WHEATBELT SNAPSHOT SERIES: TELECOMMUNICATIONS

Version 07 – July 2014

DISCUSSION PAPER OVERVIEW

The purpose of this document is to outline the telecommunications infrastructure and service delivery in the Wheatbelt. This document highlights the issues and limitations of existing services and infrastructure. The information contained within this document is correct to the best of the Wheatbelt Development Commission's knowledge. Should you believe that any information is incorrect or have queries relating to the document please contact the WDC to further discuss these matters.

REGIONAL LOCATION

The Wheatbelt comprises an area of 154,862 square kilometres and encompasses 43 Local Governments. The Region is home to almost 74,000 people, making it the third most populous region in the State.

The Australian Government holds responsibility for administering legislation relating to telecommunications in Australia.

The WA Department of Commerce works with industry and the community to deliver projects that will capitalise on the opportunities created through new technologies. Projects will enhance communication services in regional and rural Western Australia, and encourage small to medium sized enterprises to transform traditional business practices by incorporating digital technologies.

Figure 1: WHEATBELT DEVELOPMENT COMMISSION AREA

KEY DEVELOPMENTAL ISSUES

Key issues for Telecommunications in the Wheatbelt include:

- Increased mobile coverage to address widespread blackspot issues across the 43 local governments in the Wheatbelt region. To continue to support the rollout of the Regional Mobile Communications Project (RMCP) phase 1 (15 of the 16 sites complete as of June 2014, with completion of the final site expected by September 2014). Establish a state of preparedness for future opportunities including a possible RMCP phase 2, called Regional Telecommunications Project (RTP).
- Increased Internet access. Continuous information flow between local, regional, state and national stakeholders is vital to ensure the Wheatbelt maximises the NBN potential. Emphasis is placed on resource sharing and upgrading the method of delivery (satellite, fixed wireless or fibre) when it is possible to demonstrate need.
- Monitoring the ongoing costs to Wheatbelt residents and businesses of digital television delivered via VAST (not born by city counterparts).
- Monitoring the level of disincentive for people to relocate to regional areas resulting/compounded by the VAST method of television delivery.
- Ensuring that the regional versus city telecommunications divide does not simply translate or widen as new technology is introduced. For example – delivery of television via satellite as compared with delivery through Fibre to the Premise (FTTP) or Fibre to the Node (FTTN) or delivery of internet/government services via satellite or wireless as compared with delivery through FTTP or FTTN.

WHEATBELT TELECOMMUNICATIONS PROFILE AND RESOURCES

REGIONAL MOBILE COMMUNICATIONS PROJECT (RMCP)

In September 2010 the State Government announced $120million from Royalties to Regions to deliver improved mobile telephone and emergency service coverage to regional Western Australia. $40million was allocated to the Regional Mobile Communications Project (RMCP) and $80million to the Community Safety Network Project (CSNP).

The Regional Mobile Communications Project (RMCP) is being administered by the Department of Commerce (DoC) in consultation with the Department of Regional Development and Lands, with on ground support in the Wheatbelt provided by the Wheatbelt Development Commission (WDC). RMCP is intended to deliver terrestrial mobile, voice and high speed wireless data broadband to improve highway and town-to-town coverage in regional, rural and remote communities of the State.

A list of sites is in **Appendix 1** and a map of proposed coverage at **Figure 2**. WDC agreed to assist DoC through follow up with host LGAs, provide details of the Wheatbelt RMCP sites, and to be a single point of reference for the Wheatbelt communities regarding any potential issues or updates.

