

**SUBMISSION TO THE RURAL AND REGIONAL TASKFORCE
BY KEMPSEY SHIRE COUNCIL
ON THE ISSUE OF ACCESS TO BROADBAND INTERNET**

SUMMARY

Located on the NSW Mid North Coast, Kempsey is a medium sized town on the Pacific Highway about halfway between Brisbane and Sydney. Centre of a vibrant rural community with a population of 30,000 residents. The Shire is approximately 3,500 square kilometers in size, extending from the upper Macleay Hinterland to coastal communities.

Kempsey Shire Council is a local government authority with an obligation and desire to provide services for the residents of the Macleay Valley. Our objective is to provide a communications network equal to that provided for city dwellers. A major objective of this would be access to broadband for at least 85% of the community.

Telecommunication services are currently provided primarily by the major carriers this includes mobile services. The commercial nature of these organizations limits telecommunication coverage in terms of mobile and broadband services to the more densely populated areas. Of the 30000 residents, approximately 50% live outside current coverage areas. Rural and agriculturally based residents are disadvantaged in obtaining access to broadband and mobile services; this in itself limits our areas potential for development and growth.

Telecommunication services are intrinsic in today's society, they provide access to emerging technology, state, national and global services. Regionally based communities such as Kempsey Shire, have a right to expect access to services equal to those of metropolitan residents. The technology exists to provide our community with access to these services and as a result provide for community development and growth.

Telecommunication costs have also been highlighted by the business community as a hindrance to further development. Kempsey Shire's major industry sector is manufacturing, with most product exported out of the shire. Telecommunication costs are a significant business cost when dealing with suppliers and customers in other regional and metropolitan areas.

The gap between rural and metropolitan areas is widening with metropolitan broadband access of 20Mbit per second available with cable and 1.5Mbit per second ADSL while in the Macleay Valley 50% of residences only have dialup access.

CURRENT INTERNET AVAILABILITY

ADSL

Currently there is ADSL coverage in Kempsey, South West Rocks, Crescent Head, Stuarts Point, Gladstone, Hat Head and Frederickton.

The theoretical coverage is approximately a distance of 5kms from the exchange however the route and quality of the copper means that many businesses and households within the theoretical coverage area are not able to have broadband access. For example, the Councils Sale Yards lie within the 5km radius but ADSL is not available and the same situation exists for the SES headquarters. Figure 2 shows the coverage with a 3km radius which given the indirect cable route gives a good indicative coverage. The rollout of ADSL has taken much of the cream of the easy and lucrative internet market leaving the rural areas disadvantaged.

