

Brown Hill Mobile Phone Coverage Survey

November 2020

Conducted by the Brown Hill Community FireAware Network

Coordinator: Hazen Cleary 0408690493

Survey Contact: Jeff Dobell 0491759383

The Brown Hill FireAware Network

The Brown Hill Community FireAware Network was established in 2016 to help raise awareness of the need for local residents to be informed about the dangers and nature of fire behavior and to provide information to help people better plan and prepare for any fire event that may occur in their local area. One area of concern raised by many of our community members is the poor or non-existent mobile phone signal in parts of Brown Hill.

The Brown Hill Community FireAware Network undertook an online survey in October and November 2020 and has now produced this report to seek support from all levels of government to commit resources to ensure our community has better access to a critical tool needed in any emergency situation, reliable mobile phone reception.

Background

As more and more people are relying on just their mobile phones to both provide and receive information, apart from phone calls, mobiles have become an essential tool in times of an emergency.

The Country Fire Authority (CFA), other state emergency response organisations and the State Government in general constantly advise of the need for our population to stay informed on what to do to prepare for an emergency, how to respond if an emergency occurs and to remain informed as an emergency unfolds.

The CFA advise it is better to access more than one information source to ensure accurate and up to date information is available. i.e. local news; Vic Emergency app; Vic Emergency website; CFA Face book, local radio. Increasingly many people now use their mobile phones as the primary tool to access these services.

Brown Hill, a suburb of Ballarat

Brown Hill as a suburb of Ballarat sits on the east (Melbourne side) of the city. Some of the suburb has a direct interface with the Creswick State Forest. This spread of state forest covers a vast area stretching around 12 kilometres north from Brown Hill to the edge of Creswick. This presents a very real danger to Brown Hill in the event of a major bushfire in the forest.

One of the housing areas in Brown Hill most at risk from bushfire are the established small acreage houses, established and developing housing subdivisions that can generally be described as on or feeding into Springs Road, Brown Hill. Springs Road starts just north of the Western Freeway Ballarat bypass in Brown Hill and heads north easterly away from Ballarat on the edge of the state forest, toward the White Swan Reservoir.

Up until around 15 years ago most of the homes in the area were on acreage but with the establishment of the Coorabin Housing Estate on Springs Road and the sewer, gas and other infrastructure that were installed other developers have seen the opportunity to purchase acreage, create subdivisions and tap into this infrastructure.

The authors of this report estimate that there are now around 350-400 houses in this area, and there is a current subdivision and building boom that will increase that number dramatically over the next few years.

For the purposes of this report we will refer to the area of our concerns as the Springs Road Catchment Area (SRCA): please refer to the map below, that marks the area we are focusing on.



Mobile phone reception and bushfire threat

As stated previously mobile phones are a critical tool for communication in emergency situations and one of the major emergency situations that is recognised as a threat to residents in the SRCA is the ever-present danger of a major bushfire event.

The problem is that many of the homes in this area have poor, little or absolutely no mobile phone coverage at their properties.

One would think that in some emergency situations this could be just an inconvenience but at the other end of the scale during a major or developing bushfire in Creswick State Forest it is creating a dangerous situation where peoples' inability to obtain information could put their life at risk.

It should be noted that all of Brown Hill north of the freeway (including the SRCA) is designated a “bushfire prone area” by the CFA.

Our survey

With this in mind The Brown Hill Community FireAware Network conducted an online survey on mobile phone reception for the SRCA in October & November 2020. We used the online Survey Monkey App, developed 9 questions and invited SRCA resident participation via a letterbox drop and publicity through the Brown Hill Newsletter.

At the close of the survey on the 15 November we had received 168 responses. This was a great response when we estimate there are around 350-400 properties within the designated area.

The responses overwhelmingly supported our concerns that phone reception is poor to non-existent in a significant proportion of the households in the area. The full results of the survey are attached.

We have collated the responses and display them in graphics and written form at the end of this report (Attachment 2) to allow you to understand the extent of the issue and the concerns our respondents have about this matter.

Current mobile services

The SRCA is surrounded by several mobile phone towers. It is our understanding that Optus has sites co-located with Telstra at Nerrina and they also have a site on Mt Warrenheip, and a site at WIN TV in Walker St. Vodafone have a site on Mt Warrenheip, and a site at WIN TV in Walker St Brown Hill. Telstra also has a tower in Brown Hill.

Each of these providers have a mobile Coverage web page that allows anyone to check out a particular area in Australia and be provided with a map indicating the level of mobile coverage for that area (in 3G, 4g & 5G and in some cases showing the expected level of coverage available both indoors and outdoors).

These webpages are found at:

Telstra www.telstra.com.au/coverage-networks/our-coverage

Optus <https://www.optus.com.au/about/network/coverage?sid=mbsp:coverage:knowmore>

Vodafone <https://www.vodafone.com.au/network/coverage-checker>

All three webpages indicate all the SRCA has full 4G coverage (some say a mix of outdoor only and Indoor in other parts). When several SRCA addresses with poor or no coverage were loaded on the Telstra website for example the response states the address has “*Outdoor coverage - Predicted to get 4G coverage, Indoor coverage Predicted to get 4G coverage*”. The website has a few provisos as per this snapshot from the web page, e.g.

