



**Australian
Broadcasting
Authority**

ILLAWARRA, SE NSW AND ACT

WOLLONGONG AREA



**DISCUSSION PAPER AND
DRAFT LICENCE AREA PLAN**

OCTOBER 1998

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ISSUE

- (1) Part 3 of the *Broadcasting Services Act* (the Act) places responsibility for planning the broadcasting services bands with the Australian Broadcasting Authority (ABA). The Act sets out three stages for the planning process - determination of priorities for the planning of services using the broadcasting services bands, preparation of a frequency allotment plan (FAP) and, finally, preparation of licence area plans (LAPs). Sections 24, 25 and 26 of the Act refer.
- (2) The ABA is now planning radio broadcasting services for areas within Group 3 of its planning priorities. The Wollongong area falls within the R9 Illawarra, SE NSW and ACT region within this planning priority group.
- (3) In accordance with s.25(2), s.26 and s.27 of the Act the ABA has prepared this discussion paper and draft LAP and FAP for the Wollongong area.

INTRODUCTION

- (4) The discussion paper accompanying the draft LAP for radio services in the Wollongong area of the Illawarra, South East NSW and the ACT region is published in a streamlined format. It conforms to government requirements for Regulation Impact Statements in accordance with the Office of Regulation Review publication entitled *A Guide to Regulation*, First Edition: October 1997.
- (5) While the format of the discussion paper has changed, making the information more specifically relevant to a particular market, the ABA has not changed its reasoning process for deciding whether to make new services available. The details of the reasoning process can be found in the publication, *The ABA's General Approach to Planning*, which should be read in conjunction with discussion papers.
- (6) *The ABA's General Approach to Planning* became available in July 1997, and sets out in detail the approach taken by the ABA in planning new services in a market. It also contains information on the assumptions the ABA makes during the planning process and any technical considerations which are relevant to all markets.
- (7) This discussion paper on the planning of radio services for the Wollongong market sets out the ABA's initial position and canvasses several options on planning radio services in the market, based on the information available to it at this time and after having regard to the Objects of the Act and the planning criteria set out at s.23 of the Act. The paper is intended as a starting point for further discussion and to request further relevant information to assist the ABA in making final decisions for the market.
- (8) It is in the best interests of parties seeking information on the ABA's planning process and/or obtaining licences for additional services in a market to obtain a copy of *The ABA's General Approach to Planning* from Freecall 1800 810 241, or through the ABA Internet home page on <http://www.aba.gov.au> (select Planning option). Submissions should be framed according to the information requirements detailed in the booklet,

addressing the criteria at s.23 of the *Broadcasting Services Act 1992*, and the objects of the same Act. The ABA expects that interested parties will provide the ABA with any additional information necessary to make a decision.

TECHNICAL SPECIFICATIONS

- (9) **Broadcasters are required to provide their services in accordance with the technical conditions contained in an apparatus licence. These technical conditions must reflect the technical specifications contained in the LAP and the associated *Technical Planning Guidelines (TPGs)*.**
- (10) **The technical specifications in the LAP for each service specify a nominal site, and the TPGs contain provisions relating to siting a facility other than at the nominal site. The planning scheme under the *Broadcasting Services Act 1992* will permit a site tolerance away from the nominal site shown in the LAP, but only if the proposed site passes certain mandatory conditions as specified in the TPGs, which are enforced under s.109 of the *Radiocommunications Act 1992*. In essence, the TPGs will require that the licensee should ensure any proposed transmission from a new site would not cause interference to radiocommunication services, and would not cause interference to, or preclude altogether, any broadcasting service using a planned or operating broadcasting channel.**
- (11) ***Important!***

Beyond the limited flexibility provided in the TPGs concerning transmitter siting there will be no opportunity to vary the technical specifications until the LAP is revisited, which may not be for several years. Therefore, it is vital that licensees and aspirant broadcasters carefully check relevant technical specifications contained in the draft LAP and submit proposals to the ABA if changes appear necessary.

CALL FOR PUBLIC SUBMISSIONS

- (12) The ABA is aware that some of the information available to it in relation to planning for radio services in the Wollongong area may be dated. Accordingly, the ABA is seeking confirmation from interested parties in providing radio services in the Wollongong area, or from affected parties. The matters considered by the ABA in planning radio services are outlined in *The ABA's General Approach to Planning*.
- (13) The ABA is seeking public comment on the exposure draft LAP including specific comment on the technical specifications proposed in the draft LAP together with further information from aspirant service providers where indicated.

PLEASE FORWARD YOUR SUBMISSIONS TO:

Planning Officer for R9 - Wollongong Area
Australian Broadcasting Authority,
PO Box 34,
BELCONNEN ACT 2616

by 10 December 1998 quoting file reference 1998/5448.

All submissions received will be made available for public inspection¹. Therefore, any submission marked 'In confidence', 'Confidential' or similar, cannot be considered by the ABA in finalising the LAP.

¹ As required by s27(2) of the *Broadcasting Services Act*.

OBJECTIVES

- (14) In performing its planning functions under Part III of the Act, the ABA must promote the economic and efficient use of the radiofrequency spectrum, and have particular regard to the objects of the Act, and to the planning criteria set out in section 23 (a - g) of the Act (see Chapters 2 and 3, pages 3 to 17, of *The ABA's General Approach to Planning*).

OPTIONS

The following options are presented for consideration and comment. Each option is discussed in the next section of this paper, entitled - *Impact Analysis*. That section provides information on how the ABA reached these options.

- Option 1* In accordance with the Minister's notification of 21 November 1997, channel capacity will be reserved for all existing national radio services in the Wollongong area, as follows:

Area	Nominal site	Frequency	Maximum Effective Radiated Power (ERP) or Cymomotive Force (CMF)
Illawarra	Knights Hill	95.7 MHz	150 kW
	Knights Hill	97.3 MHz	150 kW
	Knights Hill	98.9 MHz	150 kW
Wollongong	Windang	1431 kHz	430 V
	Windang	1485 kHz	120 V

- Option 2* The existing Wollongong commercial radio service 2UUL continue to operate from a nominal transmitter site at Knights Hill on 96.5 MHz, with a maximum ERP of 40 kW.

The existing Wollongong commercial radio service 2WIN continue to operate from a nominal transmitter site at Knights Hill on 98.1 MHz, with a maximum ERP of 40 kW.

The licence areas of the services will be redefined using 1996 Census boundaries.

- Option 4* The ABA may make available for allocation, one additional (ie third) commercial radio licence in the **Wollongong** area. The ABA is seeking specific comment on this option.

Should a licence be made available, the service is planned to operate on 1314 kHz, from a nominal site at Windang, with a maximum CMF of 1.1 kW.

The licence area of the service will be identical to that of the existing commercial radio services 2UUL and 2WIN, and will be defined using 1996 Census boundaries.

Option 5 Channel capacity will be made available for either a second additional (ie fourth) commercial radio service or an open narrowcasting service in the **Wollongong** area. The ABA is seeking comment specifically on this choice.

Should a licence for a fourth commercial radio service be made available for allocation, the service is planned to operate on 1575 kHz, from a nominal site at Windang, with a maximum CMF of 1.1 kV.

The licence area of this new commercial radio service will be identical to that of the existing commercial radio services 2UUL and 2WIN, and will be defined using 1996 Census boundaries.

Alternatively, should a licence for a fourth commercial radio service not be made available for allocation, channel capacity for an open narrowcasting service may be made available in **Wollongong**. The service is planned to operate on 1575 kHz, from a nominal site at Windang, with a maximum CMF of 1.1 kV. For planning purposes the nominal coverage of the service will be considered to be a radius of 30 km around the nominal transmitter site.

Option 6 In accordance with the Ministerial Notice of Reservation of 29 October 1993, channel capacity will be reserved for the existing community radio service 2VOX **Wollongong**. This service will continue to operate on 106.9 MHz, from a nominal site at Brokers Nose, with a maximum ERP of 2 kW.

The licence area of the service will be redefined using 1996 Census boundaries.

Option 7 The ABA proposes to make channel capacity available for one additional (ie second) community radio service in **Wollongong**. The service is planned to operate on 94.1 MHz, from a nominal site at Brokers Nose, with a maximum ERP of 2 kW.

The licence area of the new community radio service will be identical to that of the existing community radio service 2VOX Wollongong, and will be defined using 1996 Census boundaries.

Option 8 Channel capacity will be made available for either a second additional (ie third) community radio service or an open narrowcasting service in **Wollongong**. The ABA is seeking comment specifically on this choice.

Should a licence for a third community radio service be made available for allocation, the service is planned to operate on 93.3 MHz from a nominal transmitter site at Brokers Nose with a maximum ERP of 2 kW.

The licence area of this new community radio service will be identical to that of the existing community radio service 2VOX Wollongong, and will be defined using 1996 Census boundaries.

Alternatively, should a licence for a third community radio service not be made available for allocation, channel capacity for an open narrowcasting service may be made available in **Wollongong**. The service is planned to operate on 93.3 MHz, from a nominal transmitter site at Brokers Nose, with a maximum ERP of 2 kW. For planning purposes the nominal coverage of the service will be considered to be a radius of 15 km around the nominal transmitter site.

Option 9 The ABA proposes to vary the frequency allotment plan (FAP) for the MF-AM Band and the VHF-FM Band to reflect the above options.

Process for allocation of licences

- (15) For commercial services planned in the LAP, service providers will be determined by use of a price-based allocation system under s.36 of the *Broadcasting Services Act 1992*. Applicants for commercial broadcasting licences should be aware that a reserve price applies to the licence and that applicants will be required to pay a non-refundable application fee for each licence.²
- (16) For community services planned in the LAP, the ABA will select the service providers according to the procedures set out in Part 6 of the *Broadcasting Services Act 1992* and having regard to the matters set out at s.84 of the Act. Only not-for-profit Australian companies that represent community interests are eligible to hold these licences.
- (17) For open narrowcasting services planned in the LAP, channels will be made available under s.34 of the *Broadcasting Services Act 1992*, for a minimum period of five years, and the service providers will be determined by use of a price-based allocation system under s.106 of the *Radiocommunications Act 1992*. Potential open narrowcasting service providers should be aware that a reserve price applies to the licence and that applicants will be required to pay a non-refundable application fee for each licence.³

IMPACT ANALYSIS

DISCUSSION

- (18) A crucial consideration in deciding whether to plan additional commercial, community and open narrowcasting broadcasting services is the likelihood that the decision would promote

² The reserve price is specified by the ABA on or before the closing date and time for applications. The amount of the non-refundable application fee is set by the ABA prior to announcing commencement of the price-based allocation system for commercial licences. These amounts are subject to change.

