local communities by improving health, education, and social inclusion outcomes, while reducing disadvantage.

This document provides a summary of selected recommendations from *Victoria's infrastructure strategy* which respond to the needs and opportunities we identified in Barwon.



## Overview

Barwon has a large and diverse regional economy based upon the construction, manufacturing, health and education service industries. Economic activity is primarily driven by Geelong, Victoria's second largest city, a major industrial centre with strong transport linkages with Melbourne. The city is an import and export hub via the Port of Geelong and Avalon Airport, and is a major employment centre for the region.

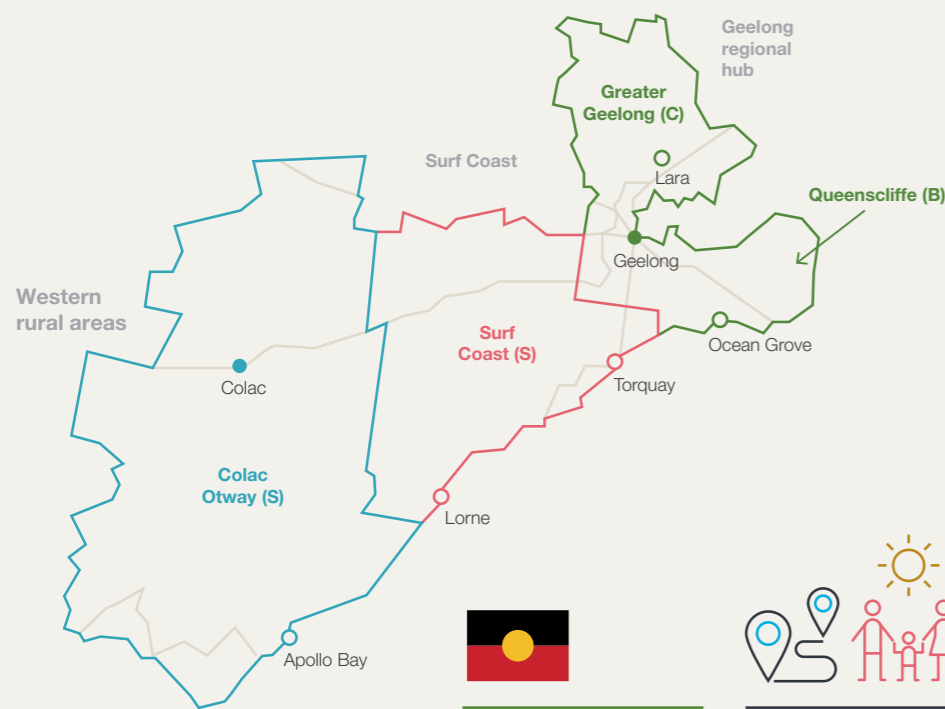
The Colac-Otway and Surf Coast local government areas have a diverse mix of agricultural sectors, including poultry, egg, beef, lamb, wool, pork, wheat, milk and horticulture. Barwon's coastal townships are popular tourist destinations and generate significant related employment.

The region includes the traditional lands of the Eastern Maar and Wadawurrung peoples. The lands of the Eastern Maar people are in the south, continuing into the Great South Coast region. In the north east, the lands of the Wadawurrung people encompass Greater Geelong and continue south to Anglesea.

Much of Barwon's north east is within commuting distance of Melbourne. The region's population and economy are influenced by the benefits and pressures of being near Melbourne. Future population growth is likely to centre on Geelong's growth areas as well as coastal settlements, mainly because of lifestyle benefits combined with proximity to jobs in Melbourne and Geelong.



## The regions of Barwon



The region includes the traditional lands of the Eastern Maar and Wadawurrung peoples.



Much of Barwon's north east is within commuting distance of Melbourne.



Barwon's economy is largely based on construction, manufacturing, health and education.



Economic activity is primarily driven by Geelong.



There is a diverse mix of agricultural sectors.

## Enhance market access and regional economic growth

### Improve freight networks

Barwon contains the Port of Geelong. It is Victoria's second largest port, handling more than 11 million tonnes of commodities each year, and a major contributor to the economy. Avalon Airport is also in the region and provides domestic and international commercial flights and freight export services. Major highways and freight rail connect the region to key economic centres of Melbourne, Geelong and Ballarat.

Efficient freight corridors between Barwon and Melbourne can support Barwon's population growth, and its growing agriculture and manufacturing sectors. Further improvements can enhance transport links to interstate highways, Avalon and Melbourne Airport, the ports of Geelong and Melbourne, and the future Bay West port. This will help ensure that Barwon can capitalise on its proximity to domestic and export markets to grow its economy. Barwon stakeholders told us, for example, that improved road and rail access to the Port of Geelong could provide efficiency benefits and help accommodate traffic increases when the Spirit of Tasmania commences operation in 2022.

Stakeholders listed duplication of Bacchus Marsh Road between Geelong Ring Road and Princes Highway, and intersection upgrades along Shell Parade as potential projects that could improve Port of Geelong freight connections.