Outdoor coverage

“The Telstra mobile coverage maps displayed have been created using tools that predict the likely areas of outdoor coverage. We have not individually tested every particular location within the identified outdoor coverage areas for coverage. This means that while the footprint of

outdoor coverage outlined on the maps is generally accurate, there may be some areas described as being within the outdoor coverage area shown where your device will not work. This is a common characteristic of wireless systems. For example, actual outdoor coverage could be degraded or not existent in specific locations due to certain geographic features or as a result of the device used. Geographic features that may reduce or block outdoor coverage could include formations, such as hills and mountains or even trees. “

A similar clause is displayed for indoor coverage.

These mobile phone provider websites create a perception that the SRCA has good 4G mobile coverage. From our survey results this message appears to be misleading and not representative of the real situation. The Brown Hill FireAware Network feels that authoritative websites stating that we have good mobile phone coverage allows inaction and lost opportunities for our area to be recognised and prioritised for improved mobile coverage. This in a high growth area just 5.3K's from the centre of Ballarat.

Conclusion

The SRCA in Brown Hill is already well populated, with significant growth in new homes and population currently occurring and more growth expected into the future. Our survey of the area clearly shows it suffers from broadly blanketed poor to non-existent mobile phone coverage. The SRCA is positioned next to a large area of natural bush. With this housing growth comes increased road traffic, all feeding into Springs Road. These ingredients are a dangerous mix should a major bush fire occur in the Creswick State Forest.

We request support from our Local, State and Federal government representatives and relevant communication authorities for a thorough assessment of the issues effecting mobile coverage in the SRCA and ultimately a short-term plan to put the appropriate infrastructure in place to resolve this frustrating and potentially dangerous situation.

Following is an analysis of the survey and the full survey's details.

Representatives of the Brown Hill Community FireAware Network and residents of the SRCA are very willing to meet with relevant representatives for the various stakeholders to help drive this issue forward.

Initial contact should be made with Brown Hill Community FireAware Network contacts:

Survey Contact: Jeff Dobell 0491759383; Email: jeffdobell0@gmail.com

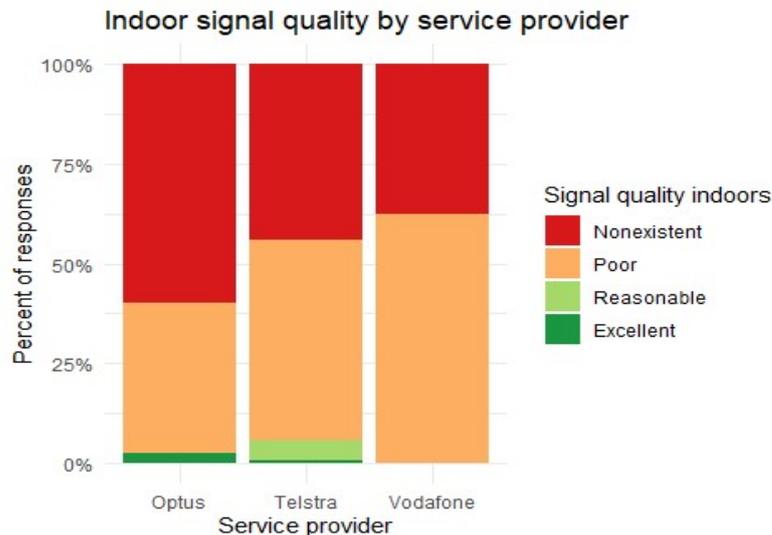
Coordinator: Hazen Cleary 0408690493, Email: hmc433@hotmail.com

17 June 2021

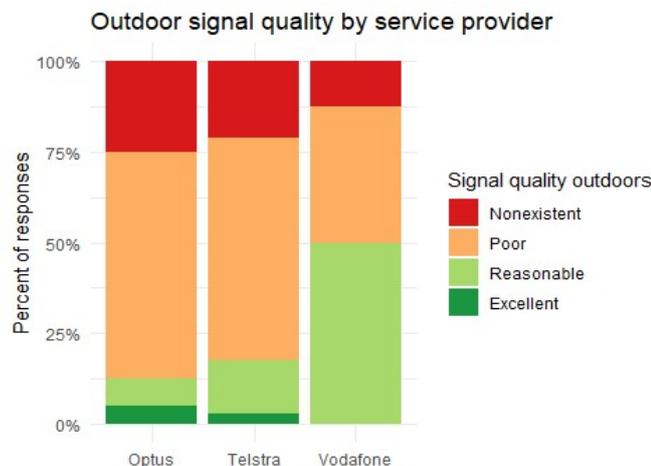
Analysis of the survey

Signal quality

How do residents rate their signal quality? Almost all the responses, irrespective of network, stated that indoor signal at their home was either poor or non-existent.



