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# Macedon Ranges Telecommunications Black Spots Study

Prepared for  
Macedon Ranges Shire Council

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# Executive Summary

- The Macedon Ranges Shire Council business survey has regularly highlighted poor levels of telecommunications coverage across parts of the Shire. Community feedback (via a survey) on phone and Internet coverage highlights the impact it has on safety, business productivity, education, social connectedness and access to services.
- The survey results and the analysis contained in this report provide the evidence base for Council advocacy to state and federal government, as well as commercial telecommunications providers.
- A total of 633 respondents registered their concerns about mobile phone and/or Internet coverage at their place of work and home. The majority of participants responded as residents who are also local business owners (53%), raising concerns about both Internet and mobile phone coverage (36% of all respondents) (Table A).

**Table A** Telecommunications Register Responses by Type and Issue

Item	Residential	Business	Both	Total
Internet	21 (3.3%)	1 (0.2%)	37 (5.8%)	59 (9.3%)
Mobile Phone	65 (10.3%)	19 (3%)	70 (11.1%)	154 (24.3%)
Both	163 (25.8%)	29 (4.6%)	228 (36%)	420 (66.4%)
Total	249 (39.3%)	49 (7.7%)	335 (53%)	633

- Taking into account the geographical distribution of the population, the responses show particular concerns about black spots around Woodend, South Gisborne, Kyneton, Darraweit Guim, and Bullengarook.
- The combination of factors that generated the greatest concern were:
  - Mobile phone reception (528 respondents out of 633) and its impact on business productivity (161 respondents); and
  - Internet speed (260 out of 633) and its impact on business (146 respondents).
- According to the survey, the greatest areas for concern about mobile coverage are: business productivity (25% of respondents citing this as an issue); and fire safety (14%). For the Internet it was: productivity (23%) and access to education (9%).
- Lack of capacity and/or distance to the local exchange were cited as the barriers to improving Internet services. Although not raised by survey respondents, topography and low density rural living are two known major impediments to improving Internet and mobile phone service quality.
- Telephone interviews with four local business owners and Shire staff revealed further details about the impacts on business productivity, curriculum provision, fire safety operations, tourism services and information dissemination. These included a significant reduction in business productivity and growth capacity; greater risk in relation to fire safety; and the inability to deliver education.



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# 1. Introduction

The Macedon Ranges Shire Council business survey has regularly highlighted poor levels of telecommunications coverage across parts of the Shire. This report evaluates community feedback on phone and Internet coverage around the Shire and the impacts it has on business activity, community safety, social connectedness and access to services.

Better access to high quality telecommunications has been a consistent issue for residents and businesses located in the Macedon Ranges. A survey of local businesses undertaken in both 2011 and 2013 highlighted wide spread concern with telecommunications access and quality. For example, in the 2013 survey, 61% of home-based businesses indicated that high-speed Internet was the highest priority service and infrastructure need. The proposed introduction of the National Broadband Network (NBN) was previously seen as solution to many of these issues. The date of any NBN roll out to Macedon Ranges Shire is now unclear.

In response to this, the Shire commissioned a study to document and demonstrate the impact of poor telecommunications services on the residents and businesses of the Macedon Ranges. This study involved:

1. A review of the 633<sup>1</sup> responses to a survey undertaken by the Shire which sought community and business feedback on telecommunications coverage; a diagnosis of the cause of suboptimal service provision; and the impact of deficient services on business productivity and the local community.
2. Mapping the location of 'black spots' (i.e. areas with poor Internet or mobile coverage). This mapping was based upon community and businesses responses from the Shire's register. Around 65% of responses had sufficient detail to allow accurate geo-coding, and were then mapped. The remaining 35% of responses were retained for issues analysis, but were not able to be mapped.
3. Telephone interviews with five stakeholders to investigate the consequences of poor telecommunications access in more detail.

Table 1 shows that almost all of the 633 respondents (92%) commented as either a resident or both a resident and local business operator. Two thirds (66%) reported both an Internet and mobile phone service issue. Percentage figures in the table refer to the percentage share of the total respondents (i.e. out of 633).

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<sup>1</sup> There were 20 duplicate in the 653 survey responses. These were removed prior to analysis.

**Table 1 Summary of Responses by Respondent Type and Issue**

Item	Residential	Business	Both	Total
Internet	21 (3.3%)	1 (0.2%)	37 (5.8%)	59 (9.3%)
Mobile Phone	65 (10.3%)	19 (3%)	70 (11.1%)	154 (24.3%)
Both	163 (25.8%)	29 (4.6%)	228 (36%)	420 (66.4%)
Total	249 (39.3%)	49 (7.7%)	335 (53%)	633

**Table 2** summarises the responses by the type of problem raised. The combination of cause and effect that generated the greatest concerns were:

1. Mobile phone reception (528 respondents out of 633) and its impact on business productivity (161 respondents).
2. Internet speed (260 out of 633) and its impact on business productivity (146 respondents).