³ The reserve price is specified by the ABA on or before the closing date and time for applications. The amount of the non-refundable application fee is set by the ABA prior to announcing commencement of price-based allocation of transmitter licences to provide open narrowcasting services. These amounts are subject to change.

the objects of the Act, including the availability to audiences of a diverse range of radio services, and the economic and efficient use of the radiofrequency spectrum. *The ABA's General Approach to Planning* contains a detailed discussion of how various planning outcomes may promote the objects of the Act.

- (19) The options developed by the ABA in relation to the planning of broadcasting services that are to be made available in the Wollongong area are discussed below.
- (20) An index of specific advice considered in development of the draft LAP is provided at Appendix 1, page 27, and an index of submissions is provided at Appendix 2, page 28. Appendix 3, page 30, sets out the proposed assignment of channels planned for the Wollongong area and Appendix 4, page 31, details the technical restraints relating to the Wollongong area.

Existing services - Frequencies in use in the Wollongong area -

Table 1 - Existing radio services in the Wollongong licence area (grouped by category of service)

Frequency	Area	Callsign	Category	Maximum ERP or CMF	s.34 Dropthrough Expiry Date
95.7 MHz	Illawarra	2ABCFM	National	150 kW	
97.3 MHz	Illawarra	2ILA	National	150 kW	
98.9 MHz	Illawarra	2JJJ	National	150 kW	
1431 kHz	Wollongong	2ABCRN	National	430 V	
1485 kHz	Wollongong	2EA	National	120 V	
1314 kHz	Wollongong		Open Narrowcasting	1.1 kV	31/12/99
1575 kHz	Wollongong		Open Narrowcasting	1.1 kV	31/12/99
96.5 MHz	Wollongong	2UUL	Commercial	40 kW	
98.1 MHz	Wollongong	2WIN	Commercial	40 kW	
106.9 MHz	Wollongong	2VOX	Community	2 kW	

Demand for services in the Wollongong area -

Table 2 - Proposals received seeking to provide additional commercial radio services

Submitter	Date	Doc No.	Synopsis
Central Zone FM Services Pty Ltd	23/10/95	95/8689-01	Interest in supplying an independent commercial radio service in Wollongong.

Submitter	Date	Doc No.	Synopsis
NSW Race Narrowcasts Pty Ltd/2KY Racing Radio	14/9/95	95/8190	Interest in providing a racing radio narrowcasting service throughout NSW, including Dapto, Helensburgh, Kiama, Shellharbour and Wollongong; believes 1314 kHz should remain as open narrowcasting; interest in supplying a commercial service if 1314 kHz is proposed for a commercial licence.
Wollongong Broadcasters Pty Ltd (Wave FM - 2UUL)	27/10/95	95/8860	Interested in obtaining a second licence for their service area; opposes day/night switching for Sydney stations.

Table 3 - Proposals received relating to open narrowcasting services

Submitter	Date	Doc No.	Synopsis
AAA Australia Announce Archive (Lilburne, James)	28/11/96	96/4422-03	Interest in supplying a 10-20 Watt FM open narrowcasting service in Wollongong.
Information Radio Services	14/4/98	98/6074	Wishes to provide 1 kW ONC service from Brokers Nose.
Minister for Communications, the Information Economy and the Arts	28/8/98	98/7484	Requesting that the ABA give full weight to the claims of open narrowcasters in determining the mix of services when undertaking licence area planning.
Multimedia Corporation Pty Ltd	5/3/98	98/5726	Existing open narrowcasting operator in Wollongong (on 1575 kHz, HPONC, expires 31/12/99) & elsewhere; interest in expanding its Italian language service by providing off-band AM services in various areas.
NSW Race Narrowcasts Pty Ltd/2KY Racing Radio (Unsworth, Barrie)	14/9/95	95/8190	Interest in providing a racing radio narrowcasting service throughout NSW, including Dapto, Helensburgh, Kiama, Shellharbour and Wollongong; believe 1314 kHz should remain as open narrowcasting; interest in supplying a commercial service if 1314 is proposed for a commercial licence.
Phillips Fox obo Tatley Pty Ltd (Rete Italia)	11/6/98	98/6588	Proposes changes which provide security of tenure for open narrowcasters to meet the needs of Rete Italia's growing network of services, in Melbourne, Sydney, Gosford, Wollongong, Mildura, Queanbeyan, Griffith, Brisbane, Adelaide and Perth.

Submitter	Date	Doc No.	Synopsis
Radspec Consultants Pty Ltd (obo Mars Media Pty Ltd)	26/8/98	98/7469	Wishes to relocate its low power open narrowcasting service (on 87.5 MHz) from Bulli to Port Kembla and change frequency to 99.3 MHz.
TJH Systems Pty Ltd (Harwood, Trevor) (on behalf of NSW Race Narrowcasts Pty Ltd & 2KY Racing Radio)	10/4/97	97/5932	Technical details of proposed FM racing ONC services; seeking to continue operating a racing service on 1314 kHz in Wollongong.
Tourist Radio Pty Ltd (Lillburne, James)	22/2/95	95/5749	Interest in supplying an open narrowcasting 20-100 watt service in the 88 to 108 MHz band in the Illawarra, SE NSW region.
Wollongong Broadcasters Pty Ltd (Cameron, Janet)	19/1/96	96/0615	Opposing additional FM or AM services in the Wollongong area; supporting two AM frequencies for open narrowcasting; suggesting three FM frequencies identified in the FAP for Wollongong could be used at Bowral, Batemans Bay or Sydney.

Table 4 - Proposals received relating to community radio services

Submitter	Date	Doc No.	Synopsis
2MBS FM	27/10/95	95/8771	Seeking extended coverage of its Sydney service into Wollongong.
2MBS FM	11/11/97	97/7884	Confirming interest in extending its coverage into Wollongong.
2VOX FM 106.9	25/10/95	95/8766	Expressing concern regarding another community radio licence being granted in Wollongong.
Islamic Council of NSW Inc	8/5/96	96/3828	Interest in supplying an AM or FM community radio service in Wollongong.
Living Sound Broadcasters Ltd	5/10/95	95/8499	Interest in supplying a community FM service to Illawarra and North Eastern Shoalhaven from Mt Saddleback on 94.1 MHz with an ERP of 5 kW; supporting demographics and detailed studies of the programming of other

Submitter	Date	Doc No.	Synopsis
			stations.
Radio for the Print Handicapped of NSW (2RPH)	13/12/94	94/7922	Interest in supplying community services to Wollongong other R9 centres. ⁴
Wyong-Gosford Progressive Community Radio Assoc Inc (PCR FM)	31/3/95	95/6306	Requesting reservation of suitable FM channel capacity for Gosford market, free from interference from services in Illawarra.

Table 5 - Other proposals received relating to commercial radio services

Submitter	Date	Doc No.	Synopsis
Grant Broadcasters Pty Ltd	2/7/98	98/6957	(Owner of 2UUL) Believes 'that the allocation of any frequencies identified for the Wollongong market should go to community or narrowcast licences rather than an additional commercial licence'.
Macarthur South West Broadcasting Pty Ltd	17/12/96	96/4603-5	Concerning licence area issues relating to Sydney and Wollongong.
Wollongong Broadcasters Pty Ltd (Wave FM - 2UUL)	19/1/96	96/0615	Opposes additional FM or AM services in Wollongong licence area (served by radio from local sources, Sydney and Nowra, with 50% penetration of Sydney services into the Wollongong area); supports two AM frequencies for open narrowcasting; suggests three FM frequencies identified in the FAP for Wollongong could be used at Bowral, Batemans Bay or Sydney.

⁴ Interest no longer current - see file note of telephone conversation between Mr Stephen Jolley of Radio for the Print Handicapped and Ms Carolyn Smith of the ABA withdrawing current interest in R9 markets due to lack of resources. (Held on file 95/5889-02)

Table 6 - Proposals received relating to national radio services

Submitter	Date	Doc No.	Synopsis
Australian Broadcasting Corporation	10/11/95	95/9000	Recommending that provision be made for up to six national radio services at Wollongong; seeking increase in power for 2RN in Wollongong.
Special Broadcasting Service (Soothill, David)	1/11/95	95/8855	Requesting power increase for present SBS 2EA service in Wollongong; requesting provisions be made for future SBS radio services throughout the region; requesting clearance of Band II television in Wollongong from WIN Channel 3 at Brokers Nose; concerned that continuation of Band II may restrict other areas in the development of FM services; concerned that continued use of Channel 3 by WIN will inhibit low power narrowcasting within 87.5 to 88.0 MHz.

OPTIONS

Option 1 - National radio services

- Submissions relating to national radio services are listed in Table 6, page 13 above.
- One submission was received from the Australian Broadcasting Corporation⁵ which proposed that the ABA should make provision for up to six national radio services in the Wollongong area.
- A submission was received from the Coalcliff Progress Association regarding poor television and FM radio reception in the Illawarra area.
- A submission was received from the Special Broadcasting Service (SBS)⁶ requesting a power increase for its existing radio service 2EA in Wollongong, to alleviate poor radio reception and provide a wide coverage service to the greater Wollongong area. The service operates on 1485 kHz at a maximum power of 120 V. SBS requests this service be upgraded to an FM service from Knights Hill at 100 kW ERP, or alternatively a lower AM frequency upgraded to 10 kW.
- The SBS submission also requested clearance of Band II television from WIN channel 3. It expressed concern that continuation of Band II may restrict other areas in the development of FM services and inhibit low powered open narrowcasting services on 87.5 to 88.0 MHz.