Even though outdoor signal seems slightly better, the overwhelming majority still find the signal to be either poor or non-existent. Note that for Vodafone, only 8 people in the survey were on the Vodafone network.



Additional comments:

"We have to stand in one spot in our home to get service if we move it cuts out. We are over it.";

"One bar, and only at the West side of the house... east side it drops out"

"Service was better before the 2G service was turned off"

"Continually drops out when talking on the phone"

"Very poor/no signal on my whole block"; "Reception only in front of house"

"Occasionally but unreliably receive SMS; can't make or receive calls"

"Occasionally if I move towards a window 1 bar will appear; however, this is sporadic."

"Directly outside my house in my driveway for instance it's still poor"

"We cannot receive phone calls or communication through the network. We need to connect to our wifi in order to use our phones";

"We have 'state of art' phones and third world reception"

"It fluctuates between none and a small amount"

Do these results tend to vary by area? It seems that the Stringybark Drive Area and Coorabin Estate have the worst of it, but most areas tend to have mostly poor signal outdoors. All these streets and estates are within the Springs Road area of concern.

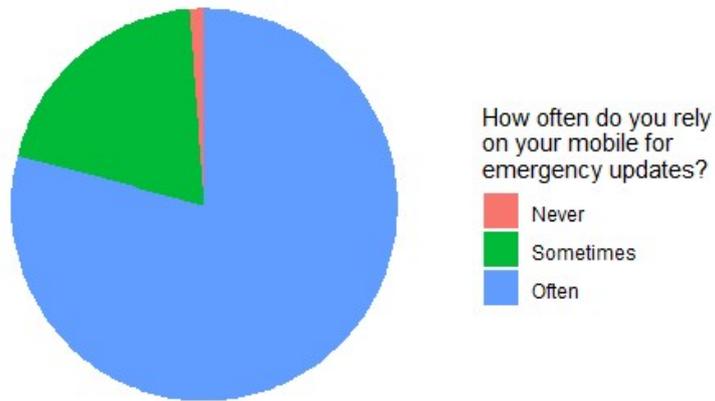


The picture is much worse indoors, signal tends to be non-existent indoors for most areas.



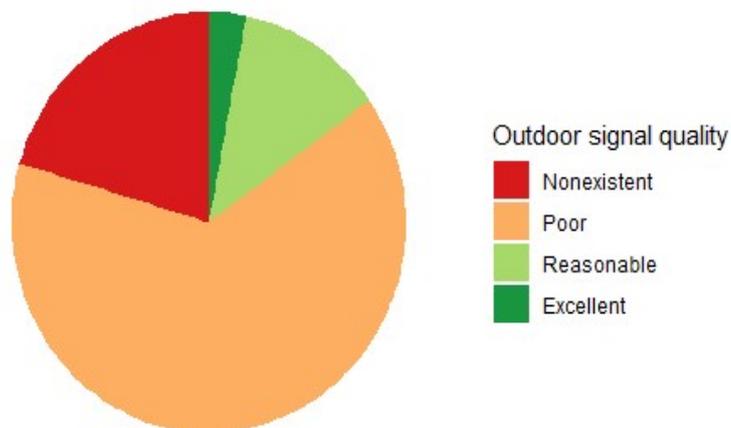
Risk posed to residents

How much of a risk is having a poor mobile signal? Over three-quarters of individuals rely on their mobile phones to receive emergency updates.



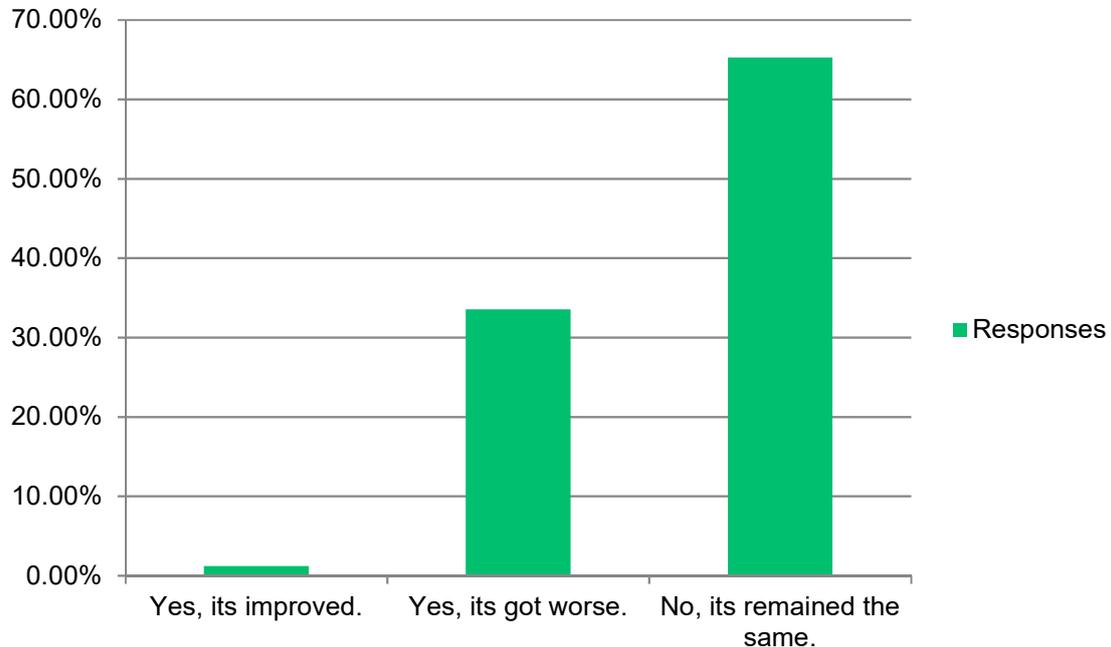
For those who often rely on their mobile phones for emergency updates, the overwhelming majority have either non-existent or poor signal, both indoors and outdoors:

