
# Submission to the Legislative Assembly:

# Standing Committee on Broadband in Rural and Regional Communities

**Submission by Byron Shire Council**

Submission

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| Organisation Name: | Byron Shire Council |
| Organisation contact Name: | Jos Mitchell |
| Position: | Community Economic Development Officer |
| Contact Phone: | (02) 6626 7222 |
| Contact email: | jos.mitchell@byron.nsw.gov.au |
| Submission authorised by: | Mayor and Councillors |

**Overview of Byron Shire**

Byron Shire is located on the Far North Coast of NSW and shares its boundaries with the Tweed, Lismore and Ballina Local Government areas. The Shire is 556 square kilometres in size. It is part of the Northern Rivers region which stretches from the Queensland Border in the north to the Clarence Valley in the south. Brisbane is located 180 kilometres north of the Shire and Sydney is 800 kilometres to the south.

The Shire is home to approximately 29 000 people and based on 2006 Census data, continues in a positive growth trend. The population is largely centred in the townships of Byron Bay, Mullumbimby, Brunswick Heads, Bangalow and Ocean Shores. These communities all currently have populations below 5000.

More key statistics from the 2006 Census:

- There are approximately 13 000 rate payers in the shire
- Households consist mainly of family units
- 75% of residents are Australian born
- Median Age 41 (Australia 37)
- Median weekly family income $932 (Australia $1171)

There are approximately 3 700 active businesses within the shire and 22% of those are within the 'Property and Business Services' industry. Anecdotally, home based businesses (HBB) are also prevalent but it is hard to gauge how many are operating.

Byron Shire has significant potential for further development of all existing sectors, in particular sustainable agriculture and creative industries. The Creative Industries sector continues to grow in the Northern Rivers region and according to Arts Northern Rivers, the regional development organisation dedicated to the sector, it is paramount that Broadband services be developed to a metropolitan equivalent in order for Byron Shire residents to effectively compete in the marketplace.

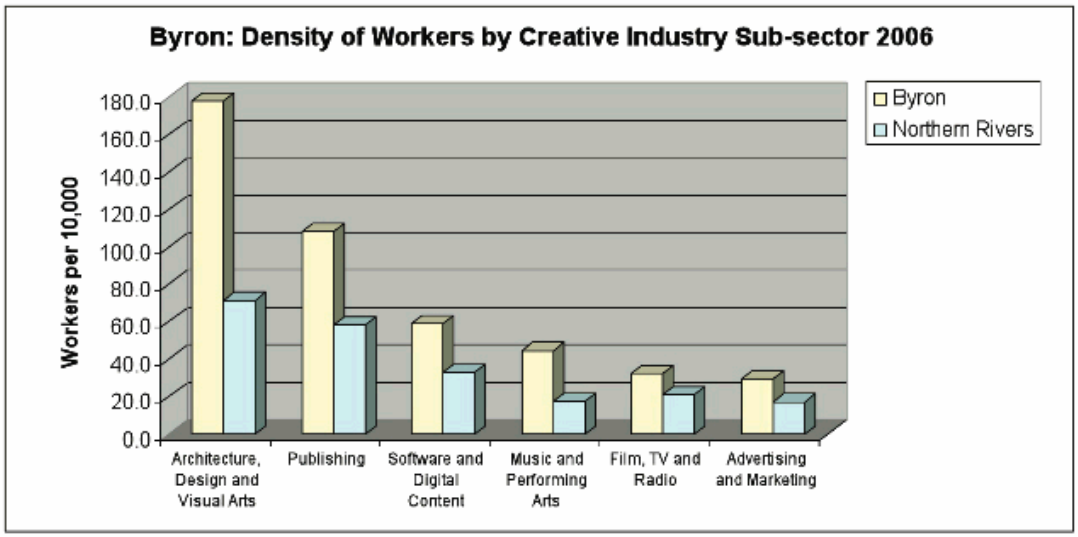



**Figure :** Extracted from Arts and Creative Industries Strategy: Report for Byron Shire Council

Analysis of Australian Bureau of Statistics data for Byron Shire shows employment in creative industries in the Shire exceeds that of the region as a whole. There is opportunity for positive economic growth and increased marketability for the shire as a whole resulting from the successful development of the sustainable agriculture and creative industries sectors. According to 2006 Census data from the Australian Bureau of Statistics, the tourism sector has also remained strong and the shire continues to attract well over a million visitors each year. Byron Bay is considered a major international tourism gateway for the state of NSW.

