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

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Date:	27/02/2014 (Revised with Black Spot submission attached)

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

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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.

THE MACDONALD VALLEY ASSOCIATION INC

ABN 28479479267.

[redacted]

Submission to the Department of Communications

on the

Mobile Coverage Programme

from the

Macdonald Valley Association

INTRODUCTION

The Macdonald Valley Association (MVA).

The MVA was formed in 1991 and is an incorporated entity, registered with the NSW Department of Fair Trading as an authorized association. It has more than one hundred members, and membership has had significant growth in recent years.

Its charter is well articulated in its **Statement of Purpose**, which is

> *"To ensure governments, their agencies, corporate entities and individuals are aware of the expressed needs and interests of the Macdonald Valley residents across a wide spectrum, to assist in meeting those needs through representation, to strive to protect those attributes of the Macdonald Valley that its residents value."*

We believe the lack of mobile communications within the Macdonald Valley is:

- endangering the lives of the Valley residents, tourists and competitors during times of floods and fires, and during times of failures of other means of communication.
- endangering the lives of motorists due to the significant number of motor vehicle accidents that occur due to city drivers attempting to drive on dirt roads and the inability to phone for help.
- seriously impeding the development of business and therefore employment in the Valley.
- significantly impeding the social networking opportunities of the community (especially for its younger members).

For details of the above please see the attached document submitted by way of our Federal Parliament member listing the Macdonald Valley as a Mobile Phone Black Spot.

While the MVA's focus in this submission is obviously centred on the needs of our local area, we believe that a large number of the black spot areas in Australia would suffer from similar problems. Accordingly, we believe it appropriate to make this submission from an end user perspective.

Some of the Questions asked in the Discussion Paper are not relevant to the end user and so will not be commented on.

The MVA's High Level View on Radio Communications in the Area.

We believe as part of the Federal Government's 'Universal Service Obligation' to the people of Australia, no matter where they live or conduct business, they should have reasonable access, on an equitable basis, to not only standard telephone services and payphones, but mobile phone communications, emergency services communications, Internet access and Radio and TV entertainment.

The Establishment of a Radio Communications (Radcom) Site

Critical to all radio communications is the establishment of a suitable radcom site. There is a very high cost in the establishment of this in rural areas due to the costs of land acquisition, rights of way, road building, power line construction and mast costs. We believe these facilities are the critical items that should be funded by the Federal Government.

The site could then be used for the following:

A. **Mobile Phone Communications**

Mobile Network Operator (MNO) access to the radcom site could be at a nationally set tariff that covers the administration and ongoing maintenance costs of Government funded radcom sites. The sites could be administered by the Department of Communications, NBN Co or a network infrastructure provider.

The mobile phone communications funding should ideally not be tied to any one MNO as in our case visitors to the area come from the city of Sydney where they reasonably expect good coverage from all MNOs.

Roaming between carriers in areas when the Federal Government has funded the radcom site should be mandatory unless all three MNOs are prepared to install base station equipment at that site. This would also remove unnecessary infrastructure duplication expenditure and may well make it cost effective for a MNO to install a base station, whereas the income from only its own customers may not.

B. Emergency Services

Similarly the radcom site should be made available to emergency services organisations (e.g. the NSW GRN and RFS) and 'Not for Profit' organisations at a small annual fee (e.g. that covers only the administrative costs).

C. Internet Services, radio, TV and 'not for profit' organisations

Currently NBN Co is apparently planning to provide internet to our local area via satellite (even though we are only 67 kms in a straight line from the GPO). The MVA believe delivery by fixed wireless would be far more preferable due to the reduction in latency.

A MNO 4G network would also be highly desirable as it would allow internet services to be accessed by residents, local businesses, visitors and emergency services organisations (ESOs) including the Rural Fire Service (RFS), thus greatly assisting fire fighting operations and reducing the risk to volunteer fire fighters.

Again, the biggest cost in providing a service is often the establishment of a radio communications (radcom) site.

If this site were established with Federal Government funding, NBN Co could use the site for its fixed wireless base station and a community group may well establish a local TV translator (due to the terrain, most TV reception in the Macdonald Valley is via satellite).

DELIVERY OPTION 1

Single Mobile Network Operator Contracted to Deliver the Programme

1. We think that it would be better use of the Government funding if the basic infrastructure were funded by the Federal Government and made available to all MNOs, NBN Co, ESOs and community groups at a nationally defined cost per user type (commercial, ESO or 'Not for Profit') regardless of individual site setup costs. This would significantly simplify access arrangements for all parties and encourage completion for the provision of mobile services in regional Australia.

2. If a single MNO is funded, unless inter MNO roaming is made mandatory, users on the other 2 networks would be significantly disadvantaged, Inter-MNO roaming (with appropriate revenue sharing) may well provide enough total traffic volume to make a site commercially viable for a single MNO, whereas a single MNO's traffic may not do this. (Currently Telstra have 46%, Optus 31% and Vodaphone 23% of the total market).

3. If an existing radcom site is proposed for mobile use, the Government grant could fund either all of the base station and backhaul equipment if only one carrier is prepared to provide mobile services in this area and roaming were mandated, or say 50% of the cost of each MNOs equipment if more than one MNO wishes to establish a base station using this site. Normal site rental charges would be paid by the other MNOs to the MNO that owns the radcom site.