It should be noted that more people would be more likely to access emergency information on their mobile phones IF they knew that the service was reliable.



Change in mobile strength

Respondents were also asked if they thought their mobile signal strength had changed in the last 12 months?



Additional comments:

"Visitors to our house cannot believe how bad the coverage is"

"No improvement since we moved here 4 years ago"

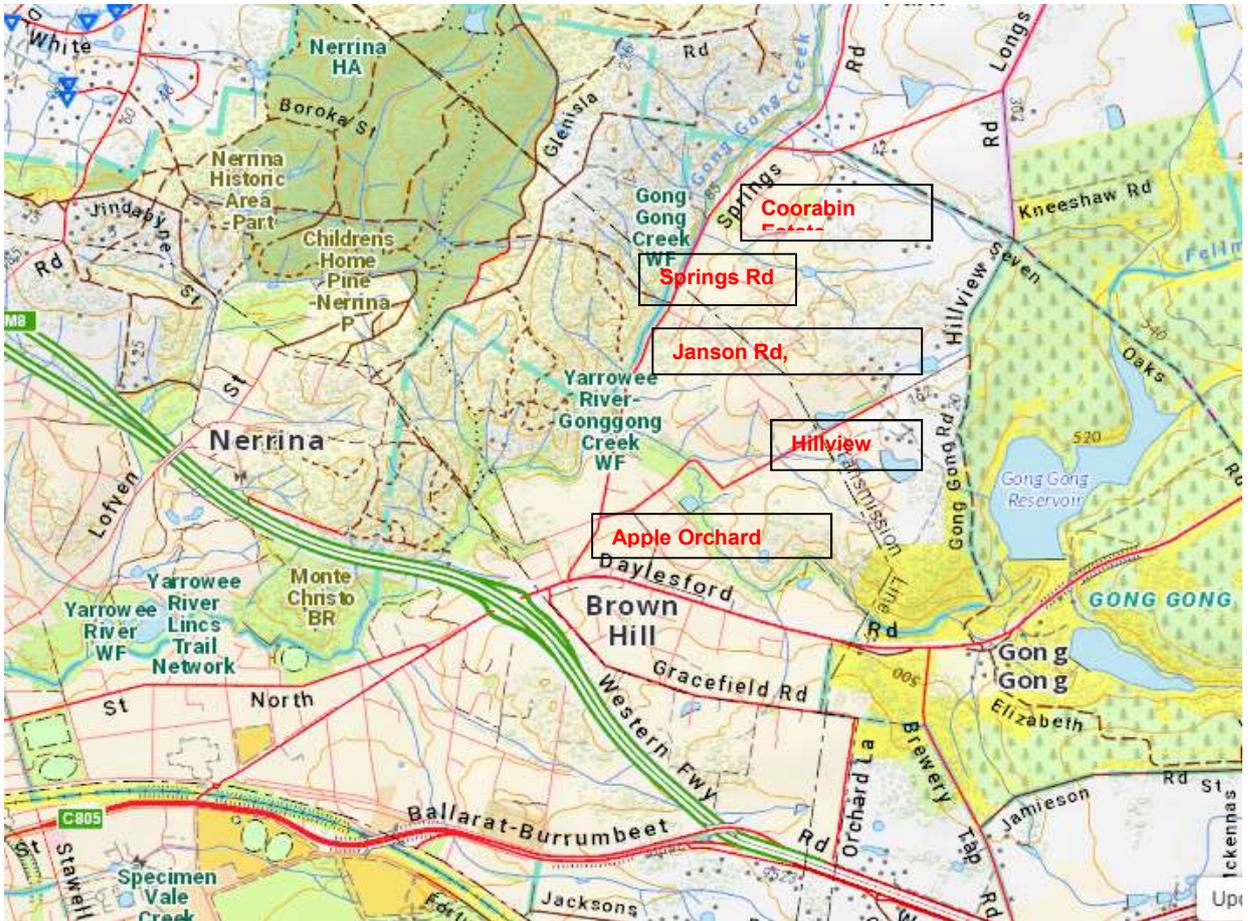
"It appears that it has become extremely bad from very bad over the course of this year"

