



BIRRR SUBMISSION INTO THE Shutdown of the 3G mobile network – Senate Inquiry

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Table of Acronyms

000	Triple Zero Emergency
1800	Free telephone call prefix
2FA	Two Factor Authentication
3G	Third generation of connective/network technology
4G	Fourth generation of connective/network technology
4GFW	Fourth Generation Fixed Wireless
5G	Fifth generation of connective/network technology
ABC	Australian Broadcasting Company
BIRRR	Better Internet for Rural Regional and Remote Australia
CIS	Critical Information Summary
CPR	Cardiopulmonary Resuscitation
CSG	Customer Service Guarantee
DCRS	Digital Call Recording System
EFTPOS	Electronic funds transfer at point of sale
FCC	Federal Communications Commission
GB	Gigabyte
HCRC	High Capacity Radio Concentrator
KBPS	Kilobits Per Second
Mhz	Megahertz
MNO	Mobile Network Operator
NGWL	Next Generation Wireless Loop
NSW	New South Wales
PICO	Small base station to extend coverage/ add capacity in densely populated areas
RRRCC	Rural, Regional and Remote Communications Coalition
RRR	Rural Regional Remote
SMS	Short Message Service
USO	Universal Services Obligation
VoIP	Voice over Internet Protocol
Wi-Fi	Wireless Fidelity

Executive Summary

Better Internet for Rural, Regional and Remote Australia (BIRRR) has ongoing concerns with several aspects of 3G closure. Our submission outlines concerns with declining coverage in rural, regional and remote (RRR) areas, with many of our members reporting worsening experience and coverage of mobile networks in recent years. This is exacerbated by issues of mobile congestion (especially during peak times) and difficulties in reporting coverage and fault issues to mobile carriers. Our membership questions the carriers' claims of 'equivalent' 4G coverage in RRR areas and are worried that 4G coverage will not be the same as 3G. Other concerns include consumer affordability to upgrade devices and equipment, the accuracy and effectiveness of information and advice regarding the shutdown and migration issues associated with 3G Universal Service Obligation (USO) voice services. BIRRR has outlined several recommendations directed at both mobile carriers and Government that could help action some of these concerns, however we stress the importance of consumer and community engagement, as this has been notably lacking in all aspects of the 3G shutdown processes and practices to date.

BIRRR Background

Better Internet for Rural, Regional and Remote Australia (BIRRR) is a grassroots not-for-profit volunteer group which advocates for viable and sustainable solutions to a wide variety of rural, regional and remote (RRR) telecommunication issues.

BIRRR is independent, apolitical and technologically agnostic. Since 2014 we have provided information, practical support and advice, primarily through our Facebook platform and website.

The organisation boasts a membership of over 15,500 individuals across Australia giving BIRRR a unique appreciation, insight and understanding of the issues and impacts of the connectivity challenges and barriers to access facing RRR Australians.

BIRRR is a founding member of the Rural, Regional and Remote Communications Coalition (RRRCC).

BIRRR recommendations for the Telecommunications Industry and Mobile Carriers:

1. Carriers and the telecommunication industry should be **mandated to provide clear and transparent information** to consumers and communities:
 - on tower upgrade timelines and migration processes for 3G shutdown.
 - on new handsets and equipment that support 4G/5G, particularly at the point of sale. Devices and equipment should have clear labels and clear guides as to compatibility with existing and newer technologies.
 - by providing information and access to an economical 'Big Button' 4G compliant handset.
 - by developing interactive, user-friendly tools that allow consumers to **check coverage quality and availability, planned outages and upgrades in specific locations.**
2. The telecommunications industry should participate in extensive engagement with consumer advocacy and representative groups and communities **prior** to any technology migration process occurring.
 - mobile shop fronts with the ability for community members to make an appointment or drop in to get accurate information on devices, service enhancing equipment and information to upgrade their device, sim card, equipment and / or voice service. Similar to the Centrelink or government services vans or breast screen buses that visit RRR communities.
 - work with and listen to consumer advocacy groups (who represent consumers) and act on the information and intel provided, to ensure migration processes to newer technologies are easier and less confusing for consumers.
 - provide local government, businesses and communities with accurate information regarding migration processes, technology upgrades and planned outages.
3. Carriers to provide **dedicated contact numbers and contact methods** for RRR consumers, staffed by employees trained in the specific technical knowledge required in these areas. Dedicated contact centres should allow RRR consumers:
 - to email specific photos of equipment/devices to see if they are compatible with 4G.
 - to report coverage issues after 3G shutdown and enable expedited access to signal enhancing equipment and technicians if required to regain coverage.
 - migrate USO voice services in an organised and transparent way to ensure consumers are not frustrated or confused with the process

4. Telstra to **proactively migrate Next Generation Wireless Local Loop (NGWL) voice service consumers** by directly contacting the customer and reducing barriers to transfer. Telstra should learn from the mistakes made during the NGWL migration process and ensure these learnings are acted on for future technology upgrades and migrations.
5. Mobile carriers should enable prioritisation of voice and SMS, in particular during emergencies and times of network congestion such as peak tourist periods or local events. Carriers should be transparent about this at point of sale to consumers.
6. In a similar manner that the mobile operators have identified mobile handsets that support emergency calling following the 3G shutdown, that mobile operators identify mobile handsets that support Wi-Fi calling and SMS over Wi-Fi; including cheaper options for those with limited means. This is important for everyone and particularly for remote communities that rely on Wi-Fi only internet access.
7. Mobile carriers to be proactive in identifying tower faults and issues, with consumers having to spend considerable time and effort getting these resolved. This includes ensuring there are enough qualified technicians to fault find and maintain and repair towers.

