

**Australia Government
Mobile Black Spot Program
Round 5A Consultation on Design Options**

**Submission by One Gippsland
2020**

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About One Gippsland

Gippsland is a geographically, socially and economically diverse region. At approximately 41,000 km², Gippsland is the largest region in Victoria. It's home to over 270,000 people,¹ 6 Local Governments and 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, assets and remarkable Gippsland diversity so that we can offer residents opportunities for great lifestyles, prosperity and access to services at all stages of life.

One Gippsland is an alliance of local government and industry leaders within the Gippsland region. We are not technical experts or mobile service providers, as such this submission outlines our high level priorities regarding mobile connectivity improvements for our communities.

In response to questions of a highly technical nature, One Gippsland state that our alliance is in support of the most effective application that will improve both overall mobile coverage in Gippsland, and address the existing blackspots within select areas of our region.

The Gippsland Regional Partnership has recently developed the Gippsland Digital Plan (last updated August 2019).² This submission outlines the information and subsequent priorities established in the consultation and development within this plan. We have also attached this plan as an appendix for further information.

Further, in the context of this submission, connectivity refers to broad based digital connectivity, via mobile and internet connection. Connectivity related to road and rail will be stipulated where required.

For more information

Shannyn Peterson - Secretariat Services - One Gippsland

E: gippsland@collectiveposition.com

P: 0434 274 457

(Federal Lobby Register No: 18169904232)

¹ https://quickstats.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/205?opendocument

² Gippsland Regional Partnership 'Regional Digital Plan – Gippsland',
https://www.rdv.vic.gov.au/_data/assets/pdf_file/0010/1872946/Gippsland-Digital-Plan-Final-25-September.pdf

Overview

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.

The Australian Digital Inclusion Index (ADII), which measures the level of digital inclusion across the Australian population, puts the Gippsland region nearly 15 points behind inner-city Melbourne.³ It is this divide that sees One Gippsland support solutions that actively work to address these issues.

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.

Agriculture and Tourism are two of Gippsland's biggest industries; being connected to reliable and fast mobile and/or broadband network is key to growing businesses within these sectors. Mobile coverage on farms and in tourist destinations within the region is sub-par, limiting the innovative abilities of these industries to grow their businesses and attract investment opportunities.

Good internet and mobile 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.

Further, the improvement of connectivity in regions like Gippsland assists in attracting private investment, decentralisation and new residents to the area.

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 (like the recent bushfires). The importance of assurances on digital connectivity in these times does not only relate to the elimination of

³ Royal Melbourne Institute of Technology-Swinburne-Roy Morgan-Telstra, 'The Australian Digital Inclusion Index 2018' <https://digitalinclusionindex.org.au/wp-content/uploads/2018/08/Australian-digital-inclusion-index-2018.pdf>

current blackspots, but also to the network resilience of current and future infrastructure to prevent outages in times of emergency.

Mobile connectivity is not only essential for fostering the liveability of our regions, but also for supporting the growing digital demands of businesses in regional Australia and providing the essential connections required in times of natural disaster.

Digital Divide

The Australian Digital Inclusion Index (ADII),⁴ which measures the level of digital inclusion across the Australian population, scores Gippsland nearly 15 points lower than inner city Melbourne (55.6 in Gippsland and 69.2 in inner city Melbourne). It is this divide that sees One Gippsland support solutions that actively work to close this gap.

These figures, whilst disappointing for those in Gippsland, are not surprising. Even within 'well served' regional areas, users regularly face issues in accessing the same reliable and high-capacity mobile coverage levels enjoyed by those in metropolitan Australia.

This disparity 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 mobile coverage, but also too in the number of network providers who offer services.

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

This issue therefore sees One Gippsland support the proposed reservation of funding (and potentially higher levels of funding) for solutions that deliver services in low population dense areas.

Mobile Connectivity and Economic Growth

Gippsland is a large and diverse region with high economic output. Good mobile connectivity is fundamental to facilitating good emergency response capabilities, attracting

⁴ Royal Melbourne Institute of Technology-Swinburne-Roy Morgan-Telstra, 'The Australian Digital Inclusion Index 2018' <https://digitalinclusionindex.org.au/wp-content/uploads/2018/08/Australian-digital-inclusion-index-2018.pdf>

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 is growing increasingly more important with the recent remote working requirements brought on by COVID-19 restrictions.

Agriculture and Tourism 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, One Gippsland believe that any further rounds of the MBSP (including 5A) should support coverage solutions that facilitate the economic drivers of regions like Gippsland.

Primary Production

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).⁵ 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.⁶

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 thirds 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.

⁵ <https://www.agriculture.gov.au/abares/research-topics/aboutmyregion/vic-latrobe#agricultural-sector>

⁶ Aither, ' Gippsland Regional Profile: an analysis of regional strengths and challenges March 2019'

Several speciality 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.

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.⁷

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

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.

⁷ McKinsey Digital – Digital Australia: Seizing the opportunity from the Fourth Industrial Revolution; OECD – A taxonomy of digital intensive sectors

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 the recent bushfires on the Gippsland tourism industry and now the impacts of COVID-19, 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).⁸

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

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.⁹

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 country.

Further, mobile connectivity is becoming increasingly more important for vendors who rely on 3G/4G connections for EFTPOS terminals. So too, it is essential in supporting the connectivity needs of those who attend events. In particular, we see the important role connectivity plays in facilitating exchange of product and money, between business and buyers at events like markets.

The Gippsland Digital plan assessed mobile connectivity in tourism locations across the region. The plan investigated two types of tourist sites; static tourist attractions and sites that host periodic events such as markets and/or music festivals.

