EXPLANATORY PAPER
REVISED DRAFT
VARIATION TO
LICENCE AREA PLAN

PERTH, WA
RADIO
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Background

In September 2004 the then Australian Broadcasting Authority (ABA) released an explanatory paper and draft variation to the licence area plan (LAP) and frequency allotment plan (FAP) for Perth radio.

The draft variation:

- proposed to amend the technical specifications for 6RPH, 6AR, 6NR, 6YMS, and 6PR;
- proposed to make available a new high power open narrowcasting service;
- sought submissions on Perth aspirant community broadcasters continuing on Temporary Community Broadcasting Licences (TCBLs); and
- proposed making channel capacity available in the FAP.

In response to the above, the ABA received eleven formal submissions, and in relation to support for a new community radio service, over 1000 letters. The submissions will be considered before finalising a variation to the Perth radio LAP.

On 1 July 2005, the Australian Broadcasting Authority (ABA) and the Australian Communications Authority (ACA) were amalgamated to form the Australian Communications and Media Authority (ACMA).

ACMA has: revised the preliminary view in relation to the Perth aspirant community broadcasters continuing on TCBLs, instead proposing that a new community radio service be made available; added preliminary views relating to technical specifications for the 6IX Wanneroo translator and the technical specifications and licence area for community radio service 6TCR Wanneroo; revised the preliminary view relating to availability of a high power open narrowcasting service; and included licence area updates for community radio services at Armadale, Fremantle and Kalamunda. These are discussed in this explanatory paper.

ACMA has not revised the preliminary views in relation to the remainder of those released in September 2004 being the amendment of the technical specifications for 6RPH, 6AR, 6NR, 6YMS and 6PR.

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: Revised Draft LAP Variation – Perth
Australian Communications and Media Authority
PO Box 34
BELCONNEN ACT 2616

By fax: (02) 6253 3277

Please quote file reference PF2005/1233 in your reply.
Any enquiries concerning matters raised in this document should be directed to Stirling Finlay on (02) 6256 2874.

The closing date for submissions is 5.00pm, 6 February 2006.

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 ACMA in finalising the LAP.
PRELIMINARY VIEW – COMMERCIAL RADIO 6IX – WANNEROO TRANSLATOR

ACMA proposes to amend the technical specifications for the 6IX translator at Wanneroo to operate as follows:

105.7 MHz from Wanneroo, with a maximum ERP of 4 kW directional using vertical polarisation.

The initial Perth radio LAP of October 2001 made channel capacity available for FM translators at Wanneroo and Rockingham for Perth AM commercial radio service 6IX to alleviate poor AM reception in the north and south of the 6IX licence areas. Both FM translators were planned to use the same channel of 105.7 MHz with opposite polarisation to introduce a ‘mush’ zone to prevent a de facto FM service in the 6IX AM efficient areas and to minimise mutual interference between the two FM translators. The Rockingham translator was planned with vertical polarisation to provide protection to Bunbury television reception, and the Wanneroo translator planned with horizontal polarisation to minimise mutual interference between the Rockingham and Wanneroo translators.

At the time the then ABA planned the technical specifications for the 6IX FM translators at Wanneroo and Rockingham, the engineering assessment identified the potential for second harmonic interference from the Wanneroo translator to reception of the Perth channel 10 analog television service. Due to FM spectrum scarcity in the area, there was no other alternative and appropriate FM channel for the FM translators.

Subsequent test transmissions of the Wanneroo service resulted in severe interference to reception of the Perth channel 10 television service. This interference impacted on just over one hundred residents in the vicinity of Wanneroo transmission site due to a combination of poor television antenna installations and the proximity of viewers of the channel 10 service to the 6IX Wanneroo transmission site.

In August 2004, an ABA engineering officer in conjunction with an ACA field officer from Perth conducted an investigation into the interference issue. The investigation identified some poor television receive antenna installations where the second harmonic of the 6IX signal was being re-radiated by mast head amplifiers to neighbouring television viewers. At the expense of the licensee2 of 6IX, filters were fitted to householders experiencing interference, and in the more complex cases, the whole of the antenna installation was renewed. As a result of this work, some of the interference was minimised, however, significant interference persisted. Following the ABA’s on site attendance, it was proposed that the interference could be further reduced by changing the signal polarisation from horizontal to vertical, although there was a risk of increasing mutual interference between the two FM translators due to co-channel and co-polarisation operation. However, as the co-channelled Wanneroo and Rockingham translators will now have the same polarisation, there is potential for the ‘mush’ zone to enlarge and the potential for increased mutual

2 The requirement to eliminate interference is noted in Section 13(g) of the Technical Planning Guidelines.
interference within the coverage areas of the two translators. Further testing has shown that the change to vertical polarisation at Wanneroo and the remedial action by 6IX in eliminating interference to viewers appears to have resolved the television interference issues.