"During the last 12 months I contacted our provider about our poor service. Their response was until another tower was built the service would remain woeful. They suggested us buying an antenna but could not guarantee that the service would improve";

"Worse than ever, can't even get a message out"

"We live less than 10mins from Ballarat CBD and have worse service than we have had whilst in some places in the outback"; "We are desperately worried as to not having any reception"

Number of respondents compared with properties in key areas

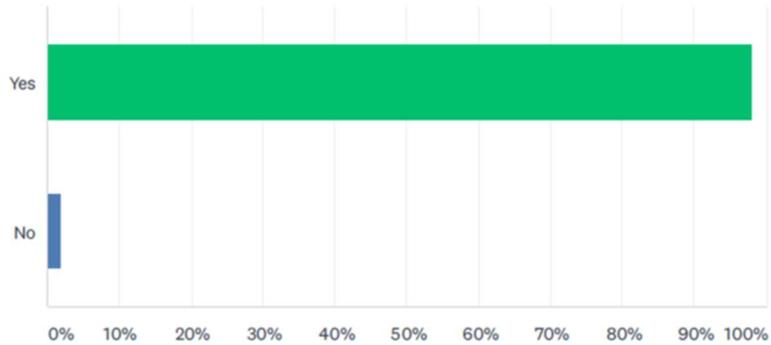


Key Location	Estimated Number of properties	Number of responses
Coorabin Estate	76	51
Apple Orchard Estate	69	34
Hillview Rd	46	22
Springs Rd	31	17
Janson Rd	31	11
Stringybark Dr	30	9

Brown Hill Mobile Phone Coverage Survey Results November 2020

Q1 Are you concerned about your mobile phone coverage in your area?

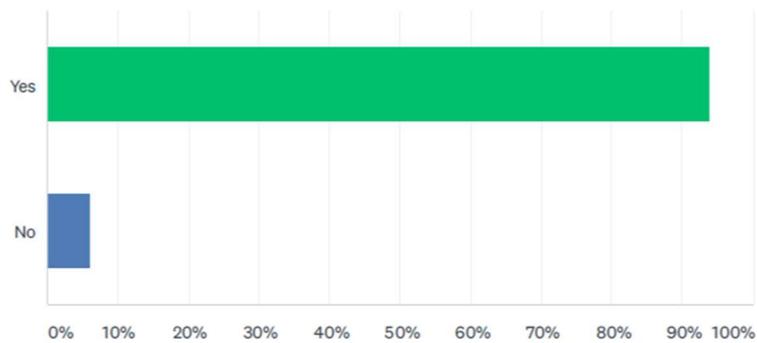
Answered: 167 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	98.20%	164
No	1.80%	3
TOTAL		167

Q2 Do you feel unsafe in your area because of the type of coverage you are receiving?

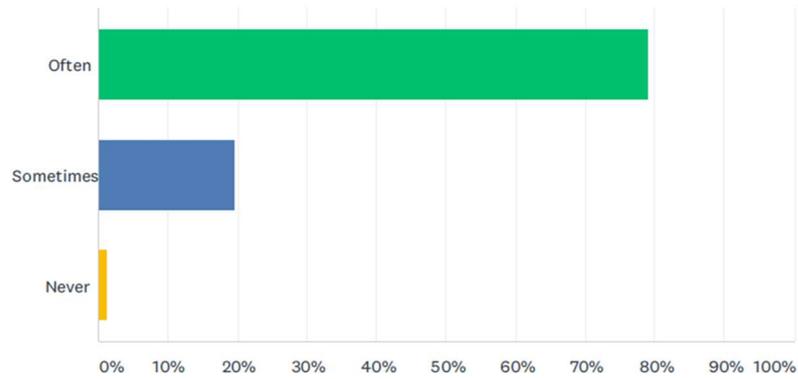
Answered: 167 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	94.01%	157
No	5.99%	10
TOTAL		167

Q3 How often do you rely on your mobile phone for emergency updates?

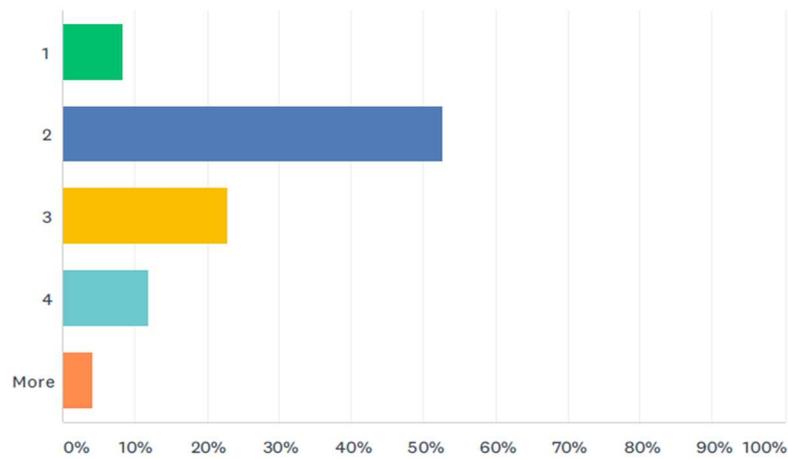
Answered: 167 Skipped: 0



ANSWER CHOICES	RESPONSES	Count
Often	79.04%	132
Sometimes	19.76%	33
Never	1.20%	2
Total Respondents: 167		

Q4 How many working mobile or cell phones are currently in use at your household?