**Table 2 Summary of Responses by Problem Type**

Item	Residential	Business	Both	Total
<b>Mobile phone issues</b>				
Poor reception	209	45	274	<b>528</b>
Very poor <sup>2</sup>	82	17	111	210
Cost	16	5	23	44
<b>Mobile phone impacts</b>				
Fire safety	44	2	45	91
Other safety	22	8	29	59
Business productivity	0	33	128	<b>161</b>
Social connections	20	3	19	42
<b>Internet issues</b>				
Speed	92	16	152	<b>260</b>
Reliability	80	12	132	224
Cost	17	4	23	44
<b>Internet impacts</b>				
Fire safety	17	2	18	37
Other safety	1	0	4	5
Productivity	0	12	134	<b>146</b>
Education	21	3	35	59
Social connections	12	3	9	24

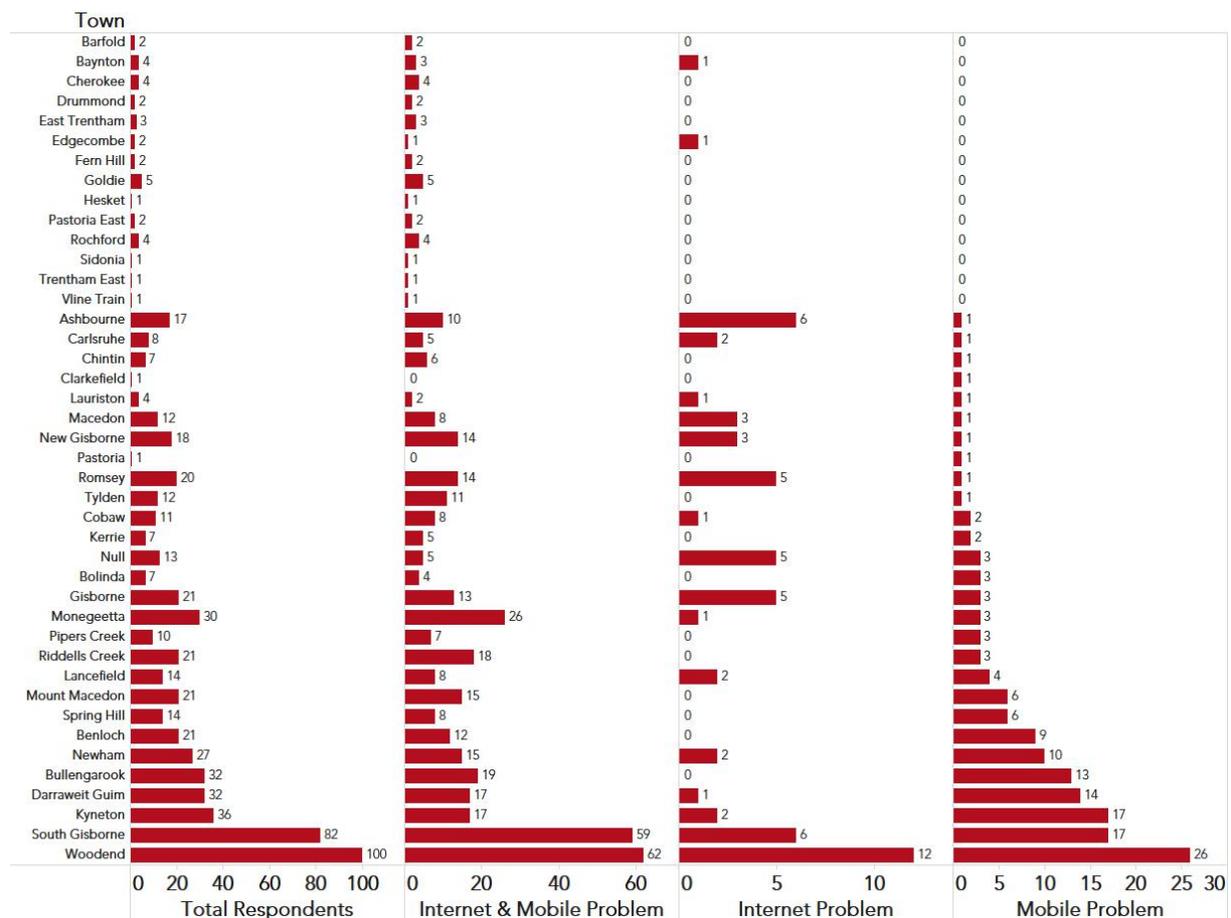
<sup>2</sup> This refers to those respondents who indicated there was no mobile phone coverage anywhere on their property.

## 2. Black Spot Locations

Community members and businesses completing the black spot survey were asked where they were located. Accounting for population size, they show particular concerns about black spots around the localities of Woodend, South Gisborne, Kyneton, Darraweit Guim, and Bullengarook.

Figure 1 details the number of black spot reports from the Macedon Ranges community, according to their location. These reports are also mapped in Figures 2 and 3, which show areas with a higher number of black spot reports in darker red<sup>3</sup>.

Figure 1 Location of respondent by service problem



Data: Macedon Ranges Shire Council Survey, 2014; Analysis: Geografia, 2014

<sup>3</sup> Kernel density analysis (with a radius of 2.5km) was used to map the black spots. Kernel density analysis highlights the those areas that have a high concentration of black spot reports by estimating the 'density' of reports in an area. It is useful for identifying clusters of black spot reports.

