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To Whom it May Concern,

I write to make a submission on behalf of Regional Development Australia and the Central NSW Joint Organisation in response to the Regional Connectivity Program discussion paper released recently.

Regional Development Australia Central West in conjunction with the Central NSW Joint Organisation have a fantastic shared passion for driving better regional communications outcomes across the Central West of NSW.

Our region is renowned for its mining, food, wine and excellent agricultural produce. The Central West region of New South Wales covers an area of 63,000 square kilometres and is home to 177,000 people within the 11 local government areas of Bathurst, Blayney, Cabonne, Cowra, Forbes, Lachlan, Lithgow, Oberon, Orange, Parkes and Weddin.

A diverse region with many towns, villages and regional cities, the telecommunications needs and challenges for our people and our local businesses are diverse. One of the biggest barriers to future growth is the continued lack of reliable telecommunications in many areas.

We congratulate the Federal Government on their work with the roll out of the Mobile Black Spot Program, but welcome the opportunity presented through the Regional Connectivity Program.

Below are a number of local case studies which outline some of the telecommunication challenges still faced by the Central West, which would be ideal candidates for a solution through an avenue such as the Regional Connectivity Program.

Please also see included at **Attachment C** a list of priority mobile black spot locations from across the Central West. This list was collated by RDA Central West with direct feedback from local government. This is by no means an exhaustive list. However, it does present a useful snapshot to governments of all levels of the scale of the connectivity challenge in our region.

### 1. Carcoar, Blayney Shire

Carcoar is a major tourism hot spot in the Blayney Shire and is famous for the annual Carcoar Running Festival, the Australia Day Fair and the Carcoar Garden and Plant Expo. With a resident



population of around 200 a small but picturesque village the population can surge for specific tourism events. However currently mobile coverage is nonexistent on the main street which is difficult for business the community and visitors.

## **2. Goolagong, Forbes Shire**

Australia's largest dairy is based in the Central West at Goolagong. Moxey Farms is a major employer who provides jobs and opportunities to around 250 people through their integrated milking operation of 7,000 cows. As technology advances and robotics becomes an increasingly important aspect of the Moxey Farms operation, the need for greater digital connectivity increases exponentially. In this small geographical area, an innovative solution is required to allow this major regional business to grow and remain competitive.

## **3. Oberon Shire**

Oberon is a small LGA of just over 5,000 people but encompasses the rolling high country of the Central Tablelands. With a number of small communities in the area such as Black Springs, Burruga and O'Connell. There are significant mobile black spot areas across the LGA.

Lack of digital connectivity including mobile phone coverage within the LGA is a significant constraint to the continued economic and social development of agricultural businesses, the state significant forestry industry and to the tourism industries within the LGA. Poor mobile phone coverage in agricultural areas possess a safety risk to the community as it makes it difficult for the community or people travelling through the LGA to contact emergency services in emergencies such as fire or farm and motor vehicle accidents.

## **4. Weddin Shire**

Agriculture, Forestry and Fishing employs 511 people (2016 census) across the Weddin Shire, and is Weddin's largest industry. Connectivity is a massive barrier to the productivity of local agricultural operations, which are a major component of the local economy. Please see **Attachment A** for in-depth case studies relevant to the Weddin Shire.

## **5. Lachlan Shire**

Covering an area of over 15,000 square kilometres with a population of around 7,000 agriculture is the cornerstone of the local economy. The towns and villages in the Lachlan Shire capture the essence of life in the bush. Condobolin is the largest town in Lachlan followed by Lake Cargelligo and Tottenham then the villages of Tullibigeal, Burcher, Derriwong, Albert and Fifield. Please see at **Attachment B** further feedback from the Lachlan Shire Council regarding some of the telecommunication challenges across their region.

## **General Comments**

One of the major barriers to smaller communities accessing grant opportunities such as this, is the inhibitive requirement of making cash contributions. Small communities do not have the capacity to source funds to capitalize on these opportunities. The short lead in times also make co-contribution difficult as these grant windows often open and close outside regular budgeting and planning processes.

