



Table of Contents

About Gippsland and One Gippsland	3
Snapshot	3
Executive Summary	4
Service Impacts	6
Mobile Blackspots/Mobile Network Operator (MNO) Mobile Coverage Maps	6
Fixed Line Broadband	7
Business	9
Sector-based Impacts	9
Tourism	10
Food and Fibre	11
Transport Corridors	13
Mobile Coverage - Road Corridors	13
Mobile Coverage - Rail Corridors	14
Resilience and Disaster Recovery	15
Further Information	18
Summary of Recommendations	19



About Gippsland and One Gippsland

Gippsland is a geographically, socially and economically diverse region. At approximately 41,000 km², it is the largest region in Victoria. Home to over 270,000 people¹ and 6 Local Governments, the region annually produces \$14 billion in Gross Regional Product (GRP).

One Gippsland is a peak regional advocacy body representing this diverse region. We aim to connect the dots between government, business and community, while also collectively working together to champion the interests of our region and our people.

It is our mission to create a thriving and dynamic region that harnesses the social, environmental and economic capabilities and assets. Gippsland has remarkable diversity so that we can offer residents opportunities for a great lifestyle and access to services at all stages of life.

Snapshot

A recent report produced by SGS Economics shows that Gippsland has undergone a series of economic shocks that has impacted the economic output of the region. Between 2015 and 2020 the combined effect of the COVID-19 restrictions, bushfires, dairy crisis, drought and hazelwood closure have had the following impact:

- Direct output loss of \$3.28 billion;
- Combined direct and indirect output loss was \$6.86 billion;
- A total of 10,213 job losses (direct and indirect); and
- Gross Regional Product shrunk by \$2.66 billion.

The closure of the native timber industry is expected to negatively impact direct output by \$548 million and further shrink Gross Regional Product by \$431 million in the next 10 years.

Despite these challenges, Gippsland has great growth aspirations including:

- Being Australia's most liveable region by 2040;
- Raise the Digital Inclusion Index Score to be in parity with Melbourne;
- Attracting an additional 75,000 residents 2040; and
- Increasing the annual Gross Regional Product to \$23.2 Billion by 2040.

To achieve these goals, investment in digital connectivity infrastructure will be required to improve the region's investment attractiveness, both to businesses looking to decentralise and to tree changers.

The One Gippsland Digital Connectivity Policy Position [can be viewed at this link](#).



Executive Summary

Gippsland is a large, diverse region with a sizable economic output.

A high level of digital connectivity is fundamental to facilitating effective emergency response capabilities, attracting investment and tourism to the region and improving liveability for those that reside there.

Without sufficient mobile and broadband connectivity, individuals and businesses in Gippsland will find themselves at a growing disadvantage.

Since 2018, the Gippsland region has experienced 39 different natural disasters, many of which have significantly impacted connectivity infrastructure and communities.¹ In a time of climate change there is no expectation that this figure will reduce.

The work from home mandate during the COVID-19 pandemic accelerated not only the shift of government service provision to online but also changed community expectations about telecommunications and other infrastructure services that support interactions with government.

Digital connectivity is essential to modern-day life, both to those who reside in metropolitan and regional Australia. Although connectivity has come a long way in recent years, there is still a large digital divide between urban, regional, rural and remote Australia. Put simply, businesses and communities in the Gippsland region require faster, more reliable and more affordable connectivity options that are comparable to their counterparts in metropolitan Melbourne.

These services include fixed broadband, mobile coverage and IoT (Internet of Things) networks. Availability of free public Wi-Fi is also vital for disadvantaged residents and tourists.

Unreliable connectivity services result in a decrease of economic output for businesses and the inability for disadvantaged residents to access reliable connectivity which will see the socio-economic divide continue in regional Victoria.

