Explanatory Paper
Draft Variation to Licence Area Plan – Atherton Radio – No.1 of 2011
Draft Variation to Licence Area Plan – Bathurst Radio – No.1 of 2011
Draft Variation to Frequency Allotment Plan

DECEMBER 2011
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Submissions

The Australian Communications and Media Authority (the ACMA) is seeking public comment on a proposed Draft Variation to Licence Area Plan for Atherton Radio – No.1 of 2011, Draft Variation to Licence Area Plan – Bathurst Radio – No.1 of 2011 and Draft Variation to Frequency Allotment Plan.

Submissions can be made as follows:

Email: rps@acma.gov.au
Mail: Draft Variation to LAPs for Atherton Radio – No.1 of 2011 and Bathurst Radio – No.1 of 2011.
RPS/TPEB/DTD
ACMA
PO Box 78
BELCONNEN ACT 2616
Fax: (02) 6219 5347


Contact details for submissions:

Email: rps@acma.gov.au
Telephone: Christopher Roberts on (02) 6219 5157
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The closing date for submissions is 5.00 pm, Friday 20 January 2012.

All submissions received will be made available on the ACMA web site at www.acma.gov.au.

Under subsection 27(2) of the Broadcasting Services Act 1992, the ACMA is required to make all submissions available for public inspection. Any submission marked ‘In confidence’, ‘Confidential’ or similar, will not be considered by the ACMA in finalising the LAP variation.
Explanatory Paper

This explanatory paper accompanies the proposed Draft Variation to Licence Area Plan – Atherton Radio – No. 1 of 2011, Draft Variation to Licence Area Plan – Bathurst Radio – No. 1 of 2011 and Draft Variation to Frequency Allotment Plan.

The broadcast planning functions of the ACMA are set out in Part 3 of the Broadcasting Services Act 1992 (BSA). The BSA requires the ACMA to promote the objects of the Act, including the economic and efficient use of radiofrequency spectrum, and to have regard to the planning criteria set out in section 23.

LAPs are made under subsection 26(1) of the BSA. LAPs determine the number and characteristics, including technical specifications, of broadcasting services in particular areas of Australia with the use of the broadcasting services bands.

The ACMA may vary LAPs under subsection 26(2) of the BSA.

The object of most obvious relevance to the ACMA’s powers in relation to section 26 of the BSA is that at paragraph (a) of subsection 3(1), that being:

> to promote the availability to audiences throughout Australia of a diverse range of radio and television services offering entertainment, education and information.

Section 27 of the BSA provides that the ACMA must make provision for wide public consultation when considering whether to make or vary a LAP.

The ACMA refers to the General Approach to Analog Planning when it considers the planning of broadcasting services. This document sets out the legislative framework and planning criteria, as well as the general approach to the planning of broadcasting services. It also contains a record of advice and assumptions about matters relevant to the ACMA’s functions and powers under Part 3 (see subsection 27(2) of the BSA).

The ACMA generally considers variations in response to submissions made to it or on becoming aware of technical issues that need addressing.

The ACMA has received two submissions in relation to radio broadcasting services in the LAPs for Atherton radio (Atherton LAP) and Bathurst radio (Bathurst LAP). These submissions have requested that the ACMA consider:

> varying the Atherton LAP to make an FM frequency available for an in-fill transmitter at Ravenshoe for the commercial radio broadcasting service 4AM; and

> varying the Bathurst LAP to make an FM frequency available for an in-fill transmitter at Oberon for the commercial radio broadcasting service 2BS.

After considering these requests and other issues known to it, and in the context of the information contained in the ACMA’s General Approach to Analog Planning and the factors listed in section 23 of the BSA, the ACMA has reached the following preliminary views, namely that it should:

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1 Section 3 of the BSA.
2 This document can be obtained from the ACMA’s web site at: www.acma.gov.au/WEB/STANDARD/pc=PC_90248
> make available FM frequency 91.3 MHz, with a maximum ERP of 250 watts (W), for an in-fill transmitter for the 4AM commercial radio broadcasting service at Ravenshoe (Preliminary View 1);

> make available FM frequency 101.5 MHz, with a maximum ERP of 100 W, for an in-fill transmitter for the 2BS commercial radio broadcasting service at Oberon (Preliminary View 4);

> update the description of the existing commercial and community radio licence areas in the Atherton and Bathurst LAPs so they are defined in terms used in the 2006 census and are consistent with the ACMA’s most recent determination of population of a licence area under section 30 of the BSA (Preliminary Views 2 and 5);

> make minor amendments to correct previous drafting errors and update technical specifications in the Atherton and Bathurst LAPs (Preliminary Views 3 and 6); and

> consequentially vary the frequency allotment plan (FAP) entries under R2 – Northern Queensland and R7 – Central NSW to reflect the addition of those proposed in-fill transmitters (Preliminary View 7).