An analysis of black spots across the Shire shows that reports of poor telecommunications services are spread widely. The areas most impacted were the more urbanised settlements (e.g. Kyneton, Woodend), as well as the more rural areas.

The five localities that had the highest number of black spot reports were:

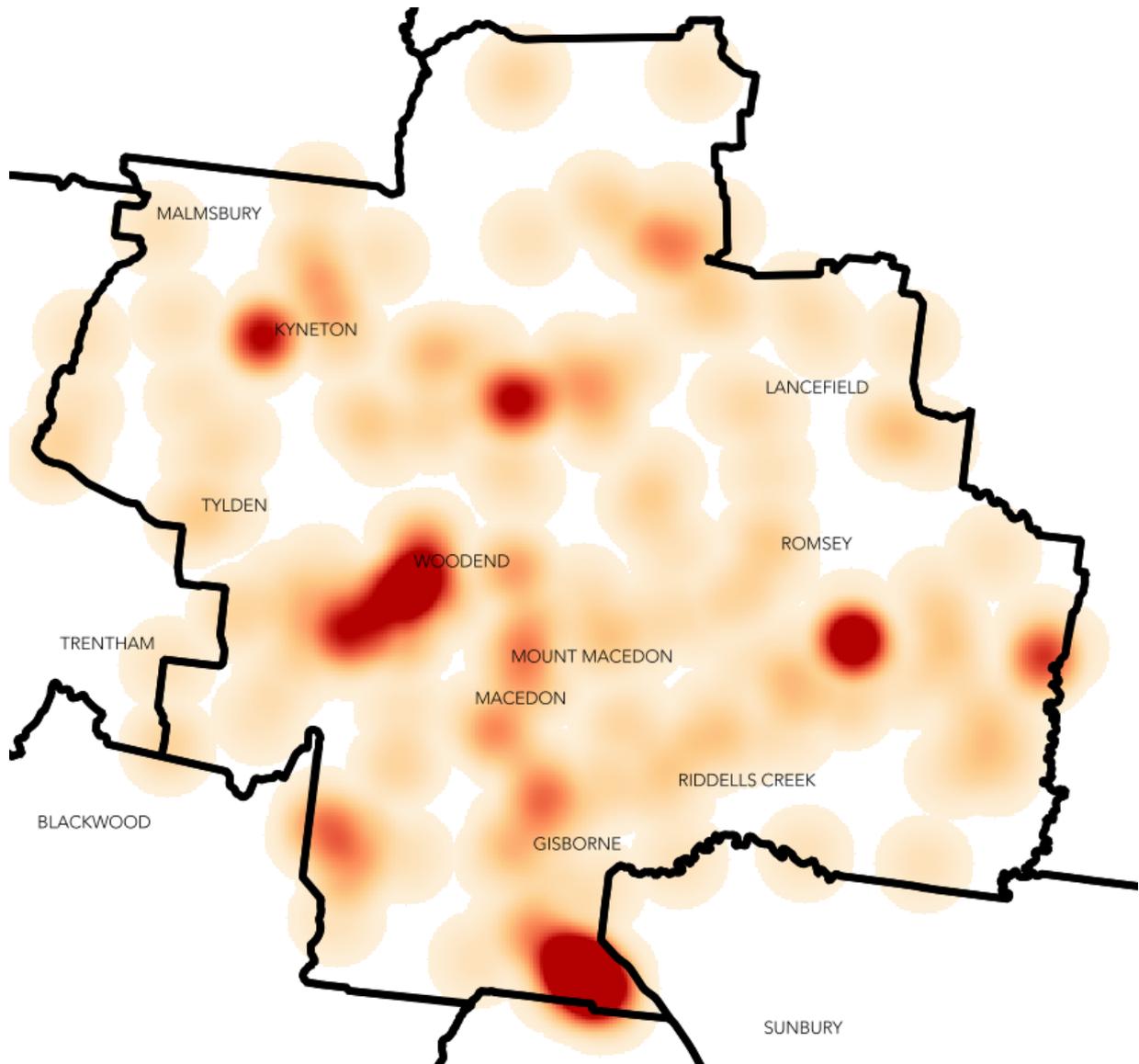
- **Woodend**, with 100 respondents reporting telecommunications problems in the area. Residents and businesses report significant issues with Internet availability and speeds, including the lack of ADSL services available in the area. Mobile phone coverage is a problem in some areas around Woodend.
- **Gisborne South**, with around 80 respondents reporting telecommunications issues in the area. Gisborne South residents report particular issues with mobile coverage and dropouts.
- **Kyneton**, with 36 respondents, most of whom were concerned with mobile phone coverage;
- **Darraweit Guim**, with 32 responses and the primary concern being mobile phone coverage.
- **Bullengarook**, with 32 responses, with primary concerns about mobile phone coverage.

When interpreting the reporting on the location of black spot, consideration must be given to the fact that respondents were self-selected, rather than randomly selected. In particular, strong advocacy from local community groups in some areas may have encouraged higher response rates in certain areas.