> **QUESTION 1**: *Would an appropriate minimum quality standard be that base stations must provide high-speed 4G LTE mobile broadband data communications and also high quality 3G mobile Voice and broadband data service? If this is not an appropriate quality standard, what is?*

Given that your Discussion Paper indicates the successful MNO must provide both voice and broadband services for at least 10 years, we suggest that tying this to 2012 technology is not appropriate. You need only to consider what mobile technology we were using 10 years ago to see the weakness in this. We suggest the proposed service level should be based on the MNO providing the same technology at the Government funded radcom sites as it does to the majority of its city customers.

> **QUESTION 2**: *What are the appropriate indicators that could be used to specify the minimum quality standards that should apply to the mobile services being provided through the programme? For example should it be a minimum RSSI in dBm.....?*

This may be appropriate if the bidding is on providing coverage for a defined stretch of highway where multiple base stations may or may not be required, but we feel that as the funding will often be to provide coverage of specific black spot areas, a 'best efforts using standard cell infrastructure,' but specifying tower location and height (if the tower is not provided by the Government) and antenna gain would be adequate. Microcells or Picocells should only be funded if specifically identified and justified to cover unique locations.

DELIVERY OPTION 2

Order of Merit from Base Stations Proposed by Multiple MNOs.

> **QUESTION 3** *Does delivery option 2 for the $80 million Mobile Network Expansion component raise any additional issues that need to be considered*?

The intent of the Liberal Party Black Spot Policy was to provide mobile communications to (all) **users** in current black spots and encourage completion in rural Australia. This option would effectively favour a single MNO in each area. Unless mandatory roaming is introduced on sites that receive Government funding, only customers of that one MNO will receive the benefit. Given that Telstra have a 46% market share, unless the other 2 carriers form a consortium, it is highly unlikely that they would be able to build a justifiable business case for many regional locations.

DELIVERY OPTION 3

Network Infrastructure Provider to Co-ordinate Implementation.

This option is the closest option to that proposed by the MVA.

The site, tower, site access and power would be provided by a specialist infrastructure provider, rather than as a government owned radcom site.

We would recommend that a detailed analysis be done on the needs of NBN Co for radcom sites compared to the list of agreed mobile black spot sites. It may well be more cost effective for NBN Co to provide and manage the radcom site than to outsource the provision of this to a specialist infrastructure provider.

The Government would then also control the costs of site access for MNOs, ESOs and 'Not for Profit' organisations.

We do not believe that option 3b would be viable due to the high cost of spectrum licensing. (The 30MHz still available in the 700 MHz band is worth in the order of $1 billion). A mandatory roaming requirement on any site that received Government funding would achieve the same end result at no additional cost to the Government (directly or indirectly).

> **QUESTION 4**: *Could options 3(a) or 3(b) for the $80 million Mobile Network Expansion Project be delivered in conjunction with options 1 or 2 to enable network infrastructure providers to compete with MNOs*?

Yes, option 3(a) could be deployed with either option 1 or 2, but why would the Government wish to try to administer such a complex system? For what sites should option 1. 2 or 3a apply? Who will decide? Who will wear the flack when the media and the MNOs say "it's not fair"?

> **QUESTION 5**: *Should bidders be able to propose to incorporate the use of base stations owned by NBN Co as part of their bid?*

As the MVA believes that Government ownership of the radcom site is the simplest, most cost effective, least cost option, yes; bidders should be able to propose the use of NBN Co sites as part of their bid.

> **QUESTION 6**: *Should a joint bid (between a specialist network infrastructure provider and a MNO) be permitted? Should it be encouraged?*

Yes, a joint bid should be permitted and encouraged if the Government decides to outsource the provision of radcom sites, but it would be far more easily administered if access was provided to all MNOs at a defined price. (If the Government funds the site construction it should be able to set the access charge)

> **QUESTION 7**: *Is it realistic to expect specialist network infrastructure providers to provide backhaul?*

While the MVA has no real view on this, the provision of backhaul is an area in which MNOs have considerable experience. It is unlikely that there would be any real economies of scale if the radcom site provider should attempt to provide this. However, if an NBN Co site is used

then it would make sense for NBN Co to offer to provide the backhaul as they will be installing backhaul for their own use.

QUESTION 8: *Is option 3(b) suitable for Australia's regional mobile network?*

If the Government can allocate some of the 30 MHz still available in the 700MHz band (The lower frequency band is needed for the greater coverage it will give in isolated areas) and they are prepared to wear the flack they will receive if they offer this spectrum to the radcom site provider for a negotiated price, this is a great idea, but will result in large amounts of criticism from the MNO's who recently paid $1.96 billion for 4G spectrum.

QUESTION 9: *What are the appropriate specifications for a base station (radcom site) to be able to accommodate at least 2 other MNOs?*

Each radcom site should provide: the mast, a central power distribution point with separate metering for say six tenants. A fenced area of flat ground surrounding the mast with sufficient space should be created for three MNOs, two ESOs and one Not for Profit organisations prefabricated comms rooms. The option to share the cost of a permanent comms building should be available if this is a Greenfield or NBN Co site.