BIRRR recommendations for Government

1. Financial support for vulnerable consumers to replace non-compatible devices and equipment, particularly low income consumers and those in remote first-nations communities. This could include the utilisation of existing devices by recycling organisations and grants for those with outdated equipment that find themselves on the fringe of 4G coverage after 3G shutdown.
2. Review and standardise all Mobile Network Operator (MNO) coverage claims and coverage mapping such that they adhere to a common, easily understood and nationally defined standard. Establish national standards for how coverage data is collected and reported by carriers, ensuring consistency and comparability. Coverage maps should show detailed information, including distinctions between different types of coverage (e.g., 3G, 4G, 5G, indoor and outdoor coverage) and signal strength and should be updated regularly to reflect the latest network expansions and changes.
3. Continue the focus on misleading and inaccurate information in the telecommunications industry, in particular in RRR areas. Investigate and remedy cases of misleading provider advertising, disinformation and customer coercion.

4. Investigate new legislation similar to recent Federal Communications Commission (FCC) legislation¹, to ensure that major Australian broadband, voice and mobile service providers display information similar to nutrition labels on food products in plain English to help consumers shop for services and devices.
5. Expand the National Audit of Mobile coverage to measure coverage and performance of mobile services in RRR areas, with a particular focus on using crowd sourced data from those in marginal coverage areas, most likely to be affected by 3G Shutdown. Ensure the data from consumers and communities with coverage concerns are incorporated in the audit.
6. Investigate those communities most vulnerable to isolation in an emergency and those communities affected by large numbers of everyday power outages and expand the Federal Government's communications resiliency infrastructure programs².
7. Establish legislated guidelines, in the event of local power failure, for maintaining USO connections where no mobile service exists.
8. Investigate the migration processes and practices of Telstra in regards to 3G NGWL migration. Seek independent data and research to determine if the proposed 3G NGWL replacement USO service - Telstra Starlink Satellite Voice, is an adequate USO voice service replacement and can meet reliability metrics required.
9. Funding for research into consumer behaviour change and funding of Connectivity Literacy solutions at a community level to promote and improve digital inclusion. For example:
 - research in best ways to achieve consumer and community behaviour change and educate and inform consumers on connectivity access and how to get and stay connected.
 - 'Train the trainer', development of specific Connectivity Literacy training and education for key local staff and community members such as local councils, community resource centres (in WA), Regional Development Associations etc
 - specific assistance for local governments and communities in developing digital plans and being aware of community needs and future requirements, to guide and fund investment opportunities.

¹ <https://www.fcc.gov/broadbandlabels>

²

<https://www.infrastructure.gov.au/media-communications-arts/phone/improving-resilience-australias-telco-networks>

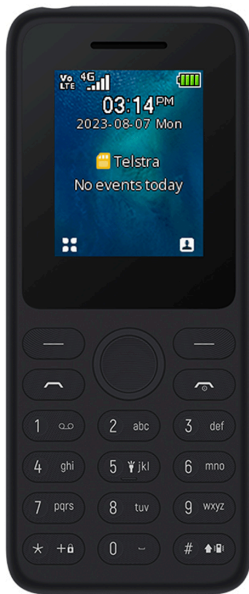
10. Enhanced Regional Tech Hub with adequate funding to address the Connectivity Literacy issue in RRR areas, this should include:

- accurate content that is regularly updated and keeps abreast of the constant changes in the telecommunications space, especially in regards to migration from aging technologies.
- specific help and advice for local businesses in particular in regards to payment systems and redundancy of connectivity.

Impact of 3G Shutdown on consumers in rural, regional & remote areas

The shutdown of 3G networks in Australia will significantly impact consumers in rural, regional, and remote (RRR) areas. The exact number of devices and consumers in RRR areas affected by the 3G shutdown remains unknown to BIRRR. However, given that all NGWL voice services (approximately 5000) and mobile towers pending upgrades from 3G are situated in these regions, combined with affordability issues and a scarcity of telecommunications shop fronts and technicians to receive accurate advice and purchase new equipment, it is evident that the impact will be most significant for consumers in these areas. BIRRR is particularly concerned with:

- **Access to Emergency Services:** Many RRR residents rely on older, non-4G / VoLTE compliant handsets and signal extenders/repeater equipment to gain coverage, which will not connect to newer networks, affecting access to triple zero emergency calls. The migration of Telstra's Next G Wireless Local Loop (NGWL) voice services is also incomplete, with the migration process commencing too close to 3G shutdown and being plagued with frustration issues, creating barriers for consumers to migrate and thus potentially impacting emergency service access. Immediate access to emergency services through the mobile network, is vital for all, but particularly critical in rural and remote Australia where alternate connectivity (such as nbn or landline phones) can be some distance away, as is the distance to physical emergency services. See ABC news article [here](#).
- **Medical Alert Devices and other industry 3G Devices:** Elderly and health-compromised Australians using 3G medical alert devices will potentially be affected by 3G closure. Industries reliant on 3G devices, including smaller businesses with 3G-based EFTPOS or payment systems, may also face disruptions. It is confusing and difficult for a consumer to know or find out if an antenna, cel-fi, smart antenna, mobile modem, farm monitoring equipment, medical alarms



and other associated equipment will still be compatible after 3G shutdown, or if the equipment is configured correctly. There are significant numbers of consumers, many of whom are particularly vulnerable, who do not understand the impact of 3G shutdown on not only their mobile handsets, but also other 'connected devices', in particular NGWL voice services which are supplied by Telstra under their Universal Service Obligations (USO).

- **Mobile Devices:** Many older consumers use basic 3G-only handsets, and there is currently no equivalent 4G 'big button' handset available. Upgrading these devices is costly and complicated, with financial and technical support needed. Additionally, newer devices may require a new SIM card, which when in a remote area, can be difficult to access and present barriers with account authority for many users. The cheapest phone

currently available from Telstra is the prepaid Telstra T-Lite for \$59, which is marketed as a 'seniors phone'. It is locked to the Telstra network and supports 4G VoLTE and emergency calling. However, it does not have 'big buttons' and some users may find the phone not as accessible as a larger button handset. Currently there is not a 4G equivalent 'big button' handset.

