

Mobile Coverage Programme Discussion Paper

Submission Cover Sheet

Submission Information

This cover sheet should be attached to submissions made to the Department of Communications in relation to the Mobile Coverage Programme Discussion Paper.

Contact Details

Name of respondent:

Name of organisation:

Central Western Qld Remote Area Planning and Development Board

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Website (if applicable):

www.rapad.com.au

Date:

28 February 2014

Confidentiality and privacy

All submissions and comments, or parts thereof, will be treated as non-confidential information unless specifically requested, and acceptable reasons should accompany each request. Email disclaimers will not be considered sufficient confidentiality requests.

Respondents lodging a submission should be aware that submissions (excluding any information agreed to be treated as confidential information) will be made publicly available, including on the Department of Communications' website. Submissions and comments will be subject to freedom of information provisions. Despite a submission being identified as confidential or sensitive, submissions may be disclosed where authorised or required by law, or for the purpose of parliamentary processes.

Do you want all or parts of the submission to be treated as confidential? Yes No

If yes, identify below which parts of the submission are to be treated as confidential (and provide a reason):

Refer Attached

If the submission contains personal information of any third party individual, indicate on this Submission Cover Sheet if that third party individual has not consented to the publication of his or her personal information:

Submission Instructions

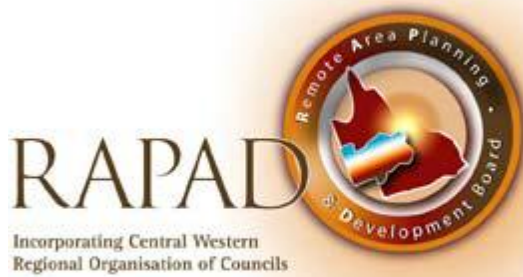
Submissions are to be made by **5:00pm (AEST) Friday 28 February 2014**.

Where possible, submissions should be lodged electronically, preferably in Microsoft Word or other text-based formats via the email address mobilecoverage@communications.gov.au

Alternatively, submissions can be sent to the postal address below (to arrive by the due date):

The Manager
Mobile Coverage Programme
Department of Communications
GPO Box 2154
CANBERRA ACT 2615

All submissions lodged will be acknowledged by the Department of Communications by email (or by letter if no email is provided). Respondents lodging a submission who do not receive acknowledgement of their submission should contact the Department. Submissions which are not acknowledged by the Department as being received may not be considered. Respondents should be aware that emails greater than 10Mb may not be successfully delivered.