QUESTION 10: *Will the proposed open access provisions be sufficient to encourage other MNOs to use the base stations to provide mobile services?*

If the total cost of the radcom site is government funded, then the Government could set the access fees. If the site has only one MNO initially, but roaming is mandated (with revenue sharing) the other MNOs will be able to measure their traffic (and lost revenue) and determine when the traffic volume is sufficient to justify the installation of their own base station.

The access fee could be shared between the MNOs that wish to use the site.

QUESTION 11: *Should MNOs be required to pre-commit to/co-invest in the base stations for which they wish to share infrastructure?*

No, the radcom site should be provided by the Government and access provided by way of an opex cost recovery only model. The MNO should only be required to agree to use this site for the 10 year period (with a penalty clause for non use). As populations normally grow rather than contract, there is little chance the MNO will lose money on the deal.

QUESTION 12: *What is the estimated additional cost of requiring all new base stations to meet the open access requirements*?

The MVA has no knowledge of this and cannot comment, but if our proposal for a Government funded comsite and mandatory roaming are accepted, this question is not relevant.

QUESTION 13: *Should the proposed open access provisions be applicable to base stations funded under the $20 million component, or should there be scope to exclude some base stations from these requirements?*

Again, if the Radcom site is Government funded, it should be open to all potential users (MNOs, ESOs and Not for Profit organisations)

QUESTION 14: *What are the most appropriate models/benchmarks for establishing access and backhaul pricing and for reflecting in that pricing the value of the public funding received by the owner of the facilities (such that access seekers receive an appropriate discount from the market price for the facility)?*

Our view of access pricing has been covered previously. (Government owned radcom sites and fixed access costs regardless of location).

As most backhaul to mobile black spot sites will be via the use of microwave links and these sites will be within the ACMA's low or remote density areas, backhaul costs will be relatively low, we suggest that each MNO be responsible for the provision of their own backhaul. Should Telstra already have fibre to the site, Telstra's existing commercial arrangements would suffice. If the site is an NBN site, the NBN could offer backhaul at similar commercial rates.

QUESTION 15: *Do the proposed assessment criteria achieve the right balance to deliver the best value for money outcomes?*

If the radcom site is to be provided by the MNO rather than by the Government, its proposed location (and hence coverage area) should be **critical** to the assessment. In the MVA area, Telstra is believed to be planning to use their current telephone exchange as its radcom site but as this is located only approx 15m above sea level in a valley with 200m high hills surrounding it, coverage from this site would be limited to the village of St Albans only. If Telstra were to instead use their passive repeater site located at an elevation of 200m, coverage of up to 15km radius would be achieved including providing the 'missing link' in continuous coverage from Sydney to St Albans.

We feel that sites that are already planned but not installed should be eligible for funding as we believe that Optus for example have shelved their plans to install a base station at St Albans, so even though planned, will not get installed without Government assistance.

QUESTION 16: *Should the proposed assessment criteria be weighted, and if so, how?*

The MVA has no views on weighting other than as defined in our reply to question 15.

QUESTION 17: *Is there a more effective way of measuring seasonal demand than proposed in criterion 3(c)?*

St Albans has a small amount of rental accommodation (1016 beds) but hosts a number of equestrian and bicycle marathons, festivals and markets where, for some events, over 1500 people sleep in temporary accommodation (tents, horse floats etc). The MVA suggests that vehicle movements are more representative of seasonal population (including day trippers who often outnumber residents) than a room count.

QUESTION 18: *To what extent would the NBN fixed wireless network result in improved mobile coverage outcomes in Regional Australia?*

As the NBN network sites will be chosen to provide optimum coverage for the fixed wireless network, those same sites will often also provide optimum coverage for MNOs, ESOs and NFP users. As previously stated, if the Government is funding the site infrastructure, it should be able to set the rental cost to be charged even if the rent is collected by the NBN Co. If the site is being funded by NBN Co, the Federal Government may wish to determine a 'fair' annual access cost for each MNO, ESO or Not for Profit potential user. It may be necessary to move some of the $100 million to NBN Co to justify this.

QUESTION 19: *How best can a greater role for the NBN Co improve **competition and choice** for consumers in regional Australia?*

If the Government funds the radcom site and allows NBN Co to manage them and provide access to those sites for a fixed fee (based on the ongoing opex cost of maintaining these sites.) this would encourage all MNOs to provide services in areas where there was previously no business case due to the high cost of site establishment.

QUESTION 20: *In addition to base station (radcom site) location, design and backhaul access, what other considerations would NBN Co need to take into account if it were to also support mobile coverage and competition benefits as part of its mandate?*

There may be some cost savings for all parties if the NBN Co were to build permanent buildings at the radcom site with internal cages for each user's equipment (rather than each MNO using transportable enclosures).

QUESTION 21: *How can early engagement between NBN Co and MNOs be facilitated in the design of each base station? Is there a role here for the AMTA?*

If the Government sets an opex based site rental cost for all radcom sites including proposed or existing NBN Co sites and the NBN Co publish closing dates for requests for joint development applications for say the building structure, the MNOs will not delay in applying as this should provide a significantly lower cost that creating their own site.

The MVA membership does not include anyone with direct experience with the AMTA so cannot comment on the advantage or disadvantage of their involvement.