- **Awareness and Communication:** While the need for migration has been flagged by carriers for some time, essential information about the 3G shutdown was delivered very late by the telecommunications industry. BIRRR consumer research clearly demonstrates that awareness of and support for telecommunications in RRR areas is lacking. The bulk of information and sudden sense of urgency on 3G closure has only occurred in the last five months. Many consumers are still unaware of the need to upgrade their devices and equipment. The 3G SMS checker launched by Telstra is helpful for mobile handsets but does not assist with other connected devices and equipment. A significant number of RRR consumers still do not have compatible devices and extension equipment and still require active financial and / or technical support to upgrade.
- **Carrier Preparedness:** BIRRR questions that carriers, particularly Telstra, will upgrade all RRR towers and equipment by the revised shutdown date of 31st August 2024. BIRRR has for some time been concerned that the original closure date of 30th June would not be met, and while the closure has now been 'pushed back,' (ostensibly due to 'consumers not being ready'), BIRRR are not confident the carriers will have effectively upgraded all RRR mobile towers, helped all consumers migrate to newer compatible handsets and equipment and migrated all

Telstra 3G NGWL voice services, by the revised 3G closure dates. Additionally, equipment shortages, in particular regarding NGWL services, have delayed migration processes.

- **Consumer Challenges and Lack of Information and Advice:** The scarcity of telecommunications storefronts, independent advice, information and assistance, and technicians in RRR areas, hinders timely upgrades and migration processes. Financial and technical barriers, including long call centre wait times, costs to upgrade devices and equipment and high installation and travel fees, complicate the process further. Other challenges include consumers, who often can not access a telco store, facing long wait times on hold or are being pushed to use an app, which requires two-factor authentication (2FA). Through no fault of their own, many consumers have yet to migrate equipment, mobile handsets and NGWL voice services successfully due to these challenges (see Appendix 1 Case Study).
- **Risk of Communication Loss:** Some consumers, particularly NGWL users, may be left without any form of communication post-shutdown due to complex migration processes, equivalent coverage issues and barriers to affording and/ or installing new equipment.
- **Misinformation:** Consumers are at risk of receiving **misinformation and misleading advice** from installer companies and equipment suppliers, who prioritise sales over accurate information, technical performance or appropriateness.

BIRRR has taken steps to support its members through informative initiatives and webinars to facilitate the transition. However, the overall impact on RRR consumers is expected to be significant due to these numerous challenges. To date, BIRRR has assisted our members through a number of initiatives. These include a webpage³ outlining the range of connected devices and equipment that may be impacted by 3G shutdown and three BIRRR initiated Telstra webinars to assist transitioning 3G NGWL customers. However, as volunteers, BIRRR should not be expected to assume the responsibilities of telecommunications companies concerning the 3G closure.

³ <https://birrraus.com/2024/04/19/3g-shutdown/>

Coverage Concerns

The BIRRR membership base have articulated concerns that although carriers have promised 'equivalent' 4G coverage, areas currently covered by 3G will not be reliably covered following the switch off.

There are three separate concerns:

1. *The first concerns areas that are currently mapped for and receive 3G handheld coverage.*

Telstra have consistently stated these areas will be covered by equivalent 4G coverage.

However, until the actual switchover occurs, this cannot be confirmed and consumers are cautious of these claims.

2. *The second are areas that currently receive 3G handheld coverage but are not mapped as receiving coverage, or are considered 'grey areas' or 'fringe areas'.*

Customers in this area have come to expect coverage, and are now worried their coverage experience will not be the same following the 3G shutdown.

3. *The third are areas that currently rely on signal enhancing equipment for 3G or 4G coverage (via Cel-Fi repeaters/antennas etc).*

As mobile signal has declined these customers have often been encouraged by carriers to purchase expensive enhancing equipment. They are now concerned that they will lose or have degraded service and their coverage experience will not be the same following the 3G shutdown. This group is also concerned that they cannot prepare until the switchover because they do not know what changes to signal enhancement equipment and configuration will be required.

There is currently little information (if any) of plans by carriers to support customers who find that following switchover, they have lost and/or experienced degraded coverage. Mobile coverage maps lack accuracy and transparency and don't clearly state if 4G coverage will be the same across all layers of the map i.e. indoors, with an antenna etc. Anecdotally, coverage maps also tend to overestimate coverage, not accurately reflecting real-world conditions. This can mislead consumers about the quality and extent of service availability, leading to dissatisfaction. Furthermore, the maps are not always updated regularly, and there are significant discrepancies between the maps and actual user experiences; which indicates gaps in the reported coverage.

Impact of a lack of telecommunications services on the economic and social circumstances of those who live in regional Australia

Telecommunications underpin economic and social prosperity in RRR Australia. While it could be said connectivity drives the Australian economy, the tyranny of distance means it is rural and remote communities who most often solely rely on mobile technologies to participate in work, social networking, health and wellbeing.

While the National Broadband Network (nbn) is available to all Australian residences, there are limitations to its universal adoption and accessibility. With mobile coverage not available to all Australians, covering only 33% of the Australian landmass⁴, BIRRR believes nbn services (that can support Wi-Fi calling and SMS over Wi-Fi) should be thought of as complementary as opposed to competitive, to the mobile network. This is especially so when considering rural and remote premises and First Nations communities which lack adequate or reliable mobile coverage.

While residences can use a residential broadband service to access their mobile carriers service via Wi-Fi calling and SMS over Wi-Fi, this has limitations:

- Not all residences choose to access nbn broadband. This may be for a variety of reasons e.g. cost, Connectivity Literacy⁵ barriers, misinformation and misleading advice from telcos, transient consumers etc.
- Wi-Fi calling is limited to the residence, so in rural situations a person may need to return inside to a residence to access emergency services. Alternative communication devices and equipment⁶ for those without mobile coverage, or those with poor coverage, is expensive and information on alternatives is often difficult to access and understand.
- The ability to use Wi-Fi calling is reliant on the nbn (or other) technology working. A lack of telecommunications redundancy, particularly with the push from mobile carriers to mobile services. For example, Telstra moving some of the remaining USO voice service customers off copper and other aging USO services and onto VoIP and non terrestrial networks (see Appendix 4). In the event of a network outage, or specific event such as power outage or rain fade on satellite services, customers without mobile coverage can be left without any form of

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<https://www.infrastructure.gov.au/sites/default/files/documents/2021-rtirc-report-a-step-change-in-demand.pdf>

⁵ <https://birrraus.com/connectivity-literacy-2/>

⁶ <https://birrraus.com/2024/05/29/in-vehicle-or-farm-implement-communication-options/>

connectivity. Unfortunately these events tend to go hand-in-hand with emergency events, such as bushfires, cyclones, floods and storms.