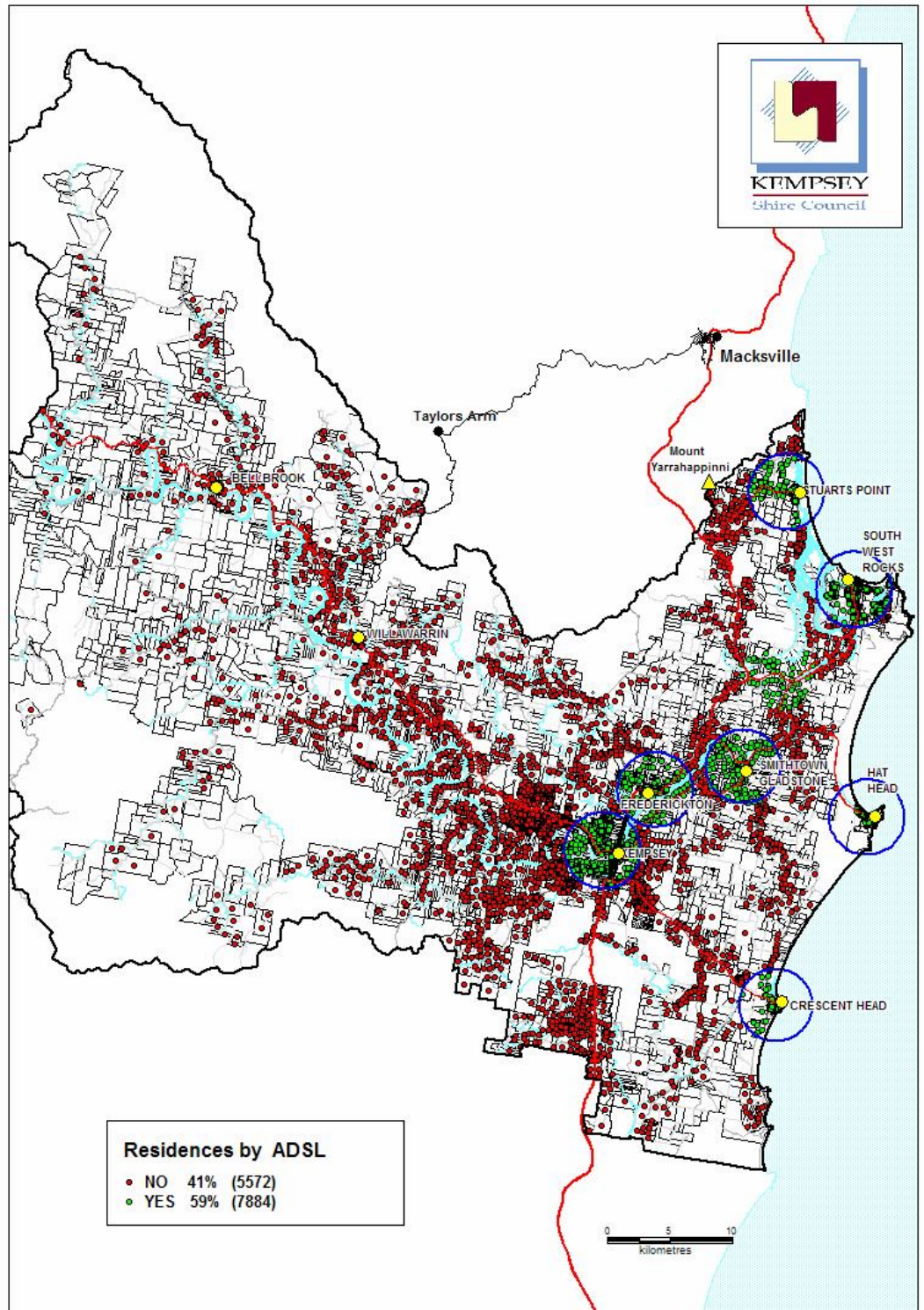


Figure 1 - Maximum Telstra ADSL coverage

The technical limitations of the ADSL coverage would indicate that only about 50% of the residences (60% theoretical) have broadband with those outside of the largest towns totally disadvantaged.

1.1 ISDN

The following map shows the ISDN coverage in the shire. The Kempsey shire is located in the lower portion of the map. The Macksville area located in Nambucca shire is shown at the top.

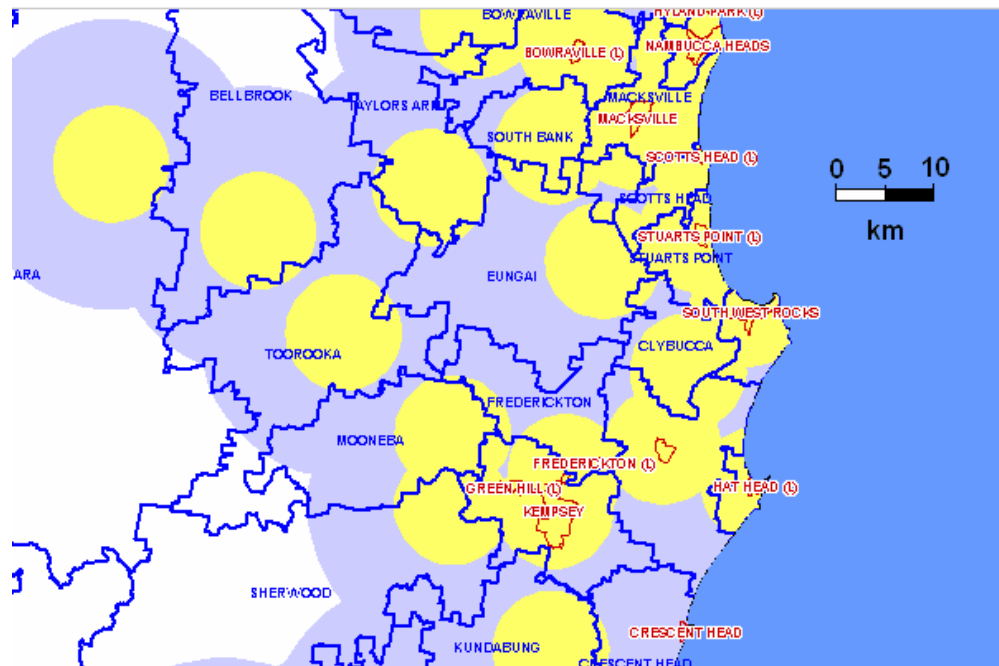


Figure 2 - Kempsey Shire ISDN

The yellow coverage areas are within 6km radius of the exchange and the blue areas cover out to a radius of 15km. The areas in blue may not be reliable ISDN links and requires testing before a service can be provided. Areas in yellow are reliable ISDN links

It is clear from the above that many areas do not have reliable ISDN. With speeds between 64kbps and 128kbps they fall considerably short of broadband rates.