QUESTION 22: *How can the Mobile Coverage Programme best complement any role that the NBN fixed wireless service plays in improving mobile coverage and competition?*

The fixed wireless service planned by the NBN will be idea for residents and business users as it offers an agreed Quality of Service.

The MNOs 4G network, while possibly more limited in range and not providing a QoS, will be available to mobile users and the ESO's.

Summary

- That the funding should **NOT** be provided directly to a MNO, neither 'winner take all' or on a 'site by site' basis.

- That the funding should be used to provide the basic infrastructure (site, access road, power line, tower and fencing

- Once the list of agreed mobile black spots is compiled, the Department of Communications and NBN Co determine which sites would be able to be used by NBN Co to provide fixed wireless services. This may well influence the decision on who is best placed to run this project.

- That this project is best managed either by the Department of Communications, NBN Co, a network infrastructure provider or a combination of NBN Co and a network infrastructure provider.

- That the MNO access charge is a flat monthly fee regardless of the site location.

- That the access charge is set so as to recover the administrative and maintenance costs only (plus a small profit margin if management of these sites is done by a specialist infrastructure provider).

- If the site is used by more than one MNO, that the access charge be shared between them.

- That ESO's and 'Not for Profit' organisations be given access to these sites at a nominal rent.

- That inter MNO roaming be required at these government funded sites (with revenue sharing).

- If the location of a proposed radcom site is nominated by the MNO (rather than the Government) its proposed location should be critically assessed to ensure the maximum coverage of the black spot area is provided.

- All sites where construction has not yet commenced should be considered for this project as MNOs may have planned a site but due to a business refocus that site may never be built without Government financial assistance.

Wayne Hawkins
Treasurer, MacDonald Valley Association

ATTACHMENT

MOBILE PHONE BLACKSPOT SUBMISSION

from the

MACDONALD VALLEY ASSOCIATION

THE MACDONALD VALLEY ASSOCIATION INC

ABN 28479479267.

[redacted]

THE MACDONALD VALLEY AND THE VILLAGE OF ST. ALBANS NEW SOUTH WALES

A MOBILE TELEPHONE BLACK SPOT

Background and Geography

The historic village of St Albans, the social centre of the Macdonald Valley, is located 67 km (as the crow flies) from the CBD of Sydney and approx 94 km via road.

St. Albans Road between the Webbs Creek ferry and St Albans and Wollombi Road between St Albans and Bucketty are classified as being part of Main Road number 181 by RMS NSW and is used as a short-cut to the Hunter Valley by residents of the North West of Sydney.

The area of the Macdonald Valley affected by non-existent or poor mobile phone service involves in excess of 300 households with an estimated population in excess of 850 people (based on recent ABS statistics on average household population).

Therefore the Macdonald Valley is a "small community".

It should be noted that part-time residents generally vote elsewhere, and thus are not included on the local electoral roll. The electoral roll is thus not a reliable indicator of population. The Macdonald Valley population often swells by up to another 3000-4000 people due to competitors and support teams at sporting events, and during cultural events. There are also at least 16 accommodation venues in the Valley that can accommodate a total of 1016 guests, in addition to numerous business operations offering employment opportunities.

With the sealing of St. Albans Road from Webbs Creek Ferry to St Albans, the area is becoming increasingly popular as a day-trip and weekend destination, as well as being increasingly regarded as a more scenic route to the Hunter Valley and other destinations.

The Settlers Arms Inn, situated in the historically significant St. Albans Village, regularly exceeds lunch sittings for 350 diners at weekends during summer.

Each year the ferries carry significant and increasing numbers of visitors to the Valley and beyond. According to the NSW Roads and Maritime Services (RMS) (which operates the local ferries that carry vehicular traffic to and from the Macdonald Valley, the Hunter Valley and beyond), in 2011 the ferries carried a total of 503,335 vehicles. The comparable average figure (provided by RMS) for the period 2007 to 2009 was approximately 490,000 per annum.

Therefore St. Albans and Wollombi Roads are "major transport routes".

The safety of every motorist is enhanced by the ability to make mobile phone calls in the event of accidents, injuries and other mishaps.

Major bicycle and horse riding events are held in the area surrounding St Albans Village with the bike ride attracting 1200 or more riders and a similar number of support personnel. An annual folk festival attracts approximately 4,000 visitors during Easter. The major horse ride attracts approximately 1,800 people (riders, support and management).

Therefore the Macdonald Valley is an "area with high demand for services during seasonal holiday periods".

The safety of attendees at these events would be greatly enhanced by mobile phone coverage.

Both the bicycle and horse riding events have historically required several ambulance evacuations (both vehicle and air) at each event. For the last two years the Ambulance Service of NSW has needed to establish a command post at St Albans to co-ordinate evacuations and have been highly hindered and frustrated by the lack of mobile phone coverage.

There are numerous narrow and winding unsealed roads in the Macdonald Valley and vehicle accidents occur often. Motorists have no ability to call for help and lives are endangered or lost due to inadequate communications. The stress and suffering of the injured and traumatised is also extended by time lost in obtaining medical treatment.

There is only one public phone box in the Valley. It is located at St. Albans and is often not functioning due to the coin collection box being full.