The weighting of relevant assessment criteria is also a vitally important consideration of any proposed program. In regional areas like the Central West the social benefits of improved connectivity cannot be underestimated. With the backdrop of the ongoing drought the importance

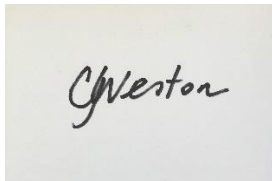
of connectivity to rural, regional and remote communities is greater than ever. With regards to project delivery capacity it is important to remember many smaller communities and businesses may not have the experience in communications project delivery space but have easily translatable skills to deliver such a project.

RDA Central West supports a place-based approach, targeting investment in local priorities to maximise economic opportunities and the above case studies are examples of this ambition in action.

RDA Central West appreciates the opportunity to make comment on this discussion paper, and welcomes the Federal Governments ongoing focus on improving regional connectivity.

If you have any questions or require any additional information, please contact RDA Central West CEO, Mr Sam Harma on (02) 6369 1600 or email [director@rdacentralwest.org.au](mailto:director@rdacentralwest.org.au)

Regards

A rectangular box containing a handwritten signature in black ink that reads "C Weston".

Ms Christine Weston

Chair- RDA Central West

A handwritten signature in black ink that reads "a. J. Medcalf".

Cr John Medcalf

Chair- Central NSW Joint Organisation

Cc: Mr Mark Coulton MP, Federal Member for Parkes, Minister for Regional Services, Local Government and Decentralisation

## **Attachment A:**

### **Case Study One**

Brett McKellar owns a 4500-hectare mixed farming operation across three properties in the west of Weddin Shire. Brett has 30 years' experience as a farm manager. The business employs four full time and two part time staff and complies with single touch payroll.

### **Economic Benefits of Ag Tech**

Precision agriculture allows Brett to maximise productivity, increase profitability and improve the sustainability of his business. 'I save 72% on Lime and Gypsum, 50% on Phosphorus, 15% on Sulphur and 25% on Nitrogen.' 'Connectivity is crucial to conducting my business at this level of precision; I need confidence in my data.' Brett began collecting grain yield data 16 years ago and introduced variable rate technology five years ago.

### **Connectivity**

Brett is motivated to invest in connectivity enabling technology, by the economic benefits of precision agriculture. Brett manages his business from a home office serviced with Optus wireless broadband supported with an aerial and Wi-Fi booster. These are necessary to obtain consistent reception; however, latency is an issue. Through the use of a mobile phone booster there is mobile reception in the house. Mobile coverage is extremely patchy across the three properties with many areas receiving no coverage.

All of Brett's precision agriculture software is cloud based; he can only access it from the home office, as such the office requires high upload and download speeds. 'I use the office late at night or early morning to avoid peak periods.' Brett simply cannot do precision agriculture without accessible and reliable internet.

### **Barriers to Business**

Brett struggles to make phone calls at many parts of the farm. Brett requires consistent 4G reception before he can meaningfully run his business from the paddock.

Brett's harvester and tractors are capable of uploading information to the cloud, however they cannot upload data consistently because of patchy coverage. Within three years Brett wants to fully utilise this John Deere platform. 'It's crazy to think of a business trying to operate cloud-based programs without decent coverage and yet that's our reality.'

'Data is very expensive in the bush as we only have the option of satellite or mobile broadband.'  
People in the city receive unlimited data for a similar price that Brett pays for 200GB (\$68/Month).  
Brett would like to collect more real time data from moisture probes and rainfall gauges to improve the precision of decisions. In the future Brett 'would love to introduce precision agriculture to my livestock enterprise and remotely weigh sheep to track growth rates.'

## **Case Study Two**

Rob Johnson owns a 3100-hectare mixed farming enterprise 20km north west of Grenfell. Rob has 31 years farming experience, employs four staff and complies with single touch payroll.

### **Economic Benefits of Ag Tech**

Rob experiences significant returns on his investment in precision agriculture; 3% reduction in inputs as a result of guidance technology minimising overlap during sowing, spraying and harvest and a further 5% reduction in inputs from variable rate application of lime, gypsum and urea. The economic benefit of precision agriculture motivates Rob to navigate the barrier of poor connectivity.