Under test transmission operation, changing the polarisation to vertical at the Wanneroo site also provided an opportunity to verify the mutual interference with the Rockingham translator which operates on the same frequency with vertical polarisation, and confirm any coverage deficiencies which were known with the earlier antenna with horizontal polarisation.

The licensee of 6IX subsequently commissioned a consultant to conduct field survey measurements in the Wanneroo area of the 6IX AM service and the Wanneroo FM translator. The field report indicated that there were some deficient areas of 6IX AM and FM coverage to the suburbs of Scarborough, Whitfords and Warwick to the south west of the translator site. As a result of this survey, to improve the FM translator coverage, 6IX requested a slight change in the radiation pattern of the Wanneroo FM in-fill translator to improve coverage to the south west. The proposal provides a minimum grade of service to the deficient areas while limiting the extent of the Wanneroo FM translator coverage towards the Perth CBD. A revised radiation pattern is proposed with a more relaxed front-to-back ratio and a wider main lobe beamwidth to serve the deficient areas to the south west and better target the areas towards the north.

The 6IX Wanneroo FM translator with the technical specifications determined in the October 2001 licence area plan would have been expected to result in improved coverage to 112,000 persons (8.3% of the Perth licence area) where AM reception was previously deficient. In addition, the 6IX Wanneroo and Rockingham FM translators were originally planned with opposite polarisation having the effect of minimising mutual interference within the coverage area of each translator.

With the proposed revised radiation pattern to improve coverage to the south west of the Wanneroo FM translator site, it is estimated that coverage would be provided to 208,000 persons (15.5% of the Perth licence area). However, as the Wanneroo translator is proposed to use vertical polarisation, this population coverage figure does not take into account the potential interference within the coverage area of the Wanneroo translator from the Rockingham translator which also uses vertical polarisation. Taking this into account, the population coverage figure would then be reduced to an estimated 177,000 persons (13.2% of the Perth licence area).
PRELIMINARY VIEW – COMMUNITY RADIO – 6TCR WANNEROO

**ACMA proposes to amend the technical specifications for 6TCR to operate as follows:**

89.7 MHz from Wanneroo with a maximum ERP of 2 kW directional and vertical polarisation.

**ACMA also proposes that the 6TCR licence area be extended to include all of the City of Wanneroo and the City of Joondalup.**

On 15 February 2004, the licensee of 6TCR Wanneroo requested an extension of its licence area predominantly to the north to include all of the Local Government Area of the City of Wanneroo and to a lesser extent to the south and south east to include small parts of the remainder of each of the Local Government Areas of the City of Wanneroo and City of Joondalup. 6TCR also requested an increase in power to the north to enable it to provide coverage to all of the northern part of the Local Government Area of the City of Wanneroo.

At the time of release of the September 2004 draft variation to the LAP, insufficient technical information had been provided by community radio service 6TCR Wanneroo to adequately assess its request for a power increase to the north commensurate with a request to extend its licence area to the north. This has now been resolved following further negotiations and 6TCR’s support for a technical proposal which would allow a power increase to the north from 500 W to 2 kW if the licence area extension request is granted. The proposed power increase would only be granted if 6TCR retains use of vertical polarisation and is subject to testing to verify interference levels to reception of the Perth channel 6 digital television service.

The current 6TCR licence area does not include a substantial northern part and small southern part of the City of Wanneroo, as well as a small part of the City of Joondalup to the southeast. No other local community radio service is located in either of the City of Wanneroo and the City of Joondalup.

In submitting its proposal, 6TCR has addressed the relevant policy guidelines relating to extension of licence areas for community radio services specified in Chapter 4 (2) of the publication *The ABA’s General Approach to Analog Planning*. This publication can be found on the ACMA website. The relevant policy guidelines state *inter alia* that:

In determining a new community service licence area, or granting an extension to an existing community radio broadcasting service licence area, the Authority will have regard to:

- Whether a community radio broadcasting service exists in the proposed licence area, and whether it serves a ‘special interest’ or geographic (‘broad-based’) community-of-interest.
- Whether a community-of-interest exists, over what geographic area, and whether that community-of-interest is currently being served.
- In cases where an existing community radio broadcaster seeks to extend its licence area, and endeavours to foster an independent locally-based aspirant group have proven to be unsuccessful, whether members of the community that the aspirant or licensed community radio broadcaster aims to serve will be able to actively participate in the
operation and programming of the licensee in providing the service. Where the geographic distance may seem to prohibit active participation, and the aspirant or licensed community radio broadcaster can demonstrate that initiatives to foster the establishment of locally-based community radio broadcasting service have proven to be unsuccessful, applicants will be required to outline the strategies they would adopt to overcome such problems.