**Current broadband technologies within the shire**

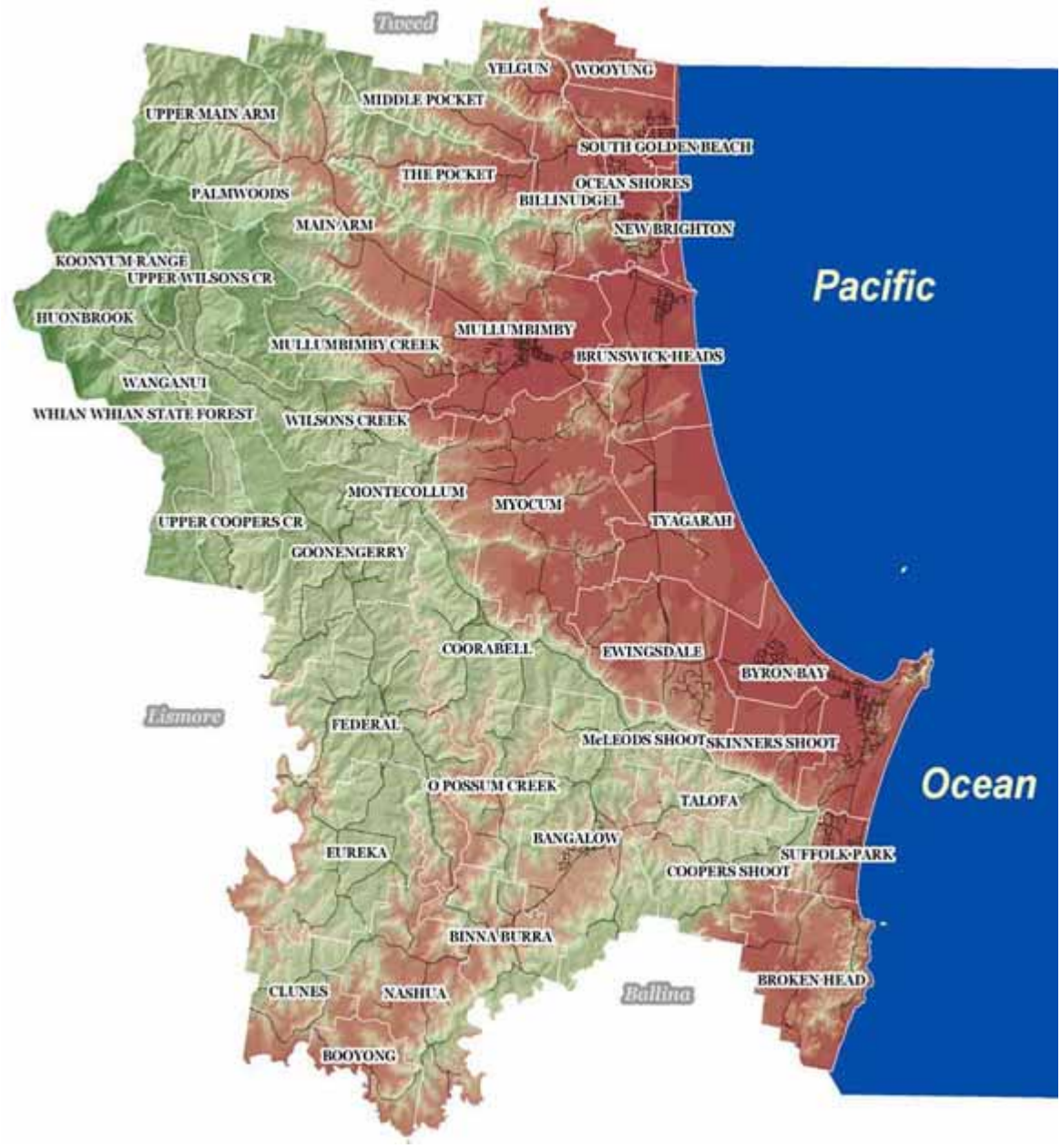
Byron Shire Council has identified the need to develop a Telecommunications Policy. The Council recognises residents' strong interest in maintaining the natural environment while developing the technology required for community economic development.