Safety and Emergency Concerns

Bushfire Prone Area

The Macdonald Valley is surrounded by the Yengo National Park and the adjacent Wollemi National Park and therefore is highly susceptible to bushfires. This year, two bushfires have already burnt out in excess of 80,000 hectares to the north and west of the Macdonald Valley and a fire at Webbs Creek burnt out an area of approx 300 hectares and two buildings. As a case in point, the Webbs Creek area is reasonably covered by mobile services. These services were essential in successfully fighting the fire as the landlines had been destroyed by the fire. A large number of the Macdonald Valley residents live on dead-end roads, thus early warnings of bushfire threats are critical to allow time for safe and orderly evacuations.

As no carrier has mobile coverage of Macdonald Valley area emergency mobile '000' calls do not work. In addition to naturally occurring fires, we have had several fires deliberately lit in the Valley over the years and it is critical that the RFS is alerted as soon as possible to maximize their ability to contain these fires before they get out of control.

The RFS also attends house fires where the same communications limitations apply.

In the most recent fire (Howes Swamp fire-October 2013) the RFS's fire control radio network, (known as the Private Radio Network [or PRN]), which should be reserved as a channel for essential communications, was used for non-critical traffic (enquiries re deliveries of food and water, messages to the crews' families re delays in returning home etc) due the absence of mobile phone coverage. A functioning mobile service would relieve the fire control radio network of the need to relay important but non-essential communications.

The ability to be able to dial '000' can and often is the most important factor in determining whether lives are lost when accidents, not limited to road accidents, occur.

Due to the lack of mobile phone coverage the National Emergency Alert System is of limited use. This system would be very useful to advise both residents and tourists in the Valley to evacuate in an emergency situation.

Flood Prone Area

The Valley regularly floods, cutting the only vehicular access to the area and many of the local roads have either causeways or low level bridges that may be under water for one to two weeks after a flood.

During floods it is not unusual for landline telephones to fail as poles and cables wash out or are severed or damaged by falling trees.

The power also often fails as power lines follow the river and the lines submerge or are brought down by falling trees.

Power failure leads to a failure of the telephone exchange as there is no power generator back up. The net result is that people can be isolated at their farms and homes or in the Village of St Albans for up to two weeks with no power and absolutely no communications. Should a medical emergency occur, no assistance can be summoned.

Bush fires and high wind events also often result in the same loss of power and telephone services due to damage or destruction of infrastructure by the fires.

Therefore the Macdonald Valley is an area that is "prone to experiencing natural disasters".

Attachment 1 includes mobile coverage maps provided by the carriers for the Macdonald Valley.

Attachment 2 includes information on recent history of floods, bushfires and medical evacuations in the Valley

The Effect on Tourism and Local Accommodation Businesses

Attachment 3 lists local accommodation businesses, providing accommodation ranging from boutique hotels to backpacker-style lodgings that operate in the Valley. Their businesses would be significantly advantaged by a mobile phone service and could be expected to increase tourism to the Valley. This would enhance local employment opportunities and strengthen sustainability of the community.

The Effect on Other Local Business

The lack of mobile phone coverage significantly affects the present operations and future growth of local businesses, discourages new businesses and hence restricts local employment opportunities and future community sustainability.

Attachment 4 includes a non-exhaustive list of local businesses, most of which have indicated that the lack of mobile phone coverage is affecting their viability, profitability and growth prospects (and thus employment prospects within the Valley).

The Effect on Community Wellbeing/Cohesion

The community of St Albans has a number of social networks that are critical to the wellbeing of the community. The St Albans Volunteer Fire Brigade, the MacDonald Valley Association, the St Albans Bushcare Group, the St Albans Common, the School of Arts Hall (Committee); The St Albans Pony Club, the St Albans Dirt Road Choir, the local church etc are some of the associations that bring together the community through a range of activities. The organization of these activities, whether they are training days, social fund-raisers or mustering of animals on the Common are much impeded by lack of communication options. Once people leave their homes to attend an event that can require up to 45 minutes in travelling time, there is no way of conveying messages that may be critical to the outcomes – e.g. change in weather requiring cancellation or changes; organizational logistics etc.

Effect on Work in the Valley

Internet is a great asset to residents of remote areas like St Albans. Much business can be achieved on the internet. Farmers can purchase goods without having to travel (at least 3 hour round trip) to the closest shopping centre (Windsor or Glenorie). However, goods need to be delivered and often couriers become lost and have no way of calling to obtain clarifications of the delivery address. Trades people also have difficulty in finding their destination or contacting their suppliers to ensure that work can proceed as planned.

Existing Mobile Communications Base Station Locations

The closest Telstra mobile base station is at Simpsons Hill (behind Wisemans Ferry, approx 22 km away.) Coverage from this cell towards St Albans ceases approx 15-18 km from St Albans.

Optus has a mobile base station located in the Village of Wisemans Ferry which (due to its lower height) has a slightly smaller coverage area. Optus also have a base station at George Downs Drive, Bucketty but coverage from this cell ceases approximately 15 km from St Albans.

Vodaphone have no coverage in the area.

See the Attachment 1 for the carrier-supplied coverage maps.