The Australian Digital Inclusion Index (ADII) 2023, which measures the level of digital inclusion across the Australian population, puts the Gippsland region about 10.5 points behind inner-city Melbourne. While this is an improvement from the 14 point gap in the ADII 2020, the divide is not resolving quickly enough. In fact, every Gippsland LGA was below the national average for this measure². Even within 'well served' regional areas,

¹ <https://www.disasterassist.gov.au/find-a-disaster/australian-disasters?state=vic>

² Royal Melbourne Institute of Technology-Swinburne-Roy Morgan-Telstra, 'The Australian Digital Inclusion Index 2020' [https://digitalinclusionindex.org.au/wp-content/uploads/2020/10/TLS_ADII_Report-2020_WebU.pdf_and_Interactive_data_dashboards_-_Australian_Digital_Inclusion_Index_\(for_ADII_2023\)](https://digitalinclusionindex.org.au/wp-content/uploads/2020/10/TLS_ADII_Report-2020_WebU.pdf_and_Interactive_data_dashboards_-_Australian_Digital_Inclusion_Index_(for_ADII_2023))



users regularly face issues in accessing the same reliable and high-capacity mobile coverage levels enjoyed by those in metropolitan Melbourne.

In 2019, a [Gippsland Digital Plan](#) was developed to articulate the region's current gaps in digital infrastructure and where future demands may lie. The development of the plan was a collaborative process that sought the views of the regional leaders, the business sector, community groups and local government. Market experts were also engaged and existing strategies and technical papers were reviewed to formulate the plan. The findings of the consultation revealed the key regional digital connectivity issues:

- **Place based Mobile Blackspots:** 496 registered mobile blackspots throughout the region;
- **Place based Fixed Line Broadband:** 72% of the regions cities and towns identified and “intermediate” supply shortfall in access to fixed line broadband;
- **Tourism Fixed Line Broadband:** 68% of key tourism locations identified a “major” supply shortfall and 32% have an “intermediate” supply in access to fixed line broadband;
- **Tourism Mobile:** 12% of key tourism locations identified had “major” supply shortfall and 24% had an “intermediate” supply shortfall for mobile coverage;
- **Agriculture Fixed line Broadband:** 100% have a “major” supply shortfall in fixed access broadband services for business users across the 5 key primary production regions;
- **Agriculture LP-WAN:** 60% have an “intermediate” supply shortfall for LP-WAN IoT supported services were identified across the 5 key primary production regions;
- **Freight Mobile:** Two class A roads and two key class B had “major” supply shortfalls mobile coverage; and
- **Road Mobile:** all 113 C classified roads within the region had “major” supply shortfalls mobile coverage.

Further to the lack of access to this integral enabling infrastructure, the plan revealed that digital skills shortages are a persistent issue across Gippsland, both in terms of basic digital literacy, as well as specialist technical skills to support business growth and competitiveness across the region.

This demonstrative lack of access to this important connectivity infrastructure will continue to impact and inhibit productivity and economic growth in almost all sectors across the region. This outcome is not conducive to fostering and supporting economic development opportunities in Gippsland, which is urgently needed to allow the region to recover from many regional shocks.

Not only is good connectivity important to the economics of a region like Gippsland, it is vital to the region's ability to react appropriately, manage and conduct good emergency procedures during times of natural disasters, such as bushfires, floods and storms. The importance of assurances on digital connectivity in these times does not only relate to the elimination of current blackspots, but also to the network resilience of current and future infrastructure to prevent outages in times of emergency.



Service Impacts

Mobile Blackspots/Mobile Network Operator (MNO) Mobile Coverage Maps

Regional cities and towns (as well as significant road and rail routes within Gippsland) are categorised as having good mobile coverage according to publicly available mobile network operator (MNO) coverage maps. However, consistent community feedback and anecdotal evidence suggests that coverage quality is significantly less than what is stipulated in these maps.

Further, the connectivity capabilities on regional and rural roads within Gippsland are unsatisfactory; prohibiting the attractiveness of these areas to tourists and also creating unsafe emergency situations. Likewise, poor in-carriage reception is experienced on trains operating east of Traralgon.

An analysis of Mobile Network Operator (MNO) coverage maps found there were 496 blackspots registered across the Gippsland region. Mobile connectivity was better when closer to cities or larger centres such as Traralgon, Warragul, Sale or Wonthaggi, but as users move from higher density town centres to more remote areas there is not only a reduction in the availability and quality of coverage, but also in the number of network providers who offer services.

This is unsurprising, given that these less populated areas are also less revenue dense for Mobile Network Operators (MNOs) and often coverage solutions are more costly. Adequate digital infrastructure provision by these operators should be seen as a market failure, which leaves those living in these areas with worse coverage than nearby regional centres and much worse coverage than metropolitan Melbourne.