Notwithstanding the self-selection issue, it is interesting to note that the black spot reports do not reflect the geographical distribution of population across the Shire. For example, some larger urban areas (e.g. Gisborne, Gisborne North, Romsey and Macedon) had lower levels of black spot reporting. This may suggest higher quality telecommunications services in these areas relative to other parts of the Shire.

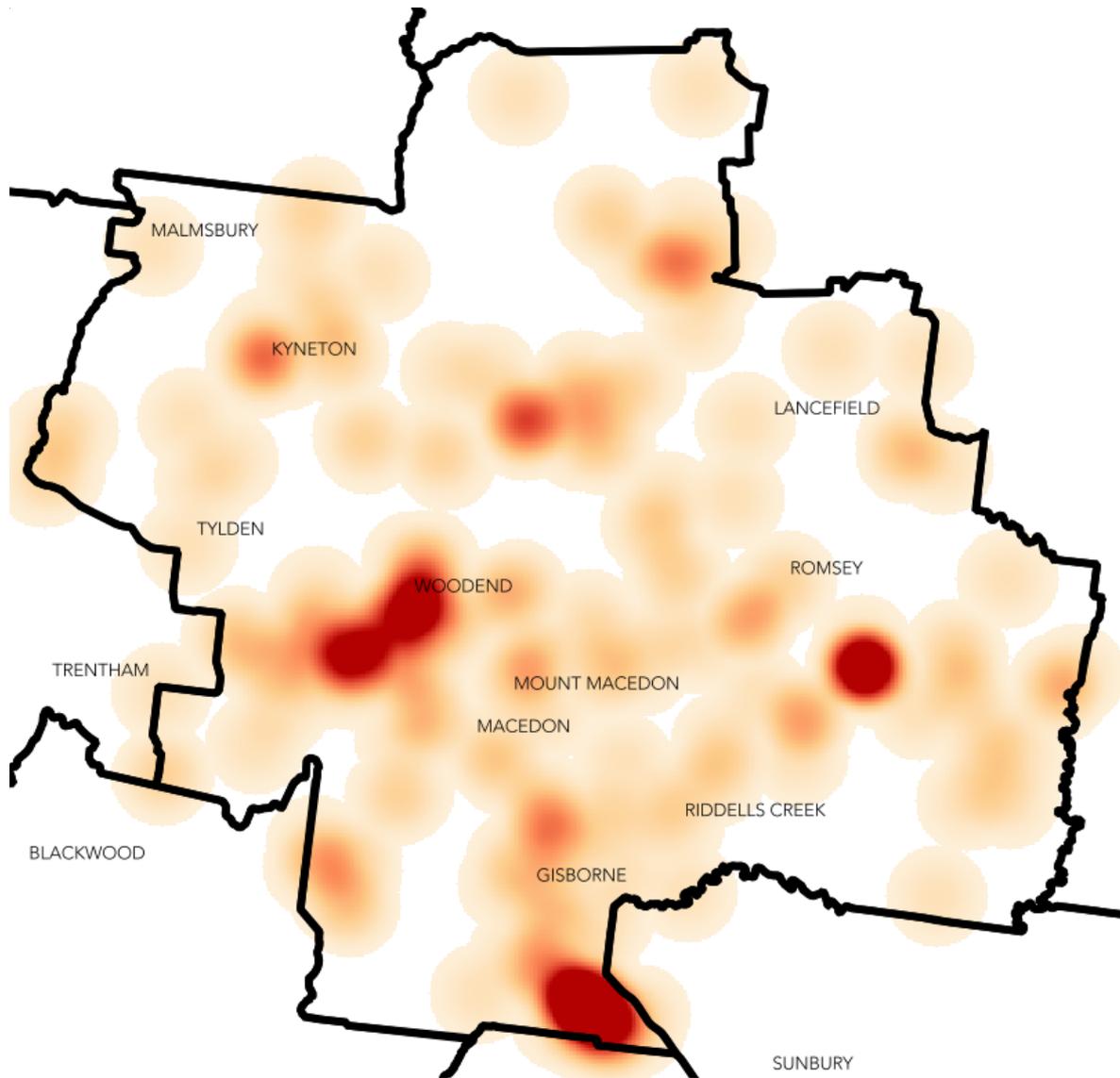
Figures 2 and 3 show similar distributions of mobile phone and Internet black spots. Many areas that have poor mobile phone coverage will also have poor Internet coverage. This is because residents often rely on mobile network based Internet (e.g. 3G coverage) to access the Internet, especially if there is an absence of ADSL in an area.