Further discussion of these matters is set out below.
Preliminary Views – Atherton LAP

Preliminary View 1 – Commercial Radio – Ravenshoe

The ACMA proposes to make channel capacity available for an in-fill transmitter at Ravenshoe for the commercial radio broadcasting service 4AM. It is proposed that this service operates on:

- 91.3 MHz from Kidner Contracting Pty Ltd Tumolin Road RAVENSHOE with a maximum effective radiated power (ERP) of 250 W with an omni-directional (OD) radiation pattern with mixed polarisation.

The Atherton LAP currently provides for one AM commercial radio broadcasting service (4AM) and one FM commercial radio broadcasting service (4AMM). 4AM is planned to provide coverage to Atherton with an additional AM in-fill transmitter at Port Douglas. 4AMM is planned to provide coverage to Atherton with additional FM in-fill transmitters at Mossman and Ravenshoe.

Coastal Broadcasters Pty Ltd (CB) is the licensee of the 4AM service.

CB has submitted a proposal to establish an additional FM in-fill transmitter at Ravenshoe to rectify deficient coverage of the 4AM service in the area. CB has proposed that this transmitter operate on any FM frequency, but with an ERP of 400 W OD.

Ravenshoe has a population of 910 persons,³ and is located approximately 37 kilometres south of Atherton.

The existing 4AMM FM in-fill transmitter at Ravenshoe is planned to operate on frequency 92.1 MHz with a maximum ERP of 250 W OD, and was planned under the Australian Government’s Commercial Radio Blackspot Program.⁴

The ACMA’s preferred approach to rectifying deficient coverage for AM radio services within their licence area is to first attempt to modify the specifications of the existing AM transmitter. This may include increasing the transmitter power, changing the radiation pattern or introducing day/night switching. Where modifications to the AM service do not resolve the coverage deficiencies, FM solutions are then considered as an option.⁵

That is, FM in-fill translators are only agreed to supplement AM services where the required FM spectrum is available and the AM coverage does not provide the required grade of service, and where an additional FM transmitter is seen as the best option for in-filling the existing AM service.

Further information on the ACMA’s approach to in-fill transmitters is available in the document AM to FM conversion and requests for FM in-fill translators which can be found on the ACMA’s web site at: www.acma.gov.au/WEB/STANDARD/pc=PC_91706

³ The Ravenshoe urban centre/locality has the identified population according to 2006 census data.
⁴ This program, which began in 2002 and concluded in 2006, provided funding for improvements to commercial radio services in 142 identified areas of poor reception.
⁵ This approach is published in the Broadcast Planning Instruction No. 12 “Planning in-fill services for MF-AM radio broadcasting services”.

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An engineering assessment undertaken by the ACMA has verified that, at Ravenshoe, signal levels of the 4AM Atherton service are below the required suburban grade of service. There are no practical solutions to increasing the power of the 4AM Atherton service to provide coverage to Ravenshoe without causing interference to co-channel and adjacent channel services within Australia and neighbouring countries. It has been determined that the FM frequency 91.3 MHz, with a maximum ERP of 250 W, is available and is suitable for use as an in-fill transmitter.

The ACMA is therefore of the preliminary view that making the FM frequency 91.3 MHz, with a maximum ERP of 250 W OD, available for an in-fill transmitter for the Atherton commercial radio broadcasting service 4AM is an economic and efficient use of radiofrequency spectrum.

It is also expected to promote the objects of the BSA, in particular the objects at paragraphs 3(1)(a), (f) and (g), as it increases the mix of and overall number of broadcasting services available, and is likely to increase the provision of diverse programming and coverage of matters of local significance in Ravenshoe.

**Preliminary View 2 – Licence Areas**

The ACMA proposes that the existing commercial and community radio broadcasting licence areas in the Atherton LAP be redefined using 2006 census data but otherwise remain unchanged.

The licence areas for commercial and community radio broadcasting services in the Atherton LAP- Atherton RA1 and Mareeba RA1 - are currently described using boundaries from the 2001 census.

The Australian Bureau of Statistics (ABS) has made available to the ACMA the most recently published census (2006), as prepared by the Australian Statistician. Therefore, the ACMA proposes that these licence areas be redefined using 2006 census data, but otherwise remain unchanged.

These licence areas, updated to 2006 census data, are detailed in the document Licence Area Maps that accompanies this explanatory paper.