Competitive domestic and international markets are placing pressure on Barwon's manufacturing and primary production industries. Infrastructure that enhances supply chain efficiencies and reduces overall production costs will be important to enhance the competitiveness of Barwon's industries. Rail freight can offer advantages in costs, capacity, and efficiency, but rail's share of Victorian freight is currently stagnant or in decline. The rail freight network has more assets in average, poor, or end-of-life condition, compared to regional passenger rail. The original Murray Basin Rail Project included freight access improvements to the Port of Geelong, and Barwon stakeholders communicated their disappointment in the project's reduced scope. Maintaining and enhancing transport infrastructure can help future industry development, by creating cheaper, faster connections between producers and their processors and markets.

Barwon's tourist industry could also benefit from improvements to key transport corridors, helping to reduce travel times from Melbourne, including the airport, and from major interstate highways, such as the Hume Highway. This helps reduce travel times from Melbourne and interstate to key coastal areas and tourist destinations within the region, and on to Great South Coast via the Great Ocean Road.

### Recommendations to better connect Barwon's businesses with processors and markets

Constructing the outer metropolitan road and rail corridor links the Port of Geelong and Avalon Airport to the freight and logistics sector located in Melbourne's west, and allows interstate road freight to bypass much of the city, making it more competitive with other ports. Securing the site of a new container port at Bay West can also improve port access for Barwon industry.

Providing funding certainty for road maintenance and upgrade programs can help leverage Barwon's road freight networks to better support the needs of the region's businesses. They will build on regional initiatives such as the *G21 region road transport plan 2017–2027* to further develop regional transport infrastructure which improves access, connectivity and safety while also reducing supply chain costs, to help Barwon businesses remain competitive.

Funding and planning for ongoing rail freight network development and maintenance can help maximise efficient investment and support Barwon's rail freight competitiveness. A published long-term network development and asset management plan would offer an opportunity to consider scope that is no longer part of the revised Murray Basin project and help address concerns raised by Barwon stakeholders. Additionally, an ongoing freight rail development and maintenance program would provide more certainty to Barwon investors and producers.

These recommendations can support Victorian Government investments in regional road infrastructure, including Bellarine Link Stage 1, Surf Coast Highway upgrades, and improving traffic flows at Barwon Heads.

**Recommendation 64**

**Act now to protect the future Bay West Port option**

In the next year, identify and secure land, and apply planning protection for transport corridors and buffers for a future Bay West Port, particularly for future road and rail connections. Monitor and report on the triggers to develop a new port, and commence and continue environmental assessment and monitoring over the next 30 years. Around 2040, begin detailed planning.

**Recommendation 66**

**Construct an outer metropolitan road and rail corridor**

Within two years, determine staging for the outer metropolitan rail and road corridor. Subject to detailed business cases, commence construction of priority sections, starting with the E6 motorway by the end of this decade. Progressively stage corridor development for completion in the next 30 years. Provide a freight rail link to coincide with the opening of the Western Intermodal Freight Terminal.

**Recommendation 78**

**Deliver long-term funding certainty for regional road maintenance and upgrades**

Within two years, specify clear levels of service for each type of regional road and bridge. Following this, dedicate a 10-year funding program to sustainably fund Victorian Government road and bridge maintenance and upgrades to meet these service levels. Funding should be prioritised based on improving safety, decreasing vehicle emissions, and lifting productivity.

**Recommendation 79**

**Fund and plan for ongoing regional rail freight network development and maintenance**

In the next year, fund a 30-year periodic regional freight rail maintenance program, informed by a publicly available network development and asset management plan. Using the plan, thoroughly determine the feasibility of the next major regional freight upgrade within five years.



Please refer to *Victoria's infrastructure strategy* (section 3.2) for statewide recommendations to help industries stay connected to global markets.

**Enhance water security and industry resilience**

Agriculture, forestry, and fisheries are a major source of Barwon's economic activity and growth. Climate change, including increased extreme weather events such as flood, fire, and, drought, may affect the future of the region's agriculture industries. Regional climate projections indicate declining rainfall combined with increasing temperatures, emphasising the importance of water security supported by drought-proof water infrastructure. By the 2030s, Barwon's average maximum temperatures could increase by up to 1.5°C, while average annual rainfall is projected to decrease by 10%. By the 2050s, Barwon could have twice as many days over 35°C and up to 49% more very high fire danger days.

Barwon stakeholders identified the need for sustainable water use. The region benefits from the Barwon River and Moorabool River corridors, but stakeholders noted water security concerns, including excessive water extraction and reduced rainfall. The Index of Stream Condition, for example, also rated 58% of Barwon River and 43% of Moorabool River to be in poor or very poor condition. Expanding the recycled water network was highlighted as a potential project that could support both the environment and agriculture industry. Stakeholders in particular flag the Northern and Western Geelong Growth Areas as opportunities to upgrade recycled water supply infrastructure and support integrated water management.

The urban water supply in coastal towns, such as Lorne and Apollo Bay, also experiences pressure during the summer period, when the visitor population temporarily surges. Without access to reliable water utilities, there will be limited capacity to cater for extended periods of drought and sustainable development of the tourist industry could be constrained.