Figure 2 Location of respondents reporting mobile phone coverage issues



Data: Macedon Ranges Shire Council Survey, 2014; Map/analysis: Geografia, 2014

Figure 3 Location of respondents reporting Internet coverage issues



Data: Macedon Ranges Shire Council Survey, 2014; Map/analysis: Geografia, 2014

## 3. Black Spot Impacts

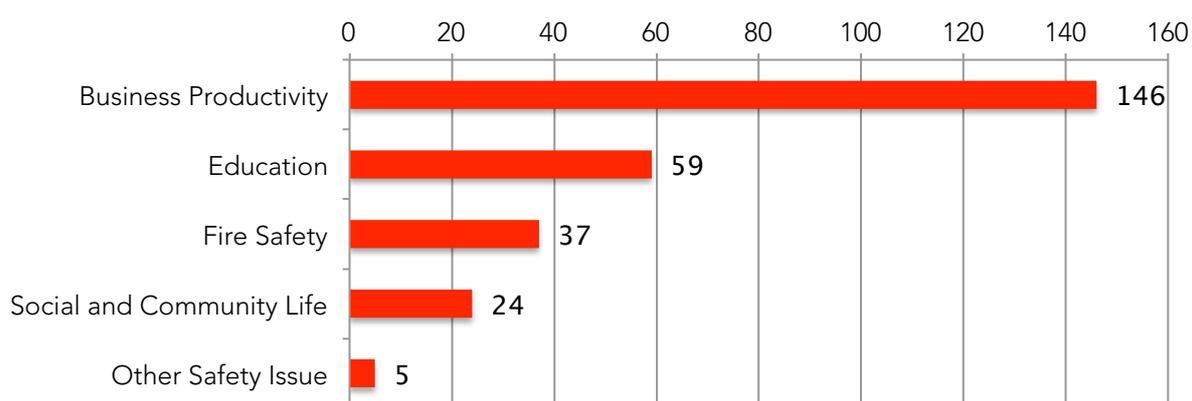
According to the survey, the three greatest areas for concern about Internet and mobile coverage are: 1) business productivity; 2) safety and 3) access to education services (including school course work and resources). Social and community interaction was also raised as an issue. Safety issues were predominantly, but not exclusively, in relation to fire risk.

### 3.1 Overview

Community members and businesses that reported black spot issues were asked to comment on the impacts on their business productivity, lifestyle and safety. Figure 4 summarises the impacts of poor Internet services for local residents and businesses and Figure 5 highlights the impact of poor mobile phone services. Business productivity was the most reported concern in both cases<sup>4</sup>.

In relation to mobile phone coverage, poor reception (528/633) and very poor reception<sup>5</sup> (210/633), were the main issues. Cost was reported an issue by a minority (44/633). In relation to the Internet, the main issue was speed (260/633), followed by reliability (224/633). Again, cost was an issue for a minority (44/633).

Figure 4 The impact of poor Internet services on survey respondents

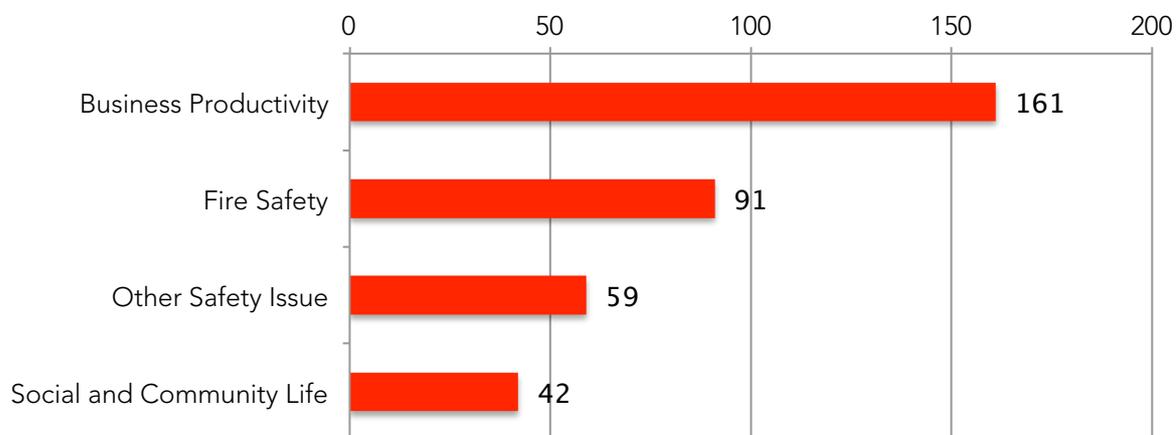


Data: Macedon Ranges Shire Council Survey, 2014; Analysis: Geografia, 2014

<sup>4</sup> Note that all 146 respondents who indicated business productivity was affected by poor Internet services, also indicated mobile phone coverage was a problem.

<sup>5</sup> Referring to no mobile phone coverage anywhere on the property.

**Figure 5** Impact of poor mobile phone services on survey respondents



*Data: Macedon Ranges Shire Council Survey, 2014; Analysis: Geografia, 2014*

A discussion of these impacts is provided below.

### 3.2 Lost business productivity

The issue that generated the greatest number of responses was in relation to business productivity. Local businesses were concerned about the impact of Internet speeds and availability, and mobile phone service coverage in the Shire. In total, 384 local businesses<sup>6</sup>, including home-based businesses, responded to the telecommunications black spot survey. This represented approximately 60% of survey respondents.

295 businesses reported poor Internet service quality or speeds. Business impacts include:

- The inability to take payments when selling goods or services, and the inability to access online banking services.
- Inability to transfer large files, which is important for many modern service providers such as graphic designers. This is a particular issue as file storage moves to Cloud based systems, requiring higher bandwidth.
- Inability to use video conferencing or other communications systems.
- General productivity losses associated with waiting times/delays.

