Explanatory Paper
Draft Variation to Licence Area Plan for Canberra Radio - No.1 of 2009

OCTOBER 2009
Call for Submissions

Submissions on the matters raised in this Explanatory Paper may be made to the Australian Communications and Media Authority (the ACMA) as follows:

By email: lais@acma.gov.au

By mail: Draft Variation No.1 of 2009 to LAP for Canberra Radio
Broadcast Planning Section
Australian Communications and Media Authority
PO Box 78
BELCONNEN ACT 2617

By fax: (02) 6219 5347

Please quote file reference ACMA2009/761 in your reply.

Any enquiries concerning matters raised in this document should be directed to Ms Rebecca Press (02) 6256 2874.

The closing date for submissions is 4 November 2009.

All submissions received will be made available for public inspection on the ACMA website.¹ (www.acma.gov.au)

¹ Note that 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 draft licence area plan (LAP) variation for Canberra Radio.

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

The ACMA has received two submissions in relation to radio services in the Canberra region. In summary the submissions request that the ACMA consider:

- making changes to the technical specifications of the high power open narrowcasting radio service (2KX) in Canberra, to relocate the transmitter site and modify the radiation pattern;
- making channel capacity available for an FM translator service for the community radio broadcasting service 1CMS to address deficient coverage of its service across Tuggeranong.

Due to spectrum scarcity in the Canberra region it is proposed to make alternative spectrum available in Williamsdale for 2QBN to facilitate the request from 1CMS.

A full discussion on these requests is set out in the ACMA’s preliminary views below.

The draft variation also proposes to make some minor amendments to correct drafting errors and remove obsolete information, and update the licence area definitions so that the licence area populations are defined in accordance with the 2006 Australian Bureau of Statistics (ABS) Census data.

Legislative Framework

The ACMA prepares LAPs under subsection 26(1) of the Broadcasting Services Act 1992 (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.

Section 23 of the BSA imposes specific obligations on the ACMA when carrying out its planning functions, including, among other things, a requirement to perform its functions in a way that promotes the objects of the Act, including the economic and efficient use of the radiofrequency spectrum.

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), 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.
Preliminary View – Open Narrowcasting Radio

The ACMA proposes to vary the technical specifications of the high power open narrowcasting radio service (2KX) on 1323 kHz to operate as follows:

- from Broadcast Site, Gungahlin Drive, Kaleen with a maximum Cymomotive Force (CMF) 335 V (400 W transmitter power) and a directional radiation pattern.

The daytime\(^2\) coverage radius of this transmission has been calculated at 25 km at its maximum based on a ‘nominated’ point with the following AMG co-ordinates: Zone 55; Easting 693775; Northing 6093950\(^3\).

The LAP for Canberra Radio (Canberra LAP), last varied in April 2006, makes available channel capacity for a high power open narrowcasting (HPON) radio service to operate a transmitter from Gungahlin on AM frequency 1323 kHz, with a maximum power of 400 Watts (W) with a directional (DA) radiation pattern and an estimated day time coverage radius of 28 km at its maximum.

In December 2006, the transmitter licence for the Canberra HPON service was issued to ANC International Holdings Pty Ltd (2KX) following a price-based allocation process.

2KX is yet to commence its HPON service in Canberra, indicating that the delay is due to continuing difficulties in the building and establishment of new transmission facilities, as 2KX have been unable to gain access to an established transmission facility. AM sites are generally difficult to find because of the requirement to have larger blocks of land with suitable soil conductivity characteristics.

2KX has now secured a new transmission site and, as a consequence, has requested that the ACMA consider changing its technical specifications to relocate the transmitter site and modify the radiation pattern.

The effect of this proposal is that the estimated daytime coverage radius of the HPON service would be reduced from 28 km to 25 km. Therefore, the total population able to receive an acceptable grade of service (i.e. rural grade) using the proposed new technical specifications compared to the existing technical specifications would be reduced by approximately 900 residents.