However, where mobile connectivity did exist according to the MNO coverage maps, consultation found that coverage levels were misaligned with the real-world end user experience in Gippsland. Users were reporting little to no coverage where a map indicated connectivity was high.

That is, the maps often list reliable 4G connections in areas that are in fact are blackspots. Mobile phone users in regional areas frequently report weak signals and call drop-outs in areas that are claimed to have good coverage.

This real-world experience of mobile coverage shows that the situation is far more complicated than the coverage maps provided by the mobile network operators suggest.

This issue has been confirmed by the Victorian State Government in conjunction with the Commonwealth Government and Australian Competition and Consumer Commission (ACCC). Both the State and Federal Government and the regulator have pressed the mobile network operators to publish more useful coverage data. Based on this, it can be concluded that there is broad recognition that the MNO's maps are unreliable and



not reflective of real-time service levels.

There is a significant market failure in mobile coverage results for Gippsland. This is not reflected in publicly available MNO coverage maps, making them an unreliable source of information. Continuing to rely on the information in these maps is detrimental to good emergency response, investment opportunities and the liveability of the regions. Furthermore, continuing to use these maps is misaligned with the government's priority to address connectivity issues in regional Australia; issues cannot be addressed if they are unknown.

In this context One Gippsland acknowledges the Government's recognition of this issue and its launch of the national audit of mobile coverage in May this year. The proposed drive testing about 180,000 km of regional and rural roads every year for three years will give a more accurate picture of the issue and better target to address gaps in the mobile coverage.

One Gippsland also acknowledges the receipt of more than \$5 million in grants for 8 projects under the first three rounds of Regional Connectivity Program to improve connectivity in the region. However, the hundreds of blackspots that remain continue to diminish the competitiveness of Gippsland's industries and adversely impact the region's liveability.

Recommendation:

- **An obligation for MNOs to provide reasonable standards of service to lowly populated areas.**

Fixed Line Broadband

Access

This disparity outlined above between connectivity in metropolitan and regional areas is also present between regional hubs and the smaller rural and remote towns that surround them. As users move from higher density regional town centres to more remote areas there is not only a reduction in the availability and quality of digital coverage, but also in the number of network providers who offer services.

Analysis was undertaken to assess fixed access broadband in the region's key cities, centres and towns (ranging in size: 16 over the size of 1,000 people and 6 under 1,000). It found that:

- 72% of these cities/towns have an intermediate supply shortfall; and
- One town (Orbost) suffered from a major supply shortfall.

Intermediate supply shortfall include: Traralgon, Moe-Newborough, Warragul, Morwell, Sale, Bairnsdale, Drouin, Wonthaggi, Lakes Entrance, Leongatha, Trafalgar, Yarragon, Yallourn North, Mallacoota, Neerim South and Glengarry.



Affordability

The ADII also shows that affordability remains a key challenge and has almost certainly been exacerbated by the COVID-19 economic slowdown. The Affordability score has increased only marginally since 2014³. Even though the absolute cost of internet data has gone down, households are now spending more money on internet services due to greater usage – which can be attributed to the requirement of many households having to work and study from home. Expenditure on these services has generally increased faster than household income over this period.

The national average Affordability results obscure the hardships faced by those households on low or fixed incomes seeking to remain digitally connected. The latest detailed ADII data (2022) show that 100% of Australians in the lowest income quintile, and 48.3% of those in the second lowest, would have to pay more than 5% of their household income- the threshold of affordability stress- to gain quality, uninterrupted connectivity. Between 27 and 32% of households in the lowest two income quintiles respectively sacrificed household essentials for internet access.³ This is especially relevant for Gippsland: three of the six LGAs in the Gippsland Region are Q2 low-income.

In addition there is the issue of digital literacy that must be addressed.

The rate of digital proficiency amongst the Gippsland community is not at a high level compared to metropolitan counterparts. Programs that remove financial barriers for young students and adult learners to access technology could result in improving workforce shortages in various industries that require medium to high levels of digital proficiency, thus increasing local employment and increasing the ability of business growth.

The IoT for the agriculture sector streamline processes creating profitability and business growth and co-investment by government would also be beneficial.

More localised and focused training is required; however, any initiatives will require access to sufficient technology and base level skills. Therefore, unless infrastructure is fit-for- purpose, digital literacy is unlikely to improve in the region.