It has proven difficult to identify what infrastructure exists in the shire, who owns the infrastructure, what technology is operating optimally and who has access. The following information has been gleaned from Council staff and records, telephone surveys, local service provider Linknet, Telstra and desktop research.

It is generally accepted that, in terms of accessibility, the Broadband order of service level is ranked as follows:
(1) ADSL 1
(2) ADSL 2
(3) Fixed wireless
(4) Satellite

ADSL 1 is more commonly available in regional areas. ADSL 2 is the technology which will provide a metropolitan equivalent service. Fixed wireless access may be available under the Australian Broadband Guarantee to those areas not covered by the planned National Broadband Network. Those not able to access the first three options may be able to connect to a satellite service provider, however it is considered to be an inferior service to both wireless and ADSL 2.

The Byron Shire mainly has ADSL 1 capacity and this provides for a limited distance range from the exchange. There is also an issue with technology-impaired copper infrastructure which is the subject of 'pair gain'. In this practice, copper wire is paired in order to provide a service to more end users but ultimately reduces the quality of service. Cabling specifications within the shire are assumed to be largely copper.




***Map of Byron Shire depicting townships and residential areas***

Wireless capacity is increasing all the time and local providers indicate that they propose to continue expanding coverage to fill gaps in the ADSL 1 service throughout the shire in the Northern Rivers region.

According to a Telstra representative, mobile base stations exist in Byron Bay and Billinudgel and they provide a direct 'line of sight' capability. Base stations also exist within other shires and may provide coverage within the Byron Shire. For example,

the base station at Knockrow in the Ballina Shire will boost capability to the area of Byron Shire south of Bangalow.

Stations servicing Asymmetrical Digital Subscriber Line (ADSL) exist at Main Arm, Goonengerry, Federal and Bangalow. These stations provide a distance range of 3.6 kilometres and up to 20 kilometres with an ADSL extender.

There are a number of towers in the region and these are owned by a number of entities including Crown Castle International, Telstra and Fibregate. It is understood that space on these towers may be leased to telecommunications companies/Internet Service Providers (ISP) to facilitate their services.

**Table of telecommunications/Broadband infrastructure located on Byron Shire Council reservoir assets**

| Location | Area | Applicant | Infrastructure |
|---|---|---|---|
| Suffolk Park Reservoir | Suffolk Park | Telstra | 1 x mobile telecommunications facility (6 x antenna) |
| Paterson Street Reservoir | Byron Bay | Vodafone | 1 x mobile telecommunications facility (3 x antenna) |
| Wategos Reservoir | Byron Bay | Vodafone | 1 x mobile telecommunications facility (2 x antenna) |
| Paterson Street Reservoir | Byron Bay | Optus | 1 x mobile telecommunications facility (3 x antenna) |
| Wategos Reservoir | Byron Bay | Optus | 1 x mobile telecommunications facility (2 x antenna) |

