

Mobile and NBN Coverage Review

Input from Cradle Coast Councils

July 2021

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Summary of Key Priorities

1. Region wide awareness and education initiatives for residents on commercially available options to improve mobile phone connectivity, service levels and internet of things bandwidth availability. This needs to be in person and in region and would benefit from involving Councils in distribution of the message.
2. Region wide grant scheme or subsidy for businesses and residents to obtain boosters for cars and homes particularly for rural and remote areas with low populations.
3. Investment in new and upgraded mobile phone towers to boost poor mobile coverage in tourist areas that are swamped in peak times – impacting the service levels of locals at those times. Telstra is most widely used for locals and should be the focus of any upgraded towers.
4. Investment in new mobile phone towers to improve patchy coverage along key roads for safety, tourists and businesses while travelling. Focus should also be on Telstra as a carrier as that is the most used service by locals.

Overview

Community, government and business customers have raised concerns regarding mobile network coverage and capacity in North West Tasmania, in particular in Circular Head, Waratah Wynyard, Kentish and Latrobe Council areas. North West Tasmania has a dispersed population making the economics of growing the mobile network without co-investment challenging. Mobile coverage in the region is patchy causing deep concerns among the community. These areas are the least digitally included in Australia against all metrics. North West Tasmania faces the greatest digital divide in all of Australia with accessibility and digital ability being particular pain points.

Council Feedback Summary

Devonport City – there are several mobile blackspots reported by the Council and a map provided.

Burnie City – no input received.

Central Coast – willing to participate but no immediate issues to report.

Circular Head – have undertaken a review with Telstra and propose some new towers. Details of review supplied. See North West Tasmania Mobile Network Coverage and Capacity Presentation April 2021 prepared by Telstra. Circular Head Council would like all the recommended upgrades from Telstra to be actioned but appreciate that if prioritisation is required the problems identified in Appendix 2 are the most sought.

Kentish/Latrobe – Have engaged with Telstra and note that overall solutions are too expensive or too large. Surveys of the community were recently undertaken and views on coverage problems collected. The surveys showed areas with connectivity issues for both NBN and mobile across both municipalities.

King Island – no input received.

Waratah / Wynyard – have undertaken a review with Telstra and propose 4 new towers. See Waratah Wynyard Co-investment Project Mobile Network Coverage & Capacity Upgrade (May 2021) prepared by Telstra. Waratah Wynyard Council would like all the recommended upgrades from Telstra to be actioned but appreciate that if prioritisation is required the problems identified in Appendix 2 are the most sought.

West Coast – NBN community input sought recently. Difficulties with low service in Rosebery and Strahan. Mobile coverage issues in Queenstown particularly in peak season. Some difficulty experienced accessing upgrades to the fibre to the premises for enterprise solutions: requiring education and technical support.

Appendix 1 Template for Problem/Solution Identification

Appendix 2 Summary of Needs Identified by Cradle Coast Councils

Appendix 3 Details of Issues Provided by Councils

Appendix 1: Template for Problem/Solution Identification

Location:

Service: Mobile or NBN **Carrier:** Telstra or Optus

Need: (No coverage ie true black spots, Poor coverage ie low signal strength, Patchy coverage ie footprint is not continuous, Coverage by only one provider, Bandwidth ie 3G vs 4G vs 5G and likely congestion (eg seasonal influx of users), Signal strength – handheld vs indoor)

Solution Location Suitability (Power, Access... if known):

Cost Breakdown (if known):

Expected Impact: (eg. Social connection, participation & engagement, Education & healthcare, Economic activity, Improved productivity, Public safety & emergency services)

Comments:

Appendix 2: Summary of Needs Identified by Cradle Coast Councils

1. Waratah Wynyard Council

1.1 Location: Boat Harbour

Service: Mobile **Carrier:** Telstra

Need: 3G and 4G coverage available, likely congestion (eg seasonal influx of users)

Solution Location Suitability: New Small Cell (4G) proposed

Cost Breakdown (if known): see below

Expected Impact: These solutions will provide new coverage, improve depth of coverage, and add considerable capacity to sites currently impacted by seasonal influxes of visitors.