Recommendations:

- **Drive initiatives that remove financial barriers for young students and adult learners to access technology;**
- **Facilitation of digital literacy learning across Gippsland targeting community and business, including funding to develop region-specific training courses;**

³ [Affordability \(digitalinclusionindex.org.au\)](https://digitalinclusionindex.org.au)



- **Increase post-secondary Information Communications and Telecommunications (ITC) skills to**
- **support Gippsland's growth; and**
- **Develop and deliver a digital capability assessment/strategy for Gippsland businesses that will assist in economic growth and access export markets.**

Business

One Gippsland notes the 240 Business Fibre Zones project that includes the towns of Morwell, Cowes Sale and Wonthaggi as the availability and affordability of adequate business-grade services across all NBN technology types is a key issue in the Gippsland region.

Unfortunately, even after the introduction of NBN's Enterprise Ethernet business service, due to technical limitations, the service cannot be accessed by many businesses who have not received higher capacity technologies in the rollout and we would like to see the program expanded to include all major regional centres in Gippsland to enable businesses to meet growing digital demands and be contributors to the economic recovery and productivity growth of the state and country.

Recommendation:

- **Expand the Business Fibre Zone program to include all major regional centres in Gippsland.**

Sector-based Impacts

Gippsland is a large and diverse region with high economic output. Good mobile connectivity is fundamental to facilitating good emergency response capabilities, attracting investment to the region and improving liveability for those that reside there. Without sufficient mobile connectivity, individuals and businesses in Gippsland will find themselves at a growing disadvantage. This has grown increasingly more important since the remote working requirements brought on by COVID-19 restrictions.

Tourism and food and fibre are two of the biggest industries in Gippsland, being connected to reliable and fast mobile and internet networks is key to growing these industries.

Fast, reliable connections allow the agriculture sector to grow and innovate by being able to streamline processes using the Internet of Things (IoT). Similarly, good connections assist the tourism industry by creating networks that can handle usage spikes during large scale events and encourage tourists to holiday in our region.

This digital divide, if not addressed, will continue to impact and prohibit growth in almost all sectors across the region. This is not conducive to fostering and supporting economic development opportunities in the region, which could be a key contributor to the post-COVID-19 economic recovery.



The Gippsland regional economy is driven by sectors such as primary production and tourism as such, is crucial that connectivity solutions are implemented that facilitate the economic drivers of regions like Gippsland.

Tourism

In 2019, Gippsland visitor expenditure reached \$1.3 billion and had 3,000 small tourism businesses employing over 13,000 people.

Given the devastating impacts of both the COVID-19 pandemic, the 2019/2020 bushfires and the series of floods and fires from September 2023 to February 2024 on the Gippsland tourism industry, any further disadvantage to this sector could see businesses closing their doors for good. (The estimated loss of visitor expenditure for the December 2019 to March 2020 period is \$170-180 million).⁴

This is a key industry for Gippsland, and fostering its continued growth is essential for building the region's economy.

Bushfire impact model based on International and National Visitor Survey, Regional Expenditure Model, June 2019, Tourism Research Australia

Like the agricultural industry, tourism in Gippsland has also been identified as having low current digital intensity with requirements only set to grow over the next 3-5 years for the industries to remain competitive.⁵

Tourists travelling to and around Gippsland expect good mobile connectivity and often rely on it for navigation and travel information. Overseas tourists are also often heavily reliant on mobile internet connections as they are less familiar with their surrounds and are used to greater coverage in their home countries.

'Grey spots' are also an emerging significant issue for Gippsland, meaning there are areas that may have adequate connection at low demand times but access becomes unreliable or inaccessible during peak periods. This could be during school holidays and peak tourist seasons, or in much more life threatening cases such as communities converging in the event of a natural disaster.

Analysis of 25 key tourist locations in Gippsland including permanent attractions, event locations and trails found that no locations had adequate fixed access broadband and although 64% of locations had adequate mobile coverage, the lived experience often contradicts this.

Some of the locations that were identified as having major shortfall in supply are internationally acclaimed attractions such as the Australian Motorcycle Grand Prix and Phillip Island Penguin Parade. A breakdown of the impacts has been provided below for more context:

- 68% of locations have a major supply shortfall for fixed access broadband;
- 32% had an Intermediate supply shortfall for fixed broadband;
- 12% had major supply shortfall for mobile coverage; and



- 24% had Intermediate supply shortfall for mobile coverage.