**Table of telecommunications/Broadband infrastructure located within Byron Shire as approved through Council's development application process**

| Location | Area | Applicant | Infrastructure |
|---|---|---|---|
| Warrambool Road | Ocean Shores | Abi Group | Utility Installation - Communication Antenna for bypass |
| 59 Coopers Shoot Road | Coopers Shoot | Optus / Rural Fire Service | Telecommunications facility (2 equipment sheds and 20m monopole) |
| 8 Grevillea Street | Byron Bay | Optus | Telecommunications tower |
| Scotts Wood Grove | Mullumbimby | Byron Shire Council (Federal Gov. television "Blackspot" program) | Television transmitter monopole 25 metres high with extended 3 metre antennae. |
| Warrambool Road | Ocean Shores | Byron Shire Council (Federal Gov. television "Blackspot" program) | Television Retransmission Tower and Communications Shelter |
| Paterson Street | Byron Bay | Broadcasting Services Australia | Communications Shelter, transmitting and receiving antennae and cable |

## Challenges/Issues

### a) The industry

The availability of accessible and accurate information in relation to telecommunication options, existing infrastructure and capabilities is extremely limited.

The competitive nature of the industry and the capital outlay required to develop a comparable service may be prohibitive to the long term development of smaller providers. Costs and access to towers, antennae and licensed spectrum are immense and time intensive. It therefore becomes imperative to 'sign up' as many customers as possible to recoup these costs.

In a fast-paced technological environment, the vast majority of the public finds it difficult to keep abreast of the terminology, let alone research available options to meet needs. The resources required to monitor this ever-changing sector are immense and, it appears, monitoring and legislative changes may be reactive.

The Australia Government - Department of Broadband, Communications and the Digital Economy (DBDCE) website http://bcoms.dbcde.gov.au/BSL/Welcome.do provides generic consumer information which is of some assistance to those aware of its existence. However, the limitations of access to this site and the information it contains will be outlined later in this submission.

### b) Demographics and topography

The Byron Shire has a dispersed population set amongst a diverse topography. Telecommunication coverage can be affected by a number of variables, including terrain. The terrain within the shire consists of coastal planes and undulating and mountainous hinterland. It is typical that the latter experiences a lack of Broadband service or 'patchy' reception.

Employment options are comparatively limited because of the size of settlements and a lack of public transport and telecommunications/broadband infrastructure. This poses particular problems for access to health care and tertiary/adult education, as well as limiting the capacity of local businesses to compete at a national and international scale.

Flexible work models such as home-based businesses could be a potential growth area if reliable, world-class infrastructure is in place. These opportunities would reduce pressure on the environment and transport infrastructure, and also provide improved flexibility and lifestyle choices.

### 1. Difference between advertised service availability and consumer experiences of service levels

Consumers are presented with coverage options via media which are generally price competitive.

Due to the difficulty in locating reliable Broadband information, consumers are at the mercy of the information made available by providers. Research indicates that some providers are not "up front" about the actual services consumers will receive or that

services may be impaired for a number of reasons.

Over-subscription by service providers is a common complaint. Cabling and spectrum have a certain capacity however some providers subscribe consumers over the optimal capacity and this is evidenced by slower access speeds and 'drop outs'.

## 2. Service gaps within the shire

Information from providers including Telstra and Linknet, local businesses and residents suggests that the areas of Booyong and Federal have large 'black spots'. Businesses and residents have reported unavailable, unreliable or interrupted coverage to Broadband services.

More densely populated areas within the shire also battle with the issue of access to effective Broadband services. Based on Australian Bureau of Statistics data, Ocean Shores currently has a population of approximately 3500 and is home to retail, sporting, service and home based businesses. There are still businesses within the area that have reported their access is limited to dial-up internet service. Satellite coverage may be available but is not a superior service and is susceptible to weather conditions.

Service difficulties have been noted widely across the shire and also occur in the areas of Suffolk Park, Byron Bay (including the Arts and Industry Estate), Mullumbimby and Bangalow.

While mindful of infrastructure cost relative to the population density of some of these areas, and the need to reach critical mass, there is concern that some provider practices may impede other providers from filling the gaps in service as quickly as is actually possible.

## 3. Options for improving service availability

### a) Publicly available accurate information

Information relating to base station location and relevant services is not readily available to the public in Australia. Providers guard information closely in a highly competitive market and public access maps are not available or not sufficiently detailed. The lack of accessible information is a topic continuously discussed in on-line forums.