⁵ Submission 95/9394 dated 12/12/95.

⁶ Submission 95/8855 dated 1/11/95.

- (21) The Ministerial Notification of Reservation of 21 November 1997 (under s.31(1) of the Act) includes requests for reservation of channel capacity for three FM services and two AM services in the Wollongong area. These services are already operating.
- (22) The ABA plans for new national services only where the Minister has notified the ABA to reserve additional capacity. As additional capacity for Wollongong does not appear on the Minister's list of 21 November 1997, the ABA will not take any action in regard to planning for future ABC or SBS radio services at this time.
- (23) The National Transmission Agency, the government body responsible for upgrading and establishing national transmission facilities, has no plans for upgrading the existing SBS radio service in Wollongong in its Capital Works Program⁷. The ABA therefore does not propose to take any action in regard to this matter at this stage.
- (24) The frequency range for Australian VHF FM radio is 87.5 to 108 MHz. The television channels that use VHF Band II are:
- Channel 3 - 85 to 92 MHz;
 - Channel 4 - 94 to 101 MHz; and
 - Channel 5 - 101 to 108 MHz.
- (25) As both FM radio and Band II television broadcasting services share the same frequency range, they may interfere with each other if similar channel blocks are used in the same or nearby geographical areas.
- (26) Whereas prior to commencement of the *Broadcasting Services Act, 1992* the government had a policy of clearance of Band II television channels, the Minister has not given the ABA any direction to continue with this policy. Accordingly, the ABA, in carrying out its planning function under the Act, now needs to make decisions on the timing of clearance of these channels in order to make capacity available for FM radio services, in accordance with the public benefit and the criteria set out in the Act.
- (27) The LAP for the Southern NSW television markets (which includes WIN3 Wollongong, Eden and Narooma) is within the ABA's planning priority group 5, and development of that LAP is expected to commence in 1999. Consideration of the clearance of WIN3 Wollongong, Eden and Narooma will take place at that time.
- (28) The draft LAPs for radio services in Bega, Nowra and Wollongong contain technical specifications for a number of additional FM frequencies that could be allocated despite the presence of WIN channel 3.
- (29) The ABA is interested in gauging the demand for FM services in the Wollongong area beyond the services already proposed to be made available in this LAP. Any information received will be considered when planning for television services in Southern NSW is

⁷ File note of 8/1/1998 on file 95/5889-02 - telephone conversation between Trevor Caughey, ABA and Mr Ron McGregor, NTA.

under way. This information will be used by the ABA in determining whether demand for any additional FM radio services is sufficient to warrant a decision to clear channel 3 to an alternative channel in the future.

Option 2 - Existing commercial radio services 2UUL and 2WIN Wollongong

- (30) No proposals were received relating to existing commercial radio services 2UUL and 2WIN in Wollongong, and therefore no changes are proposed.

Option 3 - One additional AM (ie third) commercial radio service; and

Option 4 - Second additional AM (ie fourth) commercial radio service or an AM open narrowcasting service in Wollongong.

- Submissions received relating to an additional commercial service in Wollongong are listed in Table 2, page 9. Submissions relating to open narrowcasting services are listed in Table 3, page 10.
- Interest in supplying an additional commercial radio service in the Wollongong area has also been expressed by Central Zone FM Services Pty Ltd.⁸
- Interest in providing a commercial radio service in Wollongong has also been expressed by NSW Race Narrowcasts Pty Ltd, although it states that its preference is to continue providing its existing racing service as an AM open narrowcasting service:

It should be noted that since January 1993 the Racing Radio service has been transmitted from Wollongong on A.M. 1314 which was temporarily allocated to N.S.W. Race Narrowcasts Pty Ltd as a “drop through” frequency.

When within the planning process the Wollongong A.M. frequencies are identified as being available for allocation, we believe that they should continue to be classified as narrowcast frequencies.

Although if the A.B.A. chooses to allocate 1314 as a commercial frequency, then Racing Radio will be prepared to bid for the commercial licence, as the A.M. transmitting site and equipment has been acquired by the N.S.W. T.A.B. ...

However, if the Authority were to confine the planning process to the allocation of commercial licences due to spectrum constraints, I must point out that 2KY Broadcasters Pty Ltd would be capable of presenting a comprehensive broadcast program incorporating elements of Racing Radio, as it currently does in the Sydney region and would be a participant in any allocation process conducted by the Authority in respect of commercial licences.⁹

- An initial submission from the licensee of the existing commercial radio station 2UUL, Wollongong Broadcasters Pty Ltd (Wave FM)¹⁰, expressed interest in obtaining a second

⁸ CZFM Pty Ltd is associated with the SAT FM radio network, advertised for sale in May 1998.

⁹ Submission 95/8190 dated 14/9/95.

¹⁰ Submission 95/8860 dated 27/10/95.

commercial radio broadcasting licence, and opposed day/night switching for Sydney radio stations.

- A later submission from the new owners of 2UUL stated:
 1. The Wollongong licence area is well served with local radio signals both commercial and national. Furthermore, the fortuitous signals from Nowra and from Sydney provide a very complete range of AM and FM radio services. We submit that there is no public demand for additional services in either FM from Knights Hill or in an allocation of the AM signals.
 2. The AM signals 1314Khz and 1575Khz are providing narrowcast services which, although they are re-broadcasts of external programs, do meet specific needs of audiences in the Wollongong area. In this area, there is no doubt that the technique of temporarily allocating the “drop through” AM frequencies to narrowcast has been successful. We submit that the two AM frequencies in the Wollongong area be retained for narrowcast purposes.
 3. We submit that the allotment of three FM frequencies at Knights Hill be reconsidered in the light of the demand for a frequency at Batemans Bay and at Bowral and also in view of the uncertainty of the situation of frequencies that will be allocated in the Sydney area.¹¹
- Subsequently, Grant Broadcasters Pty Ltd (owners of 2UUL) expressed its opposition to a third commercial service in the Wollongong area based on the economic state of the region, stating:

...we have recently noted the Revised Preliminary Views and Draft Technical Specifications for Newcastle, Muswellbrook and Taree. Particularly we note that it is proposed that there is no additional commercial radio service for Newcastle. We also note the reference to the depressed economic conditions in Newcastle and the diversity of services currently available and that an additional community radio service would best meet object 3(a) of the Broadcasting Services Act 1992.

We believe that these matters are also very relevant to any views that the ABA may form on the planning for Wollongong and Nowra.

Wollongong. Since Grant Broadcasters Pty Ltd purchased the licence for 2UUL in November 1996 we have become very aware of the difficult economic conditions in the area. Unemployment in the 1996 census stood at 12.2% compared to Newcastle at 11.7%.

In addition to this, there is intense competition for advertising on commercial radio with the opposition station 2WIN being owned by the television company, WIN TV, also headquartered in Wollongong...

We anticipate that in this year, 1997/98, we will probably break even. This is quite unacceptable after the two previous years of loss.

Wollongong has two commercial services plus fortuitous coverage from POWER FM [2WSK] transmitting from Knights Hill, plus the ABC, 2EA [national radio] and two high powered narrowcasters and all the Sydney stations...Wollongong has the widest possible diversity of radio services.

For reasons we have previously stated, an additional commercial radio station would not increase the diversity and would only replicate existing services. Moreover, another station would not increase the area's radio revenue and we would have to reduce the amount of local input to even maintain the break-even position.

¹¹ Submission 96/0615 dated 19/1/96.

In view of the above two factors we believe that the allocation of any frequencies identified for the Wollongong market should go to community or narrowcast licences rather than an additional commercial licence. With the large numerical growth in Sydney's population and the demand for new radio services in Sydney we believe that the frequencies that may be identified for the Illawarra would be more efficiently used if they were to be allocated to Sydney.¹²

(31) In the Wollongong region, Grant Broadcasters Pty Ltd currently owns 2UUL Wollongong and the neighbouring Nowra commercial radio services - 2WSK (POWER FM) which transmits from Knights Hill on 94.9 MHz at 50 kW and the AM service, 2ST.

- Rete Italia, which provides an Italian language programming service on 1575 kHz in Wollongong (as part of a network covering Adelaide, Brisbane, Gosford, Griffith, Melbourne, Mildura, Queanbeyan, Sydney and (shortly) Perth) wishes to expand its network. (The Wollongong open narrowcasting service is currently licensed until 31 December 1999.). In its submission, Rete Italia states:

As part of our ongoing commitment to expand our network to provide Italian radio programmes to all Italians and Italo-Australians in Australia we are in the process of placing our signal on a satellite with full coverage of the Australian continent. ...

To this end, we would be very interested in obtaining a narrowcast frequency which may be available for narrowcasting and hereby submit our submission for use of this frequency for Italian programming with *Rete Italia*.¹³

- A recent submission from Phillips Fox, lawyers acting for Rete Italia, proposes an alternative category of licence which would not involve an auction process:

... [the] introduction of a new category of broadcasting services or alternatively, a new sub-category of open narrowcasting services, which would better suit its characteristics and needs. The new category might best be described as "Ethnic Commercial".

The "Ethnic Commercial" category would cater for the unique needs of open narrowcasters, such as Rete Italia. The category would bring greater certainty at a reasonable cost...

The "Ethnic Commercial" category would have the following elements:

- (b) Re-buying and buying licences without the auction process, the price being determined by the ABA.
- (c) The allocation of licences by the ABA would involve a consideration of:
 - the dependence of the target group on the service;
 - any historical performance;
 - the apparent professionalism of the applicant.
- (d) Licence renewals would be more certain, as with commercial licences, thereby creating some security of tenure.

...the creation of a new category of broadcasting services would require legislative change. This is outside the realms of the possible in terms of submissions to the ABA¹⁴.

- The Minister for Communications, the Information Economy and the Arts has also requested the ABA take account of the claims of operators of existing open narrowcasting services using AM channels vacated by commercial radio services which converted to FM, particularly in mainland capital cities, when determining the mix of services in an area. The Minister states:

¹² Submission 98/6957 dated 2/7/98.

¹³ Submission 98/5726 dated 5/3/98.