Potential Base Station Locations

Telstra own two sites at St Albans:

The Telstra telephone exchange. While this would be the 'easy' site to install a mobile phone base station, (due to the availability of power, a building and communications links), it is located low in the Valley, approximately 10-15 M above sea level and would provide communications only to the Village area, which holds a small percentage only of the Valley's resident population and an even smaller percentage of the swelled population during Valley events. This solution would be the least satisfactory and least appropriate method of improving communication facilities and reducing risk factors for Valley residents, its tourist visitors and motorists travelling through the Valley to other destinations.

The Telstra passive repeater site. This facility is on a hill about 200M above sea level and far enough from the village to eliminate any heritage issues. This site is the optimum mobile coverage site in the area and would provide coverage back towards Wisemans Ferry thus providing continuous coverage from Sydney to St Albans as well as providing good coverage of the Macdonald Valley area and towards Bucketty. There is currently no mains power available at this site but the cable run is simple and the granting of a 'right of way' would be unlikely to be unreasonably withheld by the affected local land owners.

Optus have formalized a lease on a site behind the old Court House in St Albans but have not commenced construction of a base station and we believe it is no longer on their rollout plan due to a change in business focus.

Internet

While the village of St Albans has reasonable Internet speeds via ADSL services, the speed reduces with distance from the exchange. At 6 km from the exchange it drops to an unusable speed. A large percentage of the Valley population lives outside of the 6 km range.

The NBN currently plans to provide internet services to the St Albans area via satellite.

If the Federal Government funds the erection of a radcom site in the Valley the NBN may well provide a fixed wireless service to the St Albans area.

A carrier-provided 4G service would allow access to the Internet to users outside of the home location. This would be highly beneficial for local businesses, farmers and tourists.

Other Communications Services

The coverage of the area by the Government Radio Network (used by the Rural Fire Service, SES, Police, Ambulance, National Parks, etc) is also limited as the closest base station is also on the Telstra site at Simpsons Hill.

The RFS paging service does not work north of St Albans village, considerably hindering the local fire brigade in contacting volunteers in the event of a fire.

TV reception in the area is almost exclusively provided via satellite. If a local radcom site were available, a community funded TV translator would become feasible.

RECOMMENDED ACTION

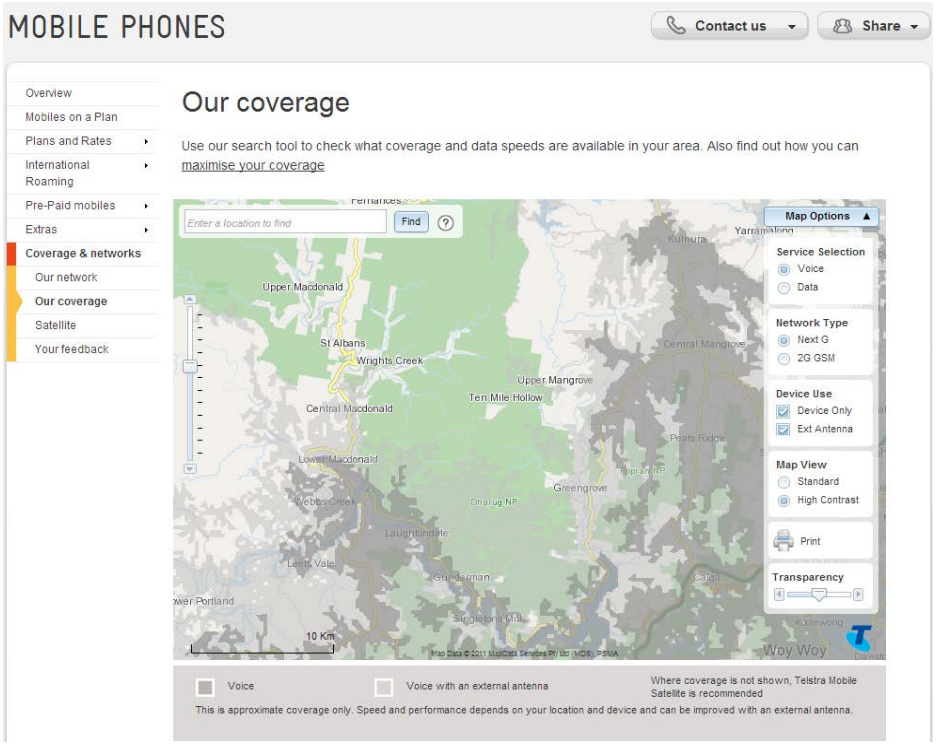
- **That St Albans (NSW) is included in the database of sites with poor or non-existent mobile coverage.**

- **That proposals to provide mobile phone coverage to the Macdonald Valley and the Village of St Albans be initially considered under the $80 million Mobile Network Expansion Project.**