RAPAD Submission

Department of Communications

**Mobile Coverage Programme
Discussion Paper**

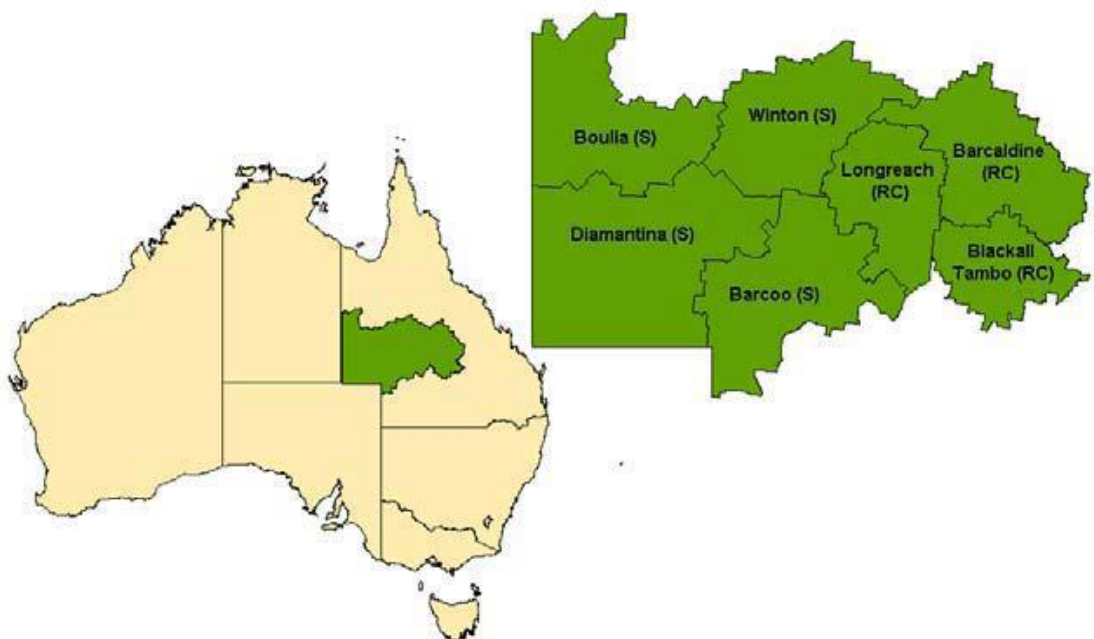
February 2014

About RAPAD

The Remote Area Planning and Development Board (RAPAD) is a not for profit, regional economic development agency and regional organization of councils, owned and managed the seven Local Governments of Central Western Queensland.

The RAPAD region encompasses an area of some 385,000km², with 19 towns in seven local government areas: Barcaldine Regional Council, Barcoo Shire Council, Blackall-Tambo Regional Council, Boulia Shire Council, Diamantina Shire Council, Longreach Regional Council, and Winton Shire Council.

The regional population is approximately 12,256 people spread between townships and approximately 1,300 rural properties which in turn represent approximately 58% of the regions registered businesses. Agriculture (fisheries and forestry) accounts for approximately 30% of the RAPAD regions employment. The composition of nominal gross value added (GVA) for the RAPAD region is also dominated by agriculture (fisheries and forestry) which accounts for 41.4 per cent of nominal GVA. The other major industries in the region are tourism, government related services and mining exploration, which if current public information suggests, will convert into significant developments over the coming years.



Central Western Qld

Rural and Remote

In today's modern world, Australians, like people in the rest of developed societies, take for granted the ability to use reliable mobile services and fast real-time broadband. In rural and remote Australia access to these services is as critical, if not more so, than it is in metropolitan regions. Those who live and work in rural and remote Australia are already isolated by distance, but in many cases this physical isolation is irrelevant if they are connected online, in real time.

Rural and remote Australia makes a significant contribution to Australia's wealth in the resources, tourism and agricultural industries. Vibrant rural and remote communities need government investment in telecommunications infrastructure. Modern communications services are essential to empower the outback's participation in the digital economy and enhance their everyday lives. Mobile communications, the use of smart phones, mobile apps and the emergence of M2M applications brings improved productivity, business opportunities and social equity.

The trend to high and high demand for mobile data is evident in access to government services (health and education) tourism, pastoral production and natural disaster management.

Rural and Remote regions with their low populations and high distances are not always well serviced by quality telecommunication services and high capacity links to capital cities. Market failure to invest in adequate infrastructure means government assistance is needed to stimulate investment.

Two RAPAD region shire councils, Barcoo and Diamantina Shires, have fought for over 10 years to improve their current aging radio links to sustainable high capacity links (optic fibre). Diamantina and Barcoo Shires are prepared to invest millions of their own dollars to partly fund optic fibre to their communities and are currently engaged in a process to realise optic fibre connection to the five towns in the shires.

RAPAD is concerned that the Mobile Coverage Programme Discussion Paper contains no means to specifically address the special characteristics of remote area mobile coverage and advocates specific remote design characteristics as discussed below.

Market Failure

The struggle by rural and remote Australian communities to improve telecommunications infrastructure is well documented¹ and the RAPAD telecommunications policy² released in 2013 explores the infrastructure and service gaps as well as detailing future policy options.

Greater infrastructure investment in rural and remote communities is required if the outback is to better participate in the digital economy.

¹ For example: The Ngaanyatjarra Lands Telecommunications project: A Quest for Broadband in the Western Desert and Regional Telecommunications Reviews.