- Not all carriers and not all handsets support Wi-Fi calling or SMS over Wi-Fi. This little understood fact is a roadblock for many RRR consumers and First Nations communities who are reliant on Wi-Fi only internet access. It also creates issues for consumers needing Two Factor Authorisation (2FA) for banking, government reporting and access to allowances and medical appointments etc., that rely on SMS. Being able to contact your provider can also be challenging without mobile service to receive 2FA codes.

Good connectivity via the mobile network in a RRR community can have significant positive impacts on residents. Attracting residents and workers, access to Telehealth, enabling remote work and work-from-home, improved access to educational and learning opportunities and a significant reduction in isolation.

For rural business, connectivity via the mobile network is essential for workplace health and safety, attracting employees and conducting business.

Examples from members:

“During crop harvest mobile contact between farmers with grain trucks at the silos is critical, without it the whole operation has to stop, we need to know what quality is being received and where to send the grain”

“You just have to keep doing CPR until someone finds you and can get into the house to call 000, with mobile service you can hands free call for help”

“It’s not uncommon to spend all week just seeing my husband, it’s pretty isolated, thank goodness I can text friends and family, it helps you feel less alone as a new mother.”

Service Provisions and Coverage

Anecdotally, BIRRR has established that mobile network coverage maps are often inaccurate. Not only does this make it difficult for consumers to access current information regarding options for mobile availability at their residence, it reduces confidence that the same footprint will be covered after the 3G switch off.

Over the last six months BIRRR has seen a significant increase in member reports of declining mobile coverage, as well as capacity issues (congestion, data slowdown, dropouts) on mobile services across Australia (see Appendix 2 Case Study). BIRRR has also received reports that the decline in coverage and capacity is likely being impacted by a reduced supply of regional technicians which, in turn, is leading to extended repair times and poor maintenance of towers and associated equipment.

Quantitatively describing these issues is difficult, as the mobile carriers' outage reporting systems are not kept up to date. Members report, it can often take days for outages to be recognised, and even then it is often not communicated by the carrier and the onus is placed on the consumer to 'prove' there is an issue or fault.

Distressingly, a lack of community consultation and notification regarding planned upgrades to mobile towers is common. Some communities have reported extended periods of unexpected downtime. Planned outages rarely take into account the communities needs and local events, examples including major planned outages scheduled over the Goondiwindi Agricultural Show in Queensland and the Gloucester Agricultural Show in NSW.

These issues are further complicated where there is a lack of redundancy, for example, where Telstra have moved customers off an nbn fixed line voice only plan, to its mobile network (see Appendix 4). This raises significant concerns in areas where the mobile network is less reliable, prone to effects of power outages in remote areas and subject to congestion during peak times such as tourist season or a local event.

Efficacy and capability in disaster situations

BIRRR is concerned that there is next-to-no public information available on telecommunications carriers' response to disaster situations. We do not know if carriers have plans in place to prioritise voice and SMS services during emergencies to maintain network capacity. We do not know what plans there are to trigger emergency roaming (after the trial is complete), how a community can have it enacted quickly during an emergency and where roaming might be available.

BIRRR members often report carrier towers are not resilient to power outages, with little or no battery backup or generators in place. When a generator can be provided, locals are not trained or allowed to refuel and with roads often cut during emergency, the generator can not be used until the required personnel access the site. Additionally, maintenance, repair and upkeep of mobile towers, particularly after natural disasters and weather events, does not occur without consumers having to actively be involved in reporting the issues.

In RRR areas power outages are an everyday occurrence, and whilst other major infrastructure such as water and sewerage often have systems in place, telecommunications infrastructure often lacks planning, resiliency and redundancy, not just during disaster situations but also during everyday power failure.

Adherence to, adequacy of, and opportunity to improve service obligations

There are currently no service obligations on mobile network operators for mobile coverage in Australia. While consumer guarantees protect purchase of devices, and the USO covers voice service accessibility, there is no protection for a mobile consumer who locks in a contract with a provider or purchases coverage extension equipment, then finds their service degrades or has significant outages.

USO voice services provided by the 3G network do have service obligations. However, these services are currently being migrated to 4G Fixed Wireless and Starlink voice services, with BIRRR holding concerns that Telstra has not been transparent in providing detail to consumers on migration processes, as well as the adequacy and service obligations of these newer technologies

While an urban customer has choice, RRR customers with mobile coverage are often in areas of monopoly service. Even where there is choice, there are significant barriers to switching providers,

particularly when there has been investment in signal extenders, directional aerials and technician visits.

Any other related matters

Telstra NGWL (3G voice service) transition to 4GFW (4G voice service) and Starlink Voice

Next-G Wireless Link (NGWL) ⁷ is an extended 3G network that provides in excess of **5,000** quality voice data services to many remote properties, particularly in Queensland and New South Wales. NGWL uniquely uses 3G voice for the service and ensures voice priority during times of network congestion. NGWL customers have anecdotally reported their experience and reliability metrics were high.

The customer NGWL modem is essentially a mobile phone in a box with a standard telephone handset interface. NGWL leverages the mobile backbone network often using mobile repeaters to considerably extend the mobile footprint. Mobile repeaters are reliable and low cost, thin route i.e. they do not support many customers, particularly if used for broadband as well as voice..