In addressing the relevant policy guidelines, relevant points made by the licensee of 6TCR include:

1. WJRBA represents the community interest of residents in the Cities of Wanneroo and Joondalup, as is reflected in it’s name: Wanneroo Joondalup Regional Broadcasting Association Incorporated (WJRBA); and registered trading name “Twin Cities FM”.

2. Whilst all age groups are served by WJRBA, there are two key age groups (15-25 and 40-55 years) in both areas in which programming is reflective of their interests.

3. The Cities of Wanneroo and Joondalup have access to their residents and rate payers through WJRBA’s broadcasting of City announcements, interviews with each of the mayors and the Chief Executive Officers.

4. The City of Joondalup also uses WJRBA, for interviews and community announcements. Both organisations supply WJRBA with media releases for use in news bulletins that focus on local events.

5. There are currently 16 business sponsors and more than 50 community groups including schools and government organisations from both areas that utilize WJRBA’s services.

6. WJRBA both has and is planning to conduct outside broadcasts from locations in both areas.

ACMA has letters on file supporting 6TCR’s request to serve both areas from the Mayor of the City of Joondalup, the Mayor and CEO of the City of Wanneroo, and the Federal Member for Moore.

In relation to the proposed power increase, the licensee of 6TCR will need to upgrade its current antenna system to a purpose built design to achieve the required radiation pattern. Such an upgrade may improve coverage to the south and southeast with no increase in power in this direction, as the current antenna system is of basic design with some limitations because of its tower mounting.

The 6TCR proposal is subject to the conducting of test transmissions and rectification of any interference to reception of the Perth channel 6 digital television service in accordance with the start up procedures specified in the Technical Planning Guidelines.
Preliminary View – New Perth City Community Radio Service

ACMA proposes to make available a new Perth City community radio service to operate as follows:

90.5 MHz from Ardross, with a maximum ERP of 500 W directional and vertical polarisation.

ACMA proposes to define a licence area for a new community radio service to serve the Perth City area in terms of areas defined by the Australian Bureau of Statistics at the Census of 5 August 2001.

At the time leading up to the release of the September 2004 draft variation to the Perth radio LAP there were six aspirant community radio groups in the Perth area. These were Capital Community Radio (over 55’s format), Western Sports Media (sports format), WA Portuguese Club (Portuguese format), Hits Radio Ltd (general format), Lycourgos Inc (Greek format), and Mr Marwin Naji (Arabic format). The WA Portuguese Club has since withdrawn its application for a future Temporary Community Broadcasting Licence (TCBL) and no fresh applications from three other previously known groups have been received. Capital Community Radio (CCR) and Western Sports Media continue to remain very active and will time share the available frequency of 90.5 MHz until March 2006.

In September 2004, the then ABA formed the preliminary view that an additional community radio service should not be made available for Perth. The ABA’s view was that TCBLs should continue on a channel sharing basis in order to gain a better indication of any unmet community radio needs in the Perth market.

The ABA proposal in the September 2004 draft variation to the Perth LAP not to make an additional community radio service available in Perth caused an unfavourable response in formal submissions on the matter. The ABA separately received over 1,000 letters objecting to the September 2004 proposal not to make an additional community radio service available in Perth. The great majority of the letters argue that none of the existing community radio services in Perth currently serve the seniors community which is the programming platform of CCR. The ABA did not receive any submissions from the existing community radio broadcasters in Perth arguing that program formats such as those of aspirant groups CCR and Western Sports Media are already met.

From the evidence now before it, ACMA is of the view that there is demand for an additional permanent community radio service to serve the Perth city area. The revised draft LAP variation therefore proposes to make medium power frequency 90.5 MHz available for this purpose.

ACMA seeks submissions on the revised proposal to make an additional permanent community radio service available to serve the Perth City area.
Preliminary View – Perth high power open narrowcasting services

ACMA withdraws the proposal to make 1170 kHz available for a high power open narrowcasting service in Perth.