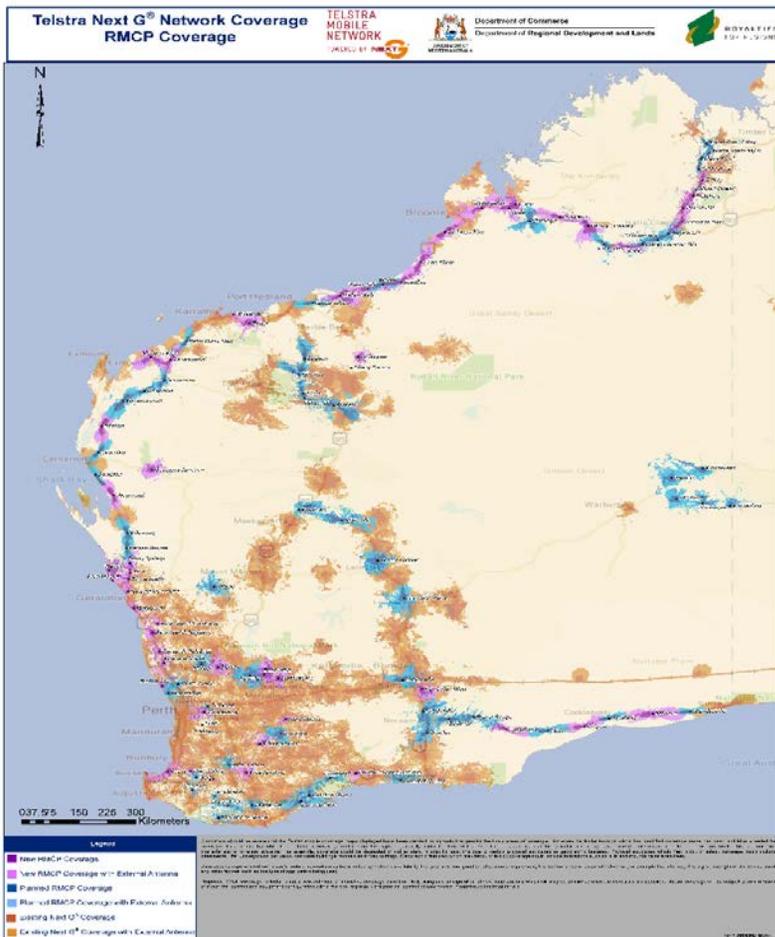WDC have collated information relating to remaining black spots in the Region.

Figure 2: RMCP COVERAGE

DIGITAL TELEVISION IN THE WHEATBELT

Prior to 25th June 2013, a number of Wheatbelt communities owned and operated retransmission facilities for analogue television. Funding support was not available to upgrade, build and operate digital retransmission facilities. Subsidies for individual households to purchase and install satellite digital services were available. It was anticipated that the switch to digital television would present a substantial cost for those in regional areas with multiple televisions, especially hotels and motels.

WDC provided feedback into the guidelines for the retransmission of digital television services, including retransmission of services sourced from the new Viewer Access Satellite Television (VAST) satellite service being undertaken by the Australian Communications and Media Authority (ACMA).

These guidelines at **Appendix 2** addressed the authorisation of digital television retransmission services by self-help providers, and are aimed at ensuring that viewers of retransmitted digital television services have substantially the same viewing experience as those watching a broadcaster provided service. Proposed digital television switch dates for locations can be found at www.digitalready.gov.au.

In 2011 WDC raised awareness of issues surrounding the planned delivery of digital television and highlighted that VAST did not cater for all regional needs and should not become another cost impediment to living and doing business in regional areas. WDC identified a number of potential issues with the changeover to digital television in

the Wheatbelt, many of which are still concerns now, after the switchover. These include;