² A Rural and Remote Telecommunications Policy: The end of third rate telecommunications in rural and remote Australia. <http://www.rapad.com.au/policy-and-submissions>

Market failure is a constant for those working and living in rural and remote areas. Community approaches to telecommunications companies to invest in their region is too often met with the same responses; *the business case to build the infrastructure and meet ongoing sustainability targets for the requested services is simply not possible*. A low population base, long distances to the next town and poor underpinning infrastructure (backhaul) are typical reasons cited as reasons why providers will not invest.

Telecommunications infrastructure providers point to the need for government a capital contribution to make projects viable. And the further the remote community is the more expensive a telecommunications project becomes. Governments must commit substantial funds if rural and remote communities are to gain a degree of equivalency with metropolitan users.

RAPAD draws to the department's attention that market-based policy and procurement mechanisms do not work in rural and remote regions.

RAPAD notes that no Commonwealth funding has been allocated to extending mobile coverage for the past 6 years despite mobile coverage being cited as a major community concern by the 2011/12 Regional Telecommunications Review³.

The government's \$100M commitment to improve mobile coverage is welcomed by RAPAD as a good start to improving rural and remote services, but is concerned the current design means that little of that funding will reach remote Australia. Many requests for programme funding will fail. There are simply not enough available funds to meet the estimated 800+ mobile black spot locations across Australia. The competitive process for a share of the \$100M raises great concern for rural and remote Australia.

Design Impediments

Our concern is that the programme design has not recognised the competitive disadvantage outback Australia faces to successfully attract investment dollars from Mobile Network Operator (MNO) and thus be eligible for funding. Rural and remote communities face greater difficulty to contribute and raise sufficient co-contributions because of its low populations, the low rate based of local governments and because they will be competing with stronger regional communities for state government support.

³ http://www.rirc.gov.au/2011-12_report/

Programme Design

General

Market enquiry by the region suggests a mobile base station in remote Australia will cost in excess of **\$1,250,000 for each new location**, provided significant infrastructure is in place (towers, communication hut, power and backhaul optic fibre infrastructure). Locations without backhaul, power and towers would be more expensive.

Design Issues

Rural and remote projects inevitably require higher funding level levels than outer metropolitan and many regional locations because of higher backhaul costs and higher installation and maintenance costs. However the programme design fails to recognise this important rural and remote factor. The programme average project funding is \$334,000 per project. Market failure is the reason why telecommunications companies have historically failed to invest in rural and remote infrastructure. The typically profile of a rural and remote town is one of low populations, poor backhaul infrastructure and limited low (government, business and community) capacity to co-invest in better communications services. They face real challenges to make significant co- contributions. This combined with other stated factors contribute to significant difficulty to develop a sustainable business case for mobile projects in their location.

However these towns and the connecting major transport corridors need mobile coverage and this programme offers the opportunity to construct mobile towers in remote priority black spot locations.

Our concern is that programme favours lower priced projects to achieve its objective to fund 250-300 new or upgraded mobile base stations across Australia. As rural and remote locations will be higher cost projects due to stronger market failure RAPAD calls for a re-balance of the programme design to recognise the disadvantage faced by remote mobile projects.

RAPAD advocates an alternate programme design incorporate a sliding scale of Commonwealth government contribution that recognises rural and remote regions require greater funding assistance with funding amount dependent on factors such as remoteness, backhaul availability (build or monopoly only option) and population density. The higher these factors influence base station costs the higher the level of government contribution.

Areas in higher population density or higher co-contribution have greater probability of gaining funding. MNOs are more likely to invest in these locations because government funding will close the investment gap to make these projects a commercial proposition. Yet some coastal and regional black spot locations will, as populations grow, automatically attract new towers as MNOs seek to maintain or gain competitive positions. It's only time factor before MNOs can develop positive business cases for these locations. In outback regions the population is static or declining. Therefore over time it's unlikely a sustainable business case in support of infrastructure investment will reach a viable proposition for MNOs in outback locations, unless the government provides substantial funds.