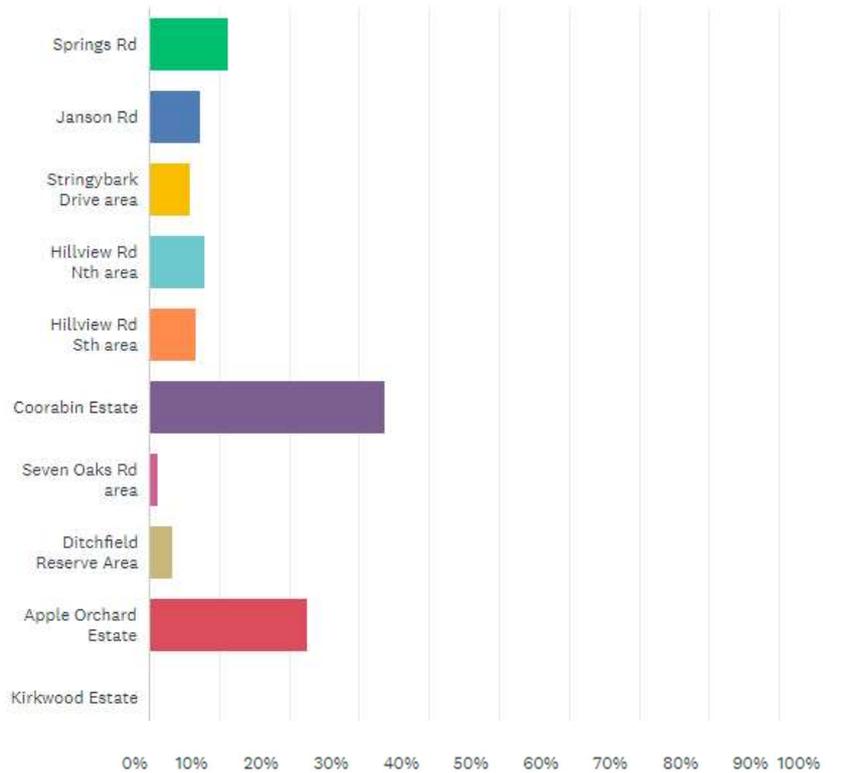
Answered: 167 Skipped: 0



ANSWER CHOICES	RESPONSES	Count
1	8.38%	14
2	52.69%	88
3	22.75%	38
4	11.98%	20
More	4.19%	7
TOTAL		167

To assist in building a better picture of where mobile signals are good or poor. Please indicate the area in which you live. If you wish to be more specific add your comments to "other".

Answered: 151 Skipped: 16



ANSWER CHOICES	RESPONSES
▼ Springs Rd	11.26% 17
▼ Janson Rd	7.28% 11
▼ Stringybark Drive area	5.96% 9
▼ Hillview Rd Nth area	7.95% 12
▼ Hillview Rd Sth area	6.62% 10
▼ Coorabin Estate	33.77% 51
▼ Seven Oaks Rd area	1.32% 2
▼ Ditchfield Reserve Area	3.31% 5
▼ Apple Orchard Estate	22.52% 34
▼ Kirkwood Estate	0.00% 0
TOTAL	151

