Explanatory Paper

Draft Variation to Licence Area Plan for Lithgow Radio
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Call for Submissions

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

By email: lapvariation@acma.gov.au
By mail: Draft LAP Variation –Lithgow Radio
ACMA
PO Box 34
BELCONNEN   ACT   2616

By fax:(02) 6253 3277

Please quote file reference 2005/2174 in your reply.

Any enquiries concerning matters raised in this document should be directed to Mr Brett McClymont on (02) 6256 2831.

The closing date for submissions is 5.00pm, 28 October 2005.

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, cannot be considered by the ACMA in finalising the LAP variation.
Preliminary Views

Preliminary View – Commercial and Community FM Radio – Lithgow

<table>
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<tr>
<th>ACMA proposes to vary the technical specification of the 2ICE commercial FM radio service in the Lithgow RA3 licence area to operate from Katoomba as follows:</th>
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<tr>
<td>● 99.5 MHz from 31-34 Great Western Highway (Next to Plant Nursery), Wentworth Falls, with a maximum effective radiated power (ERP) of 1 kW using a directional antenna pattern, antenna height of 60 metres and mixed polarisation.</td>
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ACMA proposes that the licence area of the existing 2ICE commercial radio service be varied to include three additional collection districts (CD’s) and to redefine the licence area using 2001 Census boundaries.

ACMA proposes that the licence areas of the 2LT commercial radio service and the 2EZY Community radio service be redefined using 2001 Census boundaries, but otherwise remain unchanged.

Background

The Australian Broadcasting Authority (ABA) varied the Lithgow radio LAP in December 1999 to extend the existing 2LT AM and 2ICE FM commercial radio licence area to include Katoomba and to provide an AM translator for 2LT and an FM translator for 2ICE to serve Katoomba and the lower Blue Mountains and the Katoomba area respectively.

The 2LT AM translator was to operate on 783 kHz from Wentworth Falls Katoomba with a maximum cymomotive force of 440 V using an omni-directional pattern. The AM frequency 783 kHz was previously used by the Katoomba commercial radio service 2KA from Wentworth Falls, before converting to FM on 96.1 MHz (now 2ONE).

The 2ICE FM translator was to operate on 99.5 MHz from Council Headquarters Building Gang Gang St Katoomba, with a maximum ERP of 200 W using an omni-directional pattern with an antenna height of 30 metres.

Request for 2LT FM Translator - Katoomba

In 2004, Media Corporation Australia Limited (MCAL), licensee of the 2LT AM and 2ICE FM services, advised the ABA that the owners of the 2ONE Wentworth Falls transmitter tower will not allow AM antenna’s back on the site. As such, MCAL has been trying to find a suitable financially viable site for the 2LT AM service in the Katoomba area, but have been unable to find any and the 2ONE tower is the only available option. In addition, the Blue Mountains Council have advised MCAL that it will not permit any further AM transmission sites in the Blue Mountains area. Antennas used for AM services are functionally different to FM, AM services tend to be more expensive to implement than FM services and require larger land areas.

To be able to implement the 2LT service from a viable site, MCAL has requested a change from an AM frequency to an FM frequency. The FM service would be located on the 2ONE tower.
Changes to Technical Specification for 2ICE FM translator - Katoomba

MCAL has also requested a change of site for the 2ICE FM service to the 2ONE tower together with an increase in maximum ERP to 2 kW using a directional antenna pattern at an antenna height of 70 metres. Blue Mountains City Council has stated that MCAL would not be granted permission to operate from the Council Headquarters site and an alternative site should be sought.

As with the 2LT AM service, the only viable site in the area is the 2ONE tower. However, the 2ONE tower is also used by a number of non-broadcasting services in the area and antenna access to the tower is limited to particular heights on the tower because of the existing antennas of the other services.

MCAL requested the increase in antenna height and maximum ERP because of the congestion on the 2ONE tower has meant that the existing antenna height specification of 30 metres cannot be met and also increasing the antenna height is needed to provide a suburban grade of service into Katoomba.

Discussion

Alternative 2LT FM frequency - Katoomba

The availability of suitable FM spectrum in the Blue Mountains area is severely limited and this is likely to be exacerbated by the requirement for the planning of national radio services in nearby areas, in particular at Lithgow. The Minister for Communications, Information Technology and the Arts asked the ABA to plan FM spectrum for the ABC’s Parliamentary NewsRadio Network and additional FM spectrum to meet possible ministerial reservation requirements for future ABC services. ACMA has called for tenders to perform the planning of FM spectrum in these areas and is currently assessing the tenders received. ACMA expects the planning of the national services to be completed by November 2006.