The programme has an objective to ‘improve mobile coverage along major transport routes, **in small communities** and in areas that are prone to experiencing natural disasters’.

As an option to the above alternative Mobile Coverage Programme design, RAPAD suggests a design incorporating a target of 50% (\$40M) funds reserved for rural and remote small communities recognising their need for greater funding assistance.

By allocating \$40M to remote communities the government is addressing the market with the strongest market failure, locations least likely to leverage NBN infrastructure (no NBN fixed wireless sites) and communities with lower levels of co-contribution capability.

Furthermore each qualifying project receives a minimum \$750,000 government funding from the programme, double the average under the existing design and thereby recognising the higher costs for remote locations. It would be expected that MNOs would work with local governments on co-contributions and other commitments prior to nominating the location in their submission.

Under this option the programme design could also be enhanced to require as a mandatory criterion that MNOs must nominate at least 40 small rural and remote communities in their submissions giving reasons for the remoteness priority.

Factors the programme could include to guide MNOs choice of the 40 small rural and remote communities include:

- (a) That the town has a local government administration centre; or
- (b) That the town has a school, police station or library; or
- (c) A defined minimum distance to the next town with mobile coverage; or
- (d) The economic factors attributable to mobile coverage – farming activity, safety issues, natural disaster history, tourism density.

These factors are consistent with the Parliamentary Secretary Hon Mr Fletcher statement; ‘*Critically, we want the programme to stimulate competitive entry by carriers in locations where they do not presently have coverage*’.⁴

Competition

The programme design encourages competition through the competitive bidding process, the option for a wholesale mobile capability allowing roaming and through open access principles. Hon Paul Fletcher set out two competition principles in his speech to ACCAN 14 February 2014⁵.

RAPAD is encouraged by the principle of competition in the programme design as it offers choice of provider and service options.

Remote locations that have, to date, failed to attract MNO investment principally because of low populations. For many remote communities the realism is that only one MNO will place a bid for their location. For the RAPAD communities of Jundah,

⁴ See <http://www.paulfletcher.com.au/speeches/other-speeches/item/1012-speech-to-accan-conference-connecting-the-country.html>

⁵ Ibid

Windorah, Bedourie, Yaraka (populations of 100-200 residents), where no mobile coverage exists, one mobile supplier is the most likely outcome. **It's highly unlikely that the current programme design criteria of open access and shared infrastructure will encourage another competitor to deliver mobile services in the RAPAD region - very remote locations.** This will not be the case in higher population areas or perhaps major transport corridors.

Mobile roaming between networks offers an option for remote users to gain mobility choice and access service options. Mobile roaming has been a contentious issue for carriers over many years.

The Parliamentary Secretary Hon Paul Fletcher stated he wished the programme to have on competition impact in mobile communications in regional and remote Australia. He nominated mobile roaming as a methodology. However he stated, *'The only potential exception to this principle might be in very remote parts of Australia, where it is highly unlikely a second or third carrier would be prepared to incur the cost – even a reduced cost – of gaining access to the first carrier's base station because the amount of traffic available is so tiny.'*

The RAPAD region lays within ABS the very remoteness classification⁶.

RAPAD suggest the department explores ways to include mandating roaming as part of the competitive process in all design options.

Base Stations

The discussion paper refers to 'the use of additional complementary technologies, such as microcells and picocells (which have a coverage radius of approximately 2km and 200m respectively) to improve service for particular areas within a proposed new 'macro-cell' base station footprint'. Expanding this concept to encompass smaller base stations (microcell and picocells) as the solution for smaller remote communities may expand mobile coverage in rural and remote locations.

Small townships with tight community boundaries may also be suitable for complementary technologies. Careful investigation and consideration of current (e.g. LTE) and future service restrictions is required.

RAPAD recommends the government review the use additional complementary technologies, such as microcells and picocells to create mobile coverage in smaller communities where a traditional based station is uneconomical.