### **Connectivity**

Rob has a landline, patchy 4G/3G Telstra mobile and Sky Muster Satellite in the office. The business is constrained by speed (upload and download) and data. Tasks such as end of month banking are undertaken at 2 am to avoid periods of peak demand. Despite attempts to improve it, poor connectivity is a barrier to economic opportunity 'What we have is not good enough to do what we want in our business.'

Rob installed seven mobile repeaters to address concerns of working in isolated locations. He can now make mobile calls across the farm. Rob has a mobile router and aerial to hotspot his mobile in the office. This was purchased as backup for when the Satellite reaches its data limit.

### **Barriers to Business**

Rob practices precision agriculture. On farm connectivity varies widely; as such the areas of poorest connectivity dictate the upper limit of precision agriculture on farm. Even where there are areas of good connectivity, it is not fully utilised.

All of Rob's machines have the capacity to upload data to the cloud however poor coverage means the data is not consistent enough for precision agriculture maps. Rob's technician travels from Wagga Wagga quarterly to download data to a USB. Variable rate input maps are then generated by a consultant and transferred back to Rob on a USB. 'Transferring my data currently involves someone transporting a USB; 100km an hour in a ute is quicker than my internet!'

Rob cannot ground truth as he cannot access large data files in the paddock; Rob overcomes this by printing hard copies of maps and carrying these in his ute.

Rob has three soil moisture probes across his farm which require constant 3G service to upload every 9 minutes. Rob cannot collect moisture data from one soil type because it experiences insufficient mobile service.

'I invite you to visit and experience the challenge of poor connectivity and see the lengths I go to overcome it.'

### **Case Study Three**

Paul Tognetti manages a 2,600 hectare mixed farming enterprise 8km west of Grenfell. Paul has 35 years' experience as a farm manager. The business has three full time employees and complies with single touch payroll.

#### **Economic Benefits of Ag Tech**

Paul experiences significant return on investment from precision agriculture. There has been a 13% cost saving on fertiliser as a result of using variable rate technology (VRT) at sowing. Similar savings are made on other inputs. VRT increases production, reduces inputs and results in a more profitable and sustainable business. Paul introduced guidance technology 15 years ago and precision agriculture six years ago. Economic benefits mean Paul continues to identify and introduce technology.

#### **Connectivity**

Paul manages his farm from a home office serviced by a landline and wireless broadband; there is no mobile coverage in the office. There is mobile coverage across all but 30 hectares of the farm. The office internet connection is slow and regularly drops out in late afternoons particularly if multiple windows are open, as such Paul spends early mornings in the office, when it is most reliable.

Paul has learnt to manage around his connectivity challenges. The internet is a business tool: it's too slow and frustrating for entertainment or social activities. Paul states 'I wouldn't know what good was, we are so accustomed to it being bad.' A recent speed test in the office on a weeknight at 6.30pm indicated download speeds of 1.34 Mbps.

#### **Barriers to Business**

Within five years Paul will implement precision agriculture across his livestock enterprise and the 30 hectares of pasture without connectivity will become a barrier, demonstrating connectivity as economic enabling infrastructure.

Mobile phone calls are a core communication method and poor coverage affects Paul's business daily. 'I don't get to stop running my business just because I travel through a location with no mobile reception.'

Australia's reputation for poor rural connectivity means international precision farming companies do not offer their best technology to the Australian market, meaning Paul cannot use his platform of choice. Paul worries that even when this new technology eventually makes it to Australia, that he won't have sufficient connectivity on farm to support it. 'I just want the technology to make better decisions for my business.'

'I welcome you to come and see what we do with what we have.'

## Attachment B

Lachlan Shire Council currently utilises:

- Telstra Based Mobile Telephones.
- UHF CRS (CB) Radios in vehicles.
- The Land Mobile Radio System.

Even utilising the three systems the LGA does not currently have sufficient access across our Shire which impacts on worker safety and efficiencies in the way we conduct our business activities (e.g. not able to use smart devices in field operations, etc.).