- Most rural residents expected to organise installation of direct to home satellite service attracting a subsidy but relying on financial outlay from the resident. VAST clients are responsible for installing satellite dishes, smartcards and decoders. The installation of additional televisions will need to be met by the household or business (additional decoders are required for each television). Costs may reach $1600/rural household for a service free to city counterparts.
- Rural business such as accommodation venders, Motels/hotels, caravan parks, schools, hospitals, multi-dwelling buildings and retirement living facilities face greater challenges and personal expense. They will require new satellite fed Mater Antenna Television (MATV) digital head ends with an estimated cost of $12 000 to in excess of $60 000 dependent on room/s and television requirements.
- The ongoing maintenance at a personal cost to regional residents (not born by their city counterparts) will impact access and cost of living.
- Lack of local television specialists to provide cost effective and timely repairs to the VAST home unit.
- VAST will provide an additional disincentive for people to relocate to regional areas
- Caravaners will require a satellite dish, decoder and finder. The finder will be needed in every rural location to locate satellite position. Travellers will prefer to rest in areas providing terrestrial service (Self help sites)

and this will impact on small regional towns and communities.

- High quality digital television via fibre to the premise (FTTP) or Fibre to the Node (FTTN) will not be an option for most regional WA towns as many aren't scheduled to get FTTP or FTTN.

WHEATBELT DIGITAL ACTION PLAN

Regional Development Australia Wheatbelt, in partnership with the Wheatbelt Development Commission has developed the Wheatbelt Digital Action Plan which was launched on 28th August 2013. Recommendation 5.6 of the 2011-12 Regional Telecommunications Review report is *"Regional Development Australia Committees, in conjunction with local councils, should develop digital economy plans for their regions and identify digital economy champions. Cooperation in developing these digital economy plans should be sought from other local and regional institutions such as universities and national organisations such as the CSIRO and National ICT Australia"*.

A Wheatbelt Digital Action Plan Steering Committee was formed to develop the "Wheatbelt Digital Action Plan". The plan will assist all Wheatbelt communities plan for usage maximisation of NBN infrastructure through preparation prior to the rollout of Wheatbelt sites. The plan will focus on:

1. Identifying key opportunities enabled by NBN (optic fibre, wireless and satellite technologies).
2. Capitalising on current infrastructure to encourage it's greater utilisation, and leverage of additional services.

3. Investigating alternative investment models to expand fibre and/or wireless across the Wheatbelt (in comparison to satellite).

NATIONAL BROADBAND NETWORK (NBN)

NBN is an Australian Government initiative under the Department of Broadband, Communications and the Digital Economy (DBCDE). This wholesale-only, open access high speed broadband network is planned to deliver high-speed broadband across Australia. WDC argues that the following unique circumstances of our region warrant attention in the planning for NBN service delivery:

- The unique disbursement of our population of 75,000 over 110 communities;
- The nature of this disbursement relying increasingly on technology to deliver essential services such as health and education;
- The industry/business profile of our region being dominated by micro and small business (many of them being home based), and the ability of these businesses to remain globally competitive in a knowledge economy without world class technology. The Wheatbelt has the lowest dominance of large employers of any region is Australia with only 1.5% of employees working in businesses with more than 20 employees (Insight – Australia's Regional Competitveness, 2013)

Wheatbelt towns listed by NBN to receive Fibre to the Premise are (FTTP), which is now more likely to be Fibre to the Node (FTTN); Bakers Hill, Beverly, Brookton, Cervantes, Cunderdin, East Bullsbrook, Gnowangerup, Jurien, Katanning, Kellerberrin, Lancelin, Lower Chittering Valley, Merredin, Moora, Muchea, Narrogin, Northam, Pingelly, Sawyers Valley, Southern Cross, Sovereign Hill, Tuart Rise Toodyay, Wagin, Wongan Hills, Woodridge Estate, Wundowie, and York (see **Appendix 3** for estimated Wheatbelt houses serviced by FTTP NBN rollout)

Those listed to receive Next Generation wireless are: Bindoon, Cuballing, Dowerin, Dumbleyung, Gingin, Wickepin and Williams.

WDC and Wheatbelt Local Government consultation needs to be ongoing with NBN Co to ensure that local context is provided and appropriate information is proactively volunteered to demonstrate possible needs for an increased level of service provision (eg upgrade from satellite service to fixed wireless).