These shortfalls in access to adequate mobile and fixed broadband create a range of issues that prevent the economic impact of this industry to be fully realised, these issues include:

- **GPS and Navigation:** Tourists travelling to and around Gippsland expect good mobile connectivity and often rely on it for navigation and travel information;
- **EFTPOS terminals:** Mobile connectivity is increasingly more important for vendors who rely on 3G/4G connections for EFTPOS terminals. It is also essential in facilitating exchange of product and money, between business and buyers at events like markets and festivals; and
- **Usage spikes:** Both coastal resorts that experience sharp seasonal visitor spikes and event locations that house large tourist events (like markets or music festivals) face constraints with network capacity due to an increase in user traffic. In some locations the population can increase five-to- ten-fold.

These issues could see tourists choosing attractions closer to townships, posing real implications for businesses at more remote sites. For a region renowned for “nature based” tourism, this poses real challenges as many of the attractions are away from main town centres.

Further, it could affect the attractiveness to potential event organisers in choosing a location in Gippsland.

Without intervention, these implications will likely affect the productivity and economic abilities of the tourism sector in Gippsland.

One Gippsland note Federal Government programs that seek to address coverage issues for tourism operators such as the Mobile Blackspot Program and the Regional Connectivity Program and recommend that Gippsland is prioritised in the program rollouts to address these issues.

Recommendations:

- **Prioritise Gippsland in the rollout of future rounds of the Regional Connectivity Program;**
- **Deliver mobile roaming availability for international visitors in remote locations; and**
- **Consideration of the impact of both ‘black spots’ and ‘grey spots’, which are likely to occur in growing communities that interface bushfire and flood prone areas.**

Food and Fibre

The food and fibre industry in Gippsland has a gross value of \$7 billion⁶. Gippsland has a goal of Increasing the annual Gross Regional Product to \$23.2 billion by 2040, to be able to achieve this, productivity and economic growth must be made possible through improved digital infrastructure.

In 2018/19, agricultural production in Gippsland made up 14% of the total gross value of agricultural production in Victoria (\$2.2 billion of Victoria’s \$15.9 billion).⁷ International exports from the region are worth \$1.3 billion and agriculture (and associated industries) make up three of the top five international export industries in



Gippsland.

The agribusiness sector is a significant employer in the region, with over 37% of Gippsland's business involved in agriculture and fishing and a further 15% involved in upstream processing operations. Livestock products, including milk production, represent about 50% of that total, followed by Livestock Slaughters (30%), and Crops (20%).

The flourishing dairy industry in Gippsland produces 32% of Victoria's dairy production or 19% of Australia's dairy production and accounts for about a third of Victoria's total dairy revenue. There is a large dairy-processing sector within the region producing fresh milk, milk powder, butter, cheese and other products for domestic and significant export markets. Several specialty cheese businesses also exist in Gippsland producing a wide range of high-quality cheeses and other value-added dairy products.

In addition to dairy, Gippsland has a significant grazing industry based predominantly on beef, but also wool and prime lamb production. A significant proportion of the high value grass-fed beef produced in Gippsland is exported to regions throughout Asia.

Gippsland has a thriving vegetable-producing industry. The trend for vegetable processors is to market fresh vegetables, however some regional processors are utilising value-adding techniques such as cleaning and packaging to meet the 'consumer ready' markets.

Energy production is one of Gippsland's major industries, based in the Latrobe Valley and Bass Strait's oil and gas fields. The region produces around 90% of Victoria's electricity and 97% of Victoria's natural gas, with 46% of Australia's oil coming from the Bass Strait fields.

The Gippsland forestry industry encompasses a wide variety of operations, from Australia's largest pulp and paper mill to many small hardwood mills. It is estimated that the value of forestry to Gippsland's economy is comparable to that of agriculture. In this context, it must be noted that the closure of the native timber industry is expected to negatively impact direct output by \$548 million and further shrink the Gross Regional Product by \$431 million over the next ten years.

An analysis of digital intensity requirements reveals that agriculture will rely heavily on digital services over the next 3-5 years to be able to retain competitiveness in the Australian and international market.⁹

The Gippsland Digital Plan assessed the current unmet needs of five primary production (beef, dairy, grazing) locations in Gippsland.