In addition to any submissions on this revised ACMA preliminary view, ACMA would be interested to hear from HPON aspirants about any other AM options that may be available to meet HPON demand in Perth. This might include lower-power channels of less potential utility for DRM in regional areas for future digital radio services.

The September 2004 draft variation to the Perth radio LAP proposed that 1170 kHz in the MF band be made available for use as a high power open narrowcasting (HPON) service following a submission provided on behalf of the Chinese Association of WA of its interest in providing a Chinese language service on a vacant AM channel. Two additional parties, Kincaid Corporate Properties Pty Ltd and UCB Australia, indicated interest in submissions after the release of the September 2004 draft variation to the Perth radio LAP.

In May 2005, the then ABA released a discussion paper on Spectrum for Digital Radio calling for submissions on the options contained therein. The discussion paper canvassed the options for placing restrictions on three bands: VHF Band III, the MF Band and VHF Band I so as to not further reduce the already limited capacity to introduce digital radio services.

A public announcement was made by the Acting Chair of ACMA at the annual Broadcasting Conference on 9 November 2005 that ACMA intends to release further MF-AM band channels only after the utility of spectrum for future introduction of digital radio services is considered. Based on the utility of spectrum as detailed above, ACMA therefore withdraws the previously proposed availability of 1170 kHz for a high power open narrowcasting service in Perth.

An assessment of vacant MF frequencies 927 kHz and 1170 kHz has been undertaken to determine the utility of these frequencies for future digital radio services (likely to be using the Digital Radio Mondiale [DRM] standard). Both frequencies could be used for DRM in Perth, however the utility of these frequencies in regional areas is of most importance as Perth should be adequately served by digital radio services using the DAB standard in other frequency bands. From this analysis, both 927 kHz and 1170 kHz are considered suitable for DRM use in the south west of WA.

The utility of 927 kHz is marginally poorer than for 1170 kHz due to the use of the adjacent frequency (918 kHz at Narrogin). However, this would not prevent the use of 927 kHz for DRM at a sufficient distance from Narrogin. As part of this assessment the interference impact of a 2 kW DRM service sited at Busselton was made. Such a service is expected to have similar coverage and co-channel interference potential to a 10 kW AM service. Current Busselton AM services are 4 or 5 kW and only a few AM services in WA exceed a power level of 10 kW.

The assessment of 927 kHz at Busselton showed that at 2 kW (DRM) there would be an increase in night-time interference for 3UZ Melbourne (927 kHz) and an increase in night-time interference for 3NA Narrogin (918 kHz). These increases are in the order of 1 dB. Typically a 0.5 dB increase is considered acceptable. If the DRM power is reduced to 1 kW (broadly equivalent to a 5 kW analog AM service), then the interference potential would fall within the acceptable range.
In early September 2005, Racing and Wagering Western Australia (RWWA), the licensee of the Perth HPON service operating on 1206 kHz, wrote to ACMA advising of coverage difficulties, particularly to the Perth northern suburbs of the service. RWWA expressed interest in the use of vacant AM channel 927 kHz and requested that ACMA make the channel available for an additional HPON licence in Perth for which interested parties would be required to bid at auction. ACMA is similarly unable to assist with this request.
Preliminary View – Licence Areas

ACMA proposes that the Armadale, Fremantle and Kalamunda community licence areas be redefined using 2001 Census boundaries, but otherwise remain unchanged. ACMA also proposes to make a minor variation to the heading of the description of the Perth RA1 commercial and community licence area to remedy a previous drafting error.

The licence areas for the community radio service in Armadale, Fremantle and Kalamunda are currently described against the 1996 Census count. The Perth commercial radio and wide coverage community radio licence areas were redefined using 2001 Census boundaries in a licence area plan variation determined in September 2002.

ACMA proposes to take this opportunity to redefine the Armadale, Fremantle and Kalamunda community radio licence areas using 2001 Census boundaries, but otherwise remain unchanged.

In the September 2002 variation to the Perth licence area plan which included an update of the Perth RA1 commercial and community licence area description using 2001 Census boundaries, the number heading used for the heading of the description was Attachment 1.1.1. This heading error is proposed to be corrected so that it is now Attachment 1.1.
Preliminary View – Variation to Frequency Allotment Plan – Perth, WA

ACMA proposes to vary the frequency allotment plan (FAP) for the VHF FM radio band for R22 Perth as it relates to the preliminary view on a new community service in Perth.

ACMA proposes to add capacity to the FAP for one FM channel for a new community radio service in Perth as shown in the proposed FAP variation instrument so that the FAP is consistent with the preliminary views contained in the draft LAP.