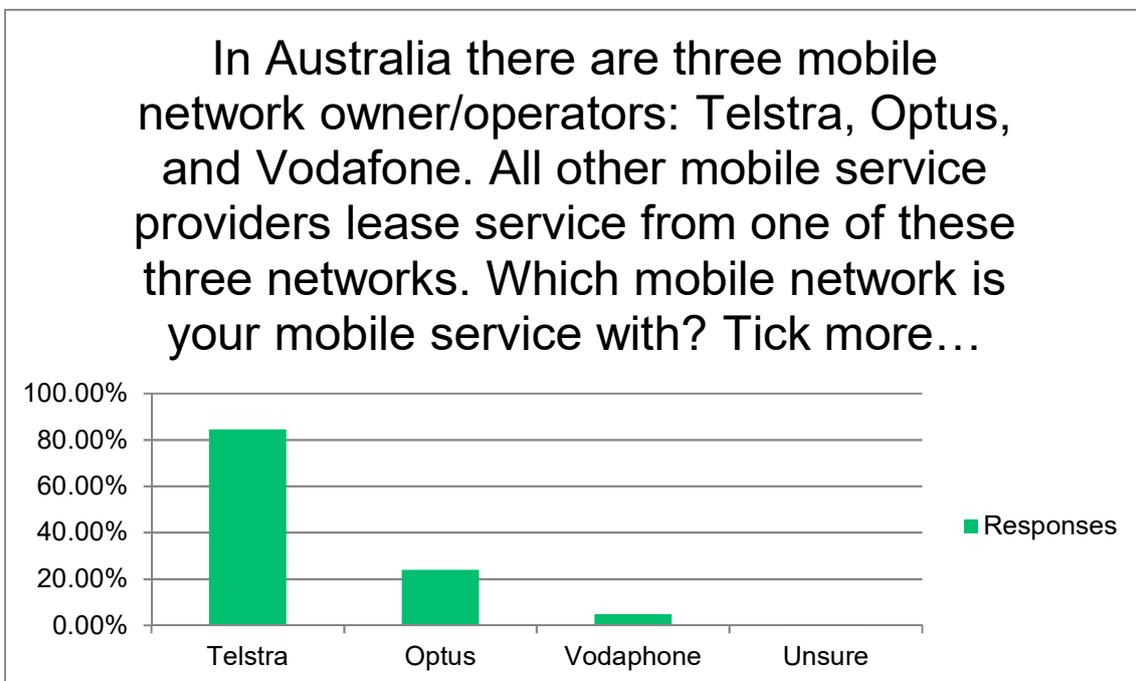
Showing 28 responses

Willowbank Way; Willowbank Way (Albert Park Estate); Benson Street; Delmela CRT Ryan Street, off Strickland Pde end; Apple Orchard Drive, Brown Hill; Corner of Janson Road Opposite the Coorabin estate; Apple Tree Hill Estate; Delmela Court; Gracefield Drive; heron ridge; Apple Tree Hill Estate; Lanah Place; Monte street; Burgadale Court; Delmela Court; Willowbank Way; Brooklyn Court; Illana Street; Anaila St; 10 Whistler Close; Benson St. Longs

Hill Road; Have lived in Stringybark Drive for over 25 years and never had service; nor can we hook into NBN without a satellite dish apparently. Still on ADSL; Madderns Road Glen Park; Longs Hill Road/ Brooklyn Court; Bottom of Longs Hill Rd.

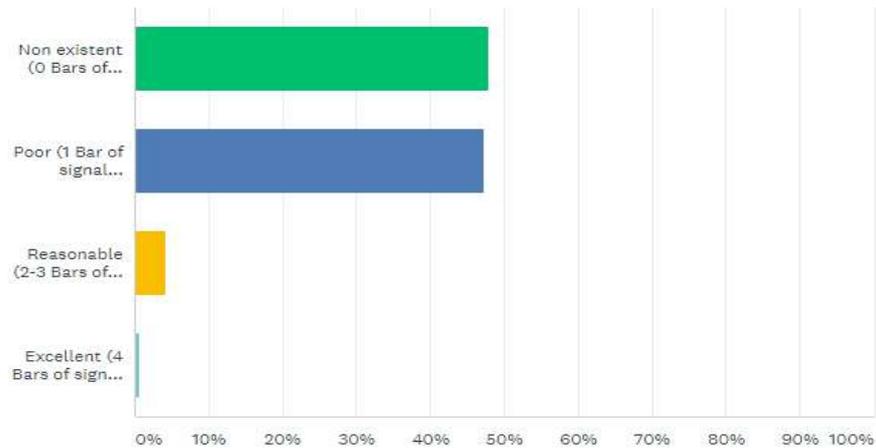
Q6 In Australia there are three mobile network owner/operators: Telstra, Optus, and Vodafone. All other mobile service providers lease service from one of these three networks. Which mobile network is your mobile service with? Tick more than one if required.

Answer Choices	Responses	
Telstra	84.43%	141
Optus	23.95%	40
Vodafone	4.79%	8
Unsure	0.60%	1
Answered		167
Skipped		0



How would you rate your mobile phone reception inside your house the majority of the time?

Answered: 167 Skipped: 0



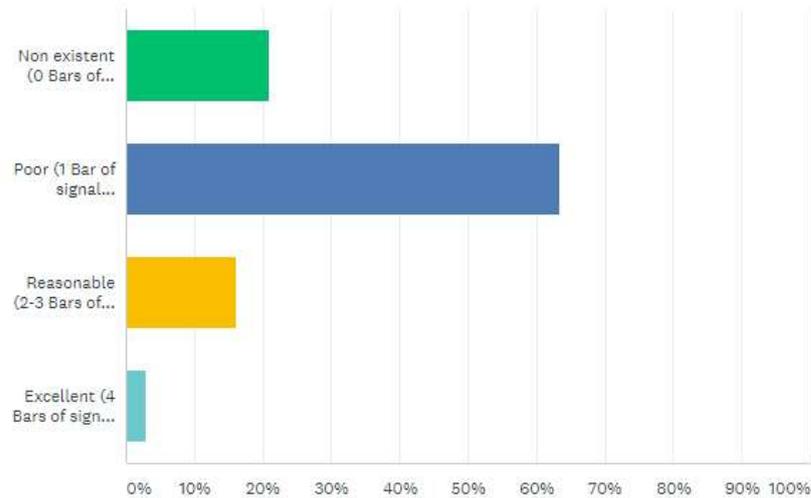
ANSWER CHOICES	RESPONSES
Non-existent (0 Bars of signal strength)	47.90% 80
Poor (1 Bar of signal strength)	47.31% 79
Reasonable (2-3 Bars of signal strength)	4.19% 7
Excellent (4 Bars of signal strength)	0.60% 1
TOTAL	167