A similar situation previously existed in the United Kingdom and, in 2000, the Stewart Group delivered a commissioned report recommending the development of a national database outlining base station locations and their operating characteristics. The government initiated a website entitled 'Sitefinder' (www.sitefinder.ofcom.org.uk) in response to the recommendation.

The implementation of a similar approach within Australia could have multiple benefits. Public access to such information would allow people to make more informed choices in relation to the coverage they are seeking and possibly assist to allay other related lifestyle concerns.

Information and regional site maps could be incorporated into the DBDCE website.

The website itself has proven to be an interesting study. It is frequently inaccessible with the link listed as a 'Bad Gateway'. The Broadband Service Locator has also proven inaccurate in 100% of the 20 searches conducted. Search addresses were listed as having providers which do not service the area or an incomplete list of providers for the area.

**b) Transparent and honest advertising**

There is an immediate need for accurate and honest advertising. The industry provides generalised advertising and subscribers in all regions may consequently believe that services are comparable everywhere within the local government area.

It is a fact that current infrastructure in many regional areas does not allow for comparable service and consumers should be made aware of this. The current telecommunications/Broadband plan options also do not make provision for reduced rates due to inferior service.

**c) Australian Broadband Guarantee funding**

The National Broadband Network will take years to roll out and is possibly dependant upon continued government support across terms and budgets.

It the absence of optic fibre cabling door-to-door, the extension of the Australian Broadband Guarantee for the further development of wireless services could be considered.

The following is an excerpt taken from the Australian Broadband Guarantee website:

> The Australian Broadband Guarantee is an Australian Government initiative designed to help residential and small business premises access a metro-comparable broadband service regardless of where they are located. The program targets premises unable to access commercial metro-comparable services, particularly those living in remote parts of Australia.
>
> Under the Australian Broadband Guarantee, a metro-comparable broadband service is defined as any service that offers a minimum 512kbps download and 128kbps upload data speed, 3GB per month data usage at a total cost of $2500 GST inclusive over three years (including installation and connection fees).
>
> The program works by paying internet service providers that register with the program a subsidy to provide metro-comparable broadband services to residential and small business premises where such services would not otherwise be available.
>
> The Government has allocated $250.8 million over four years to 2012 to fund the Australian Broadband Guarantee, which complements the National Broadband Network by subsidising access to metro-comparable broadband where not otherwise available while the new network is rolled out.

**d) Consideration of state-wide government contracts to major clients**

State-wide provider contracts for government services, including health services, are common. However, regional authorities seeking broadband services may find that providers are unable or unwilling to provide metropolitan comparable coverage. Due consideration to these issues prior to negotiations of state-wide contracts would ensure that regional services get the same broadband capacity as their metropolitan counterparts or that other providers could fill the gaps that some of the major providers do not consider viable.

Broadband infrastructure development within the shire could support the further development of home-based low footprint businesses, particularly in the agriculture and creative industries sectors, and assist with access to vital services including health care and education.

**Recommendations:**

1. In 2000 the UK government developed a national database outlining base station locations and their operating characteristics and initiated a website entitled 'Sitefinder' (www.sitefinder.ofcom.org.uk). The implementation of a similar approach within Australia could have multiple benefits. Public access to such information would allow people to make more informed choices in relation to the coverage they are seeking and possibly assist to allay other lifestyle-related concerns.

2. There is an immediate need for accurate and honest advertising. The industry needs to provide accurate information about the quality and reliability of service, and the capabilities of current infrastructure in specific locations (down to street level), and adjust fees and charges accordingly.

3. An extension of the Australian Broadband Guarantee for further development of wireless services could be considered while the National Broadband Network roll-out takes place.

4. Government negotiations of state-wide contracts need to ensure that regional services get the same broadband capacity as their metropolitan counterparts or provide opportunities for other providers to fill the gaps that some of the major providers do not consider viable.