With the rollout of RMCP phase 1, consideration needs to be given for sites that may have been previously listed for satellite that would now be better serviced by a fixed wireless model. It is generally understood that service providers (like Telstra) are sharing information with NBN Co to ensure the best delivery of NBN service, however, continuous information flow between local, regional, state and national stakeholders is vital to ensure the Wheatbelt maximises the NBN potential.

ONGOING CONSULTATION FOR IMPROVEMENT OF WHEATBELT TELECOMMUNICATIONS

Wheatbelt LGAs have contacted WDC, after the RMCP phase 1 announcement, requesting a channel for feedback into possible future telecommunications projects to ensure telecommunications issues within their shire jurisdiction are recorded.

The WDC will continue to encourage a collaborative approach to "filling the gaps". We will work to identify funding shortfalls for additional towers and developing workable arrangements between State, Federal and Local funding, together with input from the service providers, to achieve the desired result of extensive regional coverage.

WDC provided a submission to the 2011–12 Regional Telecommunications Independent Review (RTIR) which reviewed telecommunications services in regional, rural and remote parts of Australia and provided a report to the Minister for Broadband, Communications and the Digital Economy, Senator Stephen Conroy, in March 2012. This addressed communications needs of Indigenous Australians, developments in the terrestrial and satellite mobile phone sector, the consumer concerns of people and businesses in regional, rural and remote Australia and the role of NBN with regard to delivering health and education outcomes, growth in local economies, business efficiencies and opportunities and government services and programs, including local government services. The 2011-12 Regional Telecommunications Review report released May 2012 is available at http://www.rtirc.gov.au/ . It includes 52 findings, made 33 recommendations based telecommunications experiences in regional, rural and remote areas, and is an excellent reference for LGAs developing regional telecommunications case studies.

REGIONAL TELECOMMUNICATIONS PROJECT (RTP)

$45 million was announced early in 2014, in the recent state budget, to implement Stage 2 of the RMCP. Termed the Regional Telecommunications Project (RTP) can be viewed as the second round of RMCP, and will again be managed through DoC consultation with RDCs with a focus on providing;

- approximately 80 new or expanded telecommunications towers (3G/4G mobile and wireless broadband services within small communities and at strategic locations)

- an education and skills outreach program to ensure that regional businesses and communities are equipped with the knowledge and expertise to engage and create value from their participation in the digital economy

The State Broadband Working Group (BWG) commissioned a State Telecommunications Needs Assessment (STNA) into ongoing mobile coverage issues across regional Western Australia which was completed DoC on 31 January 2014. DoC provide the below update as of June 2014

- The STNA assessed over 600 sites, measured on social and economic value.
- 80 regional WA sites have been selected, endorsed by RDCs and align with Regional Investment Blueprints.
- WDC submitted 98 sites based on information gathered by Local Governments and Telstra.
- Wheatbelt sites are being further prioritized for funding by DoC for future endorsement by Cabinet.

WDC collected and analysed a list of 98 Wheatbelt locations and has met with Telstra to gauge the severity of each of the 98 black spots and to gain an indication of cost for each site. The information provided into the STNA included:

- the name of the local government that provided the specific black spot information;
- any unique social and economic circumstances;
- the proximity of the closest location with coverage to any reported black spot;
- town coverage; and
- proximity to any major transport routes and if relevant, the kind of use a road might have long term.

FEDERAL – MOBILE COVERAGE PROGRAM (MCP)
Separate to the above announced $45 million in State funding, A Federal Government funding commitment of $100 million (GST exclusive) towards a programme to improve mobile coverage and competition in regional Australia through the proposed Mobile Coverage Program (MCP) includes two complementary components:

• **$80 million Mobile Network Expansion Project**: to improve mobile coverage along major transport routes, in small communities and in areas that are prone to experiencing natural disasters.

• **$20 million Mobile Black Spots Project**: to improve mobile coverage in locations with unique coverage problems, such as areas with high demand for services during seasonal holiday periods.