One bar, and only at the West side of the house... east side it drops out.
 Service was better before the 2G service was turned off
 Drops out all the time %. Have to use WiFi assist
 Calls drop out and delays in connecting to calls
 In some areas of my home, I have no reception at all
 Sometimes 0 bars non-existent
 Continually drops out when Talking on the phone
 Can vary seems to be stronger at the front of the house but the living spaces are at the back of the house where we spend most of our time
 Very poor/no signal on my whole block
 Reception only in front of house
 Very occasionally poor (1 bar)
 We have to stand in one spot in our home to get service if we move it cuts out. We are over it.
 Have to go outside sometimes.
 only can be used thru WiFi
 My Aldi service is non-existent in this area
 1-2 Bars only in Kitchen. No reception in rest of house.
 Occasionally but unreliably receive SMS; can't make or receive calls
 Occasionally if I move towards a window 1 bar will appear; however, this is sporadic.



How would you rate your mobile phone reception outside of your house the majority of the time?

Answered: 167 Skipped: 0



ANSWER CHOICES	RESPONSES
Non existent (0 Bars of signal strength)	20.96% 35
Poor (1 Bar of signal strength)	63.47% 106
Reasonable (2-3 Bars of signal strength)	16.17% 27
Excellent (4 Bars of signal strength)	2.99% 5
Total Respondents: 167	

[Comments \(16\)](#)

Most of the time but zero on many occasions

Phone calls often drop off whilst in use. Often delays in dial connection

If you mean away from home. If you mean directly outside my house in my driveway for instance it's still Poor.

Had to change from Optus to Telstra when we moved on 4 years ago as had little to no coverage with Optus

very poor indeed

Phone calls drop out both inside and outside

We cannot receive phone calls or communication through the network. We need to connect to our wifi in order to use our phones

Only if I stand in one spot and don't move

We have 'state of art' phones and third world reception

Occasionally poor (1 bar)

Non-existent on lower parts of the property, reception increases heading uphill to 1 bar

Often drops out; can't always call out

Mostly non-existent.

It fluctuates between none and a small amount

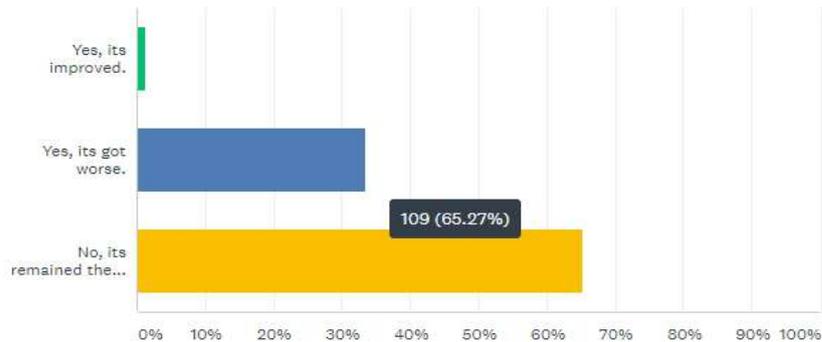
Out the front of the house might get 1 bar sometimes

Sometimes no signal



Do you think your mobile signal strength has changed in the last 12 months?

Answered: 167 Skipped: 0



ANSWER CHOICES	RESPONSES
Yes, its improved.	1.20% 2
Yes, its got worse.	33.53% 56
No, its remained the same.	65.27% 109
TOTAL	167

Showing 16 responses

Used to get 2 bars, now only get one.

Worse if anything

Often Phone drops out when on a call

visitors to our house cannot believe how bad the coverage is

No improvement since we moved here 4 years ago

It appears that it has become extremely bad from very bad over the course of this year

Brooklyn Court; back side of Coorabin Estate.

very unsatisfactory

During the last 12 months I contacted our provider about our poor service. Their response was until another tower was built the service would remain woeful. They suggested us buying an antenna but could not guarantee that the service would improve.

Just moved here

Still non-existent

Worse than ever, can't even get a message out

We live less than 10mins from Ballarat CBD and have worse service than we have had whilst in some places in the outback

We are desperately worried as to not having any reception.

Never used to get any coverage.

Got worse since Xmas 2019