¹⁴ Submission 98/6588 dated 11/6/98.

... some open narrowcasters including the operators of ethnic services such as 3XY and Rete Italia, have expressed concerns about the future prospects of their services. They have suggested that, ... were the services to be no longer available as a result of the relevant LAPs and subsequent allocation processes, this would deprive ethnic communities in general of one of the few sources of information and entertainment available in their native languages.

The racing industry is similarly concerned to retain their metropolitan open narrowcasting services, there being no alternative to these services for racing enthusiasts.

I have assured these operators that their claims will be fully taken into account by the ABA in undertaking licence area planning. In particular, I have drawn to their attention the provision for wide public consultation in the licence area planning process, and suggested that they make submissions to the ABA formally presenting their views in this context. I understand that several open narrowcasters have already been in contact with the ABA regarding the future of their services.

I note that, as part of the LAP process, the ABA is required to taken into account a range of factors including the objects of the Broadcasting Services Act. The latter include the promotion of diversity in the range of broadcasting services available to the public, and which reflect a sense of Australian identity and cultural diversity.

While I appreciate that decisions on the mix of services to be made available as a result of LAPs is entirely the responsibility of the ABA, I would hope that the Authority would give full weight to the claims of open narrowcasters, the importance of such services in contributing to the achievement of diversity in broadcasting services, and to meeting the needs of niche interests in the community.¹⁵

- (32) The characteristics of the Wollongong market considered by the ABA are as follows:
- (33) At Census 1996, the estimated population of the Wollongong licence area was 246,795 persons, an increase of more than 10,500 persons since the Census in 1991 (236,024 persons).
- (34) Relative to total Australia, the Illawarra and SE NSW region contains a broadly comparable percentage of people who speak a language at home other than English.
- (35) At Census 1996, the Illawarra and SE NSW region had a lower percentage of Aboriginal and Torres Strait Islander persons than Australia as a whole.
- (36) At Census 1996, the median weekly household income of Wollongong (\$608) was below the Australian median (\$635) and the NSW median (\$655) but higher than the median weekly household income for 'NSW Other Urban' (\$510).
- (37) Other matters considered include the following:
- (38) Prior to the commencement of the *Broadcasting Services Act 1992*, the two existing commercial radio services in Wollongong converted from the AM band to the FM band. These AM channels - 1314 kHz and 1575 kHz - were made available, under s.34 of the Act, for use by open narrowcasting services until the expected date of finalisation of the Wollongong radio LAP, where the decision about their future use would be made. The current expiry date for the use of these frequencies for open narrowcasting purposes is 31 December 1999.

¹⁵ Submission 98/7484 dated 28/8/98.

- (39) 1314 kHz is currently being used by NSW Race Narrowcasts Pty Ltd for 2KY Racing Radio, and 1575 kHz by Rete Italia for Italian language programming.
- (40) NSW Race Narrowcasts Pty Ltd currently provides a high powered AM open narrowcasting racing radio service to an area from the southern suburbs of Sydney to Shoalhaven Heads, including the centres of Bulli, Corrimal, Dapto, Helensburgh, Kiama, Port Kembla, Robertson, Shellharbour, Stanwell Park and Wollongong.
- (41) The area served by the Italian language open narrowcasting service provided by Rete Italia is smaller - from north Wollongong to Gerringong, including the centres of Corrimal, Dapto, Kiama, Port Kembla, Shellharbour, and Wollongong.
- (42) In addition to these two open narrowcasting services which are licensed to operate until 31 December 1999, the Wollongong commercial radio market currently supports two FM commercial radio services, as well as five national and one community service. The ABA considers it likely that, among a population of 246,795 persons within the licence area, Wollongong may contain demand for an additional one or two commercial radio services.
- (43) Of the two frequencies, 1314 kHz has marginally better propagation characteristics due to its position on the AM band. The ABA therefore proposes to make this frequency available for a new (ie third) commercial radio service in Wollongong.
- (44) Before its conversion to FM, 2WIN (formerly 2OO) was actively seeking a change in frequency from 1575 kHz to 1062 kHz, due to the poor coverage characteristics of 1575 kHz. Interference concerns mean that the power of 1575 kHz cannot be increased, and existing nulls in the radiation pattern of this service have to be maintained. In view of this, the ABA proposes that this frequency be made available for either a second additional (ie fourth) commercial radio service, or remain available for use by an open narrowcasting service.

(45) *Submissions are now being sought about whether the AM frequency 1575 kHz should be used for commercial or open narrowcasting radio broadcasting services.*

Please note:

Should 1575 kHz be taken up for use as a fourth commercial radio service in Wollongong in the price-based allocation process, no frequencies would be available for future allocation of high power open narrowcasting services in the Wollongong area.

- (46) At recent ABA auctions of commercial and open narrowcasting radio broadcasting licences held in Sydney there has been higher than expected demand for commercial licences which had not been apparent from submissions to the LAP process. This clearly

indicates that the lack of formal expressions of interest to the planning process may not be evidence of no entrepreneurial capacity.

- (47) In the absence of any compelling evidence to the contrary, the ABA will place some weight on expressions of interest from persons with a successful track record in managing a broadcasting service in competitive markets, or from persons who express a serious interest and are able to provide evidence that they will be able to readily access such knowledge when considering whether making an additional commercial radio licence available in an area would be likely to promote the Objects of the Act.

Summation

- (48) After considering the objects of the Act and the planning criteria in s.23, and taking into account the knowledge and experience of the Members (s.169), the ABA has formed the view that one new AM commercial radio licence and either a second AM commercial radio licence or, alternatively, an open narrowcasting service, should be made available for allocation in the Wollongong market, for the following reasons:

- it would represent economic and efficient use of the radiofrequency spectrum;
- there is investor demand to provide these services;
- additional commercial and/or open narrowcasting radio services are likely to promote diversity; and
- it is likely to promote coverage of matters of local significance.

- (49) **The ABA seeks additional information from potential service providers to assist in finalising a decision regarding an additional (ie third) and either a fourth commercial radio service or open narrowcasting service in the Wollongong market. The ABA requests that potential service providers address the following questions:**

- a) *Whether and in what way providing additional commercial radio broadcasting services or open narrowcasting services in the Wollongong market would represent an economic and efficient use of the radio frequency spectrum;*
- b) *Whether or not any additional commercial radio service you propose to provide would offer signal coverage at least comparable to existing services;*
- c) *The likely impact of any increase in the number of services on diversity in the range of services offered and the overall level of programming in the area covering matters of local significance;*
- d) *Information and supporting evidence about your capability to provide a commercial radio service;*
- e) *Whether sufficient capital is currently or potentially available to you to commence and continue to provide a fourth commercial radio service in accordance with the technical specifications proposed in the draft LAP; and*

f) <i>Whether your interest is contingent in any way.</i>

Option 5 - Existing community radio service 2VOX Wollongong

- No proposals were received relating to existing commercial radio service 2VOX in Wollongong, and consequently no changes are proposed.

(50) In accordance with the Ministerial Notice of Reservation of 29 October 1993 (under s.31(1) of the Act), channel capacity will be reserved for the existing FM community radio service 2VOX Wollongong.

Option 6 - One additional (ie second) FM community radio service; and**Option 7 - A second additional (ie third) FM community radio service or an FM open narrowcasting radio service in Wollongong**

- Submissions received relating to additional community radio services in Wollongong are listed in Table 4, page 11, and those relating to open narrowcasting services are listed in Table 3, page 10.
- Interest in providing a new community service in Wollongong has been expressed by:
 - 2MBS FM;
 - 2RPH
 - Islamic Council of NSW Inc; and
 - Living Sound Broadcasters Ltd.
- 2MBS FM, the licensee of the existing community radio service 2MBS Sydney, operating on 102.5 MHz, expressed interest in extending its service into the Wollongong area.¹⁶
- 2RPH which provides a print handicapped community radio service in Sydney on 1224 kHz, expressed interest in providing its reading service progressively to print handicapped people in various centres throughout NSW, including Wollongong.¹⁷ However, due to lack of resources, it has since withdrawn its interest.¹⁸
- The Islamic Council of NSW Inc expressed interest in providing an AM or FM community radio service in Wollongong.¹⁹
- Living Sound Broadcasters Ltd expressed interest in providing a service to Illawarra and North Eastern Shoalhaven from Mt Saddleback on 94.1 MHz with an ERP of 5 kW.²⁰

¹⁶ Submission 95/8771 dated 27/10/95.

¹⁷ Submission 94/7922 dated 13/12/94.

¹⁸ See file note of telephone conversation between Mr Stephen Jolley of Radio for the Print Handicapped and Ms Carolyn Smith of the ABA withdrawing current interest in R9 markets due to lack of resources. (Held on file 95/5889-02)

¹⁹ Submission 96/3828 dated 8/5/96.

²⁰ Submission 95/8499 dated 5/10/95.

- Interest in supplying an open narrowcasting service in the Wollongong area has been expressed by:
 - Australia Announce Archive;
 - Information Radio Services
 - Tourist Radio Pty Ltd; and
 - NSW Race Narrowcasts Pty Ltd (2KY Racing Radio).
 - Australia Announce Archive proposed a 10 W to 20 W FM open narrowcasting service in Wollongong.²¹
 - Information Radio Services proposed a 1 kW open narrowcasting service from Brokers Nose to cover an area north to Stanwell Park and south to Gerringong.²²
 - Tourist Radio Pty Ltd proposed a 20 W to 100 W open narrowcasting service in the 88 MHz to 108 MHz band in the Illawarra region, using NTA transmitter sites.²³
 - NSW Race Narrowcasts Pty Ltd (2KY Racing Radio) currently provides an open narrowcasting racing radio service to Bulli, Corrimal, Dapto, Helensburgh, Kiama, Port Kembla, Robertson, Shellharbour, Stanwell Park and Wollongong on 1314 kHz, and has expressed interest in continuing this service.²⁴
- (51) The Islamic Council of NSW Inc has conducted no temporary transmissions in Wollongong, but has conducted special events transmissions for Ramadan in other centres.
- (52) Living Sound has conducted temporary transmissions since July 1993 and is currently operating under a Temporary Community Broadcasting Licence (TCBL)²⁵ granted until 19 January 1999, on 94.1 MHz from Saddleback Mountain.
- (53) There is one existing general community radio service in Wollongong, 2VOX, operating on 106.9 MHz, from a nominal site at Brokers Nose, with a maximum ERP of 2 kW.
- (54) Two high power open narrowcasting services in Wollongong are currently operating on AM frequencies - 1314 kHz (racing radio) and 1575 kHz (Italian language).
- (55) The ABA is proposing that one of these frequencies - 1314 kHz - be made available for a commercial radio service, and the other - 1575 kHz - for either a commercial or open narrowcasting service.