**Recommendations to improve water security for Barwon's agriculture and tourism industries**

Continuing to modernise irrigation systems, considering all sources of water supply, and upgrading Victoria's emergency water supply network can further strengthen water security in Barwon, including to ensure farmers can access water as rainfalls continue to decline. Improving water security can benefit Barwon's agriculture and tourism businesses, helping to support continued growth.

**Recommendation 13**

**Consider all water supply sources**

Consider all water sources for supply augmentation, including identifying and addressing barriers to purified recycled drinking water within the next 10 years. When planning for future water supply, investigate all options including, but not limited to recycled water, seawater desalination, stormwater harvesting and better use of the water grid.

**Recommendation 16**

**Strengthen agricultural water security by modernising irrigation**

In the next 30 years, contribute funding toward planning and delivery of water infrastructure and irrigation modernisation projects across Victoria.

**Recommendation 17**

**Upgrade Victoria's emergency water network**

In the next year, assess the condition, capacity and security of Victoria's emergency water supply point network, and upgrade or replace inadequate supply points. Clarify ongoing responsibility for monitoring, maintenance and funding to secure a resilient network.



Please refer to *Victoria's infrastructure strategy* (section 1.2) for additional recommendations on water and climate.

**By the 2030s**



Average **maximum temperatures** could increase by up to 1.5°C



Average **annual rainfall** is projected to decrease by 10%

**By the 2050s**

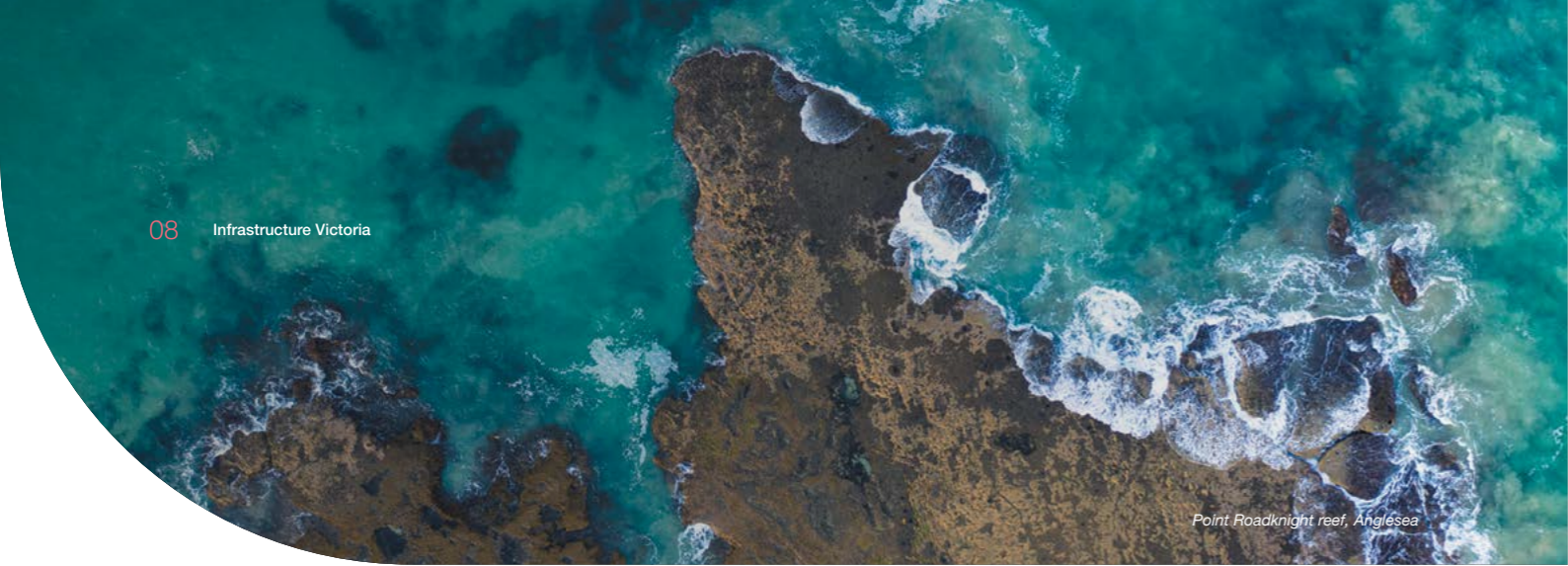


Could have **twice as many days** over 35°C



Could have up to 49% more **very high fire danger** days





Point Roadknight reef, Anglesea

## Protect Barwon's coasts

Barwon's coastline contributes to the regional economy through port and trade activity and tourism and related services. Barwon is the gateway to the Great Ocean Road. However, the impacts of climate change are visibly threatening the Great Ocean Road's \$1.1 billion visitor economy.

Coastal erosion will likely increase with rising sea levels and storm surges. This is endangering Barwon's coast, and the economies and communities it supports. Stretches of beach have been washed away at Apollo Bay, while coastal erosion threatens the Great Ocean Road. The Victorian Government has established the Great Ocean Road and Parks Authority to help manage this issue. Improved and upgraded coastal protection infrastructure is needed to help coastal communities and iconic tourism assets mitigate the impact of changing coastal conditions.