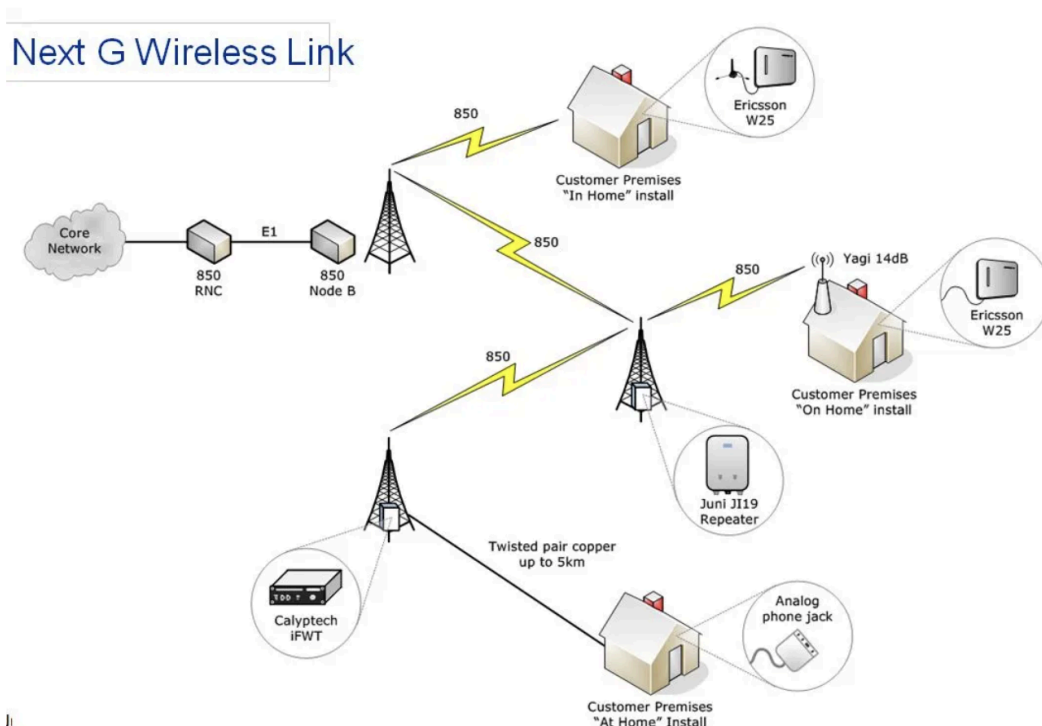


Figure 1: Typical NGWL network infrastructure

⁷ <https://birraus.com/2018/01/29/ngwl-migration/>

NGWL customers are provided voice services in one of three ways. However, there can be multiple variants and equipment used to deliver the voice service:

- a. via the core mobile network
- b. via a repeater tower
- c. via a ploughed copper landline and repeater tower. These premises are out of range of the 3G footprint.

NGWL was first rolled out around 2008 and has provided some sixteen years of reliable service. On 10 September 2018, Telstra announced its NGWL services were Customer Service Guarantee (CSG) compliant⁸.

As part of the 3G shutdown migration Telstra first informed consumers of the need to migrate in early 2023. However, Telstra has left the NGWL migration to the very last minute. As of early June 2024 (despite the earlier proposed 3G shutdown of 30th June 2024) many NGWL customers are yet to be migrated (see Appendix 3). More concerningly, many 3G only towers are still not upgraded, which is preventing NGWL consumers from migrating their voice services. Many of these consumers are being pushed to Telstra's Starlink voice service, not because of their lack of mobile coverage, but due to the disorganised and poor migration processes and lateness of upgrades to many remote Telstra towers.

Following a series of consumer group-initiated Telstra NGWL migration webinars in early April 2024, customers first learnt of the two possible service migration models.

- a. A thin route 4G voice and data service similar to NGWL called **4G Fixed Wireless or 4GFW**.

The replacement 4GFW network utilises the same NGWL infrastructure with upgraded 4G equipment and antennas. The concept of core network and repeater network coverage is replicated. For 4GFW customers there are two Telstra plans available; Upfront Home Phone Plan for \$50 per month (with 2GB of data) and Upfront Starter Plan (with 50GB data allowance) for \$65 per month. Telstra advises that if the data quota is exhausted the service is capped at 256kbps, however the voice service will be maintained.

⁸ https://oia.pmc.gov.au/sites/default/files/posts/2018/12/2_ris_in_pdf_1.pdf

For most NGWL customers transitioned to 4GFW, the customer requires a technician visit where the existing external 3G antenna is replaced with one that is 4G compatible. The 3G modem is replaced with the latest Telstra 4G Wi-Fi modem and the external antenna is connected via coaxial cable. For some customers without an external antenna this is a self-install procedure. A standard telephone handset connects to the voice port on the Wi-Fi modem.

Note: On multiple occasions prior to the product announcement, BIRRR had engaged with Telstra to inform them that using the 'fixed wireless' terminology for this product is confusing for consumers.

- b. A satellite Starlink voice and data service called **Telstra Starlink Voice**.

Customers with an NGWL copper landline extension (iFWT) will be transitioned to non-terrestrial satellite Starlink Voice rather than retain the copper landline.

Note: The copper landline is relatively new infrastructure and can provide many more years of reliable service. In order to reinstate the copper landline tower for 4G FW, it requires the 'standard Cel-Fi 4G repeater upgrade' and the 'in home' Telstra Wi-Fi modem installed at the tower. The existing copper landline connects to the voice port of the modem. The customer's existing handset will work exactly as it did for NGWL. This is a straightforward technical task and simpler and more reliable than a Starlink voice installation, however was not offered by Telstra.

For NGWL customers transitioned to Telstra Starlink Voice, there appears to be one 'voice only' plan for \$50 per month with no data allowance. To date, BIRRRs attempts to clarify the Telstra NGWL to Telstra Starlink Voice offer have proven difficult.

NGWL migration processes have been plagued with issues. A BIRRR Facebook poll has highlighted that 25% of NGWL users are still waiting for a technician to be able to successfully migrate their 3G voice service, 9% were sent the wrong equipment and 13% are waiting on further information from Telstra, or waiting for their local tower to be upgraded to 4G. Through no fault of their own consumers may not be able to upgrade their NGWL voice services before the 3G shutdown.