Preliminary assessments undertaken by ACMA have highlighted that it is unlikely any FM spectrum would be able to provide coverage to the eastern boundary of the Lithgow RA1 licence area without causing significant signal overspill into the Sydney commercial radio licence area. The Lithgow RA1 licence area and the Sydney commercial radio licence areas share a common boundary and the Lithgow RA1 licence area includes the lower Blue Mountains.

The potential for signal overspill into the Sydney licence area may be reduced by limiting the maximum ERP towards Sydney.

2ICE Site, ERP and Antenna Height Change - Katoomba

In assessing the request for an increase in antenna height to 70 metres, ACMA found that the proposed antenna system would be located just below 60 metres on the 2ONE tower and has therefore conducted its assessments based on a maximum antenna height of 60 metres. Based on the current LAP technical specification of 200 W ERP and an antenna height of 60 metres, the 2ICE Katoomba service has the potential to cause significant signal overspill into the Sydney commercial radio licence area. Further analysis with a maximum ERP of 2 kW also highlighted the potential for adjacent channel interference to the service in Bathurst. Taking into account the potential for signal overspill and
interference, a subsequent assessment was undertaken using a maximum ERP of 1 kW with a directional radiation pattern.

The subsequent analysis found that, at 60 metres, a 1 kW directional service with an ERP restriction of 40 W towards Sydney would provide a suburban grade of service to Katoomba and reduce the level of signal overspill into Sydney. The proposed 1 kW directional radiation pattern will also improve coverage of the 2ICE Katoomba service to the urban centres² of Mount Victoria and Blackheath. Mount Victoria and a CD forming part of the Blackheath urban centre are currently not part of the 2ICE licence area, but within the 2LT licence area. Due to the increased coverage of the 2ICE Katoomba service to these centres, ACMA is proposing that Mount Victoria and Blackheath be included in the 2ICE licence area.

The licence areas for 2ICE (Lithgow RA3) and 2LT (Lithgow RA1) are not currently identical. MCAL has previously requested that the two licence areas be made identical. In 1999, the ABA determined an extension of the two licence areas to include Katoomba. In determining an extension of the licence areas, the ABA took into account the predicted coverage of the proposed AM and FM translators at Katoomba. The AM translator at Katoomba was expected to have a wider coverage than the FM translator, with the AM translator expected to provide coverage to the lower Blue Mountains area. However, the Katoomba FM translator service, because of ERP restrictions towards Sydney, has reduced coverage to the east compared to the AM service and the Lithgow RA1 and Lithgow RA3 licence areas were defined accordingly. Therefore, as the FM service cannot provide the same coverage as an AM service, ACMA is not proposing to extend the Lithgow RA3 licence area in any way other than to update the licence area using 2001 Census boundaries and include Mount Victoria and Blackheath.

It should be noted that there is potential for the proposed 2ICE Katoomba service to cause 2nd Harmonic interference to the reception of TCN 9 Sydney in areas in close proximity to the proposed FM transmitter. Also, there is potential for interference to the reception of television services where viewers may be using mast-head amplifiers to receive the Sydney services. Interference issues are managed under the provisions of the “Start-Up Procedures” of ACMA’s Technical Planning Guidelines (TPGs). The TPGs state that in the event of interference, a licensee must adjust, or fit devices to, the transmitter or affected receivers or undertake other necessary measures in order to eliminate or minimise interference to other services.

Conclusion
Taking into consideration the Minister’s request for the planning of new Parliamentary NewsRadio services, ACMA is proposing not to allocate an alternative FM frequency to 2LT until such time as the planning of additional FM national services in nearby areas has been completed. ACMA will then revisit the request for an FM frequency at Katoomba for the 2LT service.

In regards to 2ICE, ACMA proposes that the 2ICE Katoomba FM service operate from 31-34 Great Western Highway Wentworth Falls on 99.5 MHz using a 1 kW directional

² Urban centre where the population is equal to or greater than 1 000 people.
radiation pattern with an antenna height of 60 metres and mixed polarisation. ACMA is also proposing to redefine the 2ICE (Lithgow RA3) licence area using 2001 census boundaries and to include three additional collection districts at Mount Victoria and Blackheath.

The existing 2LT (Lithgow RA1) and 2EZY (Lithgow RA2) licence areas are currently described using 1996 Census boundaries. As the latest census figures are available, ACMA is proposing to redefine these licence areas using 2001 Census boundaries, but otherwise remaining unchanged.