The Victorian Government has identified the Bellarine Peninsula as a Distinctive Area and Landscape. Barwon stakeholders underscored the importance of conserving the Peninsula's environment, including its unique habitats, ecosystems, and biodiversity. For example, they expressed a need to consider the Bay West Port development in the context of its interaction with nearby Bellarine Peninsula Ramsar wetland.

## Recommendation to protect Barwon's coasts

This recommendation secures investment to safeguard coastal homes, infrastructure, and tourism and to build resilience to the impacts of climate change. Our recommendation aims to provide funding certainty that can enable a considered approach to managing coastal tourism assets.

These recommendations can build on Victorian Government investments, including funding for Apollo Bay Breakwater repairs and for the construction of rock groynes on Apollo Bay.

### Recommendation 18

## Invest in protection and adaptation for Victoria's coasts

In the next year, develop clear guidance on coastal adaptation planning, including thresholds, triggers, and planning guidelines to support local area decision-making. Invest in coastal protection upgrades and maintenance, including beach and dune protection and rehabilitation, and storm surge protection, over the next eight years.



Please refer to *Victoria's infrastructure strategy* (section 1.3) for additional recommendations on embedding resilience.

## Foster tourism in Barwon

The Barwon region spans spectacular and varied landscapes, from the world-famous Great Ocean Road to the Otway forests. Visitors are attracted to the region by the Bellarine Peninsula's wineries and cultural events such as the Queenscliff Music Festival, as well as the natural beauty of the coastline, beaches, and forests.

The tourism industry makes a significant contribution to Barwon's economy, but the COVID-19 pandemic has disrupted the industry, as border closures and restrictions on movement have taken effect. However, tourism can contribute to the region's economic recovery.

The region's proximity to Melbourne is both an asset and a liability for local tourism. Three of the region's four local government areas are within Victoria's ten highest for tourism visits per capita, but many of these are day visitors, limiting tourist expenditure within the region. Barwon's natural attractions mean that it is well-placed to further develop nature-based tourism experiences to help attract more visitors, encourage them to stay longer, and spend money in the local area. When planning for nature-based tourism, Barwon stakeholders communicated the importance of tourism infrastructure that preserves and protects natural assets, particularly in national parks. Community representatives also noted a need to consider tourism effects when planning for emergency and safety facilities. They said, for example, Barwon's population doubles over peak holiday periods and is a high bushfire prone region.

Important Aboriginal heritage sites in the lands of the Wadawurrung people include the You Yangs Regional Park. The You Yangs region is noted for its rich Wadawurrung history and contains many registered Aboriginal heritage sites. These continue to provide a vital focus for Aboriginal cultural practices and have immense potential for wider public education and interest.

## Recommendations to support a recovery in regional tourism

Our regional tourism recommendations, centred on Aboriginal and nature-based tourism opportunities, aim to support sustainable growth in Barwon's tourism industry. Development of a nature-based tourism strategy to guide future investment in the region's tourist infrastructure will help to ensure that tourism experiences, and supporting facilities, meet visitor expectations. The strategy will help protect and enhance the region's natural assets. Re-examining existing policies, such as policies around tourism leasing in national parks, can help encourage appropriate investment in tourist facilities and services and foster longer-term industry growth in Barwon.

Developing a Victorian Aboriginal tourist strategy with Aboriginal communities can help further drive sustainable economic activity in Barwon, helping to preserve and promote the region's Aboriginal cultural histories and heritage sites as well as create job opportunities for Aboriginal communities.

These recommendations can build on Victorian Government investments in Barwon's tourism infrastructure, including upgrades to visitor facilities and a coastal trail along the Great Ocean Road.

### Recommendation 81

## Plan for and facilitate regional nature-based tourism investments

In the next two years, develop a Victorian nature-based tourism strategy to guide industry development and prioritise further investments. During the next 15 years, support regional tourism investment by allowing more site-specific leases for up to 49 years for infrastructure proposals that meet strict criteria and complement environmental and cultural values.

### Recommendation 82

## Develop a Victorian Aboriginal tourism strategy with Aboriginal communities

Support and partner with Aboriginal communities in the next two years to guide future investments in Aboriginal tourism and cultural heritage, including through Joint Management Plans.

## Unlock industry growth opportunities

Barwon's manufacturing industry has seen a structural shift over the past decade as large-scale manufacturing sectors such as automotive have declined. New opportunities for advanced manufacturing are emerging, in high-technology sectors such as carbon fibre manufacturing, including linkages with Deakin University.

Barwon stakeholders told us electricity supply is a potential constraint on both the manufacturing and agricultural industries, limiting productivity, and future growth, due to outdated infrastructure which can no longer meet growing energy demands.

## Recommendations to remove infrastructure barriers to investment in Barwon

Our recommendation to co-fund power supply upgrades responds to constraints associated with outdated power supply infrastructure and supports new investment opportunities for regional businesses. Where upgrades are shown to deliver benefits to existing users and unlock potential future investment, upgrade costs can be shared between the Victorian Government, power distribution companies, and local businesses.

