



Byron Shire Council

**Submission to the
Legislative Assembly:**

**Standing Committee on
Broadband in Rural and
Regional Communities**



Submission by Byron Shire Council

Submission

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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. There is opportunity for positive economic growth and increased marketability for the shire as a whole resulting from the successful development of these 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. Further information about the potential of industry in the Shire if broadband is improved is included in this submission below.

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.

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 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.



Map of Byron Shire depicting townships and residential areas

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, there are limitations of access to this site and the information it contains which was outlined in Byron Shire Council's related submission to the "Are You Connected?: Telecommunications Availability in Rural and Regional Communities (Inquiry)".

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.

1. Improving government services and efficiency in service delivery, including in the areas of education, health and justice services.

There is a current lack of public transport and telecommunications/ broadband infrastructure that poses particular problems for access to health care and tertiary/adult education. Improved broadband services have potential for increased use in the following ways:

- a) Rural / farms – accessibility to information relating to weather events, new technology, on-line networks, skills and technology transfer, government legislation and policy.
- b) Education – expanded access to on-line learning for rural areas. Currently, educational opportunities are not available in some rural or regional areas at both secondary and tertiary level. Other adult educational opportunities exist such as regional community college programs. These opportunities are important as students can do the work in their own time, meaning study can be done in conjunction with other lifestyle responsibilities, for example, work, farming or parental responsibilities.
- c) Health -
 - i) provide online medical assessments that could improve the standard of health services and minimise patients requirements to travel for service;
 - ii) facilitate the sharing of patient medical information with the patient's consent.
- d) Justice – on-line conferencing and support services for community services and the court system.

- e) Local Government services - including Development Application lodgment and processing, public submissions, virtual committees, and opportunities to report information, for example, uploading documents, photos or video footage.
- f) Environmental benefits – improved broadband access may reduce pressure on transport infrastructure and reduce carbon emissions from cars and other forms of transport.

Recommendation: That the Committee note that improved broadband infrastructure in Byron Shire has the potential to increase efficiency and the number and type of services provided by government to rural and regional communities, in the areas of education, health, justice, local government services and the environment.

2. Improving the level of engagement of rural and regional communities in public life through new technologies.

- a) Wider access to new technologies would provide opportunities for local government to connect with residents and provide up-to-date information, improving consultation, information-sharing and advice. Improved broadband would also make it easier for residents to send in information and submissions, increasing participation and collaboration (see 1e).
- b) Community groups could also be virtual, leading to improved connectivity and participation. Information-sharing and communication could happen on-line via chat, blogs etc rather than the requirement for face-to-face meetings. Many groups could benefit from enhanced connection and technology/ skills transfer, for example, landcare and other farming/ environmental groups, parent groups, disabled, youth and older persons' groups.
- c) Recreational opportunities – book clubs and other social connections could be facilitated on-line and provide interaction with external contacts or those close by. 'Staying in touch' via social networking sites is becoming increasingly important in the new 'Web 2.0' world.
- d) Improved broadband capabilities are highlighted as an area of improvement in the Byron Shire Council Cultural Plan (2008-2013) – which highlights the need to "support improved communication, networking, forum opportunities and resource sharing; and enhance a youth online communication network".

Recommendation: That the Committee note that improved broadband services in Byron Shire could increase the level of engagement of rural and regional communities by improving information flows, expanding consultation opportunities, enhancing connectivity between community groups, increasing participation in programs, and is seen as particularly crucial to the further development of creative industries in the region.

3. Investigating the potential economic benefits from new technology on commercial and business opportunities in rural and regional communities.

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.

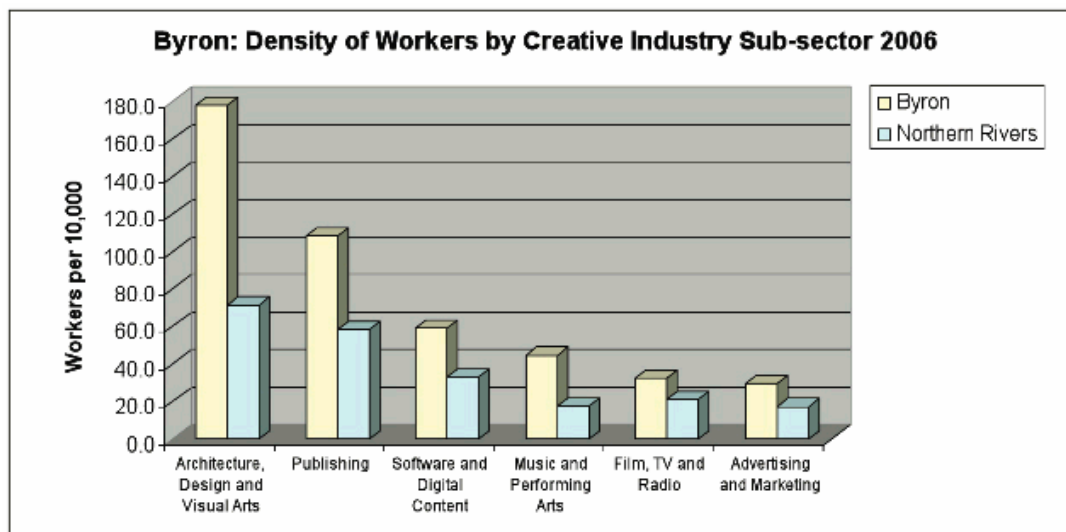


Figure : Extracted from Arts and Creative Industries Strategy: Report for Byron Shire Council Analysis of Australian Bureau of Statistics data for Byron Shire shows employment in creative industries in the Shire exceeds that of the region as a whole. There is opportunity for positive economic growth and increased marketability for the Shire as a whole resulting from the successful development of the sustainable agriculture and creative industries sectors. There is a need for high speed broadband to support production and distribution, for example in film, music, advertising and marketing.

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.

There are opportunities for growing online markets for local produce (the ability to sell products without visiting the buyer). Online sales are a growth area where local products or services are able to be provided online, therefore enabling suppliers to market to the world, for example, food produce, fashion, technology, consulting, design services.

Home-based businesses are prevalent in the Shire and a potential growth area if reliable, world-class infrastructure is in place. This opportunity reduces pressure on the environment and transport infrastructure, and also provides improved flexibility and lifestyle choice.

Home-based businesses are seen as an important sector to foster in Byron Shire, as employment options are comparatively limited because of the size of settlements. There is a current lack of public transport and telecommunications/broadband infrastructure, and this limits the capacity of local businesses to compete on a national and international scale.

Recommendation: That the Committee note that economic benefits to rural and regional communities in Byron Shire could be significant if broadband services were improved, particularly in the areas of home-based business, creative industries, information technology, and agriculture.