Of the 5 key primary production regions in Gippsland analysed:

- 100% have a major supply shortfall in fixed access broadband services for business users; and
- 60% have an intermediate supply shortfall for LP-WAN IoT supported services.



The findings show that, in the best circumstances, these primary production areas have a shortfall in coverage supply – meaning often supply does not meet the needs of the producers. Further, two surveyed locations were identified as having major shortfalls in supply.

The digital requirements for agriculture and primary production businesses in Gippsland will be an ever-increasing evolution. Evidence to date suggests that market led solutions will likely continue to fail to address this growing gap, leaving solutions for these issues to the remit of federal or state government blackspot programs.

As demonstrated, agriculture and primary production are key driving forces in the Gippsland regional economy but also too in the Victorian state economy. To not foster and support the growth of business in this sector could be economically detrimental to both the region and state's economy.

For these reasons, One Gippsland is calling for Gippsland to be prioritised in future rounds of the Regional Connectivity Program.

Recommendation:

- **Prioritise Gippsland in the rollout of future rounds of the On Farm Connectivity Program**

Transport Corridors

Whilst One Gippsland agrees with prioritising regional and remote transport corridors; however, only using routes defined within the Roads of Strategic Importance (ROSI)¹⁰ initiative or National Land Transport Network (NLTN)¹¹ is problematic. These initiatives are not representative of the Gippsland region as there are no rail, and few key road corridors identified in either of these programs.

Road and rail corridors that provide key linkages for businesses, commuters and tourists are fundamental to the success of regions and also the national economy, as such these linkages should be considered under any proposed criteria. Smaller regional residential roads should also be included as coverage in these areas is essential in emergency situations like evacuating during bushfires.

Mobile Coverage - Road Corridors

The ROSI includes only one road within East Gippsland (which services a small section of the community). Similarly, the NLTN also only identifies one road, a main thoroughfare from Melbourne to Traralgon with adequate mobile coverage.

This therefore excludes most of the Gippsland region, many areas of which have significant mobile connectivity issues. The Gippsland Regional Plan identified:



- Two class A roads and two key class B roads: have major shortfalls in coverage supply (3G or little/no coverage). These roads service a large catchment of the Gippsland population, provide essential connections for travelling tourist and connect food and fibre producers with export and domestic markets; and
- All 113 C classified roads: Within the region have major shortfalls in supply (little coverage and no cover in alpine regions). These roads are also key to the connectivity of the Gippsland region, helping community members travel for essential services, work and school and stay safe in times of emergency.

As shown earlier, tourism is a key industry in the Gippsland economy. Bad connectivity on road corridors means that tourists cannot access the required mobile GPS services needed for travelling around the region. In an already competitive market, the tourism industry is going to be even more so following the bushfires and COVID-19. Not resolving these issues could be detrimental to Gippsland's competitiveness in this industry.

Additionally, the Gippsland Digital Plan notes all 113 C classified roads within the region have major shortfalls in supply (little coverage and no cover in alpine regions). These roads are also key to the connectivity of the Gippsland region, helping community members travel for essential services, work and school etc.

The market alone is expected to fail in addressing these connectivity issues. Intervention is required to lift mobile coverage on these more minor roads.

The Gippsland regional economy is driven by sectors such as primary production and tourism as such, One Gippsland believe that any further rounds of the Regional Connectivity Program should support coverage solutions that facilitate the economic drivers of regions like Gippsland.

Recommendations:

- **Prioritise Gippsland in the rollout of future rounds of the Regional Connectivity Program; and**
- **Include coverage solution on smaller more localised transport corridors to allow for necessary local connections and to facilitate more widespread tourism throughout the region, outside of main town centres in the future rounds of the Regional Connectivity Program.**

Mobile Coverage - Rail Corridors

Rail routes from Melbourne to Traralgon have strong and continuous mobile connectivity following the Victorian State Government VicTrack12 program that undertook significant work on enhancing mobile connectivity on regional V/Line routes throughout the state.

There has however been an identified intermediate shortfall in supply on Gippsland rail between Traralgon and Bairnsdale.

Unsurprisingly (given the aforementioned issues with MNO coverage maps), train travellers frequently report



poor connectivity in areas where the MNOs suggest good coverage is provided. This is due either to localised mobile blackspots or carriage types that block passenger in-carriage reception.