As mentioned, the further you travel from population centres, the worse the mobile connectivity gets. It is therefore unsurprising that tourist sites, both static attractions and event locations, that are further from populated town centres have poor mobile connectivity.

⁸ Bushfire impact model based on International and National Visitor Survey, Regional Expenditure Model, June 2019, Tourism Research Australia

⁹ McKinsey Digital – Digital Australia: Seizing the opportunity from the Fourth Industrial Revolution; OECD – A taxonomy of digital intensive sectors

Usage spikes also pose an issue for tourist sites in the region. 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 during this increase in user traffic. In some locations the population can increase five-to- ten-fold (e.g. Phillip Island, Inverloch, Venus Bay, Wilsons Promontory, Lakes Entrance and Marlo).

This could see tourists choosing attractions closer to townships, posing real implications for businesses at these more remote sites. Further, it could likely 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.

It is unlikely that market forces will sufficiently address these supply demands in remote tourist locations.

Recommendation

One Gippsland agree with the proposed second component of Round 5A set to reserve funding (and potentially offer higher levels of funding) to solutions that deliver services to low population areas (as stipulated in section 1-B in the Australian Government Mobile Black Spot Program, Round 5A, Discussion paper).

One Gippsland therefore recommend that key industries such as tourism and primary production be included in the eligible criteria of Round 5A MBSP. This is on the basis that mobile connectivity is becoming ever more important for the region's key industries. If these blackspots and shortfalls are not resolved, our businesses will be put at an economic and social disadvantage.

Mobile Network Operator (MNO) Mobile Coverage Maps

Publicly available coverage maps published by the relevant MNOs often list a level of coverage that is misaligned with the real-world experience in Gippsland. 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 prohibitive to good emergency response, investment opportunities and the liveability of the regions. Furthermore, continuing to use these maps is misaligned with government's priority to address connectivity issues in regional Australia; issues cannot be addressed if they are unknown.

More in-depth surveys in regional Australia need to be conducted to identify actual coverage levels and then address blackspots in pockets that are assumed to be connected with higher capabilities.

One Gippsland recognises that better technology to address blackspots may need to use more advanced technologies than would otherwise be used in less challenging terrain. It is One Gippsland's recommendation that the government should consider these challenges and make allowances for the required funding of these solutions within the MBSP.

Recommendation

One Gippsland recommend comprehensive surveying be conducted in regional Australia to understand actual mobile coverage capabilities. MNO maps are unreliable and should not be the only source of coverage information the government considers in the design of the mobile blackspots program.

Transport Corridors

It is noted that in the *Australia Government Mobile Black Spot Program—Round 5A—Discussion paper (Section 1C)*, it was proposed that a third component of Round 5A be reserved for funding to target coverage along major regional and remote transport corridors (including to communities along these corridors).

Further proposed in the discussion paper was that Round 5A would target transport corridors defined in the Roads of Strategic Importance initiative and National Land Transport Network, as these “identify significant transport corridors that deliver economic and social benefits to Australia”.

Whilst One Gippsland agrees with prioritising regional and remote transport corridors, 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 the 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 - 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.

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

¹⁰ https://investment.infrastructure.gov.au/key_projects/initiatives/roads_strategic_importance.aspx

¹¹ https://investment.infrastructure.gov.au/about/the_national_land_transport_network.aspx

¹² Victorian State Government, 'VicTrack', <https://www.victrack.com.au/projects/past-projects/regional-rail-connectivity>

Melbourne to Traralgon with adequate mobile coverage. This therefore excludes most of the Gippsland region, many areas of which have significant mobile connectivity issues.

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.

Analysis done for the Gippsland Digital Plan shows suitable mobile coverage on major (Class M) thoroughfares, mixed coverage on intermediate (Class A and B) roads and poor coverage on minor (Class C) roads.

Further, there are two key Class A roads and two key Class B roads identified within the Gippsland Digital Plan as having major shortfalls in coverage supply (3G or little/no coverage). Although these roads service a large catchment of the Gippsland population, provide essential connections for travelling tourist and connect primary producers with market opportunities, they would not be eligible for funding under the Government's current proposed guidelines.

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. By including criteria that facilitates the eligibility of these roads in the Round 5A of the MBSP, the Government can assist the Gippsland region in stemming any further growth in the current digital divide.

Recommendation

One Gippsland recommends that transport corridors eligible for within this priority area should not be limited to those defined within the Roads of Strategic Importance initiative and National Land Transport Network. A more flexible model would allow for connectivity solutions on important road and rail routes that don't fit within these two initiatives to be funded where required.

Mobile Connectivity During Bushfire Events

Although not the first time Gippsland has experienced severe bushfires, the recent 2019/20 fires caused damage to the likes not experienced in our 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 holes 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.

Telecommunication networks are more essential than ever during bushfires as they are crucial to the dispersing and receiving of information vital to decision making. Further, they are crucial to the connectivity and communication required between emergency services and evacuation centres.

A report conducted by the Australian Communications and Media Authority (ACMA)¹³ 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 has drawn attention to the need for resilience in telecommunication networks.

Network resilience

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

¹³ Australian Communications and Media Authority, 'Impacts of the 2019–20 bushfires on the telecommunications network', <https://www.acma.gov.au/publications/2020-04/report/impacts-2019-20-bushfires-telecommunications-network>

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 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 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 48 hours of auxiliary backup power to avoid immediate and prolonged outages during times of natural disaster would be more fitting.

Recommendation

One Gippsland recommend that any infrastructure or solutions funded in areas that are prone to natural disasters have at least 48 hours of auxiliary backup power to avoid immediate and prolonged outages during times of natural disaster.