The above program has received over 2000 submissions, and is still open at as June 2014. WDC, in their formal feedback into the MCP Discussion Paper provided on 28th February 2014 has advised that 98 Wheatbelt sites have been identified and are available for future discussion around priorities for our region.

WDC has not officially been engaged to discuss sites for the Federal Funding however; Wheatbelt LGAs have been contacted by the Federal Department of Communications, seeking details of black spots and to identify any form of co-contribution (eg in-kind, cash, works, land, towers, additional stakeholders etc) that could promote their sites as value for money. WDC encourage Wheatbelt LGAs to provide as much telecommunications data as possible into this process. This will ensure ad hoc data is not used to make investment decisions. WDC support the concept of leveraging this Federal funding to couple with State funding, by accessing the $20 million Federal MCP. This will provide more towers and move toward better broadband accessibility.

APPENDIX 1: WHEATBELT SITES DEVELOPED UNDER RMCP PHASE 1

RMCP Site Name	Shire	Development Commission	Proposed Commissioning Date
Arthur River North	Shire of West Arthur	WDC	Q4 2013
Ballidu	Shire of Wongan-Ballidu	WDC	Q1 2013
Bencubbin	Shire of Mt Marshall	WDC	Q1 2013
Breton Bay	Shire of Gingin	WDC	COMPLETE
Clackline	Shire of Northam	WDC	Q1 2013
Coomallo Hill*	Shire of Coorow	Midwest (MWDC)	Q3 2012
Flint	Shire of Beverley	WDC	Q4 2013
Kondinin	Shire of Kondinin	WDC	Q2 2013
Koorda	Shire of Koorda	WDC	Q1 2013
Miling	Shire of Moora	WDC	Q1 2013
Mukinbudin	Shire of Mukinbudin	WDC	Q4 2012
Narembeen	Shire of Narembeen	WDC	COMPLETE
North Gingin	Shire of Gingin	WDC	Q1 2013
Wickepin East	Shire of Wickepin	WDC	Q2 2013
Wongonderrah	Shire of Dandaragan	WDC	Q4 2012
Woodridge	Shire of Gingin	WDC	Q1 2013
Woottating	Shire of Northam	WDC	COMPLETE

*Coomallo Hill (highlighted) is in the Midwest region, located in the Shire of Coroow.

This site borders and will provide substantial coverage to the Shire of Dandaragan.
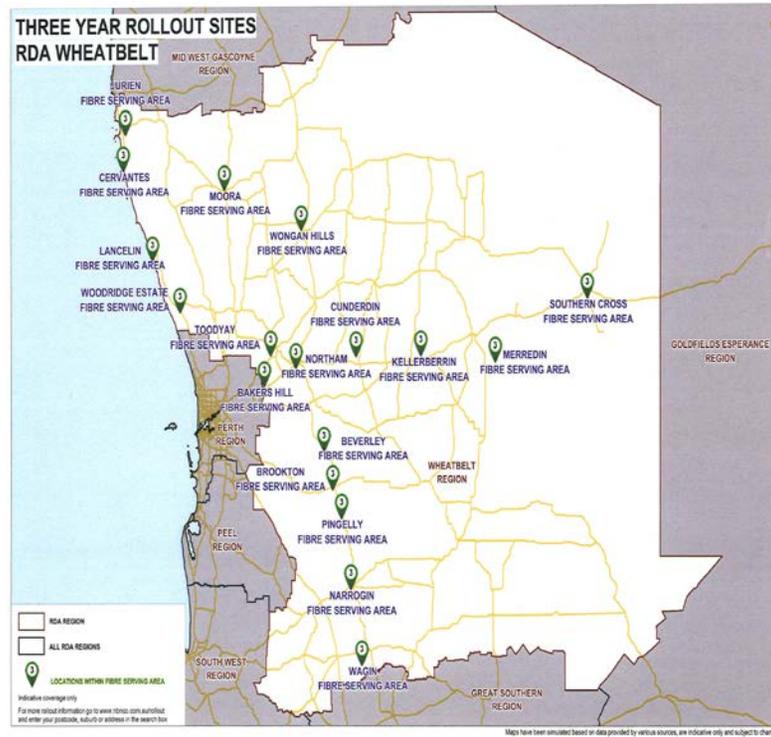
Background