²¹ Submission 96/4422-03 dated 28/11/96.

²² Submission 98/6074 dated 14/4/98.

²³ Submission 95/5749 dated 22/2/95.

²⁴ Submission 95/8190 dated 14/9/95.

²⁵ The temporary transmissions policy has been replaced by temporary community broadcasting licences (TCBLs) which came into effect in August 1997. TCBLs allow aspirant groups to operate temporary community services for up to twelve months, depending on the number of aspirant groups sharing the TCBL frequency.

- (56) The ABA believes there is justification for the introduction of two new community radio services or one community and one open narrowcasting service in the Wollongong area to promote diversity in the range of services available.
- (57) Capacity is available for two medium power FM radio services to operate in Wollongong from Brokers Nose on 94.1 and 93.3 MHz, each with a maximum ERP of 2 kW. Neither of these frequencies can be operated at higher power and therefore neither is suitable for a new FM commercial radio service in Wollongong.

(58) *Please note:*

If both frequencies (94.1 MHz and 93.3 MHz) are made available for community radio broadcasting services in the final LAP for Wollongong, and are taken up in the subsequent allocation process, no frequencies would be available for future allocation as medium power open narrowcasting services in the Wollongong area.

- (59) The ABA considers the licence area of the existing Wollongong community radio service, 2VOX, is the most appropriate for any additional community radio service/s in Wollongong.
- (60) The ABA is also proposing that an additional community radio licence be made available for allocation in the Nowra/Shoalhaven area from Cambewarra Lookout (on 103.7 MHz at 1 kW maximum ERP) - see Nowra discussion paper and draft LAP - October 1998.

(61)

The ABA would be interested in obtaining information from potential service providers concerning community of interest ties and also on market conditions as set out in 'The ABA's General Approach to Planning' in relation to additional community radio services in the Wollongong region.

(62) Please note:

*The purpose of the draft LAP and discussion paper is to ascertain the technical requirements of aspirant broadcasters in relation to the coverage area of any proposed service. It is **not** about which aspirant group should be allocated a proposed community radio broadcasting licence. This is determined after the LAP has been finalised, when the allocation process will consider the merits of all applicants for community radio licences made available for allocation in the LAP.*

Option 8 - Proposed variation to the Frequency Allotment Plan

- (63) The ABA proposes to vary the frequency allotment plan (FAP) for the MF-AM Band and the VHF-FM Band to reflect the options discussed above as part of the draft Wollongong radio LAP.

OTHER CONSIDERATIONS

Low power open narrowcasting

- (64) The frequency range 87.5 MHz to 88.0 MHz is within the channel 3 part of the broadcasting services band as the sub-band assigned to low power (1 W in urban areas and 10 W in rural areas) open narrowcasting radio services throughout Australia where channel 3 television services do not operate. 99.3 MHz and 99.7 MHz have been found suitable for use as low power open narrowcasting radio services in areas affected by the Wollongong channel 3 television service.
- (65) The licensee of an LPON service in Wollongong (2 MAC FM Ethnic Radio) has been unable to transmit this service on 88.0 MHz as the transmitter is located within the coverage area of channel 3²⁶. Suitable alternative frequencies for this service are either 99.3 MHz or 99.7 MHz.
- (66) Similarly, the licensee of an LPON service in Bulli (Mars Media Pty Ltd) cannot transmit this service on 87.5 MHz as the transmitter is located within the coverage area of channel 3²⁷. The licensee has requested relocation of the transmitter to Port Kembla and a change in frequency to 99.3 MHz.
- (67) The ABA retains the power to make spectrum available for open narrowcasting purposes outside of the licence area plan, under s.34 of the *Broadcasting Services Act 1992*. If there is interest in 99.3 MHz and 99.7 MHz for low power open narrowcasting purposes in the Wollongong channel 3 coverage area, the ABA will consider making these frequencies available under s.34 of the Act. Existing LPON licensees who are currently

²⁶ Refer to correspondence between Australian Communications Authority, ABA and Mr Alec Kencevski - Specific Advice 97/7780, 3/11/97.

²⁷ Submission no. 98/7469 dated 26/8/98.

licensed to operate on other non-standard frequencies, will have first preference for association of 99.3 MHz or 99.7 MHz for their services.

- (68) **To enable these LPON services to operate, the ABA will directly arrange for variations of these existing LPON licences to either 99.3 or 99.7 MHz.**
- (69) Whereas the Australian Communications Authority (ACA) issues LPON licences²⁸ using frequencies within the range 87.5 - 88.0 MHz, the ABA issues these licences where this sub-band is unavailable due to the operation of channel 3 television services. Accordingly, the ABA would like to hear from any person or organisations interested in providing LPONs using 99.3 MHz or 99.7 MHz in the Wollongong channel 3 coverage area. However, licences for new LPON services will only be issued after existing LPON licences have been varied.
- (70) Under Option 8 in the discussion paper for Nowra, the ABA proposes to make the frequency 103.7 MHz available for a community radio service in Nowra. There is currently an LPON on 103.7 MHz in the Wollongong area, which may receive interference from the Nowra community radio service. The ABA will contact the licensee of this service to arrange for a change of its operating frequency.

Developments in Technology

- (71) Developments in current radio and television broadcast technology can have an impact on the future planning of broadcasting services. For example, developments in current technology may offer an improvement in the received quality of existing services or may allow for improved spectrum efficiency in planning for conventional radio and television services. The ABA, in consultation with national and international bodies, closely monitors developments in current broadcasting technology and evaluates its likely implications to the Australian broadcasting environment.

- Digital Radio Broadcasting (DRB)

- (72) As implementation plans for DRB around the world are still under negotiation, the ABA is unable to consider in detail the impact of DRB in preparing this radio licence area plan.
- (73) On 24 March 1998, the Minister for Communications, the Information Economy and the Arts, Senator the Hon Richard Alston, announced that the Government had put in place planning processes which will allow the start up of digital radio services in Australia in 2001. He said that planning will proceed on the basis that the Eureka 147 system will be used to provide digital services, operating generally in the L band, but with consideration of VHF spectrum in regional areas. Existing broadcasters will share a multiplex facility which can provide 5CD quality radio services.
- (74) The Minister also announced that commercial, community and national (ABA & SBS) radio broadcasters will be able to convert to digital, but will be required to transmit their programs in

²⁸ LPON licences are not allocated at auction but are issued upon application.

analogue mode for a simulcasting period. He said that there will also be opportunities for new digital commercial radio services, with the number and timing of new entrants to be determined as part of the planning process.

- (75) As stated in *The ABA's General Approach to Planning*,²⁹ the ABA assumes that, even if a DRB system was introduced in Australia later this decade, AM and FM services would still remain the most important media for radio services for a number of years, as it would take an extended period of time for DRB receivers to reach comparable penetration rates, and for DRB transmission facilities to provide a comprehensive coverage throughout the country.

The Demand for Radiofrequency Spectrum for Services Other than Broadcasting Services

- (76) The ABA's general consideration of demand for spectrum for other services is contained in *The ABA's General Approach to Planning*. There were no submissions received relevant to the Wollongong licence area.

Such Other Matters as the ABA Considers Relevant

- (77) The ABA is unaware of other relevant matters at this stage.

CONSULTATION

- (78) Submissions on the planning of broadcasting services for the Illawarra, SE NSW and ACT region, which includes the Wollongong area, were invited in June 1995. Informal discussions with existing and aspirant broadcasters were conducted during a visit to the region in July 1995.
- (79) This discussion paper and draft LAP are issued for the purpose of wide public consultation on the ABA's proposals for the number, mix and shape of broadcasting services to be available in the Wollongong area.

CONCLUSION

- (80) Comments received on the draft LAP will be considered by the ABA. Any substantial variations to the ABA's options will be circulated for comment before the ABA determines the final LAP for radio services in the Wollongong area.

²⁹ Chapter 5, Item 10, page 45.

INDEX OF SPECIFIC ADVICE

Date	Doc. No.	Details
13/10/95	- ¹	SIARS Pty Ltd - Demographic/Economic Analysis - Wollongong Commercial Radio
10/10/96	96/4077	SIARS Pty Ltd - Supplementary Report - Wollongong Commercial Radio
22/10/97	- ²	Note for File - Telephone conversation between Ms Carolyn Smith (ABA) with Mr Keith Ashton of Australia Announce Archive (formerly known as Tourist Radio Pty Ltd)
3/11/97	97/7780	Correspondence between ABA, Australian Communications Agency and Mr Alec Kencevski (2 Mac fm Ethnic Radio) regarding interference to WIN3 from LPON service on 88 MHz.
6/11/97	- ³	File note of telephone conversation between Mr Stephen Jolley of Radio for the Print Handicapped and Ms Carolyn Smith of the ABA withdrawing current interest in R9 markets due to lack of resources
1/12/97	- ⁴	Note for File - Telephone conversation between Ms Val Avery (ABA) and Mr Norman Ashley of Capital Media NSW Pty Ltd re status of his submissions.
8/1/98	- ⁵	Note for File - Telephone conversation between Trevor Caughey (ABA) and Mr Ron McGregor (National Transmission Agency) re request by SBS to increase power of 2EA in Wollongong.
22/5/98	98/6355	Letter from Boyd House and Partners regarding newspaper advertisement submitted by Logan Partners Corporation advertising sale of SAT FM network.