Comments: Reference: Waratah Wynyard Co-investment Project Mobile Network Coverage & Capacity Upgrade (May 2021) prepared by Telstra and North West Tasmania Mobile Network Coverage and Capacity Presentation April 2021 prepared by Telstra

1.2 Location: Lapoinya

Service: Mobile **Carrier:** Telstra

Need: Patchy 4G coverage, 3G coverage available, likely congestion (eg seasonal influx of users)

Solution Location Suitability: New Small Cell (4G) proposed

Cost Breakdown (if known): see below

Expected Impact: These solutions will provide new coverage, improve depth of coverage, and add considerable capacity to sites currently impacted by seasonal influxes of visitors.

Comments: Reference: Waratah Wynyard Co-investment Project Mobile Network Coverage & Capacity Upgrade (May 2021) prepared by Telstra and North West Tasmania Mobile Network Coverage and Capacity Presentation April 2021 prepared by Telstra

1.3 Location: Flowerdale

Service: Mobile **Carrier:** Telstra

Need: 3G and 4G coverage available, likely congestion (eg seasonal influx of users)

Solution Location Suitability: New Small Cell (4G) proposed

Cost Breakdown (if known): see below

Expected Impact: These solutions will provide new coverage, improve depth of coverage, and add considerable capacity to sites currently impacted by seasonal influxes of visitors.

Comments: Reference: Waratah Wynyard Co-investment Project Mobile Network Coverage & Capacity Upgrade (May 2021) prepared by Telstra and North West Tasmania Mobile Network Coverage and Capacity Presentation April 2021 prepared by Telstra

1.4 Location: Sisters Beach

Service: Mobile **Carrier:** Telstra

Need: 3G and 4G available, bandwidth with 4G congestion (eg seasonal influx of users)

Solution Location Suitability: Upgrade so power access is suitable - 4GX UPGRADE + Extended battery life

Cost Breakdown (if known): see below

Expected Impact: These solutions will provide new coverage, improve depth of coverage, and add considerable capacity to sites currently impacted by seasonal influxes of visitors.

Comments: Reference: Waratah Wynyard Co-investment Project Mobile Network Coverage & Capacity Upgrade (May 2021) prepared by Telstra and North West Tasmania Mobile Network Coverage and Capacity Presentation April 2021 prepared by Telstra

Total Cost of Waratah Wynyard Council solutions described = \$967,500

2. Circular Head Council

2.1 Location: Togari

Service: Mobile **Carrier:** Telstra

Need: Patchy 4G coverage

Solution Location Suitability: New Macro site (4G)

Expected Impact: Increased service for residents, public safety and emergency management, economic impact for agricultural businesses and social connectivity for residents.

Comments: Reference: North West Tasmania Mobile network coverage and capacity presentation April 2021

2.2 Location: Port Latta

Service: Mobile **Carrier:** Telstra

Need: Patchy 4G coverage

Solution Location Suitability: New Small cell (4G)

Expected Impact: Increased service on road from Smithton to Burnie for economic and public safety and emergency management impact.

Comments: Reference: North West Tasmania Mobile network coverage and capacity presentation April 2021

2.3 Location: Stanley

Service: Mobile **Carrier:** Telstra

Need: Bandwidth 4G congestion (eg seasonal influx of users)

Solution Location Suitability: Existing site Capacity expansion (replace 3G with 4G)

Expected Impact: Increased service reliability, Public safety and emergency management

Comments: Increased digital inclusion particularly in tourist peak times.