346 business reported problems relating to poor mobile phone coverage, including:

<sup>6</sup> This represents around 10% of the registered, active businesses in the Shire.

- Inability to communicate with customers and suppliers. This was a particular issue for workers 'on the road'. Many survey respondents expected that they would have blanket mobile coverage while driving throughout the Shire.
- Inability to receive SMS verifications for online banking transactions.

Many survey respondents indicated they were sole traders, and that it is critical that they are contactable by mobile phone at home or on the road. This includes tradesman, freelancers and others that may not have an office phone number, or need to be on-call when they are away from work.

Some examples of survey responses include:

*"I own a web design and development company and work from home one day a week. I have to do most of my work at my office in the CBD as the lack of broadband makes it very difficult to work from home"*

*"I would like to work from home but it is difficult when I can't be contacted on the phone."*

*"When internet banking requires confirmation details and responds with a SMS, weather determines whether I get the message."*

*"I have 30 tradesmen that work all hours and they may need to contact me. This can be urgent."*

*"Use of EFTPOS for sales in gallery 50% of time cannot get signal."*

*"We achieve half the work in double the time."*

### 3.3 Access to emergency information

The most significant impact of poor telecommunications coverage amongst the community was the potential safety issues during an emergency, such as bushfire or a fallen tree. Poor mobile phone and Internet coverage has three specific impacts during an emergency:

1. The inability to receive text messages or other alerts from emergency services during an emergency event.
2. The inability to make or receive calls to/from family, friends and emergency services during emergency events.
3. The inability to use smart-phone applications such as the CFA/FireReady app, which provides updates about nearby fires based on a phone's GPS location.

The survey revealed that many residents were concerned about their safety during the February 2013 bushfires in Macedon Ranges. This was due to the lack of information about the proximity to, direction and general risk of the fires.

Emergency services have previously noted the limitations of relying on text messages for information during emergencies across Victoria. They are not able to guarantee residents will receive emergency messages during such events, and that other information sources (e.g. radio) and safety measures should be used in conjunction with this.

Some local CFA volunteers noted that the poor mobile coverage at their home limits their ability to assist others during emergencies. This has a wider consequence for community safety across the municipality.

Some examples of survey responses include:

*"No warning text messages received when large fire threatened Gisborne South this summer."*

*"I also cannot get my mobile to work in the bedroom which means I cannot get alerts from the FireReady app to alert my family of bushfires when we are sleeping."*

*"Relatives and friends are quite often unable to contact us at times of power loss, this is a concern if there is an emergency."*

### 3.4 Limited access to education

Many respondents were also concerned about the impact of broadband access on their family's education. Specifically, poor or unreliable Internet affected the capacity of young people to use educational resources, undertake homework and use school systems. The risk is that young people in the community will not achieve their full educational potential.

Schools increasingly make use of online resources in education (such as online Learning Management Systems, videos and interactive text books). The integration of this into mainstream education is expected to continue and will require ever greater data volumes and speeds. Consequently, the impact of Internet speeds on education will come to be seen as a community and economic development issue.

Some examples of survey responses include:

*"I am a nursing student studying online. I find I have to do a lot of my study at work or friends' place to have better Internet."*

*"Unable to connect to broadband Internet - difficult for three teenage students to complete homework especially one doing year 12 VCE studies."*

*"I am a teacher and also require Internet for my job."*

### 3.5 The loss of social connectedness

The Internet is important for connecting and organising local communities. Community members who participate in, or volunteer with, local groups have noted the impact of poor Internet coverage on their ability to organise and distribute information. For example, group emails and newsletter distribution was difficult for some groups.

Poor phone coverage impacts on local community services that provide outreach programs within the local area. For example, on-call medical services are unable to deliver services to local residents in more remote areas.

Many residents also outlined their inability to contact friends and family, and the negative impacts on their social lives.

Some examples of survey responses include:

*"The service is not strong enough to send group emails and not able to open newsletters Internet service - it has affected local community service."*

*"I am a midwife and work on call. Having no mobile coverage in this area means I am unable to visit it, as I may miss urgent calls from expectant parents."*

*"We are a busy working family, and the inability to contact each other to manage our daily lives is a source of great frustration."*

### 3.6 Leisure and entertainment

Several respondents expressed their desire for Internet services that are fast enough to watch and download movies, music and online television. Current Internet speeds, whether they were ADSL or mobile Internet, were often seen as inadequate for these services.

A typical comment was:

*"Download speeds on the Internet are so slow watching ABC iView and the like is impossible."*

### 3.7 Service costs and consumer choice

Many respondents reported that only one telephone or Internet provider is available to them due to limited coverage on other networks. For many (44 respondents), the cost of services from this one provider are considered high or even unaffordable.

Several respondents noted the lack of choice (e.g. different packages and services) associated with having only one network provider in an area. In many cases community members were not happy with their current service provider, but had no alternative service available to them.

Respondents also noted they use costly 'add on' services, such as diverting calls from mobile to their landline when at home, to guarantee phone coverage.