In 2010, WDC sent a Telecommunications Survey to all 43 Wheatbelt LGAs, of which only 12 LGAs did not respond. WDC determined the below sites as being an initial 12 priority sites if funding became available. While there was, and still is substantial further mobile coverage required across the Wheatbelt, WDC presented 12 sites as a feasible number based on the estimation of $500, 000 to $550,000 per mobile base station (tower). The sites highlighted grey in the tables above and below are the priority sites identified by WDC which are currently under construction through RMCP Phase 1. It can be noted that 6 of the initial 12 sites determined by WDC have been completed as part of the 16 sites rolled out across the Wheatbelt as part of the RMCP Phase 1. Additionally the Shire of Dandaragan is expected to gain coverage in the vicinity of the Brand Highway at Coomallo Hill.

APPENDIX 2 - GUIDELINES FOR THE ASSESSMENT OF APPLICATIONS FOR RETRANSMISSION FACILITIES

In deciding whether to make spectrum available to a self-help retransmission applicant under section 34 of the BSA, the ACMA will have regard to the following matters, among others:

- *Whether the spectrum will be used to ensure that all available commercial and national digital television services in the relevant licence area are available to viewers in the area intended to be served by the applicant. (Where a digital terrestrial service is already available it will not need to be provided, but requests to do so will be considered on a case by case basis).*
- *Whether use of the spectrum will comply with certain technical specifications, including whether:*
  - *services will be transmitted using the MPEG-2 compression format at the DVB-T standard*
  - *services will be provided in the same definition (for example, HD or SD) as the source service*
  - *in the case where digital retransmission services are replacing analog retransmission services, the coverage of the digital retransmission services are largely equivalent to the coverage of the analog services*
  - *the service information is properly constructed with the objective that the transmitted services should have the same 'look and feel' as broadcaster-provided services; this should include provision of EPGs, program classification information, captioning, Now/Next, logical channel numbering (in accordance with the applicable standard or operating practice) and time and date table and time offset table.*
- *Any other matter the ACMA considers relevant.*

APPENDIX 3 – ESTIMATED HOMES EXPECTED TO BE SERVICED BY NBN FIBRE ROLLOUT

Wheatbelt at a glance*

The three year plan for the rollout of the National Broadband Network will see fibre construction start by 30 June 2015 in:

Bakers Hill: 400 homes and businesses in Wundowie.

Beverley: 700 homes and businesses in Beverley.

Brookton: 400 homes and businesses in Brookton.

Cervantes: 600 homes and businesses in Cervantes.

Cunderdin: 400 homes and businesses in Cunderdin.

Jurien: 1,400 homes and businesses in Jurien Bay.

Kellerberrin: 600 homes and businesses in Kellerberrin.

Lancelin: 1,300 homes and businesses in Lancelin.

Merredin: 1,600 homes and businesses in Merredin.

Moora: 700 homes and businesses in Moora.

Narrogin: 2,100 homes and businesses in Narrogin.

Northam: 3,500 homes and businesses in Northam.

Pingelly: 500 homes and businesses in Pingelly.

Southern Cross: 600 homes and businesses in Southern Cross.

Toodyay: 600 homes and businesses in Toodyay.

Wagin: 800 homes and businesses in Wagin.

Wongan Hills: 400 homes and businesses in Wongan Hills.

Woodridge Estate: 600 homes and businesses including Guilderton and Woodridge.

*Note: all localities in district (fibre service area) shown, including those crossing the boundary of the region.