The ACMA takes the view that open narrowcasting services play an important role in promoting the object of the BSA at paragraph 3(a) and for this reason, the ACMA proposes to accommodate the changes requested by 2KX to facilitate the commencement of the HPON service in Canberra, and increase the diversity of services available.

\(^2\) The day time coverage radius of a Medium Frequency service is defined by the estimated field strength contour of 54 dBuV/m, which is the protected field strength in the presence of man made radio noise alone in a rural radio noise environment. But this estimated coverage, to obtain the defined quality of service for that radio noise environment, could effectively reduce when considering the addition of natural noise. In general, the night time coverage, to obtain the same quality of service, is smaller than the daytime coverage due co and adjacent channel sky wave interference acting as additional noise contribution.

\(^3\) The purpose of this is to match the directional radiation pattern to a notional omni directional pattern to readily represent the likely coverage that would be achieved with the directional radiation pattern and transmission site.
Preliminary View – Community Radio

The ACMA proposes to make channel capacity available for a translator for the community radio broadcasting service provided by the licensee of 1CMS, Ethnic Broadcasters' Council of the ACT Inc. The 1CMS translator is proposed to operate on:

- **107.9 MHz** from Tuggeranong Hill with a maximum effective radiated power (ERP) of **100 watts (W)** omni-directional (OD).

In order to make channel capacity available for 1CMS, the ACMA also proposes to change the non-operational translator frequency of Queanbeyan community radio broadcasting service 2QBN at Williamsdale. It is proposed that 2QBN's translator frequency be changed from **107.7 MHz** to **107.5 MHz**.

The Ethnic Broadcasters' Council of the ACT Inc, the licensee of community radio broadcasting service 1CMS in Canberra, submitted a request to the ACMA to make a translator service available to provide coverage of 'shadow areas' in the Tuggeranong region.

The three other existing community radio broadcasting services in Canberra have planned 100 W translators in Tuggeranong to address deficient coverage. However, due to spectrum congestion there is currently no available FM spectrum for 1CMS.

In June 2009, the ACMA conducted an extensive review of the heavily congested spectrum across the Canberra region and identified an option to make available suitable spectrum for the proposed 1CMS translator at Tuggeranong. The broadcasting engineering analysis indicates that there is potential to make FM frequency 107.9 MHz available in Tuggeranong but the availability is dependant on shifting the frequency of the translator service of Queanbeyan community radio broadcasting service 2QBN at Williamsdale from 107.7 MHz to 107.5 MHz.

2QBN is yet to commence its community radio broadcasting service on the translator using 107.7 MHz in Williamsdale and has advised the ACMA that it has no objection to changing this frequency to support the establishment of a translator on 107.9 MHz for 1CMS in Tuggeranong.

The broadcasting engineering analysis also indicates that the alternate FM frequency (107.5 MHz) proposed for 2QBN at Williamsdale has the potential to receive interference from the co-channel community radio broadcasting service, 2EAR Moruya.

However, a terrain path profile from Moruya to Williamsdale indicates very rugged terrain obstruction between the two services. In this respect the ACMA considers that Williamsdale is afforded excellent protection against interference from Moruya.

The ACMA is therefore of the preliminary view that rationalising the spectrum for community radio broadcasting services in the Canberra LAP as outlined above is considered to be the most economic and efficient use of the radiofrequency spectrum.
Preliminary View – Licence Areas

The ACMA proposes that the existing commercial and community radio broadcasting licence areas in the Canberra LAP be redefined using 2006 Census boundaries, but otherwise remain unchanged.

The licence areas for the commercial and community radio broadcasting services in Canberra RA1, Queanbeyan RA1, Yass RA1, Tuggeranong RA1 and Canberra RA2 licence areas are currently described in the 2001 Census count. The ABS has made available to the ACMA the most recently published Census count (2006), as prepared by the Australian Statistician.

Therefore, the ACMA proposes that the licence areas in the Canberra LAP be redefined using 2006 Census boundaries, but otherwise remain unchanged.
**Preliminary View – Minor Amendments**

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<tr>
<th>The ACMA proposes to update Schedules and Attachments in the Canberra LAP to correct drafting errors.</th>
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The ACMA proposes to make amendments to Schedules One and Two, and each of the Attachments that contain the characteristics, including the technical specifications, of the broadcasting services in the Canberra area.