### Recommendation 80

## Upgrade power supply for agriculture and regional industry

In the next five years, contribute toward strategic power supply infrastructure upgrades for agriculture and regional industry, where an independent assessment demonstrates significant potential for increased productivity, competitiveness and growth.

## Facilitate regional recycling industries in Barwon

Victoria can transform its resource and recycling sector to recover up to 90% of our waste with \$1 billion of investment in infrastructure from both government and the private sector by 2039. There are currently dozens of resource recovery centres across Victoria, of varying capacity and capability, that collect materials from their local areas for transport and further recovery. There is an opportunity to support a resource recovery centre network with facilities that are more strategically located and better resourced – so that the costs of transporting materials is reduced and materials, such as compost, can be made closer to their end users, such as agriculture.

The supply of recyclable materials has not been matched by demand for them. More reliable markets for priority materials – recyclable glass, plastic, paper and card, organics, tyres and e-waste – would support economic development, help address the stockpiling of recovered materials, and reduce Victoria's reliance on landfill. Markets for these materials vary greatly, presenting different challenges for each material. Ongoing research and development can help to identify new potential uses for recycled materials, either as direct substitutes for virgin materials or new uses.

In Colac, Barwon Water is collaborating with Bulla Dairy Foods and the Australian Lamb Company on the Renewable Organics Network project, which will use high-strength organic waste from the two companies for electricity and hot water production. Other opportunities in the region include establishing food organics processing facilities. Barwon stakeholders also told us that the region could benefit from more recycling facilities, such as a regional material recycling facility to support more advanced materials sorting and processing.

## Recommendations to facilitate regional recycling industries

Infrastructure Victoria's [Advice on recycling and resource recovery infrastructure](#), suggested upgrading or building new processing infrastructure for six priority materials – plastics, paper, cardboard, glass, organics, tyres and e-waste – would create over 5000 new jobs and create high quality, recycled products for use in major infrastructure projects, manufacturing and agriculture. Regional Victoria stands to benefit most from significantly increased processing capacity, with the advice recommending 52 out of 87 new or upgraded facilities be located outside of metropolitan Melbourne.

The additional recycling and resource recovery infrastructure that is likely to be needed in the Barwon region includes materials recovery facilities, plastic processing plants, glass sand or aggregate plants and organic composting facilities. By processing materials from both Melbourne and local areas, regional Victoria can provide products, such as compost for agriculture, closer to end users, reducing transport costs and creating new jobs and services.

### Recommendation 28

#### Facilitate improved recycling infrastructure for priority materials

In the next year, focus efforts to increase and upgrade waste processing infrastructure on six priority materials. Facilitate increased recovery and reprocessing capacity and capability for paper and card, plastics, and organics by 2025. Revisit funding mechanisms and align recycling infrastructure with land use settings.

### Recommendation 29

#### Strengthen end markets for recycled materials

Continue to deliver market development for recycled materials by updating standards and specifications to be performance-based rather than material-based, and explicitly require the Victorian public sector to use recycled products where feasible. In the next five years, support research, development and demonstrations to build confidence and demand for recycled products.



Please refer to *Victoria's infrastructure strategy* (section 1.5) for additional recommendations on recycling and building a circular economy.



## Better connect the regions

### Improve public transport and cycling

Geelong's diversified economy makes it an employment and services hub for the wider region. Residents in the region's east are within commuting distance of Melbourne, and the two cities have high rates of labour mobility between them. Public transport links between Geelong and Melbourne are relatively good, and a quarter of those travelling to Melbourne for work do so by public transport. However, population growth both within Geelong and in the fast growing City of Wyndham will mean potential capacity constraints on the transport corridor.

Transport services within the region are limited. Just 2% of those who work within Barwon itself commute by public transport. Service levels drop significantly outside of central Geelong and many settlements across the region cannot use public transport to access education, work or services. Services are poor in the west of the region, particularly Colac, and for services into Geelong from the Surf Coast.

As a result, Barwon residents are heavily reliant on cars to get around. Those without their own means of transport are significantly disadvantaged in terms of their ability to access jobs and services. The region's strong population growth is also leading to increased congestion at peak times. Barwon stakeholders similarly highlighted a need for growth areas to be prioritised when expanding Geelong's public transport access, such as the Armstrong Creek corridor.

The region emphasised bus network improvements as a priority. The draft *G21 transport and movement network operating plan* noted potential projects, including a network of principal grid bus services for urban Geelong and simplification of the existing network

Stakeholders also said that Barwon could benefit from more inter-regional transport connections and shared that a regional orbital SmartBus service along the Midland Highway, for example, could help connect the region to Ballarat.

Barwon stakeholders also identified opportunities to improve the region's active transport facilities, such as a network of safe cycle paths suitable for all ages and abilities.

### Recommendations to enable viable transport options across Barwon

Redesigning regional public transport can help improve transport options within the Barwon region. Developing solutions which integrate traditional public transport with more innovative, flexible transport options to deliver services can better respond to community needs, such as by using community transport, on-demand services, and the school bus network. Providing long-term certainty to local communities can help ensure that Barwon residents can access education, health, and other services which are increasingly centralised in Geelong.