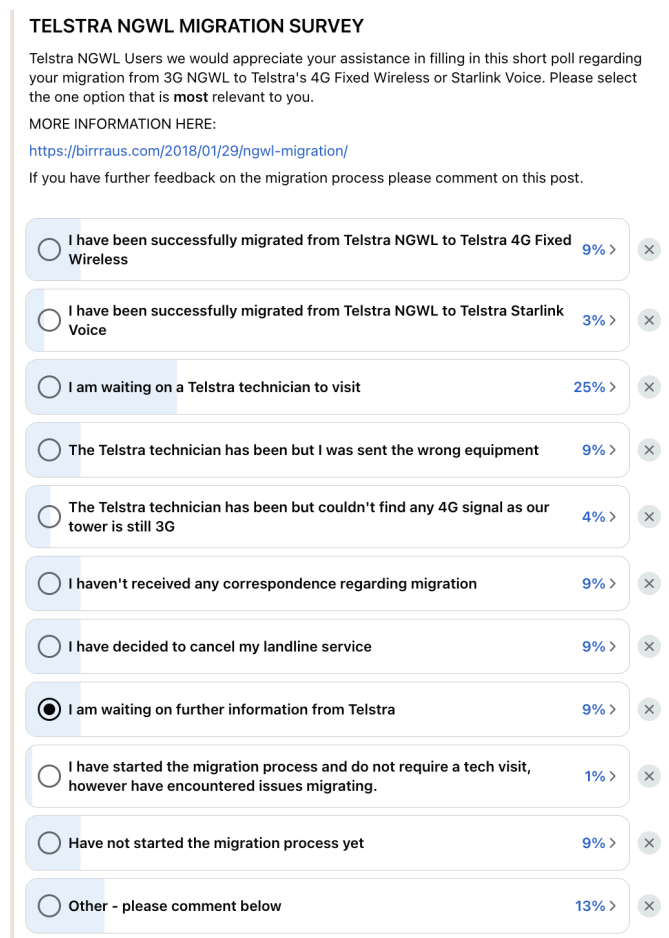


Figure 2: BIRRR Facebook Poll on NGWL Migration 13th May n=86

Issues have included:

- **Long wait times:** Telstra has established an 1800 contact number for NGWL transition support, initially this number had long wait times and is staffed by agents who do not have English as a first language, making them difficult for RRR consumers to understand..
- **Confusion with migration:** For many NGWL customers, Telstra was unable to clarify what voice service they would receive, resulting in many consumers being sent the wrong solution or having a technician visit only to find no 4G signal due to the closest tower not being upgraded as yet. NGWL customers report much confusion with transition plans, procedures and report poor experiences whilst being transitioned. There appears to have been no coordinated process, with Telstra often not being aware of what NGWL solution a consumer had, despite the consumer trying to tell them, thus the consumer not receiving the correct

migration equipment or solution. Technicians are ill prepared, lack tower upgrade information and are reporting shortages of equipment.

- **Priority Assistance:** Confusion about the level of support that transitioned priority assist customers would receive, with Critical Information Summaries (CIS) incorrectly stating it would not be available. i.e. *Priority AssistanceNot available on nbn Fixed Wireless or Telstra 4G Fixed Wireless.*⁹
- **Lack of information for NGWL consumers:** BIRRR has spent considerable time developing consumer information on NGWL migration, which has involved numerous emails and a great deal of volunteer hours, in particular around the information provided to consumers in CIS statements.
- **Number Porting Issues:** Porting existing numbers to the new technologies has often not gone smoothly with incorrect numbers being ported, or long wait times to have existing numbers ported across to the new technology.
- **Account authority and billing issues:** Even though many of these customers have held accounts with Telstra for long periods, the migration process required account owners to manage the migration process, account authorities could not do this. Account owners were required to set up new billing systems, provide new identification documents and in some cases go through new credit check processes.
- **Power Redundancy:** Telstra have not made it clear to consumers that these new technologies will not work in a power outage, and have not provided customers with power backup equipment. Nor have they explained or linked a customer to where to source this equipment or what would be required.

Some consumers have given up in frustration and cancelled their NGWL voice services. It also concerns BIRRR that Telstra have removed the dedicated 1800 number for NGWL service support and fault lodging, with consumers now required to use the normal Telstra support number or the app, which requires 2FA - difficult for those in areas without mobile coverage.

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<https://www.telstra.com.au/help/critical-information-summaries/personal/home-phone/telstra-upfront-home-phone-plans/telstra-upfront-home-phone-plan>

Appendices

Appendix 1: Case Study 1

3G (850Mhz and 2100Mhz) occupy a different frequency spectrum to 4G (700Mhz and 1800Mhz).

Many rural locations rely on an external antenna to support their mobile connection. Many will require an antenna or equipment upgrade that supports 4G frequencies. Without an upgrade they will have no service when 3G is closed. There is a lack of technicians and independent advice to help consumers understand if new equipment is required.

Peter* lives in regional Victoria. He knew about the pending 3G shutdown and configured his Cel-Fi device for 4G, but found no signal. Checking the Telstra 4G coverage maps led to further confusion as it appeared that there was 4G coverage when using the 'maximise your signal' button. Being non-technical he had no idea what this meant as all he knew was that the 4G did not work despite a professionally installed external antenna and Cel-Fi. He called Telstra for help without satisfaction, wrote to the Minister and in desperation called the ABC.

The ABC interviewed Peter and escalated his problem to Telstra¹⁰.

Shortly after Telstra 'magically' appeared and conducted signal checks confirming an adequate 4G signal at his premises.

Telstra checked the existing external antenna and advised that it was unsuitable for the new 4G bands. Upon installation of a new 4G compatible antenna his service was restored.

Peter is happy with his new service but very frustrated by the long and frustrating path to resolution. He knows that many will suffer the same experience.