The proposed amendments delete and insert information, included for reference only, that does not form part of the Canberra LAP and which may be obsolete or create confusion.

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

Clauses (2) to (9) have been amended so that the numbers of the Attachments in the determination are presented in the same format as numbers of the Attachments contained in the Canberra LAP. This information has been updated to ensure uniformity across the Canberra LAP.

Further changes include removing the words “April 2006” from the heading of Schedule One, removing the words “June 1999” from the headings in Schedule Two, Schedule Three and Schedule Four and removing the words “November 2003” from the heading in Schedule Five. The information was included for ease of reference only, but may be confusing.

The proposed changes to each of Attachment 1.2, Attachment 1.3, Attachment 1.4, Attachment 1.5, Attachment 1.6, Attachment 1.7, Attachment 1.21, Attachment 1.8, Attachment 1.9, Attachment 1.10, Attachment 1.11, Attachment 1.12, Attachment 1.13, Attachment 1.14, Attachment 1.15, Attachment 1.16, Attachment 1.18, Attachment 1.19, Attachment 1.23, Attachment 1.24, Attachment 1.25, Attachment 1.26, Attachment 1.31, Attachment 1.27, Attachment 1.28, Attachment 1.29, Attachment 1.30, Attachment 1.32, Attachment 2.1, Attachment 2.2, Attachment 3.1 and Attachment 3.2, Attachment 4.2, Attachment 5.2 and Attachment 5.3 include updating the site tolerance to refer to the *Broadcasting Services (Technical Planning) Guidelines 2007*. This information has been updated for accuracy only.

Additional changes to Attachment 1.2, Attachment 1.3, Attachment 1.5, Attachment 1.6, Attachment 1.7, Attachment 1.21, Attachment 1.8, Attachment 1.9, Attachment 1.10, Attachment 1.22, Attachment 1.11, Attachment 1.12, Attachment 1.13, Attachment 1.14, Attachment 1.15, Attachment 1.16, Attachment 1.18, Attachment 1.19, Attachment 1.23, Attachment 1.24, Attachment 1.25, Attachment 1.26, Attachment 1.31, Attachment 1.27, Attachment 1.28, Attachment 1.29, Attachment 1.30, Attachment 3.1 and Attachment 3.2, Attachment 4.2, Attachment 5.2 and Attachment 5.3 are proposed to remove the words “Radio – June 1999” from the headings in each Attachment. The information was included for ease of reference only but may be confusing.

Each of Attachment 1.4, Attachment 1.21, Attachment 1.22, Attachment 1.31, Attachment 1.32 and Attachment 5.3 will also be amended to remove the words “Radio - November 2003” from each heading. The information was included for ease of reference only but may be confusing.
Attachment 2.2 will also been amended to remove the words “Radio – 6 November 2003” from the heading. The information was included for ease of reference only but may be confusing.

The nominal location of the transmitter specified in each of Attachment 1.2, Attachment 1.3, Attachment 1.4, Attachment 1.12, Attachment 1.23, Attachment 1.24, Attachment 1.30, and Attachment 3.2 will be updated to provide a more accurate description of the transmitter site. This information is updated for ease of reference only and does not signify a change in broadcast site.

This proposed variation additionally removes the special condition from Attachment 1.4. When the Canberra LAP was varied in 2003, a special condition was added to Attachment 1.4 that transmission of the service described would cease upon commencement of the radio broadcasting services described under Attachment 1.21 and 1.22 respectively. Attachment 1.21 describes the national radio broadcasting service, News Radio, available at Canberra. Attachment 1.22 describes the national radio service, News Radio, available at Tuggeranong. As the service described under each Attachment 1.21 and 1.22 has commenced, the special condition described at Attachment 1.4 is now redundant and has been removed. Attachment 1.4 now describes the technical specifications for the national radio broadcasting service SBS radio that is available at Canberra.