The Victorian Government is investing in rail under the *Regional network development plan* to improve service quality and capacity between Melbourne and Geelong. It is also investing with the Australian Government to deliver Geelong Fast Rail, to reduce travel times between the two cities. There may be opportunities to integrate Geelong Fast Rail with potential planning processes for Melbourne Metro Two. One opportunity to consider, for example, is using the Melbourne Metro Two tunnel to provide a more direct service for electrified rail services from Geelong to Southern Cross station, which could help accommodate more passengers and contribute to resolving network capacity issues.

A high quality public transport service to connect Armstrong Creek to the rail network should be considered for implementation in coming years.

Improvements to public transport are accompanied by our recommendation to transform cycling in Geelong, supporting active transport in the region. Collecting data on the western and southern link cycling projects currently underway would help to illustrate the potential of safer, low stress cycling in Geelong, reduce localised congestion, and improve health outcomes.

### Recommendation 39

#### Transform cycling in Melbourne, Ballarat, Bendigo and Geelong

In the next 10 years, prioritise and significantly progress developing a continuous network of high quality, safer cycling corridors in Melbourne, Ballarat, Bendigo and Geelong, including separated cycle ways and more storage at train stations and activity centres. In the next five years, immediate priorities include connections within and between central Melbourne and surrounding suburbs, and connections to the Monash, La Trobe and Sunshine National Employment and Innovation Clusters.

### Recommendation 61

#### Prepare for Melbourne Metro Two and direct Geelong rail services

Within five years complete a business case for the Melbourne Metro Two Tunnel project, and protect the land required to construct it. Consider using the tunnel to re-route Geelong services direct to Southern Cross, and consider new stations or relocating existing stations. To shape demand for the project in the next five years, enable more intensive land use around the rail network, and introduce 'next generation' bus services between Newport and Fishermans Bend, and Victoria Park and Parkville.



#### Recommendation 75

##### Link outer suburbs to rail with 'next generation' buses

In the next year, introduce 'next generation' bus services towards Clyde, Mornington Peninsula, Wollert and Armstrong Creek. In the next five years, complete feasibility studies to plan the ultimate development of public transport services on these corridors and secure remaining land required.

#### Recommendation 83

##### Redesign regional public transport to meet local needs

In the next five years, redesign existing regional transport services so they are integrated, based on regional needs assessments, and sustainably funded. Use significant technological and reform opportunities to deliver innovative service models that meet local needs.

### Improve digital connectivity and telecommunications infrastructure

The COVID-19 pandemic has further highlighted the digital divide between Melbourne and regional and rural communities. Barwon businesses have experienced inadequate mobile coverage, a lack of high-speed broadband, and gaps in digital connectivity. The Barwon Regional Partnership points to a need to enhance digital equity and infrastructure and build greater digital literacy in the region to improve social inclusion and access to services.

Inconsistent and unreliable mobile and digital access constrains the productivity and competitiveness of Barwon businesses. Agriculture could benefit from reliable on-farm internet to enable productivity-enhancing precision agriculture technology.

Enhanced digital connectivity could support future growth in the region's financial and insurance services sector. Barwon stakeholders noted a need for improved internet and mobile phone reliability in tourist locations to meet visitor expectations.

Poor digital connectivity also affects social equity and community safety in the region. One in six Barwon households do not have internet access compared with the average of one in eight in Melbourne. Digital access is even lower in some of Barwon's more disadvantaged areas – one in four households in Colac and Corio-Norlane do not have access to the internet.

The COVID-19 pandemic increased the need for internet access, revealing the deficiencies of connectivity across Barwon. For example, stakeholders said online learning had been a challenge for some parts of the region, further disadvantaging residents in places such as Colac, Corio and Norlane where education outcomes are below the Victorian average.

#### Recommendations to continue to bridge Barwon's digital divide

Addressing regional Victoria's digital connectivity gaps can improve internet and telecommunications infrastructure in Barwon. Reliable high-speed internet connections can help Barwon businesses to operate and compete, and place businesses in a stronger position to weather future crises. Access to high speed internet can also offer community benefits, by supporting remote access to health and education services, and by fostering the maintenance of social connections.

Improving regional telecommunications infrastructure resilience will also help address Barwon's digital infrastructure and connectivity needs. We recommend continuing to address mobile coverage gaps to provide equitable access to mobile services and help ensure residents can remain connected during emergencies. A comprehensive approach across fixed, mobile and Wi-Fi networks can ensure

more resilient telecommunications.

Providing better internet access in Barwon's libraries provides support for digital literacy skills development and improves access for those without home internet access. Investments could foster better internet access, leveraging the existing infrastructure, expertise, and support available within the library network. It can also complement the Victorian Government initiative to provide free public Wi-Fi in Geelong's north, which addresses gaps in digital access and affordability in the northern suburbs that lead to social and economic disadvantage.

#### Recommendation 84

##### Address regional Victoria's digital connectivity gaps

In the next five years, continue delivering regional digital connectivity improvements, and monitor and review the need for further government investment following the roll-out of the Digital Future Now initiative.