### 3.8 Impacts by location

Three significant, localised impacts were revealed in the survey results:

1. Nearly one third of Gisborne South residents who responded (13/43) reported significant concerns about the impact of poor mobile services on information during emergencies. Numerous respondents noted the inability to make calls or receive emergency text messages during the February 2014 bushfires in the area. The lack of mobile coverage in the area is seen as a safety issue for local residents.
2. The largest concerns about telecommunications coverage in the Darraweit Guim area also relate to community safety and emergency management (14/33 respondents). Residents frequently reported the lack of mobile services available during recent bushfires in the area.
3. The greatest concern amongst the Woodend community was the impact of slow or poor quality Internet on business operations (30/101 respondents). Many respondents reported that they operate a business from home which needs fast and reliable Internet access (e.g. teleconferencing, transferring large files) and that the current Internet services available in the area limited their productivity. A number of non-home based businesses in Woodend also reported this issue.

## 4. Black Spot Diagnosis

Lack of capacity and/or distance to the local exchange were cited as barriers to better Internet services. Although not raised by survey respondents, topography and low density rural living are two major impediments to improving Internet and mobile phone service quality.

Survey respondents provided limited information about the causes of their Internet and mobile service issues. The few respondents who did raise this, highlighted the following:

- The lack of available ADSL ports at a local telephone exchanges (9 respondents).
- The distance between their premises and a local exchange (6).

Although not raised in the survey, there are several factors that influence the availability and reliability of Internet and mobile services in the Macedon Ranges:

1. Local topography is likely to create problems with provision of mobile phone and mobile Internet coverage (including any future rollout of NBN fixed wireless services in the area). Similarly, topographical constraints in many areas of Macedon Ranges would limit the feasibility of alternative solutions such as microwave Internet, or femtocell mobile services.
2. The popularity of rural living in the Shire means that many residents live some distance from townships and therefore a significant distance from their local telephone exchange. Long distances between a residence and an exchange will affect the quality and reliability of ADSL services due to the capacity of copper telephone lines.
3. Satellite Internet is an option for providing Internet in areas where mobile or fixed line Internet is not available. NBNCo is currently not providing new satellite Internet accounts due to capacity issues on their temporary satellite system. This will be rectified in the longer-term with the launch of dedicated satellite services.

## 5. Case Studies

Detailed interviews were undertaken with five local business owners and organisations that have previously reported poor Internet or mobile phone access in Macedon Ranges. The interviews revealed impacts on business productivity, curriculum provision, fire safety operations, tourism services and information dissemination.

### 5.1 Home-based business

Tracy and Benjamin operate two home-based business services. Tracy is a Public Relations and Events Manager. She is responsible for updating online marketing platforms, including managing social media campaigns and delivering video content online. Benjamin is a home-based owner of an event production business. He uses the Internet daily to communicate and send digital information to clients and suppliers. Key issues are:

- Internet speeds affect both businesses. For example, a regular download of 700 MB (the average size of a video) takes at least five hours to complete (in a well-serviced region this would take around 6 minutes). Their home Internet connection often 'drops out', disrupting the download, and forcing them to start again.
- The poor Internet connection limits their competitiveness in an increasingly globalised industry. Notably, their inability to send and receive files to graphic designers or other associates affects their business productivity and growth potential. The inability to make online conference calls to overseas associates is also an impediment.
- Slow upload speeds have reduced their ability to deliver work on time to their clients and employers, creating conflict and impacting on their work.
- In urgent circumstances it is not unusual for the couple to travel outside their homes to access Internet in town centres or areas outside of Macedon Ranges with better Internet quality.

### 5.2 Braemar College

Braemar College provides Year 5 to 12 and VCE-level education to around 800 students and employs 120 staff. Since 2010, the college has been transitioning towards an e-learning platform, with all year 5-8 level textbooks accessed through iPads. By 2015, year 9-12 level textbooks will be transitioned to e-learning systems in their entirety. The key issue is:

- The College is identified as one of the highest bush fire risk schools in Victoria. The College relies heavily on e-learning systems during total fire bans (TFB) days, where classes are conducted online through the Internet and iPads. Poor Internet quality (both 3G and ADSL) has hindered the College's ability to conduct online classes under TFB days. The school itself had 4 TFB days in the past year. Unreliable Internet coverage remains a major impediment to delivering consistent and quality education within a bush-fire area.

- At present, mobile coverage on school grounds remains unreliable even for emergency calls on 000. In cases of emergency (e.g. bushfire threats, immediate medical attention), staff must rely on basic communication systems (UHF radios and satellite phones). This has heightened safety concerns in the school community.

### 5.3 Barker Trailers

Barker Trailers is a regional manufacturer of semi-trailers, supplying around Australia. Business operations are dispersed across several sites where communication is maintained between managers, manufacturers and sales staff via mobile telephone and an online enterprise resource planning (ERP) system. The main place of business is located near Woodend. Given its national prominence, Barker Trailers also maintains a team of salespeople who communicate to clients via mobile telephone and email. The key issue is:

- Poor Internet speeds hinder Barker Trailer's ERP system – directly impacting on the productivity of the business. There are significant lags in sales and operational information being exchanged between employees.
- Limited mobile phone coverage means that staff cannot be contacted when they are away from a fixed line (even outdoors at the company's site in Woodend) – impacting on the efficiency of operations.
- In some cases these communications issues have led to a loss of business- such as missed sales opportunities.