¹ Held on File No. 95/5889-01
² Held on File No. 95/5889-02
³ ibid
⁴ ibid
⁵ ibid

APPENDIX 2

INDEX OF SUBMISSIONS - WOLLONGONG AREA

Trading/ Organisation name	Surname	Given name	Date of correspondence	Document number
2MBS FM	Benyon	J M	27/10/95	95/8771
2MBS FM	Hamilton	Ken	11/11/97	97/7884
2VOX FM 106.9	Goncalves	Alex	25/10/95	95/8766
AAA Australia Announce Archive	Lilburne	James	28/11/96	96/4422-03
Austouradio Ltd	Ashley	Norman	10/8/94	94/6244
Australian Broadcasting Corporation	Jadeja	Dilip	10/11/95	95/9000
CAPCOMM Pty Ltd; SMFM: SATELLITE/ MULTICASTING/FM & Austouradio Ltd (now InfoRadio Australia)	Ashley	Norman	21/7/95	96/3354
Central Zone FM Services Pty Ltd	Lilburn	Herb	23/10/95	95/8689-01
Coalcliff Progress Association	Dalmer	J	7/11/94	94/7800
Department of Cross Cultural Ministries Anglican Church	Thew	John	22/8/95	95/7994
Grant Broadcasters Pty Ltd	Cameron	Dugald	2/7/98	98/6957
Information Radio Services	Bedford	Mike	14/4/98	98/6074
Islamic Council of NSW Inc	Roude	Ali	8/5/96	96/3828
Living Sound Broadcasters Ltd	Sharpham	Alan	5/10/95	95/8499
Macarthur South West Broadcasting Pty Ltd	Lopresti	Roy	17/12/96	96/4603-5
Member for Cunningham	Martin MP	The Hon Stephen	27/8/96	96/4093
Member for Cunningham	Martin MP	The Hon Stephen	1/4/97	97/5849

Trading/ Organisation name	Surname	Given name	Date of correspondence	Document number
Minister for Communications, the Information Economy and the Arts	Alston	Senator the Hon	28/8/98	98/7484
Minister For Gaming and Racing	Face, MP	The Hon J Richard	27/10/95	95/8831
Multimedia Corporation Pty Ltd	Larobina	Ubaldo	5/3/98	98/5726
NSW Race Narrowcasts Pty Ltd/2KY Racing Radio	Unsworth	Barrie	14/9/95	95/8190
Phillips Fox obo Tatley Pty Ltd (Rete Italia)	Fox	Phillip	11/6/98	98/6588
Radio for the Print Handicapped of NSW (2RPH)	Crozier	Tom	13/12/94	94/7922
Radspec Consultants Pty Ltd (obo Mars Media Pty Ltd)	Clark	Brian	26/8/98	98/7469
SMFM SATELLITE/ MULTICASTING/FM (now InfoRadio Australia)	Ashley	Norman	13/2/95	95/5490-09
SMFM SATELLITE/ MULTICASTING/FM (now InfoRadio Australia)	Ashley	Norman	13/2/95	95/5490-10
Special Broadcasting Service	Soothill	David	1/11/95	95/8855
TJH Systems Pty Ltd	Harwood	Trevor	10/4/97	97/5932
Tourist Radio Pty Ltd	Lillburne	James	22/2/95	95/5749
Wollongong Broadcasters Pty Ltd (Wave FM - 2UUL)	Cameron	Janet	19/1/96	96/0615
Wollongong Broadcasters Pty Ltd (Wave FM - 2UUL)	Whiteman	Mike	27/10/95	95/8860
Wyong-Gosford Progressive Community Radio Assoc Inc (PCR FM)	Keane	Laurie	31/3/95	95/6306
Wyong-Gosford Progressive Community Radio Inc (PCR FM)	Keane	Laurie	4/8/97	97/6967

PROPOSED ASSIGNMENT OF CHANNELS REPORT

LAP : Wollongong Medium : Radio

Service Category	Status	Frequency	Service Licence No	Technical Specification No	Attach No	Area Served	s 34 Droptthrough Expiry date (if applicable)
National	Licensed Reserved	95.7 MHz	N/A	TS3008901	1.4	Illawarra	
National	Licensed Reserved	97.3 MHz	N/A	TS2111601	1.5	Illawarra	
National	Licensed Reserved	98.9 MHz	N/A	TS7335001	1.6	Illawarra	
Commercial	Available	1314 kHz	SL1150237	TS6873001	1.7	Wollongong	31/12/99
National	Licensed Reserved	1431 kHz	N/A	TS4023001	1.2	Wollongong	
National	Licensed Reserved	1485 kHz	N/A	TS4233601	1.3	Wollongong	
Commercial (Option)	Available	1575 kHz	SL1150249	TS10008385	1.8	Wollongong	31/12/99
Open Narrowcasting (Option)	Available	1575 kHz	N/A	TS8311001	1.14	Wollongong	31/12/99
Community (Option)	Available	93.3 MHz	SL1150266	TS10008523	1.11	Wollongong	
Open Narrowcasting (Option)	Available	93.3 MHz	N/A	TS10008292	1.15	Wollongong	
Community	Available	94.1 MHz	SL1150163	TS10008291	1.12	Wollongong	
Commercial	Licensed	96.5 MHz	SL4137	TS4137001	1.9	Wollongong	
Commercial	Licensed	98.1 MHz	SL4128	TS4128001	1.10	Wollongong	
Community	Licensed	106.9 MHz	SL2006	TS2006001	1.13	Wollongong	

APPENDIX 4

TECHNICAL RESTRAINTS RELATING TO THE DELIVERY OR RECEPTION OF BROADCASTING SERVICES

- Channel capacity is available for
 - two high power (1.1 kV) AM radio services in the Wollongong area (proposed as one commercial service and one commercial or open narrowcasting radio service) (Option 3 and 4)
 - two medium power (2kW) FM radio services (proposed as one community and one community or open narrowcasting service) in the Wollongong area (Option 6 and 7).
- The two AM frequencies, 1314 and 1575 kHz, were previously used by commercial radio services which converted to the FM band prior to commencement of the *Broadcasting Services Act, 1992*, and have been made available, under s.34 of the Act, for open narrowcasting use pending a decision as to their future use in the Wollongong radio LAP.
- To meet the demand for new radio services, frequencies 93.3 MHz and 94.1 MHz were examined and found to be suitable for potential use in the Wollongong area.

An engineering assessment of these frequencies follows:

Wollongong

The licence area of the Wollongong commercial radio licence area has a population of approximately 246,795 persons (1996 Census).

The following table shows which frequencies are potentially available for assignment in the Wollongong region:

Frequency	Area	Callsign	Category	Maximum ERP or CMF
1314 kHz	Wollongong		Proposed commercial	1.1 kV
1575 kHz	Wollongong		Proposed commercial or open narrowcasting	1.1 kV
93.3 MHz	Wollongong		Proposed community or open narrowcasting	2 kW
94.1 MHz	Wollongong		Proposed community	2 kW

1314 kHz and 1575 kHz

These frequencies were originally used by commercial services 2WIN and 2UUL before they converted to FM. Prior to their conversion, 2OO (which became 2WIN) on 1575 kHz requested a change to a lower AM frequency (1062 kHz) because of problems of coverage within the Wollongong area. This was actively being explored when the proposal for the Wollongong stations to convert to FM presented itself.

Both of these frequencies have been made available for open narrowcasting use until 31/12/1998 using their current specifications.

93.3 MHz, 94.1 MHz 2 kW

These frequencies are adjacent to the existing 2SNO commercial FM radio service in Goulburn (93.5 MHz, 40 kW) and a proposed FM commercial or open narrowcasting service in Goulburn (94.3 MHz 40 kW). Interference assessments indicate that the proposed Wollongong services will not cause interference to the Goulburn services, and the hilly terrain of the escarpment above Wollongong will protect the proposed Wollongong services from interference from the Goulburn services.

Electromagnetic compatibility (EMC) checks show no problems of potential interference to radiocommunication services.

Low Power Open Narrowcasting sub-band - 99.3 MHz and 99.7 MHz

The use of the frequencies in the sub-band 87.5 to 88.0 MHz for low power open narrowcasting (LPON) services (1 W in urban areas and 10 W in rural areas) is restricted when a television service is operating on VHF channel 3. The channels in the LPON sub-band can only be made available in areas outside a 50 km radius from the Wollongong channel 3 television transmitter site at Brokers Nose.

Applications for LPON services within the Wollongong licence area that lie inside the restricted radius must use an alternative sub-band of frequencies. In the Wollongong area, the alternative frequencies are 99.3 MHz and 99.7 MHz, which were chosen taking into account the presence of the Wollongong television service on channel 3 and existing VHF-FM radio services.

These frequencies still have the possibility of causing interference to reception of the channel 3 television service. This would only occur close to the LPON transmitter or where the signal strength of the channel 3 television service is relatively low. The interference could be rectified by fitting a notch filter to remove the FM signals from

the antennas of affected television receivers. Such remedial action would be the responsibility of the LPON licensee.



**Australian
Broadcasting
Authority**

ILLAWARRA, SE NSW AND ACT WOLLONGONG AREA

(RADIO)

DRAFT LICENCE AREA PLAN

OCTOBER 1998

DRAFT LICENCE AREA PLAN - WOLLONGONG

DRAFT DETERMINATION

The Australian Broadcasting Authority hereby makes this plan for broadcasting services in the Wollongong area, under subsection 26(1) of the *Broadcasting Services Act 1992*.

Five national radio broadcasting services are to be available in the area described at Attachment 1.1 to this Determination with the use of the broadcasting services bands. The characteristics, including technical specifications, of the national radio services that are to be available in the area described at Attachment 1.1 are set out in Schedule One and Attachments 1.2 - 1.6 to this Determination.

Three (or four *) commercial radio broadcasting services are to be available in the area described at Attachment 1.1 to this Determination with the use of the broadcasting services bands. The characteristics, including technical specifications, of the commercial radio services that are to be available in the area described at Attachment 1.1 are set out in Schedule One and Attachments 1.7 - 1.10 to this Determination.