This map shows that even ISDN as an upgrade from dialup is not able to supply the desired coverage. The Kempsey shire falls well short of being able to get dependable Internet access let alone broadband.

Wireless

The only non-localised wireless service available within the Shire is the Telstra NextG facility through the mobile phone infrastructure. This facility is useful for travelling business people with limited online requirements but it is too expensive to be considered a viable solution for households and businesses.

This facility is available only where high quality mobile phone coverage is available. Again this coverage is only available for a short distance around the major towns and villages.

OPPORTUNITIES AVAILABLE GIVEN BROADBAND INTERNET AVAILABILITY

Currently only ADSL provides semi-broadband internet access. ADSL theoretically covers around 60% of residences in Shire depending on the radius of coverage used and the true location of the exchanges. It is reported that there are significant broadband "black-spots" in those areas with only 80% effective coverage within the theoretical coverage areas. That is around 6,300 residences have access to broadband, leaving 7,100 residences without any broadband access.

From a business user perspective and using the figures above, around 600 businesses have access to broadband leaving 1,000 with no access.

The only cost effective means of providing high speed broadband Internet access in rural areas such as the Kempsey Shire is true wireless broadband through a non-mobile phone infrastructure (such as Wimax).

The availability of Shire Wide high speed Internet access would allow for the following facilities to become available and help overcome Kempsey Shires current disadvantaged status.

Health Services

Electronic health applications, the development of online health services. Patients can access and upload information to medical providers. Applications for home-based nursing, health and community workers would be available.

Education

Students and residents would be able to access educational services such as research, new technology development, university and TAFE courses and global resources.

New business attraction

Through providing telecommunication services equal to metropolitan areas the region becomes attractive for business migration. Land costs and the infrastructure services available makes the Kempsey Shire attractive for business investment. The widespread availability of high speed broadband internet access and reduced telecommunications costs would allow the area to be promoted as a real business and lifestyle choice.

Retain existing business

Access to high speed broadband would allow existing businesses to operate on an equal basis to metropolitan businesses with increased efficiencies and reduced cost. This would allow the shire to retain existing business that might otherwise look to moving to metropolitan areas to gain access the facilities.

Tourism / Commercial travelers

The Macleay Valley is a popular tourist destination, tourism contributes approximately \$119 million to the Shires economy per annum, and widespread high speed internet access would provide to the suite of services that the area can provide for the traveling public. As growth of personal access devices is rapidly becoming the norm internationally and in Australian capital cities, access to these facilities within the Macleay Valley is critical.

Community development

Access to widespread high speed broadband services would assist in the development of the Kempsey Shire community. Through information and applications available, resources and equity of access would overcome some of the disadvantages that exist within our community. Online service access would provide for home based health care, aging in place, education services and the further development of home based businesses.

The youth of the area would have access to online tertiary courses and other educational facilities. This would enable them to stay in the area and undertake courses of their choice.

DISINCENTIVES AND BARRIERS TO THE PROVISION OF TELECOMMUNICATIONS AND BROADBAND

The federally funded HiBIS and Broadband Connect programs have been partially effective in increasing the availability of broadband in regional areas however this partial success has been a two edged sword. The broadband rollout has been almost exclusively copper/ADSL based. This means that the government has funded a copper based old technology rollout that is focused on the population centres. Due to the technical limitations of ADSL and the state of the existing copper, this has meant that areas up to 5km from the telephone exchanges have been covered leaving other areas to rely on satellite or missing out altogether. That fact that the more urban areas have been wired with ADSL means that the commercial cream of regional rollout has been taken leaving the less urban areas without high speed internet connectivity.

Satellite based coverage for the less urban areas is much more expensive particularly for full high speed duplex operation and the latency creates difficulties for Voice over IP (VOIP) use.

OPTIONS FOR TELECOMMUNICATIONS TECHNOLOGY INCLUDING BROADBAND IN RURAL AND REGIONAL AREAS

The use of Fibre To The Node (FTTN) in Rural areas is not a viable solution and Telstra's proposal for a national FTTN system has been dropped therefore the only viable solution for regional and rural areas is a wireless solution as per the OPEL (Optus Elders) project which includes ADSL/2+ and Wimax although it is to be hoped that the Wimax will ultimately be on licensed spectrum.

Given the Federal Governments backing of the OPEL project consideration of other technologies would seem to be academic however the emphasis must be on ensuring that the project actually does deliver for rural areas and does not merely duplicate coverage in urban regional areas.