**Preliminary View 3 – Minor Amendments**

The ACMA proposes to update the schedules and attachments in the Atherton LAP.

The ACMA proposes to make amendments to Schedule One and to each of the attachments that contain the characteristics, including technical specifications, of the radio broadcasting services in the Atherton area.

The ACMA does not intend these minor amendments to alter any existing rights or obligations. It proposes to replace schedules and attachments in their entirety, without changing the substantive parts, to facilitate these minor amendments.

The proposed changes to the schedules include:

> removing the words "- June 2004" from the heading at Schedule One.

This information was included for ease of reference only, but may be confusing.
The proposed changes to the attachments headings include:

- removal of the heading “LICENCE AREA PLAN : Atherton” and substitution of the heading “LICENCE AREA PLAN : Atherton Radio” in attachments 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 1.11, 1.12, 1.13, 1.14, 1.15; and
- removing the heading “LICENCE AREA PLAN : Atherton Radio - June 2004” from Attachment 1.16 and substituting the heading “LICENCE AREA PLAN : Atherton Radio”;

The proposed changes to the attachments’ technical specifications include:

- updating the nominal locations of the transmitter specified in attachments 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 1.11, 1.12, 1.13, 1.14, 1.15, 1.16 and 2.2 to provide a more accurate description of the transmitter site.
- updating the Australian Map Grid reference specified in attachments 1.3, 1.5, 1.10, 1.11, 1.12 and 1.13 to reflect the actual locations of the transmitters for these services;
- updating the site tolerance field to refer to the Broadcasting Services (Technical Planning) Guidelines 2007 in attachments 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 1.11, 1.12, 1.13, 1.14, 1.15, 1.16 and 2.2;
- updating the maximum antenna height specified in attachments 1.7, 1.8, 1.9, 1.10 and 1.11 on the advice of the broadcaster; and
- updating the recording method for the output radiation pattern in attachments 1.14 and 1.15.

This information has been updated for ease of reference only and does not signify a change to the planned performance of the transmitters.
Preliminary Views – Bathurst LAP

Preliminary View 4 – Commercial Radio – Oberon

The ACMA proposes to make channel capacity available for an in-fill transmitter at Oberon for the commercial radio broadcasting service 2BS. It is proposed that this service operates on:

- 105.5 MHz from Translator and GSM Tower Falls Hill Rockley Road OBERON with a maximum effective radiated power (ERP) of 100 W with an omni-directional (OD) radiation pattern with mixed polarisation.

The Bathurst LAP currently provides for one AM commercial radio broadcasting service (2BS) and one FM commercial radio broadcasting service (2BXS). 2BS is planned to provide AM coverage to Bathurst with additional FM in-fill transmitters at Blayney, Burrara and Sofala. 2BXS is planned to provide FM coverage to Bathurst.

Bathurst Broadcasters Pty Ltd (BB) is the licensee of both 2BS and 2BXS.

BB has submitted a proposal to establish an additional FM in-fill transmitter at Oberon to rectify deficient coverage of the 2BS service in the area. BB has proposed that this transmitter operate on FM frequency 105.5 MHz with ERP of 200 W OD.

Oberon has a population of 2,473 persons, and is located approximately 40 km south-east of Bathurst, on the south-eastern border of the Bathurst RA1 licence area. The Lithgow RA1 licence area is directly east.

The ACMA’s preferred approach to rectifying deficient coverage for AM radio services within their licence area is to first attempt to modify the specifications of the existing AM transmitter. This may include increasing the transmitter power, changing the radiation pattern or introducing day/night switching. Where modifications to the AM service do not resolve the coverage deficiencies, FM solutions are then considered as an option.

That is, FM in-fill translators are only agreed to supplement AM services where the required FM spectrum is available and the AM coverage is deficient, and where an additional FM transmitter is seen as the best option for in-filling the existing AM service.

Further information on the ACMA’s approach to in-fill transmitters is available in the document AM to FM conversion and requests for FM in-fill translators which can be found on the ACMA’s website at: www.acma.gov.au/WEB/STANDARD/pc=PC_91706

An engineering assessment undertaken by the ACMA has verified that Oberon is outside the area covered by the existing 2BS Bathurst AM transmitter, and that it is not possible to increase the power level of that transmitter due to likelihood of interference to the reception of 3AK in Melbourne.

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6 The Oberon Urban centre/Locality has the identified population according to 2006 census data.
7 This approach is published in the Broadcast Planning Instruction No. 12 “Planning in-fill services for MF-AM radio broadcasting services”.

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It was determined that the FM frequency 105.5 MHz is available and is suitable for use as an in-fill transmitter and, if operated at 100 W, would provide the required grade of service in Oberon.