Two (or three **) community radio broadcasting services are to be available in the area described at Attachment 1.1 to this Determination with the use of the broadcasting services bands. The characteristics, including technical specifications, of the community radio services that are to be available in the area described at Attachment 1.1 are set out in Schedule One and Attachment 1.11 to 1.13 in this Determination.

No (or up to two ***) open narrowcasting radio services are to be available in the area described at Attachment 1.1 to this Determination with the use of the broadcasting services bands. The characteristics, including technical specifications, of the open narrowcasting radio services that are to be available in the area described at Attachment 1.1 are set out in Schedule One and Attachments 1.14 - 1.15 to this Determination.

* See Option 4

** See Option 7

*** See Options 4 and 7

Dated

SCHEDULES

Each of the Schedules sets out:

- the category of each of the services that are to be available in that area (column one);
- the status of the service (column two) does not form part of the licence area plan decision and is included for reference only;
- the frequency for each transmitter (column three) does not form part of the licence area plan decision and is included for reference only;
- the service licence number which has been allocated to the service, if appropriate (column four); N/A = Not Applicable, as the *Broadcasting Services Act 1992* only requires service licences for Commercial and Community services;
- the number of transmitters required to transmit the service;
- the transmitter specification number which has been allocated to each transmitter (column five);
- the identifying number of the attachment where the technical specifications for each transmitter are described (column six). (Each set of technical specifications referred to in the Schedules is an attachment to this determination); and
- the general area served by each transmitter (column seven).

Status Column

Licensed	:	service is already licensed
Available	:	new licence available for allocation
Proposed	:	transmitter for existing broadcasting service licence
Alternative	:	alternative channel proposed for licensed service
Reserved	:	capacity reserved for a national or community service in accordance with Ministerial notification

Frequency Column

The frequency shown is the centre frequency of the channel.

SCHEDULE ONE

Licence Area Plan : Wollongong Radio - Draft - October 1998

Licence Area : WOLLONGONG RA1

Service Category	Status	Frequency	Service Licence No	Technical Specification No	Attach No	Area Served	s34 Drop through Expiry date (if applicable)
National	Licensed Reserved	1431 kHz	N/A	TS4023001	1.2	Wollongong	
National	Licensed Reserved	1485 kHz	N/A	TS4233601	1.3	Wollongong	
National	Licensed Reserved	95.7 MHz	N/A	TS3008901	1.4	Illawarra	
National	Licensed Reserved	97.3 MHz	N/A	TS2111601	1.5	Illawarra	
National	Licensed Reserved	98.9 MHz	N/A	TS7335001	1.6	Illawarra	
Commercial	Available	1314 kHz	SL1150237	TS6873001	1.7	Wollongong	31/12/98
Commercial (Option)	Available	1575 kHz	SL1150249	TS10008385	1.8	Wollongong	31/12/98
Commercial	Licensed	96.5 MHz	SL4137	TS4137001	1.9	Wollongong	
Commercial	Licensed	98.1 MHz	SL4128	TS4128001	1.10	Wollongong	
Community (Option)	Available	93.3 MHz	SL1150266	TS10008523	1.11	Wollongong	
Community	Available	94.1 MHz	SL1150163	TS10008291	1.12	Wollongong	
Community	Licensed	106.9 MHz	SL2006	TS2006001	1.13	Wollongong	
Open Narrowcasting (Option)	Available	1575 kHz	N/A	TS8311001	1.14	Wollongong	31/12/98
Open Narrowcasting (Option)	Available	93.3 MHz	N/A	TS10008292	1.15	Wollongong	

Attachment 1.1

Licence Area Plan : Wollongong Radio

LICENCE AREA FOR SERVICE LICENCE NOS : SL 4137, SL4128, SL1150237,
SL1150249, SL2006, SL1150163, SL1150266
COMMERCIAL AND COMMUNITY RADIO, WOLLONGONG RA1

The licence area, in terms of areas defined by the Australian Bureau of Statistics at the
Census of 6 August 1996, is:

Area Description

Wollongong (C)
Shellharbour (A)
Kiama (A)

Note:

Standard terminology used by the Australian Bureau of Statistics:

(C) = City
(CD) = Collection District

LICENCE AREA PLAN : Wollongong - Radio - Draft

Category : National

General Area Served : Wollongong (NSW)

Service Licence Number : Not applicable

TECHNICAL SPECIFICATION - AM Radio

Specification Number : TS4023001

Transmitter Site :-

Nominal location : WINdang 13.5 Km South of WOLLONGONG

Australian Map Grid :	Zone	Easting	Northing
Reference	56	303908	6176912

Site Tolerance : Refer to Technical Planning Guidelines

Emission :-

Frequency Band & Mode: MF-AM

Carrier Frequency : 1431 kHz

Output Radiation Pattern :-

Bearing or Sector (Clockwise direction)	Elevation	Maximum CMF
At all angles of azimuth	0	430 V

LICENCE AREA PLAN : Wollongong - Radio - Draft

Category : National

General Area Served : Wollongong (NSW)

Service Licence Number : Not applicable

TECHNICAL SPECIFICATION - AM Radio

Specification Number : TS4233601

Transmitter Site :-

Nominal location : 12km South of Wollongong WINDANG

Australian Map Grid :	Zone	Easting	Northing
Reference	56	304700	6178200

Site Tolerance : Refer to Technical Planning Guidelines

Emission :-

Frequency Band & Mode: MF-AM

Carrier Frequency : 1485 kHz

Output Radiation Pattern :-

Bearing or Sector (Clockwise direction)	Elevation	Maximum CMF
At all angles of azimuth	0	120 V

LICENCE AREA PLAN : Wollongong - Radio - Draft

Category : National

General Area Served : Illawarra (NSW)

Service Licence Number : Not applicable

TECHNICAL SPECIFICATION - FM Radio

Specification Number : TS3008901

Transmitter Site :-

Nominal location : NTA ABC Television VHF Tower KNIGHTS HILL

Australian Map Grid :	Zone	Easting	Northing
Reference	56	288510	6166150

Site Tolerance : Refer to Technical Planning Guidelines

Emission :-

Frequency Band & Mode: VHF-FM

Carrier Frequency : 95.7 MHz

Polarisation Mixed

Maximum antenna height 167 m

Output Radiation Pattern :-

Bearing or Sector (Clockwise direction)	Maximum ERP
0°T - 160°T	40 kW
160°T - 350°T	150 kW
350°T - 360°T	40 kW

LICENCE AREA PLAN : Wollongong - Radio - Draft

Category : National

General Area Served : Illawarra (NSW)

Service Licence Number : Not applicable

TECHNICAL SPECIFICATION - FM Radio

Specification Number : TS2111601

Transmitter Site :-

Nominal location : NTA ABC Television VHF Tower KNIGHTS HILL

Australian Map Grid :	Zone	Easting	Northing
Reference	56	288510	6166150

Site Tolerance : Refer to Technical Planning Guidelines

Emission :-

Frequency Band & Mode: VHF-FM

Carrier Frequency : 97.3 MHz

Polarisation Mixed

Maximum antenna height 167 m

Output Radiation Pattern :-

Bearing or Sector (Clockwise direction)	Maximum ERP
0°T - 160°T	40 kW
160°T - 350°T	150 kW
350°T - 360°T	40 kW

LICENCE AREA PLAN : Wollongong - Radio - Draft

Category : National

General Area Served : Illawarra (NSW)

Service Licence Number : Not applicable

TECHNICAL SPECIFICATION - FM Radio

Specification Number : TS7335001

Transmitter Site :-

Nominal location : NTA ABC Television VHF Tower KNIGHTS HILL

Australian Map Grid :	Zone	Easting	Northing
Reference	56	288510	6166150

Site Tolerance : Refer to Technical Planning Guidelines

Emission :-

Frequency Band & Mode: VHF-FM

Carrier Frequency : 98.9 MHz

Polarisation Mixed

Maximum antenna height 167 m

Output Radiation Pattern :-

Bearing or Sector (Clockwise direction)	Maximum ERP
0°T - 160°T	40 kW
160°T - 350°T	150 kW
350°T - 360°T	40 kW

LICENCE AREA PLAN : Wollongong - Radio - Draft

Category : Commercial

General Area Served : Wollongong (NSW)

Service Licence Number : SL1150237

TECHNICAL SPECIFICATION - AM Radio

Specification Number : TS6873001

Transmitter Site :-

Nominal location : 2WL WINDang Road Dp 537317 WINDANG

Australian Map Grid :	Zone	Easting	Northing
Reference	56	304700	6178300

Site Tolerance : Refer to Technical Planning Guidelines

Emission :-

Frequency Band & Mode: MF-AM

Carrier Frequency : 1314 kHz

Output Radiation Pattern :-

Bearing or Sector (Clockwise direction)	Elevation	Maximum CMF
0°T - 61°T	0	1.1 kV
61°T - 91°T	0	535 V
91°T - 127°T	0	195 V
107°T - 109°T	0	275 V
127°T - 157°T	0	535 V
157°T - 223°T	0	1.1 kV
223°T - 253°T	0	540 V
240°T - 240°T	0	90 V
344°T - 347°T	0	440 V
355°T - 360°T	0	1.1 kV

Note :-

This frequency has been made available for open narrowcasting purposes until 31/12/98.