The mobile phone system does not cover the entire Shire (even with the use of cell fi boosters). Key transports routes are not sufficiently covered (e.g. poor coverage between Condobolin and Forbes on the Lachlan Valley Way, etc.).

The Shire's community acknowledges and appreciates that benefits that a secure / stable mobile phone network can bring to not only their everyday lives, but also to the ongoing prosperity of our towns and villages. It is essential in attracting businesses to our local government area and to attract ongoing investment. It appears that urban areas are moving forward in terms of mobile phone coverage whilst regional Australia is moving further behind. Businesses in our Shire want to take advantage of the technological developments that urban areas are experiencing, but are limited by poor mobile phone coverage, creating an uneven playing field for investment. Today the majority of businesses (including farming enterprises) require a fixed-line service, access to high-speed internet and a mobile phone/data service to fully engage in the digital economy. These services are either non-existent or are limited within our Local Government Area.

We understand that there are commercial viability concerns for telco providers in providing and maintaining new infrastructure in regional locations. However, it is beyond our Councils (and the community's) capacity to fund the extension of the mobile phone network on its own. The benefits to regional areas, however, needs to be recognised. The broader benefits include improved access to government services, ease of communications for emergency services, improved access along major transport routes which benefits economic growth as well as public safety, improved safety for farmers and coverage for visitors to the area.

Given the benefits of improving mobile coverage, Council is open to consider partnering with carriers to improve mobile phone coverage. Council is aware that it may need to consider making substantial capital improvements to improve the mobile phone coverage within our Shire which will impact upon our operating budget and the levels of service we can provide to our community. All whilst enduring difficult economic conditions including one of the worst droughts on record. Given our small operating budget we are likely to also require financial assistance from the Federal Government to fund the infrastructure required within our LGA, which may cost in the order of \$350,000 to \$500,000 for each new tower (notwithstanding the ongoing maintenance costs).

Mobile phone technology is the way of the future and all we ask for is a level playing field with our urban counterparts. Without immediate improvements to mobile phone technology within regional Australia the future for our regional towns and villages will be severely compromised.

## Attachment C

Mobile Blackspot Priority locations across the Central West. This list was collated with direct feedback from Local Government.

The sites in yellow were rectified in the last round of the Federal Government's Mobile Black Spot Program.

Federal Identifier	Location_Name	Electorate	Lat	Long	LGA
NSW-0342	Carcoar	Calare	-33.61608088	149.1403467	Blayney
NSW-1686	Wattle Flat	Calare	-33.13944156	149.6936607	Bathurst Regional
NSW-0158	Black Springs	Calare	-33.84779051	149.7422671	Oberon
NSW-1220	Obley	Calare	-32.70420749	148.5524775	Cabonne
NSW-1485	Sunny Corner	Calare	-33.38074527	149.8857339	Bathurst Regional
NSW-2428	Ganbenang	Calare	-33.754081	150.129016	Oberon
NSW-0201	Boona Mount	Parkes	-32.62901213	147.204345	Lachlan
NSW-0904	Lewis Ponds	Calare	-33.27051578	149.2673089	Cabonne
NSW-2931	Ophir	Calare	-33.169287	149.239044	Cabonne
NSW-0640	Glen Davis	Calare	-33.12219843	150.2795154	Lithgow
NSW-2487	Goonumbla	Riverrina	-32.996043	148.125226	Parkes
NSW-0013	Albert	Parkes	-32.3520184	147.5074569	Lachlan
NSW-1088	Mount Olive	Calare	-33.6151777	149.9444709	Oberon
NSW-3059	Rock Forest	Calare	-33.356334	149.402222	Bathurst Regional
NSW-0430	Cooks Myalls	Riverrina	-33.03410148	147.9984082	Parkes
NSW-2836	Mount Rankin	Calare	-33.351629	149.477767	Bathurst Regional
NSW-0298	Burruga	Calare	-33.94780466	149.5306656	Oberon
NSW-0530	Duckmaloi	Calare	-33.69023958	149.9633763	Oberon