#### Recommendation 85

##### Improve regional telecommunications infrastructure resilience

In the next five years, develop more resilient regional telecommunications infrastructure so communities can stay safe during emergencies, including better mobile coverage, back-up systems and power supply, and emergency mobile roaming.

#### Recommendation 86

##### Fund regional libraries to provide better internet access

In the next year, start a five-year funding program for libraries in regional towns and rural areas to improve community access to fast, free internet services, leveraging existing library infrastructure.

## Foster regional Victorians' health, wellbeing and inclusion

### Improve access to health and education

Parts of the Barwon region demonstrate relatively poor health, social or education outcomes when compared with Victorian averages. For example:

- ∨ Colac-Otway has a relatively high number of registered mental health clients, 16 per 1000 population compared with a Victorian average of 12 per 1000. One in five (20%) Colac-Otway residents report high or very high levels of psychological distress compared with 15% across Victoria.
- ∨ One in four children in Colac-Otway (23%) are developmentally vulnerable on one or more domains, rising to one in three in Corio (38%) and one in two in Norlane and Whittington (48% and 59% respectively). This compares to the Victorian average of one in five (20%).
- ∨ The proportion of young people disengaged from school and not finishing Year 12 is relatively high in parts of the region – 39% in Corio and Norlane and 36% in Colac compared with a Victorian average of 17%.

Across the region, Aboriginal Community Controlled Organisations (ACCOs) play a central role in the provision of services and the promotion and protection of Aboriginal people's rights. Barwon's Aboriginal population is projected to grow 67% between 2018 and 2028, the third highest rate in regional Victoria, which could lead to additional demand for Aboriginal and other services in the region. The combination of increasing client numbers and inadequate infrastructure is restricting the ability of Barwon's ACCOs to provide timely and effective service delivery.

The Barwon Regional Partnership highlighted the impacts of the COVID-19 pandemic on the region's children and young people. They experienced major disruption to education and significant job losses, particularly among those in casual employment in hospitality and the arts.

Barwon stakeholders are concerned about the risk of increased youth unemployment and educational disengagement, potentially impacting their mental health. Regional stakeholders told us that a Youth Foyer in Geelong would benefit disadvantaged young people who are particularly at risk for homelessness and are disengaged from education and employment.

#### Recommendations to improve health and education outcomes for Barwon residents

Innovation in healthcare delivery can expand the use of technology in service provision, to better connect regional communities with specialist health services. Better access to mental health facilities in the region is also required. These recommendations can build on innovative use of technology within Barwon during the COVID-19 pandemic, for example, the partnership between Barwon Health and Deakin University to deliver mental telehealth services.

A plan for future investment in Aboriginal community controlled infrastructure can respond to the current and future infrastructure needs of Barwon's Aboriginal community, as well as contribute to Closing the Gap in outcomes for Aboriginal Victorians. Funding more Youth Foyers in regional Victoria, including in Geelong, aims to respond to challenges facing the region's young people. It aims to help break cycles of disadvantage by providing stable accommodation for young people aged 16 to 24 who commit to education and training pathways.

Our recommendations can build on recent Victorian Government investments, including funding towards a community hospital in Torquay, a dedicated children's emergency department in Geelong, and a youth prevention and recovery care unit in Barwon's South West.

#### Recommendation 25

##### Use innovation to deliver better models of health care

Within two years, help slow the growth in demand for hospital infrastructure by developing a comprehensive statewide health innovation strategy, supported by a funding over five years to promote and progressively implement better models of health care.

#### Recommendation 67

##### Co-design an Aboriginal community controlled infrastructure plan

In the next year, start a co-design process with Aboriginal Victorians to develop a plan to guide investment in Aboriginal community-controlled infrastructure to meet current and future social, economic and cultural needs.

#### Recommendation 70

##### Deliver infrastructure for a more responsive and integrated mental health system

In the next year, establish a dedicated infrastructure fund to support more responsive and integrated mental health and wellbeing services, consistent with the recommendations of the Royal Commission into Victoria's Mental Health System.

#### Recommendation 92

##### Fund more Youth Foyers in regional Victoria

Fund at least six new Youth Foyers in regional Victoria by 2026, to better use existing education infrastructure and support vulnerable young people.



Please refer to *Victoria's infrastructure strategy* (section 3.3) for recommendations on aligning social infrastructure with better service delivery.

### Improve and better use community infrastructure

Demographic changes, such as an ageing population, are affecting the scope and mix of services councils need to provide. Geelong and Surf Coast are experiencing high population growth and development, increasing pressure on services and existing community facilities. Furthermore, the Barwon region includes several areas of relative socio-economic disadvantage, driving local demand for community and health services. Disadvantage is relatively high in Colac-Otway, for example, while suburbs in Geelong such as Corio and Norlane are among the most disadvantaged in the state.

Climate change adds further complexity to the challenges facing local governments and communities. Barwon is more exposed to the impacts of climate change with projected higher temperatures, more days of extreme heat, declining rainfall forecast, and higher bushfire risk.

