Mount Irvine Progress Association
Submission to 2021 Regional Telecommunications Review
September 2021

1. **Context**
    i. Mt Irvine is in the Greater Sydney Metropolitan Area and part of the Blue Mountains City Council. We are surrounded by National parklands at the end of a single road approximately 20kms long. This total length is made up of two roads, Mount Irvine Road (approximately 12 kms long), connecting Mount Irvine to Mount Wilson and Mount Wilson Road (approximately 8 kms long), connecting Mount Wilson to Bells Line of Road.
    ii. Mount Irvine Road is narrow, poorly maintained, lined for much of its length by large eucalyptus trees, and steep inclines on the upper and lower sides.
    iii. During the 2019/20 fires and the restoration period following, there were many times when residents could not travel from Mt Irvine to Mt Wilson and thence beyond, due to fallen trees. During the restoration period we were prevented from leaving Mt Irvine for a period of three weeks, except between the hours of 4:30 pm to 7:30 am the following day. This was to enable extensive tree clearing work to be carried out on this section of road. If an emergency event occurred during the period the road was closed, even with the best intentions of the workers, one can envisage that Ambulance and other emergency vehicles if required, would be significantly delayed. In these circumstances the emergency services personnel resident at Mt Irvine would have been required to provide any first responder help needed using resources available at Mt Irvine. This includes medical and other emergency services such as firefighting activities.
    iv. On several occasions during this period, we were without mains electrical power. The longest period, during the fires themselves, was for twelve days. In this period, residents were unable to keep vital appliances, such as refrigerators and communications modems, working as fuel supplies for generators became exhausted.
    v. The realisation by residents of the extent to which Mt Irvine, being at the end of a single road in and out, and vulnerable to extended power interruptions, could become isolated for extensive periods was a big "wake up call". We do not have the luxury of simply exiting the mountain by an alternative route. We need to be completely self-reliant and mobile telecommunications is one of the fundamental components that will allow us to achieve this.
    vi. In these circumstances it is vital that excellent telecommunications are available, and specifically, modern mobile based services.
2. **Current Telecommunications facilities**:
    i. **Fixed line telephone** – fixed line telephone services are provided to Mount Irvine via the small Telstra telephone exchange at Mt Wilson some 15 kilometres distant. This is a very unreliable service and even when working provides a poor-quality service, primarily noise on the line, making it very difficult to hear and understand the other party. Many households, who can receive a mobile signal, have chosen to move away from this facility and rely on their mobile phone, or have elected to have the Sky Muster Satellite service installed. This denies them of one significant benefit that the Telstra exchange provides, that is, the telephone handset being powered via the copper lines.

ii.   **Fixed line data** – no fixed line data service (e.g., ADSL) is provided to Mount Irvine. The reason given being, that the existing copper wire is not suitable for this purpose.

iii.   **Mobile - 4G**. This service is obtained from the Bilpin telecommunications tower about 5 to 6 kilometres line of sight to the southeast of Mt Irvine. Unfortunately, it is only available to residents and others depending on their location. Some experience a reasonable service (e.g., 2 bars) whilst others experience no service at all. Even though the Bilpin tower is clearly visible from Mt Irvine (please see photo below), we understand that the antennas providing the mobile 4G coverage from that tower are aligned coinciding with the direction of Bells Line of Road, and the populated area at Bilpin and adjacent communities. This orientation is not conducive to providing good coverage at Mount Irvine. We are of the view that this tower could be used to provide a good mobile service to most of Mt Irvine. All populated areas of Mount Irvine would be clearly visible from the Bilpin tower (there being no development on the western slope of Mt Irvine). We believe the addition of suitable facilities at this site would not only assist day to day communications but also help overcome the drop in signal strength on rainy, misty, or smoky days.

iv.   **NBN Sky Muster Satellite fixed voice and data service** – is available to Mount Irvine residents, however the major limitation of this fixed service is the latency experienced and the need for local power. Regarding latency, typically it is about 700 milli seconds for the satellite service, compared to typically 20 milli seconds for 4G. The difficulty with this degree of latency is that website pages can time out before refreshing and in some cases, it means that users cannot even log in to a site. There is also the general inconvenience of having to wait for pages to respond. The Sky Muster fixed voice service works satisfactorily, and it is also suitable for digital streaming services.

3. **Mt Irvine's telecommunications needs.**

i.   The highest priority is an excellent mobile service. In any type of emergency, it is imperative that people can be contacted whatever their physical location on Mount Irvine is, and in turn they are able to contact anyone located on Mount Irvine or elsewhere. This is simply the minimum telecommunication service required. It should be emphasised that emergency service personnel are initially contacted via an "app" on their mobile phone. It is essential that this message gets delivered 100% of the time to such people located on Mount Irvine.

ii.   As government agencies now rely on mobile phone-based telecommunications to communicate with their employees and volunteer members, and with the public, it follows that governments, both federal and state, act on the implicit assumption that there is a mobile phone network in place which is operating to specification and providing the coverage needed. It is worth noting that many firefighting appliances operated by volunteers now have iPads installed to assist firefighters.

iii.   We note that firefighters and ambulance personnel have their own dedicated mobile radio network, including fixed in vehicle radios and handheld portable radios. These networks, however, do not provide any capability for communication with the public or between members of the public.

iv.   It is further noted that mobile phones need to be recharged, however there are generally more options available to do this. We at Mount Irvine are working

on a separate resilience project to provide our public hall with a backup generator and mobile phone recharging points.

    v.   For other non-time critical requirements and those where latency is not an issue, a combination of the Sky Muster service and an upgraded Telstra fixed telephone line service will suffice.

4. Recommendations

    i.   Urgent action be taken to provide Mount Irvine residents, visitors, and emergency service personnel with excellent mobile telecommunications.

    ii.   Urgent action be taken to upgrade the copper fixed line telephone service provided from the Telstra exchange at Mount Wilson. This includes upgrading the copper lines where necessary, upgrading access pits so that they do not get crushed by vehicles and thus become susceptible to fire damage, taking steps to exclude water from the whole system (apparently a major contributor to noise on the line), and upgrading the Mount Wilson exchange so that it both reliable and always operational, including when the mains electrical power supply is interrupted.

5. **Acknowledgement** The community of Mount Irvine is grateful to have this opportunity to make an input to this review. As a community that has recently experienced the threat posed by the 2019/20 fires and having been isolated from the rest of the Blue Mountain's and wider areas during this emergency period, we hope that this review leads to the provision of telecommunications facilities in this area that offer residents a high degree of assurance that, in future emergencies, they will be able to seek timely help, and also comfort in the knowledge that that assistance will be provided.

Photo - view of Bilpin Telecommunications Tower (vertical white line) from Mount Irvine.

Screen Shot - Distance of Mt Irvine to Bilpin Telecommunications Tower – using Six Maps: 5.521 kms