Reference: North West Tasmania Mobile network coverage and capacity presentation April 2021

3. West Coast Council

3.1 Location: Queenstown

Service: Mobile **Carrier:** Telstra

Need: Patchy coverage, seasonal congestion

Comments: Likely caused by topography, and need additional towers, but also capacity of the towers needs to be improved to deal with peak tourist numbers.

3.2 Location: Roseberry

Service: NBN **Carrier:**

Need: Low service in township

Solution Location Suitability: Solution would be additional fixed wireless points to remove shadow area.

Comments: Currently fixed wireless with several shadow areas which revert to Satellite. Satellite is unreliable on heavy rain days and on days of high “ducting”.

3.3 Location: Strahan

Service: NBN **Carrier:**

Need: Low service on waterfront of township

Solution Location Suitability: The fix for this is to swap to fibre to the node for that area.

Comments: Currently fixed wireless however there is a shadow on the waterfront (where the main tourist businesses are) that means fixed wireless NBN is not reliable and does not meet speed requirements.

4. Devonport City Council

4.1 Location: Coles Beach

Service: Mobile **Carrier:** Telstra

Need: Patchy coverage, seasonal congestion

Expected Impact: Public safety and emergency management as well as social connection, participation and engagement of residents.

Comments: Residential density/use will see more users affected in this area than others in the Devonport municipality. Coles beach extending to the rail crossing near Nixon St, Buster road, Palooona road, Belamie road, Melrose road, Kelcey Tier Road.

5. Kentish/Latrobe Councils

5.1 Location: Wild Mersey MTB Trails/Railton

Service: Mobile **Carrier:** Telstra and NBN

Need: Limited mobile and NBN connectivity

Expected Impact: Public safety and emergency management as well as social connection, participation and engagement of residents. Tourism in peak seasons.

5.2 Location: Wilmot

Service: Mobile **Carrier:** Telstra and NBN

Need: Limited mobile and NBN connectivity

Expected Impact: Public safety and emergency management as well as social connection, participation and engagement of residents.

5.3 Location: Roads to Cradle Mountain

Service: Mobile **Carrier:** Telstra and NBN

Need: Limited mobile and NBN connectivity

Expected Impact: Public safety and emergency management as well as social connection, participation and engagement of residents. Tourism in peak seasons.

5.4 Location: Port Sorell

Service: Mobile **Carrier:** Telstra and NBN

Need: Limited mobile and NBN connectivity

Expected Impact: Public safety and emergency management as well as social connection, participation and engagement of residents. Potential for new residents engaged in remote working. Tourism in peak seasons.

5.5 Location: Claude Road/Paradise

Service: Mobile **Carrier:** Telstra and NBN

Need: Limited mobile and NBN connectivity

Expected Impact: Public safety and emergency management as well as social connection, participation and engagement of residents.