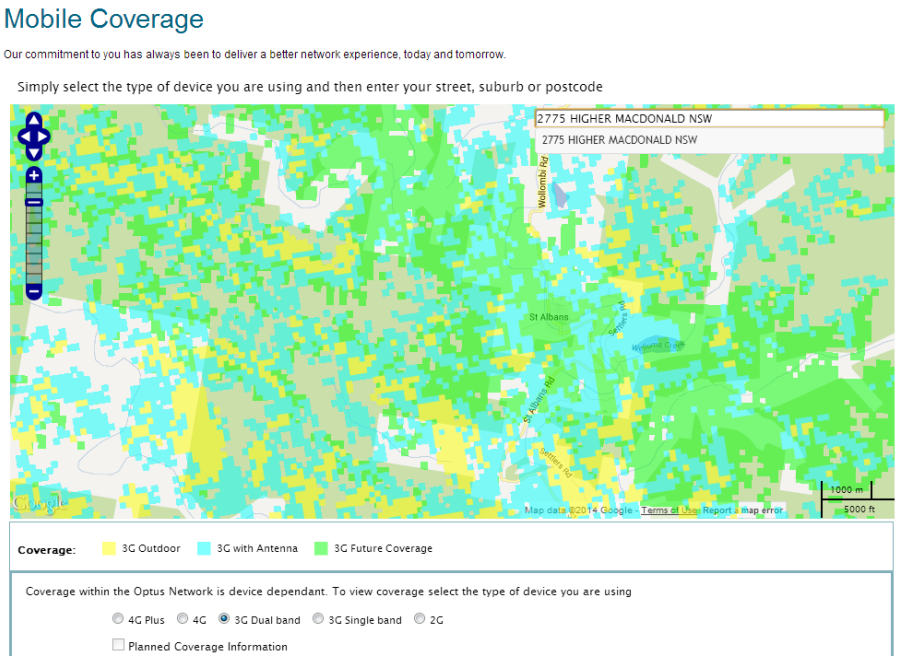
- **That if proposals to provide mobile funding to the Macdonald Valley and the Village of St Albans under the $80 million Mobile Network Expansion Project are unsuccessful, that proposals for funding under the $20 million Mobile Black Spots Project be considered due to the high number of day visitors and tourists that visit the area.**

- **That establishment of a shared radcom site at the existing Telstra passive microwave repeater would provide the basic infrastructure needed to address all of the above-mentioned communications issues**.

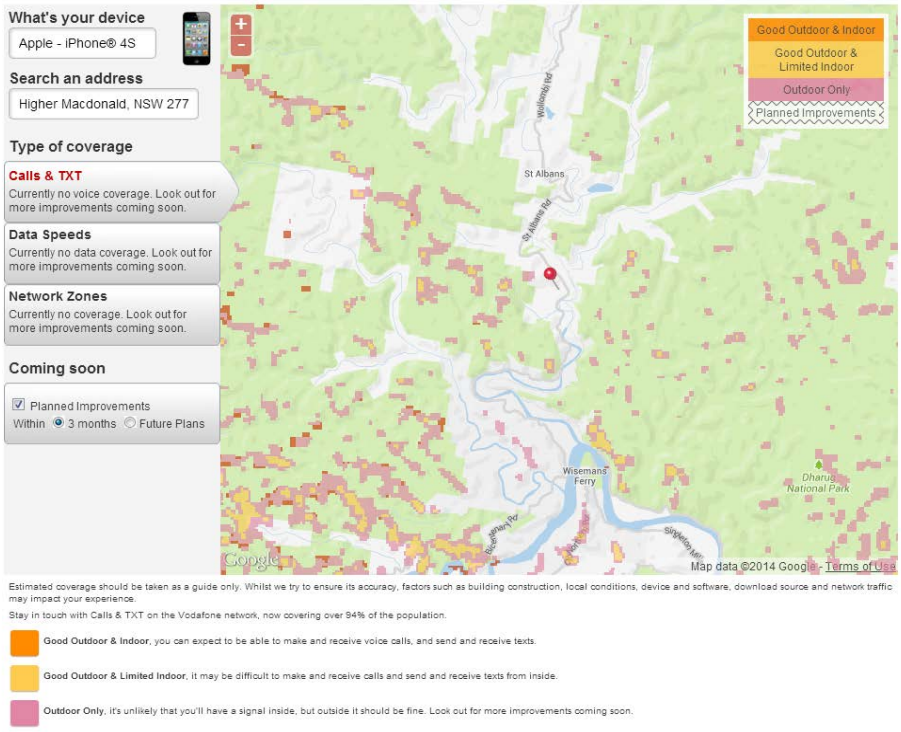
Existing Mobile Phone Coverage and ADSL Reach
Telstra