Local Government Co-Contribution

The seven local governments of RAPAD are open to co-contribution options to remove mobile Blackspots throughout their region. The scale of co-contribution ranges from cash, as demonstrated by the Barcoo and Diamantina Shire commitment to their optic fibre project, to in-kind asset access, planning co-ordination, collaborative facility upgrade contribution and shared project responsibilities.

⁶ <http://www.abs.gov.au/websitedbs/d3310114.nsf/home/remoteness+structure>

NBN Infrastructure

The discussion paper only considers NBN Co wireless infrastructure as a leverage option to creating wider coverage. The latest NBN Co maps show the RAPAD seven shires are without a single NBN Co wireless tower- see diagram 1.

RAPAD also recognises that the government intends to undertake a review of the NBN fixed wireless and satellite programs.

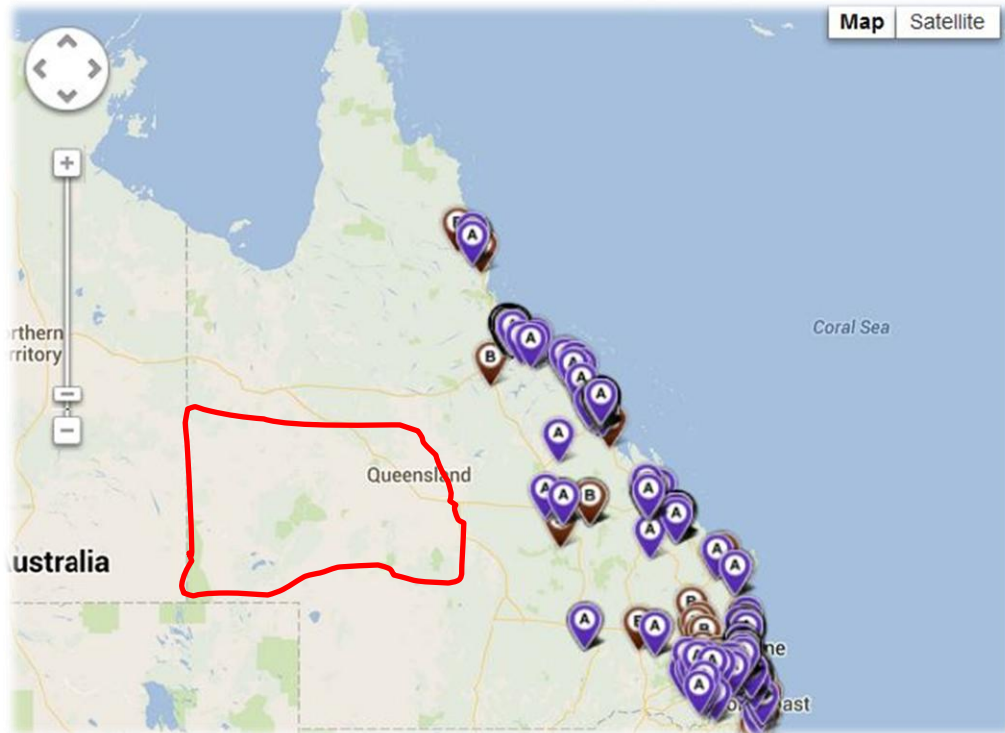


Diagram 1.

Source: <http://www.nbnco.com.au/when-do-i-get-it/rollout-map.html>

This website is currently under review, pending the introduction of new Government policy.

For the RAPAD region sharing of NBN fixed wireless infrastructure will have no impact on cost reduction for the mobile business case, since the current publicised plans for that infrastructure shows it is concentrated towards coastal locations. The programme has not included another NBN asset – satellites. Do the NBN satellites have the capacity and capability to be the backhaul vehicle in remote regions or in locations where backhaul is very expensive to build?

The Birdsville Optus and Telstra 3G mobile base stations use Ku band satellite backhaul. The mobile data service from Telstra is a restricted data service. Satellite backhaul, if configured correctly and if government funds are appropriate, could give another option to fund rural and remote mobile Blackspots.