Appendix 3: Details of Issues Provided by Councils

1. Issues and potential solutions for Circular Head Council

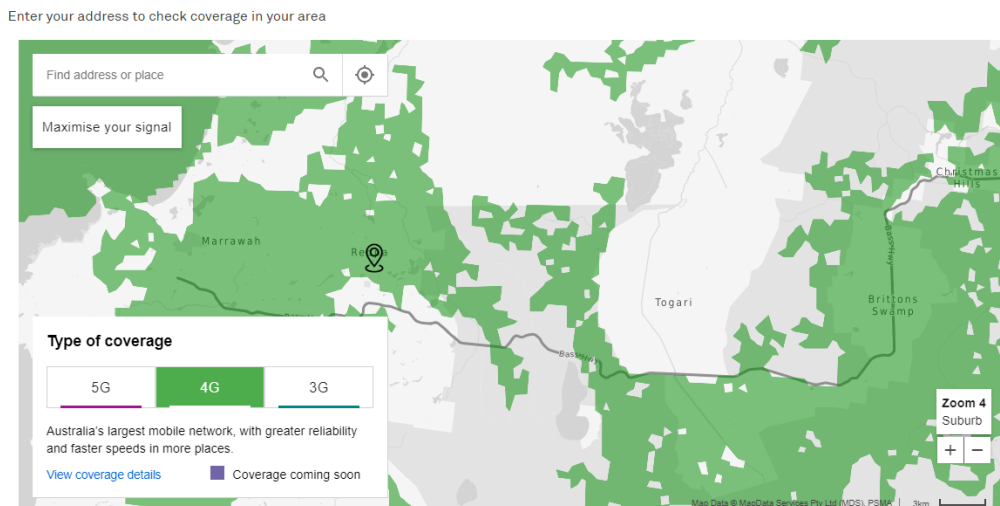
Issue	Causes/Contributing Factors	Impacts	Potential Solutions	Areas impacted
Mobile phone coverage patchy travelling on highways/ major roads.	Telstra may advise	Business community desire coverage for doing business whilst travel Community desire for continuity of coverage	Businesses install booster technology in cars.	<u>State Roads</u> Bass Highway, Black River Bass Highway, Port Latta – Rocky Cape Bass Highway, Togari – Redpa Stanley Highway, Near Trethewies Lookout
Lack of throughput. Areas where coverage is available limited by throughput particularly when tourism is high.	Suggested high visitor numbers in camping areas. Fishing boats and illegal boosters	Cannot get regular services at peak times. Downloads limited.	Shack/home owners install NBN satellite and use this service	Arthur Pieman Conservation area, in particular between the village at Arthur River and Temma.
Generally poor coverage	Unsure	Agribusiness not able to access full range of services. Opportunities being limited. Tourists	Individual boosters in houses, dairy sheds, and work vehicles Satellite phones	Togari Woolnorth Trowutta locality and surrounds Mawbanna Tarkine Drive/ Western Explorer (these must be recognised as aspirational)
General blackspot pockets where otherwise coverage is good	Potentially mobile phone types being used. Lack of booster. Frustration is perhaps exacerbated in that in some of these areas (eg parts of Forest, and Redpa Optus coverage is better)	Businesses	Unsure	Areas in Redpa and Marrawah Lower Scotchtown Parts of Forest Tall Timbers Resort, Smithton was one such area (think it maybe better now)
Dropping back to 3G Coverage	4G coverage not as great	What is the solution to this when 3G turned off	Greater capacity in 4G band as 5G is taken up?	Various locations

Our priority spots from Mobile Coverage would be Togari and blackspots on the highway between Smithton and Burnie.

NBN Capability wise would be extending fixed Wireless west of Smithton (Togari, Redpa/Marrawah, Woolnorth, Arthur River) and South of Smithton (Edith Creek, Roger River, Trowutta, Lileah and Mawbanna)

Under the NBN Funding guidelines announced there needs to be 50 premises capable of being connected so depending on topography and coverage of the tower not all of these areas are going to meet the threshold. Satellite services cover these areas – but have data limits. In some of these spots a holistic approach to prioritising improvements is needed. Were an improved mobile phone coverage is provided it would open up the option of using 4G mobile for internet rather than satellite. 4G plans could offer better data rates and speeds to the satellites and have greater flexibility than the fixed wireless option.

Coverage in Togari



2. Issues and potential solutions for West Coast Council

NBN – Whole of West Coast

Reliability issues – these are primarily cause by backhaul limitations, that mean peak capacity can be an issue and there is limited redundancy out of the West Coast. The problem is most severe in Strahan and Zeehan, where backhaul links to the main line out of the West Coast are not as good.

NBN – Strahan

The solution in Strahan is fixed wireless however there is a shadow on the waterfront (where the main tourist businesses are) that means fixed wireless NBN is not reliable and does not meet speed requirements. The fix for this is to swap to fibre to the node for that area, however, it does not appear to be part of NBN cofound solutions policy at the moment.