NSW-1173	Newbridge	Calare	-33.58506711	149.36386	Blayney
NSW-0948	Lowther	Calare	-33.61960747	150.1041856	Lithgow
NSW-0502	Dargan	Calare	-33.4896502	150.2523579	Lithgow
NSW-2017	Belgravia	Calare	-33.10972	149.024448	Cabonne
NSW-0273	Bumbaldry	Riverrina	-33.90892775	148.4434281	Weddin
NSW-0591	Fifield	Parkes	-32.80798257	147.4570176	Lachlan
NSW-0650	Glenelg	Riverrina	-33.73082409	148.08831	Weddin
NSW-2537	Hartley Vale	Calare	-33.534936	150.238007	Lithgow
NSW-2532	Hampton	Calare	-33.645936	150.047837	Lithgow
NSW-0458	Corinella	Riverrina	-33.45435181	147.5216876	Forbes
NSW-2544	Hazelgrove	Calare	-33.665769	149.892776	Oberon
NSW-0637	Glen Alice	Calare	-33.04683412	150.219996	Lithgow
NSW-0908	Limekilns	Calare	-33.25859818	149.7482362	Bathurst Regional
NSW-3371	Wisemans Creek	Calare	-33.623863	149.719629	Oberon
NSW-0387	Clear Creek	Calare	-33.31190534	149.694602	Bathurst Regional
NSW-1723	Wiagdon	Calare	-33.18391849	149.6829993	Bathurst Regional
NSW-1059	Moorilda	Calare	-33.61664512	149.330498	Blayney
NSW-1937	Wolgan Valley	Calare	-33.240061	150.155897	Lithgow
NSW-2072	Bocobra	Calare	-33.086768	148.537795	Cabonne
NSW-2573	Isabella	Calare	-33.95364	149.666876	Oberon
NSW-3244	Triangle Flat	Calare	-33.757706	149.47349	Bathurst Regional
NSW-0056	Baldry	Calare	-32.86400254	148.5024567	Cabonne
NSW-0314	Byng	Calare	-33.34644109	149.2554183	Cabonne
NSW-0291	Burcher	Parkes	-33.51491253	147.2531711	Lachlan
NSW-2127	Bruie Plains	Riverrina	-32.818476	147.865048	Parkes

NSW-2579	Jenolan	Calare	-33.816084	150.02147	Oberon
NSW-0586	Fairholme	Parkes	-33.28266036	147.3997385	Lachlan
NSW-0772	Hobbys Yards	Calare	-33.69436711	149.3276863	Blayney
NSW-0836	Kiacatoo	Parkes	-33.04995516	146.765279	Lachlan
NSW-1077	Mount David	Calare	-33.82115912	149.5945644	Oberon
NSW-1279	Paling Yards	Calare	-34.17847042	149.7431121	Oberon
NSW-1280	Palmers Oaky	Calare	-33.1958241	149.859917	Lithgow
NSW-1750	Wollangambe	Calare	-33.27196923	150.4667136	Lithgow
NSW-1991	Bald Ridge	Calare	-33.936983	149.422719	Oberon
NSW-2190	Caloola	Calare	-33.609017	149.435712	Bathurst Regional
NSW-2280	Cow Flat	Calare	-33.568447	149.531876	Bathurst Regional
NSW-2385	Essington	Calare	-33.71813	149.681543	Oberon
NSW-2628	Kerrs Creek	Calare	-33.050016	149.092493	Cabonne
NSW-3064	Roseberg	Riverrina	-33.863988	149.068458	Cowra
NSW-1017	Milkers Flat	Calare	-33.2810986	149.3971689	Bathurst Regional
NSW-1604	Turondale	Calare	-33.07999016	149.6096358	Bathurst Regional
NSW-1856	Errowanbang	Calare	-33.524499	149.039455	Blayney
NSW-1285	Parkes Airport East	Riverina	-33.109682	148.302595	Parkes
NSW-1251	Orange Road	Riverina	-33.122984	148.405775	Parkes