The rail corridor between Traralgon and Bairnsdale is a significant route for commuters, tourists and the Gippsland community. Yet, under this proposed coverage area, solutions to address the lack of mobile coverage on this essential rail corridor would not be eligible for funding. Poor connectivity on this rail line is prohibitive to the productivity of commuters and decreases the attractiveness of the area to travelling tourists, private sector decentralisation and investment opportunities in the region. This puts our region, and its residents, at a growing disadvantage to those in metropolitan and suburban areas.

Recommendations:

- **Enhancements for mobile services on V/Line trains east of Traralgon to Bairnsdale need to be prioritised to enable liveability and better attract investment; and**
- **Deliver free passenger Wi-Fi on public transport.**

Resilience and Disaster Recovery

Since 2018, the Gippsland region has experienced 39 different natural disasters, many of which have significantly impacted connectivity infrastructure and communities.⁴ Although not the most recent bushfires in Gippsland, the 2019/20 severe bushfires are instructive about the extent of damage and the critical role of digital connectivity.

These fires caused damage to the likes not experienced in the region before. Over 1 million hectares of forest, agricultural land, livestock and private homes in a number of communities were destroyed and approximately 1,700 people were evacuated from Mallacoota alone.

These fires were devastating to both community and native flora and fauna and demonstrated the very real and pressing gaps in the ability for community access to receiving vital information. Already known mobile blackspots caused issues in receiving and disseminating information, and impacts on the telecommunication networks during these fires exacerbated this issue over large pockets of the region.

More recently, in February 2024, a devastating storm event resulted in almost all townships in South Gippsland experiencing a loss of mobile phone coverage, including Triple Zero (000) services. In Mirboo North many residents were without access to 000 services for around seven days until adjacent communications towers came back online, providing intermittent coverage.

This storm event was the second unprecedented storm event to impact South Gippsland in the past three years.

⁴ <https://www.disasterassist.gov.au/find-a-disaster/australian-disasters?state=vic>



A report into the 2019-2020 fires, conducted by the Australian Communications and Media Authority (ACMA) shows that the majority of mobile service outages experienced during the bushfires was due to power outages at base stations, not direct fire damage (80% of outages were due to power outages while only 1% was due to fire damage). This underscores the need for resilience in telecommunication networks.

In the most recent spate of bushfires, the country saw 1,390 telecommunication network facilities impacted, 77% of which caused mobile outages. Further, 51% of these facilities experienced outages of four hours or more, 26% experienced outages of less than four hours and 23% were impacted without experiencing any service outages.

The most important of these statistics, is the 323 (23%) facilities either directly or indirectly impacted by the bushfires, that did not experience any service outage. According to the report conducted by ACMA, this is because the facilities were supported by backup power until mains power was able to be restored.

These power outages often cause prolonged telecommunication outages as MNOs are unable to access base stations to fix power outages or deploy backup generators as the area may be unsafe to enter. Further, outage of less than 4 hours' experience at the 359 facilities were resolved by the restoration of power.

This shows that by having backup power already at these base stations, network impacts from power outages can be minimised and, in many cases, eliminated altogether.

The average length of outages at mobile base stations during the recent bushfires was 2.5 days. Mandating that all funded solutions provide at least 12 hours of auxiliary backup power (as was proposed in section 7 of the Mobile Black Spot Program Discussion Paper) would therefore not be long enough to cover the average outage time experienced during bushfires. Requiring base stations to have at least 72 hours of auxiliary backup power to avoid immediate and prolonged outages during times of natural disaster would be more fitting.⁵

Additionally the Commonwealth STAND program which installed satellite telecommunications in a number of community facilities throughout Gippsland during recent outages was welcome. The STAND units are intended as a safety net enabling communications at community hubs when the landline and mobile systems fail. It is our view that funding for this service should be ongoing.

Climate change means that we should expect a greater number of fires, floods and storms in the future. Due to its size, composition of national and state parks and the spread of its population (as outlined above) Gippsland is particularly vulnerable to natural disasters like bushfires and floods. Since September 2023 alone Gippsland has endured six disasters.



In the face of the challenges of climate change, digital connectivity has become a key component of disaster management. Mobile and internet services are critical to community safety and psychological well-being, since lack of information contributes to the sense of “loss of control” felt by communities during emergency events, increasing trauma. In fact, the use of digital technologies has become a primary means of communication of emergency information.