NBN – Rosebery

As with Strahan – fixed wireless with a number of shadow areas which revert to Satellite, we receive many reports that satellite is unreliable on heavy rain days and on days of high “ducting” (not sure what that is sorry, something to do with air temp), both of which are common in Rosebery. Solution would be additional fixed wireless points to remove shadow area.

NBN – Business

We have received many reports of businesses having difficulty accessing hardware upgrades (i.e. fibre to the premises for enterprise solutions), including us. Local sales teams appear not to be able to

support, we are not sure of the reason as many businesses do want to upgrade but cannot get the assistance to navigate the process.

Phone Reception (Primarily Telstra)

West Coast received a major package in the by-election (approx. 8 mil shared with Savage River) for a new tower in Tullah and backhaul improvements to support. Additionally, new small cell towers are going in to Granville and Trial Harbors from the latest funding round. We have no permanently occupied areas that need mobile coverage now.

We do have to temporarily occupied areas where high risk recreation occurs that would benefit from some coverage – Macquarie Heads (very limited Telstra), and Pieman Heads (Shacks are on the West Coast, but a lot of the recreation occurs around Corinna which is outside of our LGA). Our assessment of these areas is that it will be difficult to get coverage through the current blackspot grants but they could form part of a larger safety plan. There are also large sections of the highways that have no coverage, which we would like to see improved, noting complete coverage is not possible. Another solution to this issue would be signage letting people know how far away they are from mobile services so they can figure out if it's worthwhile walking to call for help.

Mobile – Queenstown – 4G is extremely unreliable and coverage is very variable - which impacts tourists, businesses and back up for NBN. Likely caused by topography, and need additional towers, but also capacity of the towers needs to be improved to deal with peak tourist numbers.

3. Issues and potential solutions for Devonport City Council

Mobile Blackspot areas are defined in the following map. All areas are a priority for public safety & emergency services.



4. Issues and potential solutions for Kentish and Latrobe Councils

Significant issues with NBN, mobile, and satellite throughout the two municipalities. Issues include connectivity, cost of service with low connectivity, and speed.

Priorities

All areas on the map are listed as priority locations.

Kentish Council

Service breakdown: 12.82% ADSL, 58.97% NBN, 35.90% Satellite

Mobile providers that have been listed are predominately Telstra but also include Aussie Broadband and Optus. Issues include poor reception, dropped service, and slow speeds. 4G is extremely unreliable and coverage is very variable - which impacts tourists, businesses and back up for NBN.

Internet Suppliers that have been listed include iiNet, Skymesh, Telstra, Aussie Broadband, Harboursat, Internode, and IPSTAR.

Issues are described as: higher prices for less connectivity/data, poor reception, dropped calls, not being able to access fixed wireless, slow speed and connectivity, or simply no connectivity at all.

Black spots - Exist in the more remote areas of Kentish Council including but not limited to Wilmot, Moina, Gowrie Park, Paradise, Barrington (and Lower), and Cradle Mountain.

Sheffield - Businesses on Main Street in Sheffield report issues, even though they are in a higher density area.

Wild Mersey Mountain Bike Trails - with the opening of Wild Mersey MTB Trails there is a higher possibility of injured riders on the trails. If injury occurs in an area without reception, this will hinder the rescue and response time.

Cradle Mountain – Cradle Mountain is a popular tourist attraction in Tasmania which brings visitors to the Kentish area. Once outside of the greater Sheffield area drivers are in a mobile blackspot. This poses a safety issue as tourists may not be familiar with the mountain roads and inclement weather which can occur. If accident, injury, or automobile breakdown occurs in an area without reception rescue and response time would be hindered.

Latrobe Council (Includes Port Sorell)

Service breakdown: 6.45% ADSL, 83.87% NBN, 9.68% Satellite

Mobile Provider: Predominately Telstra

Issues are described as: higher prices for less connectivity/data, poor reception, dropped calls, not being able to access fixed wireless, slow speed and connectivity, or simply no connectivity at all.