### 5.4 Gisborne Peak Winery

Gisborne Peak Winery is a winery, cellar door business and accommodation provider. The Winery attracts up to 13,000 guests on weekends and is a major tourism attraction in the Macedon Ranges. The business experiences significant issues with both Internet and mobile access, in particular:

- Phone and Internet coverage does not meet the expectations of guests and visitors - impacting on the customer experience in a hospitality business. There is evidence that customers will choose to stay at alternative locations where they can access Internet and phone coverage.
- Electronic and credit card payment facilities are often inoperable due to the lack of access, again impacting on customer satisfaction.
- The poor Internet access also affects business administration. For example, the Winery cannot use online accounting software due to Internet issues.

### 5.5 Macedon Ranges Shire Council

Macedon Ranges Shire Council relies on mobile phone and Internet coverage to deliver basic services to the local community. Key issues are:

- Poor services generally limit Councils ability to communicate with staff, customers and disseminate information to the community.

- Bushfire Prevention Officers continue to use 3G mobile services to mitigate bushfire risk in the Shire. Officers use mobile GIS technology to identify and designate locations that require bushfire clearing. Without access to GIS data, officers are unable to undertake clearing. The lack of mobile coverage continues to disrupt bushfire prevention efforts in the Shire and heightens risks in a bushfire prone area.
- The lack of phone and Internet coverage continues to impact Council's saleyard operations. Council has a legislative requirement to report saleyard information within designated timeframes. As the information is primarily delivered using Internet services, lack of reliable coverage has impeded its ability deliver it on time. Failure to deliver the information on-time incurs significant fines, and risks having the Shire's saleyard operational license suspended.
- In some areas of the Shire, Maternal and Child Health (MCH) staff are unable to contact mothers to provide up-to-date information on child well-being.
- In relation to tourism, poor Internet services continue to impact on Council's ability to respond to visitor queries and needs. Specifically in the Visitor Information Centre, unreliable Internet has prevented volunteers from responding to basic email queries regarding attractions, events and availability of accommodation. This has a wider flow-on effect for local tourism businesses, operators and employment.

# Appendix: Survey Instrument



## Telecommunication Black Spot Register

ABN 42 686 389 537 – PO BOX 151, KYNETON VIC 3444  
T 03 5422 0333 – F 03 5422 3623 – [mrsc@mrsc.vic.gov.au](mailto:mrsc@mrsc.vic.gov.au) – [www.mrsc.vic.gov.au](http://www.mrsc.vic.gov.au)

### Telecommunication Black Spot Register Form

Macedon Ranges Shire Council has developed a register for high-speed internet and mobile service black spots in the shire to support its advocacy campaign for improved telecommunications.

The register enables local businesses and residents to record exact locations where internet or mobile services are weak or unavailable as well as provide details on the effect it has on their business and lifestyle.

Data collected from the register will be presented to Victorian and Australian Government representatives and telecommunication providers to highlight the need for better mobile and high-speed internet services in the Macedon Ranges.

To register a black spot location/s, complete the details below and return the form, in the Reply Paid envelope provided, by 1 June 2014.

Forms can also be completed online at [mrsc.vic.gov.au/haveyoursay](http://mrsc.vic.gov.au/haveyoursay)

For more information, or if you would like to register in person, contact: Gaynor Atkin on 5421 9615 or email [gatkin@mrsc.vic.gov.au](mailto:gatkin@mrsc.vic.gov.au)

To ensure your privacy is maintained, only the location details provided will be forwarded to other parties.

#### **Black spot location details:**

**1. Are you responding as a:**

- Resident                       Business                       Both

**2. Type of service:**

- Mobile Telephone                       High-speed Internet                       Both

**3. Black spot location:**

Please provide as much detail as possible  
(i.e. '151 May Street, Kyneton' or 'at the corner of Jackson and Fern Road, Spring Hill')

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**4. Please provide more detail on how this limited service has affected your business and/or lifestyle:**

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**Please provide more details if you have multiple locations you wish to register:**

**1. Are you responding as a:**  
 Resident                       Business                       Both

**2. Type of service:**  
 Mobile Telephone                       High-speed Internet                       Both

**3. Black spot location:**  
Please provide as much detail as possible  
(i.e. '151 May Street, Kyneton' or 'at the corner of Jackson and Fern Road, Spring Hill')  
\_\_\_\_\_  
\_\_\_\_\_

**4. Please provide more detail on how this limited service has affected your business and/or lifestyle:**  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**1. Are you responding as a:**  
 Resident                       Business                       Both

**2. Type of service:**  
 Mobile Telephone                       High-speed Internet                       Both

**3. Black spot location:**  
Please provide as much detail as possible  
(i.e. '151 May Street, Kyneton' or 'at the corner of Jackson and Fern Road, Spring Hill')  
\_\_\_\_\_  
\_\_\_\_\_

**4. Please provide more detail on how this limited service has affected your business and/or lifestyle:**  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Your contact details:**

If you would like to be kept up to date on the progress of this campaign, please provide your name and contact details below:

Name: \_\_\_\_\_

Telephone: \_\_\_\_\_

Email: \_\_\_\_\_