RAPAD suggest using the NBN satellite for mobile backhaul links should be considered to expand and improve remote mobile coverage.

Discussed Paper Questions

The following comment is made in response to the 22 questions posed by the discussion paper and should be read in conjunction with comments above.

Question	Response	Comment
1	Agreed. The appropriate minimum quality standard be base stations must provide high-speed 4G LTE mobile broadband data communication services and also high quality 3G mobile voice and broadband data services. To do otherwise would subject regional areas to a substandard service offering.	It would also be desirable that over the 10 year contractual timeframe towers are upgraded consistent with technology and service improvements.
RAPAD urges the government to establish a transparent and open public mechanism to create the mobile Blackspots list before MNOs develop their bid applications. RAPAD is concerned that this design option does not list a criteria to encourage proposals to prioritise remote locations. The single MNO option minimises departmental programme governance but has the potential to skew regional mobile operator dominance to a single operator.		
2	A technically measurable standard is preferred.	Whatever minimum standard is adopted it should recognise that in-building coverage is desired.
Recent market testing by Barcoo and Diamantina Shire revealed that tower placement is critical for in-building coverage. Remote consumers should not be expected to go outside to make or receive mobile coverage.		
3	This option fails to make clear if certain conditions that apply to Option 1 also apply – e.g. towers must be in addition to 3 year roll out plans. Better competitive coverage in regional areas is likely under this option.	RAPAD is concerned that this option design does not list a criteria to encourage proposals to prioritise remote locations
4	Agree option 3 (a) could work with Option 1 or 2.	
5	Use of NBN Co infrastructure will drive better value from the programme. Will the MNO be able to claim access costs as capital cost in their proposal?	The timing of the government's fixed wireless and satellite review will influence this element.
6	Any proposal that demonstrates better value options should be considered.	
7	Infrastructure providers have the option of nominated carrier declarations to operate backhaul. However for remote regions only one terrestrial infrastructure owner is available. The cost to access this provider's backhaul has over a number of years been shown to be	The current ACCC inquiry into domestic transmission services may result in backhaul price reductions. Efficient use of monopoly regional infrastructure would be served with price reduction in excess of

	prohibitive. RAPAD has outlined above the need to consider NBN satellite backhaul with its Ka band satellite infrastructure.	70%.
8	Option 3 (b) is an ideal model to promote competitive tension. However for remote Australia its application is limited to the more populace towns.	
9	The requirement that existing (or “brownfield”) base stations being upgraded to provide mobile coverage would not be required to meet the mandatory requirement to support at least two MNOs appears to contradict the competition objective of the programme.	
10	The access seeker MNO to the new “greenfield” base station is disadvantage in the negotiation process if the cost and level of subsidy is not disclosed. Disclosing these amounts would assist transparency under a taxpayer funded scenario.	
11	No.	Declaring a level of interest could be substituted for a pre-commitment.
12	No response.	
13	They should be included. Government funding is required because of market failure therefore there appears no rationale to distinguish between the two components.	
14	No response.	
15		
16	weighted	
17	The \$20M component is silent on what other situations would be funded apart from, ‘such as small communities that experience increased population during peak seasonal periods’. More information on other situations that would attract funding is required. For the tourism situation, a more effective assessment methodology would include the number of ‘visitor numbers’ to reflect traveller and ‘visitor night’ – those staying in the town. RAPAD notes that visitors are known to travel to towns with mobile service at the disadvantage of	

	towns without mobile service.	
18	RAPAD has described the absence of NBN fixed wireless facilities in the above commentary and therefore its usage in remote Australia is not applicable.	
19	The option to use NBN Ka band satellite for backhaul should be investigated as a method to increase mobile coverage in remote Australia.	Birdsville has satellite backhaul for 3G services (limited data capability) from both Telstra and Optus. It is our understanding that both operators experiencing negative returns because the sites use expensive satellite backhaul is the only option. Better technology deployment and access to the NBN satellite should be explored for new installations under this programme.
20	It needs to be cognisant of broader telecommunication infrastructure needs in the community over and above fixed broadband to drive more efficient outcomes	
21	A knowledgeable and unbiased third party could facilitate timely and better outcomes if introduced to the engagement process.	
22	See answer to question 20.	

