

**Secretariat**

**2018 Regional Telecommunications Review**  
**Department of Communications and the Arts**  
**GPO Box 2154**  
**CANBERRA, ACT 2601**

Dear RTIR Panel Members,

**RE: Impediments and Possible Improvements to Telecommunications Infrastructure for the Armidale Regional Digital Economy:**

**Background**

The Armidale Region is home to some 30,000 residents and serves a catchment of more than 100,000 people in the New England North West region of NSW. In 2014 Armidale City became Australia's first fully NBN connected city with fibre to the premises. It has since consolidated its position as a leader in digital technology within regional Australia through successful implementation of a Digital Enterprise Program and a range of further investments. From these early foundations a number of digitally based business growth and incubation initiatives have since ensued, particularly in agribusiness, agricultural research, horticulture, rural health, education and the emerging citizen-science sector.

The New England North West Region produces about 25% of the state's agriculture output and Armidale is well-known for its expertise, ground-breaking research and cutting-edge technologies in this sector. Digital connectivity (including NBN and mobile coverage) is one of the mainstays of the Armidale economy, contributing an estimated \$250 million (approximately 16%) of additional GRP to the region. It is also central to the strategic growth objectives of the Armidale Regional Council which include plans for a 15% increase in economic and demographic growth over the next five years. These will be based on initiatives such the ongoing development of the Armidale Regional Airport and Business Technology Park; the establishment of NSW TAFE Digital; the University of New England's Smart Region Incubator (SRI); the world-leading success of the UNE Smart Farm; further expansion of Costas Greenhouse precinct (Guyra); growth of Armidale-based homebuilder Uniplan; the Region's recent welcoming of Iraqi and Syrian refugees; and recent relocation of the Australian Pesticides and Veterinary Medicines Authority (APVMA).

In commenting on a recent [2017 GRDC funded study](#), UNE Smart Farm's Professor David Lamb reiterated his support for investment in "telecommunications as a 'critical infrastructure' for rural and regional Australia, and in particular in agriculture" which he notes as vital for improved decision making, productivity and efficiency. He further commented on the importance of integrated user networks in which 'second tier' service providers complement 'big telco' networks for the establishment of more consistent and guaranteed speeds of delivery, backed by signal strength in rural areas.

## **Armidale Regional Investment Opportunities in Digital Infrastructure**

A number of opportunities exist for private and public investment in digital connectivity infrastructure, based on the region's past successes and plans to further strengthen the region's pre-eminence as one of Australia's leading digital economies. Despite early uptake and rollout of NBN technologies, there remain a number of areas which continue to experience poor mobile coverage, limited band-width and/or unreliable broadband connectivity.

These include:

- Marple and Enmore (mobile coverage)
- Thalgarrah and Rockvale (mobile coverage)
- Baldersleigh-Booralong (mobile coverage)
- Kelly's Plains and the Acacia Park Industrial precinct (NBN connection)

Armidale Regional Council is cognizant of the issues around mobile black spots and the benefits (economic and personal safety) that full coverage offers in the community. To this end in 2016 the Council offered financial and in-kind support to a number of applications made under the Australian Government's Mobile Black Spot Programme (Round 2), including the Baldersleigh-Booralong site above.

### **Marple-Enmore Mobile Black Spot Area**

One of the most significant "blackspot" mobile areas still requiring attention is located to the south of Armidale, where it is estimated that approximately 1,000 residents and small businesses struggle with connectivity. This area covers the districts of Marple, Enmore, Winterbourne, Uralla, Walcha Road and Kentucky, and also the Castledoyle district and at Acacia Park light industrial precinct on the Eastern side of Armidale. Approximately 600 travelers per day on the Walcha-Uralla Road are affected by this blackspot, and collectively these districts cover an area of approximately 200 square kilometers.

Economic and social dividends generated by digital infrastructure investments in areas with restricted connectivity have been well documented. They include increased labour/business efficiencies; increased productivity; improved public health and safety (particularly for bush-fire and drought-prone areas); better mental-health and social cohesion; generation of additional business revenue; economic value-added opportunities, and growth in digitally enabled export markets.

### **Blue Mountain Creek Funding and Investment Option for Marple and Enmore**

Community-led discussions between neighbouring Walcha Shire Councillors, the Armidale Digital Economy Implementation Group (ADEIG) and local telecommunication experts indicate that construction of a mobile base station on Blue Mountain Creek would rectify the Marple-Enmore blackspots affecting the districts outlined above. Blue Mountain Creek is located in an isolated area on the eastern escarpment of the New England, approximately 40km SE of Armidale (GPS coordinates S30.8338, E151.6889). Mobile coverage maps indicate that a mobile tower constructed on this site would provide the widest possible coverage for this blackspot area, which is one of the

largest and most populated areas without reliable mobile phone coverage in the Armidale-Walcha LGAs.

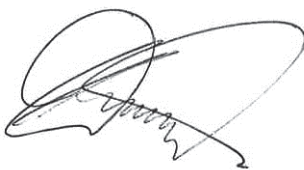
Blue Mountain Creek has an elevation of approximately 1,090 metres above sea level, and located in an isolated area without mains electricity. The cost of connecting the site to mains power is prohibitive, but discussions between the Armidale Digital Economy Implementation Group (ADEIG) and Telsa indicate that a combination of 12kW photovoltaic panels with six (6) Tesla Power Walls would be able to provide reliable and constant electricity to the site, at a cost of about \$100,000 including installation. The total investment for this installation, including land access and construction, has been estimated at around \$500,000. If successful, the use of combination PV with leading battery technologies would be 'a first' of its type in Australia, and open up possibilities for similar 'off-grid' mobile phone base-station investments in vast areas of Australia such as the Murray Darling Basin and Northern Australia, where remote sensing technologies for improved efficiencies in water and agricultural resources are likely to have greatest effect, but are currently restricted due to limited mobile connectivity.

#### **NBN Fixed Wireless at Kelly's Plains (Acacia Park)**

A further priority for telecommunication upgrades in the region is the fixed wireless problem at Kelly's Plains. The Department of Communications has advised ADEIG Chairperson, Mr Alun Davies, that this site will be further developed in October this year to provide full NBN coverage to thirty or so light-industrial business and human service providers operating on the Acacia Park site. As with previous NBN and mobile phone black spot initiatives, the Armidale Regional Council welcomes this investment, which I understand will ensure NBN services of a comparable standard with the rest of the town, thereby strengthening Acacia Park's important contribution to the Armidale regional economy.

On behalf of the Armidale Regional Council I thank you for your consideration of these important telecommunication issues for our Region.

Yours sincerely,



### **Lindsay Woodland**

Group Leader - Organisational Services

**P** 02 6770 3826 **M** [REDACTED] **F** 02 6772 9275

**E** [lwoodland@armidale.nsw.gov.au](mailto:lwoodland@armidale.nsw.gov.au) **W** [armidaleregional.nsw.gov.au](http://armidaleregional.nsw.gov.au)

135 Rusden Street | PO Box 75A Armidale NSW 2350