The ACMA is therefore of the preliminary view that making the FM frequency 105.5 MHz, with a maximum ERP of 100 W OD, available for an in-fill transmitter for the Bathurst commercial radio broadcasting service 2BS is an economic and efficient use of radiofrequency spectrum.

It is also expected to promote the objects of the BSA, in particular the objects at paragraph 3(1)(a), (f) and (g), as it increases the mix of and overall number of broadcasting services available, and is likely to increase the provision of diverse programming and coverage of matters of local significance in Oberon.

**Preliminary View 5 – Licence Areas**

The ACMA proposes that the existing commercial and community radio broadcasting licence areas in the Bathurst LAP be redefined using 2006 census data but otherwise remain unchanged.

The licence areas for commercial and community radio broadcasting services in the Bathurst LAP - Bathurst RA1, Bathurst RA2 and Bathurst RA3 - are currently described using boundaries from the 2001 census.

The Australian Bureau of Statistics (ABS) has made available to the ACMA the most recently published census (2006), as prepared by the Australian Statistician. Therefore, the ACMA proposes that these licence areas be redefined using 2006 census data, but otherwise remain unchanged.

These licence areas, updated to 2006 census data, are detailed in the document *Licence Area Maps* that accompanies this explanatory paper.

**Preliminary View 6 – Minor Amendments**

The ACMA proposes to update the schedules and attachments in the Bathurst LAP.

The ACMA proposes to make amendments to Schedules One, Two and Three and to each of the attachments that contain the characteristics, including technical specifications, of the radio broadcasting services in the Bathurst area.

The ACMA does not intend these minor amendments to alter any existing rights or obligations. It proposes to replace schedules and attachments in their entirety, without changing the substantive parts, to facilitate these minor amendments.

The proposed changes to the schedules include:


This information was included for ease of reference only, but may be confusing.
The proposed changes to the attachments headings include:

> removal of the heading “LICENCE AREA PLAN : Bathurst” and substitution of the heading “LICENCE AREA PLAN : Bathurst Radio” in attachments 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 2.2, 2.3 and 3.2; and

> removal of the heading “LICENCE AREA PLAN : Bathurst Radio – Variation – December 2004” and substitution of the heading “LICENCE AREA PLAN : Bathurst Radio” in attachments 1.3.1, 1.8, 1.9, 1.10 and 1.11.

The proposed changes to the attachments technical specifications include:

> updating the nominal locations of the transmitter specified at attachments 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.11, 2.2, 2.3 and 3.2 to provide a more accurate description of the transmitter site;

> updating the site tolerance field to refer to the Broadcasting Services (Technical Planning) Guidelines 2007 in attachments 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 1.11, 2.2, 2.3 and 3.2;

> updating the maximum antenna height specified in attachments 1.4, 1.5, 1.5 and 1.6 on the advice of the broadcaster; and

> updating the recording method for the output radiation pattern in Attachment 1.2.

This information has been updated for ease of reference only and does not signify a change to the planned performance of the transmitters.
Preliminary View 7 – Frequency Allotment Plan

The ACMA proposes that the FAP for the VHF-FM Band entries under R2 – Northern Queensland and R7 – Central NSW be varied to reflect the addition of in-fill transmitters at Ravenshoe and Oberon.

The FAP determines the number of channels that are to be available in particular areas of Australia to provide broadcasting services or restricted datacasting services, or both, using that part of the radiofrequency spectrum designated as the broadcasting services bands (BSB).

The BSB are the designated parts of the radiofrequency spectrum which have been referred to the ACMA for planning under section 31 of the Radiocommunications Act 1992 and are:

- 526.5 to 1606.5 kHz;
- 45 to 52 MHz and 56 to 70 MHz (Band I);
- 85 to 108 MHz (Band II);
- 137 to 144 MHz (channel 5A);
- 174 to 230 MHz (Band III);
- 520 to 820 MHz (Bands IV and V).

The FAP and LAP for a particular area together constitute a ‘blueprint’ for the development and planning of broadcasting in that area using the BSB. The FAP sets out the number of channels and the LAP describes the characteristics of the services using, or that are proposed to use, those channels. Under section 26(1) of the BSA, these two documents must be consistent.

As a consequence of its proposal to make available in-fill transmitters for the existing commercial radio broadcasting services 4AM at Ravenshoe and 2BS at Oberon (see Preliminary Views 1 and 2), the ACMA proposes to vary the FAP for the VHF-FM Band entries under R2 – Northern Queensland and R7 – Central NSW to reflect the addition of those FM in-fill transmitters.

This will ensure that the Atherton LAP, the Bathurst LAP and the FAP remain consistent.