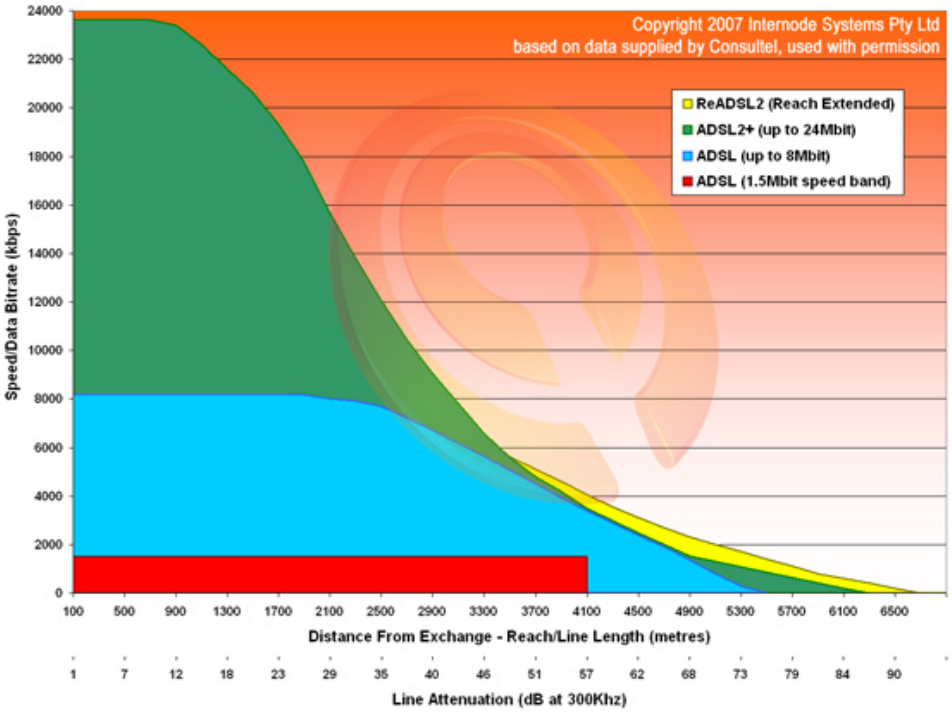
Optus



Vodaphone



ADSL reach



ATTACHMENT 2

Recent major fires, floods, medical evacuations and incidents.

FLOODS

Since 2000, the Valley has experienced eleven floods in which the flood height was two metres or higher and which impacted negatively on communications, travel and safety of Valley residents (including children), visitors and travellers. The Valley, due to its geography, is a flood-prone area, and has experienced more than twenty damaging and disruptive floods over the last three decades.

Floods affecting the Valley's communications and safety since 2000 occurred in

2000	2008	2012
2002	2009	2013 (two floods)
2005	2010	
2007	2011	

FIRES

The Macdonald Valley is also a bush fire prone locality, as evidenced by the following statistics:

YEAR	BUSH AND GRASS FIRES	HOUSE FIRES
2002	1 (1 x section 44)	
2003	1	1
2004	1	3
2005	5	
2006	5	
2007	2	
2008	1	
2009	14	1
2010	5	
2011	2	
2012	2	2
2013	3 (1 x Section 44)	2

MEDICAL EVACUATIONS

In January 2014, two men were riding motorcycles through the St Albans Common. Whilst negotiating a corner one of the riders crashed his bike. He was seriously injured. As there was no mobile coverage his fellow rider had to leave his riding companion on the road side in search of a land line. He attended the Common House some 6 kms away and raised help.
The rescue helicopter and SES attended the scene. The rider later died in hospital.

INCIDENTS

Each year local people are called upon to help rescue people stranded in isolated areas of the Valley. Each year numerous people drive to the end of the Upper Macdonald Road and continue to drive their 4x4 vehicles along various tracks and in the river beds, ignoring the signs and continue driving until their vehicles become bogged.
Because there is no mobile coverage, the stranded motorists have to walk between 12 and 23 kilometers to the closest home to raise the alarm. They usually end up at the homes late at night or in the early hours of the morning. . The people who are disturbed are exasperated at having to rescue people and lose a great deal of sleep as well as time in their working day due to these occurrences.

The area motorists are attracted to was depicted on a past 4x4 TV show suggesting it is a great 4x4 adventure.
Unfortunately many of them have young children with them. The children are left in the vehicle whilst the drivers walk for help, thus adding to stress and danger of the incident.

During floods in the Valley, many tourists who do not know the area drive into flood waters and become stranded. Some are washed off roads and causeways and others lose their cars to rising flood waters. Due to the absence of a mobile network they cannot call for help and are at the mercy of the rising waters. Some remain near the vehicles on dry land until travelling motorists, usually local residents, come by and rescue them. Others walk out to the nearest farm house for help. This is a very regular occurrence throughout the Macdonald Valley when there are floods and even flash flooding which catches motorists off guard.

Within the last three years, a young man walked out of Francisville retreat into the dark after an argument with other participants. He became lost in the bush. He walked for hours before he found his way out of the bush. He saw a light and walked to it. The property was 11 kilometers north of Francisville. He had a mobile phone but could not get a signal.

In 2012 a driver from Sydney became lost at night and ended up on Upper Macdonald Road, Upper Macdonald. Her car fell 15m down the embankment into the river. She had no idea where she was. Her mobile phone was inoperable due to no service and she stayed in her wrecked car for the entire night until dawn. With injuries she had to walk to find a house with a phone. She was lucky. The owners of the dwelling she came across were there for one of the few week-ends of the year that they come to the Valley.

ATTACHMENT 3

Accommodation Venues

VENUE	CAMPING SITES	ROOMS/CABINS	SLEEPING ACCOMMODATION
Bandusia	6	9 rooms	30
Bush Nurse		4 rooms	8
Camp Wollomi	200	25 beds	225
Francisville		40 beds	40 (mainly dorm)
Gordon MacDonald	110		220
Linley Farm		13 rooms	24
Peter McKechnie	100		200
Price Morris Cottage		4 rooms	8
Sa Soon		80 beds	80 (mainly dorm)
Settlers Arms Hotel		4 rooms	8
Sheing Farm		2	5
St Josephs		5	10
Swallows Nest			14
The Courthouse		8	16
Yanada		4	8
Zen Centre	100	1 dorm	120
	TOTAL ACCOMMODATION		**1016 Guests**

Note that not only do these venues provide accommodation in the Macdonald Valley but many are also major employers of local residents.