Given this heavy reliance of emergency services for provision of advice and warnings by digital methods, telecommunications must be considered as an essential service with defined performance requirements in relation to reliability. It follows that mandated service reliability and coverage are required to meet this fundamental shift in digital communications use.

In the aftermath of the 2019-20 fires, telecommunications were reviewed and upgraded, resulting in increased provision of batteries, generators and other infrastructure to address service reliability. Unfortunately, the experience of the most recent Gippsland storms showed that the promise offered by the system upgrades following the 2019/20 fires was not kept.

The resilience of back-up infrastructure in the last event fell from 15 hours to just two hours of back up energising. This suggests advances made are not resilient in a widespread emergency and other mechanisms are required to augment and support them. Clearly, more needs to be done.

An independent investigation into the widespread telecommunications infrastructure failures in the February 2024 storm event with clear recommendations and a plan for Gippsland to enhance system resilience is needed. Given the heavy reliance of emergency services for provision of advice and warnings by digital methods, telecommunications must be considered as an essential service with defined performance requirements in relation to reliability.

It is vital that infrastructure have at least 48 hours of auxiliary back-up power to avoid outages during this time.

RECOMMENDATIONS

- **Telecommunications are recognised as an essential service, and providers must be required to meet service continuity standards to prevent significant, prolonged and widespread outages during natural disasters;**
- **Emergency roaming is mandated for all carriers;**
- **Infrastructure have at least 72 hours of auxiliary back-up power to avoid outages during emergencies;**
- **Funding for the Commonwealth STAND program, intended as a safety net enabling communications at community hubs when the landline and mobile systems fail, should be ongoing;**
- **Establish an independent investigation into the widespread telecommunications infrastructure failures in the February 2024 storm event with clear recommendations and a plan for Gippsland to**



enhance system resilience; and

- Investigate a community partnership model in remote areas that maintains back-up infrastructure (i.e., generators) prior to and during events, improving reliability.

Further Information

[Redacted]

Secretariat Services, One Gippsland

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Summary of Recommendations

Issue	Recommendation
Resilience and Disaster Recovery	Telecommunications are recognised as an essential service, and providers must be required to meet service continuity standards to prevent significant, prolonged and widespread outages during natural disasters.
	Infrastructure have at least 72 hours of auxiliary back-up power to avoid outages during emergencies.
	Establish an independent investigation into the widespread telecommunications infrastructure failures in the February 2024 storm event with clear recommendations and a plan for Gippsland to enhance system resilience.
	Funding for the Commonwealth STAND program, intended as a safety net enabling communications at community hubs when the landline and mobile systems fail, should be ongoing.
	Investigate a community partnership model in remote areas that maintains back-up infrastructure (i.e., generators) prior to and during events, improving reliability.
Mobile Black Spots	Prioritise Gippsland in future rounds of the Regional Connectivity Program.
Mobile Coverage Surveying	An obligation for MNOs to provide reasonable standards of service to lowly populated areas.
Business-Grade NBN	Expand the Business Fibre Zone program to include all major regional centres in Gippsland.
Improve Connectivity For Tourism and Primary Production	Prioritise Gippsland in the rollout of future rounds of the Regional Connectivity Program.
	Mobile roaming availability for international visitors in remote locations.
	Consideration of the impact of both 'black spots' and 'grey spots', which are likely to occur in growing communities that interface bushfire and flood prone areas.



Issue	Recommendation
Mobile Connectivity: Rail	Enhancements for mobile services on V/Line trains east of Traralgon to Bairnsdale need to be prioritised to enable liveability and better attract investment.
	Deliver free passenger Wi-Fi on public transport.
Mobile Connectivity: Road	Prioritise Gippsland in the rollout of future rounds of the Regional Connectivity Program.
	Include coverage solution on smaller more localised transport corridors to allow for necessary local connections and to facilitate more widespread tourism throughout the region, outside of main town centres in the future rounds of the Regional Connectivity Program.
Digital Literacy and Skills	Drive initiatives that remove financial barriers for young students and adult learners to access technology.
	Facilitate digital literacy learning across Gippsland targeting community and business, including funding to develop region- specific training courses.
	Increase post-secondary Information Communications and Telecommunications (ITC) skills to support Gippsland's growth.
	Develop and deliver a digital capability assessment/strategy for Gippsland businesses that will assist in economic growth and access to export markets.