¹⁰

<https://www.abc.net.au/news/2024-03-23/3g-switchoff-telstra-emergency-bushfires-phone-network-gippsland/103604594>

Appendix 2: Case Study 2

There is widespread feedback of declining user experience on mobile networks in regional areas and poor response from carriers in addressing consumer concerns.

David lives on a cropping property in the NSW Riverina. He was recommended by Telstra to install antennas and Cel-Fis to enhance mobile coverage around his home, sheds and property. David spent a considerable amount of funds installing this equipment in houses, sheds and vehicles

Over the past 12 months David and many others in his area have noticed declining mobile coverage and service. David and his community have reported the issue to Telstra on numerous occasions and been given conflicting advice and information. To date there has been no resolution and the community is concerned that coverage in this area will be worse after 3G shutdown.

Unfortunately, in this instance Telstra is unable to provide an immediate remedy to the mobile coverage concerns you have. Telstra is always and consistently assessing measures to improve mobile coverage as a whole across our entire Australian network. For more information, please visit our website at <https://www.telstra.com.au/coverage-networks/mobile-black-spot-program>.

As we checked this with our technical team, they do not have records of the people that are complaining about the widespread coverage issue, from our end we can only check one fault case ticket per account based on the customer who raised the coverage issue. As a group we believe that there are other avenues to raise the matter where your local Council will coordinate with Telstra.

As we are told by our technical mobile team that no reported widespread outage or tower issue in your area, we suggest speaking with our technical team on 13 20 00 "say mobile faults" so they can raise a ticket on your behalf regarding poor coverage as there maybe chance that our site engineers may have been working with a fault which is related to widespread since there was an active talk about this in social media.

Unfortunately, that is the best recommendation that we have for you since from our end we can only assist one customer at a time regarding their service or account and we cannot resolve issue and may close the case as not resolved as widespread coverage issue is involving multiply customers which has to be raise by your local Council or group to Telstra so that widespread issue can be rectify as a whole since a different Telstra department will be dealing with the matter.

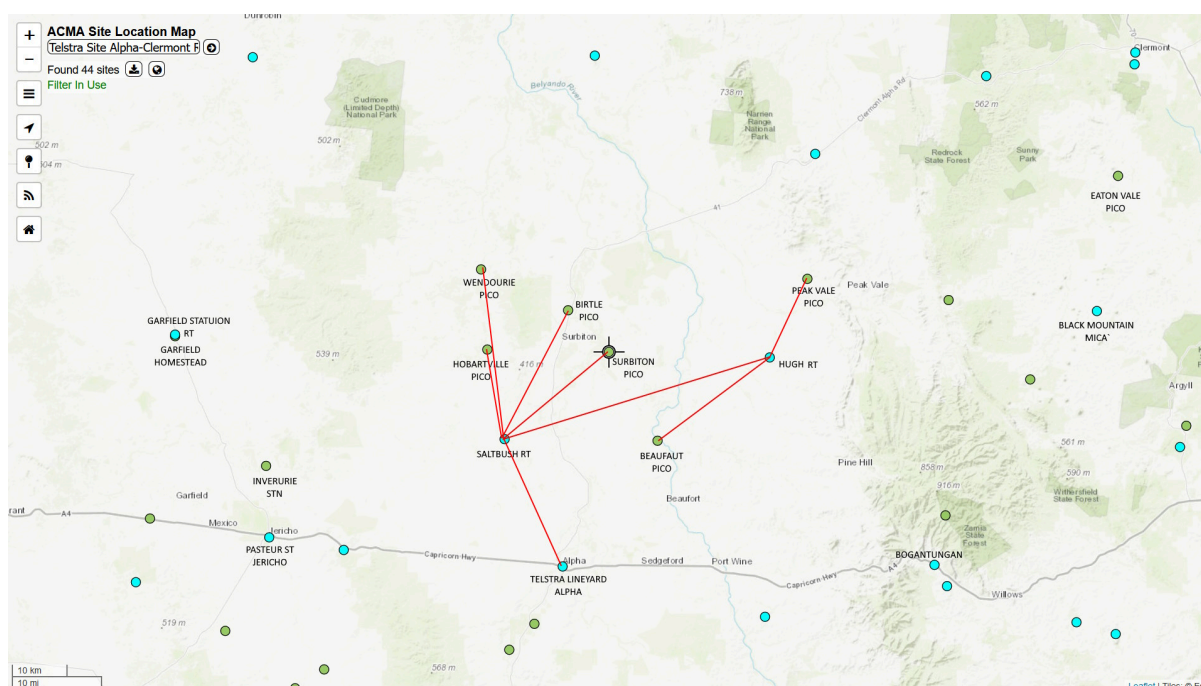
For further cases of declining coverage please see:

<https://www.facebook.com/groups/BIRRR/posts/2461155810759758/>

Appendix 3: Case Study 3

Julie and her family live on a property northeast of Alpha in Central Western QLD. The Saltbush Telstra tower that provides mobile coverage is located on their property and is a daisy chain tower providing 3G coverage only.

The tower has no battery backup and the area has regular power outages which result in no mobile coverage.



Map of the current NGWL network north of Alpha. The red lines are microwave links

In March 2023 Telstra upgraded each of the PICO towers, with 4G infrastructure in readiness for the upgrade to the primary mobile radio terminals at Saltbush and Hugh. As at the beginning of June 2024, the upgrades to the primary towers at Saltbush and Hugh are outstanding.

Julie has an NGWL Landline, and initiated migration, after Telstra and BIRRR hosted several webinars to provide information on the NGWL migration process. Telstra identified that Julie needed a technician's visit to migrate to 4G Fixed Wireless (4GFW) and an appointment was scheduled.