Social infrastructure, and the services it enables, needs to be flexible and innovative in response to changing community needs. Despite the different challenges facing each of Barwon's local government areas there is a shared necessity to manage ageing assets, do more with less, and make better use of existing infrastructure.

Barwon stakeholders have expressed support for the potential of shared social service facilities to improve health, wellbeing, and education outcomes in the region. This includes the proposed Northern Aquatic and Community Hub in Norlane and the development of school and family community hubs in Colac and Whittington.

### Recommendations to make better use of community infrastructure

The Victorian Government can support regions and local governments in providing fit-for-purpose social infrastructure which can respond to local needs. Service planning can help identify gaps in existing infrastructure, or opportunities for shared

facilities, supported by funding to retrofit, repurpose, or retire existing community facilities. Integrating transport planning within planning for service delivery will ensure that essential services can be accessed by all those who need them.

Our recommendation to create climate-adapted facilities for rural communities aims to support local governments to deliver a network of facilities which can help reduce the health impacts of exposure to heat, and prolonged smoke from bushfires. Combined with the recommendation to build back better after emergencies, this aims to build community resilience to the impacts of climate change.

#### Recommendation 19

### Build back better after emergencies

In the next year, consider policy changes and funding mechanisms so high priority public infrastructure destroyed by emergencies is built to a more resilient standard or in less vulnerable locations.

#### Recommendation 88

### Deliver multipurpose shared social service facilities in the regions

In the next year, start regional planning for social services to identify opportunities for multipurpose shared services facilities, then deliver them where appropriate, over the next five years, in partnership with local governments and community organisations.

#### Recommendation 89

### Update community infrastructure

Fund regional councils in the next five years to update, repurpose or retire outdated community infrastructure for better service delivery.

#### Recommendation 90

### Create climate-adapted facilities for rural communities

In the next five years, fund local governments to plan and help deliver a network of designated, accessible climate-adapted community facilities, to manage the health impacts of extreme heat and bushfire smoke.



Please refer to *Victoria's infrastructure strategy* (section 4.3) for additional recommendations on fostering regional Victorians health, wellbeing and inclusion.



### Address social housing challenges

The Barwon Regional Partnership identified access to affordable and social housing as a priority for the region. In March 2021, over 3600 Barwon households were on the waiting list for social housing, with over 2500 households requiring urgent assistance.

Contributing factors include:

- Only 16% of Barwon's new lettings are affordable to lower income households, compared to an average of 40% across regional Victoria. Strong forecast population growth for Geelong will only increase housing pressures in the region.
- One quarter of Barwon's low-income households experience financial stress from mortgage or rent, contributing to demand for social housing.
- The region has an estimated 2.9 homeless per 1000 people, rising to 3.1 in Greater Geelong. Barwon's homeless population has risen 23% between 2011 and 2016.

The City of Greater Geelong's social housing plan identifies a need to revitalise public housing in Corio, Norlane, and Whittington, as the existing stock is almost 50 years old. Stakeholders also told us that social housing is unevenly distributed across the Greater Geelong municipality and flagged that areas such as Armstrong Creek require social housing. The Victorian Government Big Build will invest \$1.25 billion in regional Victoria to build social and affordable housing. There is a current minimum investment commitment of \$180 million in the City of Greater Geelong and \$20 million in Surf Coast Shire.

### Recommendations to enhance access to affordable, fit for purpose housing

Expanding social housing in regional centres, in locations with good access to transport and services, prioritises areas with strong forecast population growth, such as Geelong. Combined with renewing ageing public housing stock, this can improve Barwon residents' access to affordable and fit for purpose housing.

Making social housing suitable for changing climates helps address need for adequate heating and cooling in the region's social housing. As well as installing split system air-conditioning to better regulate temperatures in the home, solar panels can help low-income residents to offset additional energy costs during extreme temperatures. This recommendation builds on a Geelong project that offers free home energy upgrades for low-income households to enable one room to remain comfortable during temperature extremes.

#### Recommendation 55

### Rapidly renew old public housing

Rapidly renew dilapidated public housing properties to improve functionality, accessibility and energy efficiency with a priority to renew at least half of all older low-rise apartments and older three bedroom detached dwellings by 2031.

#### Recommendation 93

### Expand social housing in regional centres, in locations with good access

Focus social housing investments in regional centres, near transport and services, for better access to health, social and economic support.

#### Recommendation 94

### Make social housing suitable for changing local climates

Continue to deliver a long-term program of modifying social housing to be climate-resilient by improving the energy efficiency and energy affordability of residences.

#### New lettings affordable to lower income households:

16% New lettings in Barwon

40% New lettings in regional Victoria



One quarter of Barwon's low-income households experience **financial stress** from mortgage or rent

2.9 / 1,000

People homeless in Barwon

3.1 / 1,000

People homeless in City of Greater Geelong



Barwon's **homeless population** has risen 23% between 2011 and 2016





*Erskine Falls, Lorne*

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Printed on 100% recycled paper

August 2021

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ISBN 978-1-925632-58-3 (pdf/online/MS word)



*Boomerang painting at  
Narana Aboriginal Cultural Centre*