Mobile Blackspots Central West Queensland

RAPAD has consulted member Councils and lists specific black spot areas that should be considered a priority for Mobile Coverage Programme funding. Individual Council may add to the list at their discretion or during the programme's \$20M Mobile Black Spot Project EOI process.

Diamantina Shire

Bedourie – the administrative township of the Diamantina Shire, tourist destination, centre for Qld Government agencies and a regional service centre. It currently has **no mobile coverage**.

Birdsville - mobile coverage in immediate town area for Optus and Telstra via satellite backhaul so the quality is intermittent and has frequent dropouts. No Optic fibre available.

Barcoo Shire

A total of 659 km of state roads in the Barcoo Shire have **no mobile coverage**.

Jundah – the administrative township of the Barcoo Shire, centre for Qld Government agencies and a tourist hub. It currently has **no mobile coverage**. Thompson Development Road has **no coverage** except for 18 Km in the Longreach Shire boundary.

Windorah – a tourist hub, centre for police/education/health and rural service centre on the road to Birdsville and currently has no mobile coverage.

Stonehenge – limited Telstra mobile only in the town centre of Stonehenge (*100 metres of coverage*). Service is via a repeater service from the Telstra Ban Ban tower and has limited capacity and coverage.

Longreach Regional Council

The Longreach Region includes the towns of Longreach, Ilfracombe, Isisford and Yaraka.

Yaraka located approximately 218km south of Longreach, and is located adjacent to Mt Slowcombe - poor mobile coverage area. The town has approximately 10 residents and 50 rural properties that 'may' benefit from improved mobile coverage. Local government has invested to support the installation of improved mobile coverage by providing an all-weather bitumen road installed to safely access and commercial power to Mt Slowcombe. During the period 2003 to 2008, negotiations were conducted with Telstra for improved mobile coverage but unfortunately, the negotiations between the Council and Telstra failed.

Barcaldine Regional Council

The identified Blackspots in this region are:

State Highway from the Drummond Range east of Alpha to Barcaldine.

Alpha airport (Galilee basin Coal developments).

State Highway Aramac to Torrens Creek. Two recent fatalities and no communication. Muttaborra township. Very weak signal. Needs upgrading. Difficult for Council meetings.

National highway - Barcaldine to Longreach. Cumberland tower. Huge increase in traffic numbers(tourism).

Landsborough Highway on the section Barcaldine to Blackall. Huge increase in traffic numbers (tourism).

Blackall-Tambo Shire

The identified Blackspots in this region are:

Landsborough Highway on the section Blackall- Barcaldine - 70km of no or very limited coverage.

Landsborough Highway on the section Blackall-Tambo - 20km of no coverage

Landsborough Highway on the section Tambo- Augathella - 65 km of no or very limited coverage.

Road of Local Significance - Tambo-Alpha, 05kms of no coverage. The road is experiencing significant increase in heavy vehicle usage (11.76% in one year) - major transport route agricultural and potential mining use. The road is 50% gravel and 50% bitumen however Council is seeking to fully bitumen post securing funding. It's the direct east major transport corridor for cattle.

The Landsborough Highway is a major transportation route to Darwin from Brisbane and southern states catering for general and livestock transport.

Natural Disasters - this area is prone to flooding which cuts the Landsborough Highway - the Highway has been closed five times since 2009.

Seasonal Visitation - this area experiences high visitation during the winter months - over 453,000 visitors to the Outback annually. (3% increase in 3 years to June 2013)

Majority of visitors to this region are long haul touring holidays, self-drive (80%)

Most common route to access the Outback is the Landsborough Highway.