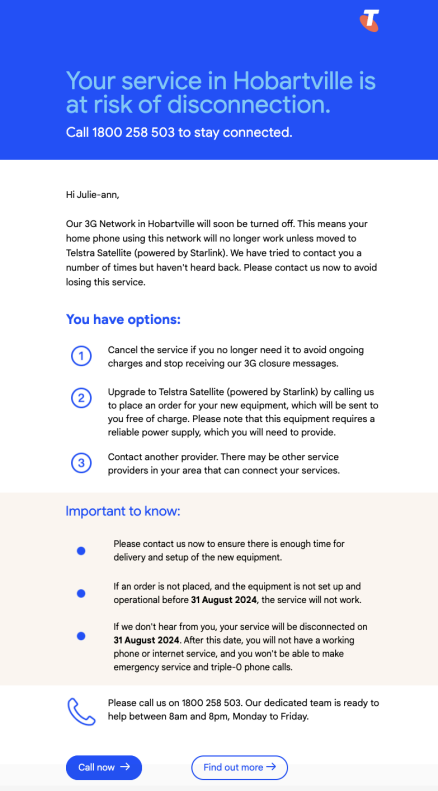
The technician arrived and stated that he couldn't migrate Julie's landline as there was no 4G signal.

Julie spoke with BIRRR about why this would be the case. BIRRR were able to inform Julie that the primary donor tower at Saltbush had not been upgraded and was only providing 3G coverage. The 4G upgrade for the Saltbush tower is planned but outstanding at this time

The technician then attended several other properties where he was also unable to find a 4G signal.

This is not an isolated example. NGWL customers report widespread disinformation and it is feared that many will end up on an inferior non-terrestrial satellite service, when a reliable terrestrial 4G service will eventually become available after upgrades are complete.

At the end of May, 2024 Julie received correspondence that she was now being migrated to the Telstra Satellite voice service. She again contacted BIRRR who were able to escalate with Telstra. Telstra advised that Julie will be able to access 4G Fixed Wireless once the local tower is upgraded.



The screenshot shows a blue header with the Telstra logo and the text: "Your service in Hobartville is at risk of disconnection. Call 1800 258 503 to stay connected." Below this is a message to "Hi Julie-ann," explaining that the 3G network will be turned off and providing options to cancel, upgrade to Telstra Satellite, or contact another provider. An "Important to know:" section lists three key points about the August 31, 2024 deadline. At the bottom are buttons for "Call now" and "Find out more".

Hi Julie-ann,

Our 3G Network in Hobartville will soon be turned off. This means your home phone using this network will no longer work unless moved to Telstra Satellite (powered by Starlink). We have tried to contact you a number of times but haven't heard back. Please contact us now to avoid losing this service.

You have options:

- 1 Cancel the service if you no longer need it to avoid ongoing charges and stop receiving our 3G closure messages.
- 2 Upgrade to Telstra Satellite (powered by Starlink) by calling us to place an order for your new equipment, which will be sent to you free of charge. Please note that this equipment requires a reliable power supply, which you will need to provide.
- 3 Contact another provider. There may be other service providers in your area that can connect your services.

Important to know:

- Please contact us now to ensure there is enough time for delivery and setup of the new equipment.
- If an order is not placed, and the equipment is not set up and operational before **31 August 2024**, the service will not work.
- If we don't hear from you, your service will be disconnected on **31 August 2024**. After this date, you will not have a working phone or internet service, and you won't be able to make emergency service and triple-0 phone calls.

Please call us on 1800 258 503. Our dedicated team is ready to help between 8am and 8pm, Monday to Friday.

[Call now →](#) [Find out more →](#)

Appendix 4: Telstra Migration of Fixed Voice Customers to Mobile

Your home phone network is changing to Telstra 4G. Here's what you need to know.

Dear [REDACTED]

Your Telstra home phone [REDACTED] is connected to the nbn™ network. As you don't have an internet service with your Telstra Voice plan on the nbn, we'd like to move your home phone service to the Telstra 4G network which connects tens of millions of phone calls each day.

From 18 April 2023 we'll be moving your home phone from the nbn to the Telstra 4G network, unless you tell us you don't want this to happen. This change won't affect how you make calls or their quality and it's a change Telstra will make in the background. If you have a full authority contact listed on your account, they'll also be told about this proposed change if we have their address.

What's the same?

- Your home phone number, plan price and any inclusions.
- Your phone will work the same and the call quality will not change.
- Any pensioner concessions will continue to be applied to your account.
- Continue to make phone calls through your Telstra Smart Modem.
- The features that can be accessed on your service (like MessageBank® for example).
- Your access to a dedicated Australian call centre if you need help.
- Any current privacy settings like Call Line Identification blocking or disclosure and Directory Listing. If you want to make changes to this in the future, you'll need to contact us.

What changes?

- **Some devices connected to your home phone may not work - see [△](#) below.**
- The colour of the light on your modem will change from green to blue, and your phone calls will start coming through the Telstra 4G network.
- Currently your modem automatically switches to the Telstra 4G network if there is a disruption to the nbn network. Once you move to Telstra 4G, you will no longer have this back up service (because you'll already be connected to Telstra 4G).



Important: please call us if you have devices connected to your home phone

These devices may stop working if you move to the Telstra 4G network, so if you have any of these give us a call and we won't make any changes to your service:

- Medical alarms
- Security alarms
- Fire alarms
- Teletypewriters
- Fax
- EFTPOS

If you have any of these devices connected to your home phone, please call us on 1800 621 290 (free of charge, open 9am-7pm AEST Monday to Friday) before 18 April 2023 and follow the prompts to remain on the nbn network. Alternatively, you can visit a Telstra store.

What's next?

If you don't do anything, this change will happen automatically from 18 April 2023. We'll let you know when the change is complete. If you move house, require Priority Assist, or tell us you don't want this change to happen, we won't make any changes to your service.

If you have devices connected to your home phone or wish to remain on the nbn network, call us free of charge on 1800 621 290 before 18 April 2023. Alternatively, you can visit a Telstra store.

If your situation changes, or you change your mind, you can easily switch back to the nbn network, at no additional cost.

For more information, please visit telstra.com/support-homewireless, call 1800 621 290 or visit a Telstra store.

Thank you for being a Telstra customer - we appreciate your business.

Kind regards,
Your Telstra Team