LICENCE AREA PLAN : Wollongong - Radio - Draft

Category : Commercial (Option)

General Area Served : Wollongong (NSW)

Service Licence Number : SL1150249

TECHNICAL SPECIFICATION - AM Radio

Specification Number : TS10008385

Transmitter Site :-

Nominal location : 12km South of Wollongong WINDANG

Australian Map Grid :	Zone	Easting	Northing
Reference	56	304700	6178200

Site Tolerance : Refer to Technical Planning Guidelines

Emission :-

Frequency Band & Mode: MF-AM

Carrier Frequency : 1575 kHz

Output Radiation Pattern :-

Bearing or Sector (Clockwise direction)	Elevation	Maximum CMF
0°T - 9°T	0	550 V
9°T - 71°T	0	1.1 kV
71°T - 155°T	0	550 V
155°T - 217°T	0	1.1 kV
217°T - 249°T	0	550 V
249°T - 337°T	0	953 V
337°T - 360°T	0	550 V

Notes :-

1. This technical specification is proposed for either a Commercial or Open Narrowcasting service - see TS8311001 - Attachment 1.14

2. This frequency has been made available for open narrowcasting purposes until 31/12/98.

LICENCE AREA PLAN : Wollongong - Radio - Draft

Category : Commercial

General Area Served : Wollongong (NSW)

Service Licence Number : SL4137

TECHNICAL SPECIFICATION - FM Radio

Specification Number : TS4137001

Transmitter Site :-

Nominal location : WIN Television Site KNIGHTS HILL

Australian Map Grid : Zone Easting Northing
Reference 56 288780 6166690

Site Tolerance : Refer to Technical Planning Guidelines

Emission :-

Frequency Band & Mode: VHF-FM

Carrier Frequency : 96.5 MHz

Polarisation Mixed

Maximum antenna height 69 m

Output Radiation Pattern :-

Bearing or Sector (Clockwise direction)	Maximum ERP
0°T - 20°T	20 kW
20°T - 130°T	40 kW
130°T - 200°T	20 kW
200°T - 310°T	4 kW
310°T - 360°T	20 kW

LICENCE AREA PLAN : Wollongong - Radio - Draft

Category : Commercial

General Area Served : Wollongong (NSW)

Service Licence Number : SL4128

TECHNICAL SPECIFICATION - FM Radio

Specification Number : TS4128001

Transmitter Site :-

Nominal location : WIN Television Site KNIGHTS HILL

Australian Map Grid : Zone Easting Northing
Reference 56 288780 6166690

Site Tolerance : Refer to Technical Planning Guidelines

Emission :-

Frequency Band & Mode: VHF-FM

Carrier Frequency : 98.1 MHz

Polarisation Mixed

Maximum antenna height 69 m

Output Radiation Pattern :-

Bearing or Sector (Clockwise direction)	Maximum ERP
0°T - 20°T	20 kW
20°T - 130°T	40 kW
130°T - 200°T	20 kW
130°T - 310°T	4 kW
310°T - 360°T	20 kW

LICENCE AREA PLAN : Wollongong - Radio - Draft

Category : Community (Option)

General Area Served : Wollongong (NSW)

Service Licence Number : SL1150266

TECHNICAL SPECIFICATION - FM Radio

Specification Number : TS10008523

Transmitter Site :-

Nominal location : Brokers Nose

Australian Map Grid :	Zone	Easting	Northing
Reference	56	304602	6195003

Site Tolerance : Refer to Technical Planning Guidelines

Emission :-

Frequency Band & Mode: VHF-FM

Carrier Frequency : 93.3 MHz

Polarisation Mixed

Maximum antenna height 15 m

Output Radiation Pattern :-

Bearing or Sector (Clockwise direction)	Maximum ERP
0°T - 230°T	2 kW
230°T - 340°T	500 W
340°T - 360°T	2 kW

Note :-

This technical specification is proposed for either a Community or Open Narrowcasting service - see TS10008292 - Attachment 1.15

LICENCE AREA PLAN : Wollongong - Radio - Draft

Category : Community

General Area Served : Wollongong (NSW)

Service Licence Number : SL1150163

TECHNICAL SPECIFICATION - FM Radio

Specification Number : TS10008291

Transmitter Site :-

Nominal location : Brokers Nose

Australian Map Grid : Zone Easting Northing
Reference 56 304602 6195003

Site Tolerance : Refer to Technical Planning Guidelines

Emission :-

Frequency Band & Mode: VHF-FM

Carrier Frequency : 94.1 MHz

Polarisation Mixed

Maximum antenna height 15 m

Output Radiation Pattern :-

Bearing or Sector (Clockwise direction)	Maximum ERP
0°T - 230°T	2 kW
230°T - 340°T	500 W
340°T - 360°T	2 kW

LICENCE AREA PLAN : Wollongong - Radio - Draft

Category : Community

General Area Served : Wollongong (NSW)

Service Licence Number : SL2006

TECHNICAL SPECIFICATION - FM Radio

Specification Number : TS2006001

Transmitter Site :-

Nominal location : Brokers Nose

Australian Map Grid : Zone Easting Northing
Reference 56 304602 6195003

Site Tolerance : Refer to Technical Planning Guidelines

Emission :-

Frequency Band & Mode: VHF-FM

Carrier Frequency : 106.9 MHz

Polarisation Mixed

Maximum antenna height 15 m

Output Radiation Pattern :-

Bearing or Sector (Clockwise direction)	Maximum ERP
0°T - 230°T	2 kW
230°T - 340°T	500 W
340°T - 360°T	2 kW

LICENCE AREA PLAN : Wollongong - Radio - Draft

Category : Open Narrowcasting (Option)

General Area Served : Wollongong (NSW)

Service Licence Number : Not applicable

TECHNICAL SPECIFICATION - AM Radio

Specification Number : TS8311001

Transmitter Site :-

Nominal location : 12km South of Wollongong WINDANG

Australian Map Grid : Reference	Zone 56	Easting 304700	Northing 6178200
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Site Tolerance : Refer to Technical Planning Guidelines

Emission :-

Frequency Band & Mode: MF-AM

Carrier Frequency : 1575 kHz

Output Radiation Pattern :-

Bearing or Sector (Clockwise direction)	Elevation	Maximum CMF
0°T - 9°T	0	550 V
9°T - 71°T	0	1.1 kV
71°T - 155°T	0	550 V
155°T - 217°T	0	1.1 kV
217°T - 249°T	0	550 V
249°T - 337°T	0	953 V
337°T - 360°T	0	550 V

Notes :-

1. This technical specification is proposed for either a Commercial or Open Narrowcasting service - see TS10008385 - Attachment 1.8

2. This frequency has been made available for open narrowcasting purposes (ONC) until 31/12/98. If the final LAP for Wollongong radio determines that it should continue to be used for ONC purposes, the service provider will be determined at auction.

Special Condition :-

The 'coverage radius' of this transmission is 30 kilometres measured from a point with the following AMG co-ordinates: Zone: 56; Easting: 304700; Northing: 6178200. This point is the same as the nominal transmitter site.

LICENCE AREA PLAN : Wollongong - Radio - Draft

Category : Open Narrowcasting (Option)

General Area Served : Wollongong (NSW)

Service Licence Number : Not applicable

TECHNICAL SPECIFICATION - FM Radio

Specification Number : TS10008292

Transmitter Site :-

Nominal location : Brokers Nose

Australian Map Grid :	Zone	Easting	Northing
Reference	56	304602	6195003

Site Tolerance : Refer to Technical Planning Guidelines

Emission :-

Frequency Band & Mode: VHF-FM

Carrier Frequency : 93.3 MHz

Polarisation Mixed

Maximum antenna height 15 m

Output Radiation Pattern :-

Bearing or Sector (Clockwise direction)	Maximum ERP
0°T - 230°T	2 kW
230°T - 340°T	500 W
340°T - 360°T	2 kW

Note :-

This technical specification is proposed for either a Community or Open Narrowcasting service - see TS10008523 - Attachment 1.11

Special Conditions :-

The 'coverage radius' of this transmission is 15 kilometres measured from a point with the following AMG co-ordinates: Zone: 56; Easting: 304602; Northing: 6195003. This point is the same as the nominal transmitter site.



**Australian
Broadcasting
Authority**

ILLAWARRA, SE NSW AND ACT WOLLONGONG AREA

(RADIO)

DRAFT LICENCE AREA DESIGNATION

OCTOBER 1998

LICENCE AREA

WOLLONGONG

DRAFT DESIGNATION OF LICENCE AREAS

Under section 29(1) of the *Broadcasting Services Act 1992* the Australian Broadcasting Authority designates the areas defined in column 2 of the attached Schedule to be the licence areas of the licences for the broadcasting services whose identifying service licence numbers are listed in the corresponding row of column 1 in the attached Schedule.

Dated

SCHEDULE

Column 1: Licence *	Column 2 : Area	Licence Area Name #
SL4137	The area described in Attachment 1.1 to the determination of the licence area plan for Wollongong of	Wollongong RA1
SL4128	The area described in Attachment 1.1 to the determination of the licence area plan for Wollongong of	Wollongong RA1
SL1150237	The area described in Attachment 1.1 to the determination of the licence area plan for Wollongong of	Wollongong RA1
SL1150249	The area described in Attachment 1.1 to the determination of the licence area plan for Wollongong of	Wollongong RA1
SL2006	The area described in Attachment 1.1 to the determination of the licence area plan for Wollongong of	Wollongong RA1
SL1150163	The area described in Attachment 1.1 to the determination of the licence area plan for Wollongong of	Wollongong RA1
SL1150266	The area described in Attachment 1.1 to the determination of the licence area plan for Wollongong of	Wollongong RA1

* Licence identified by service licence number

For information only



**Australian
Broadcasting
Authority**

DRAFT VARIATION TO FREQUENCY ALLOTMENT PLAN

WOLLONGONG AREA

(RADIO)

OCTOBER 1998

DRAFT VARIATION TO FREQUENCY ALLOTMENT PLAN

WOLLONGONG

The Australian Broadcasting Authority hereby varies the frequency allotment plan of the MF-AM and VHF-FM Radio Bands determined on 10 August 1994 and subsequently varied under subsection 25(2) of the *Broadcasting Services Act 1992*, as follows:

Frequency allotment plan for MF-AM Radio Bands - R9 - Illawarra, south east NSW and the ACT

The frequency allotment plan for the MF-AM Radio Band is varied by deleting the entries shown in Schedule One to this variation, in entirety, and inserting the entries in Schedule Three to this variation.

Frequency allotment plan for VHF-FM Radio Bands - R9 - Illawarra, south east NSW and the ACT

The frequency allotment plan for the VHF-FM Radio Band is varied by deleting the entries shown in Schedule Two to this variation, in entirety, and inserting the entries in Schedule Four to this variation.

Dated

SCHEDULE ONE

FREQUENCY ALLOTMENT PLAN FOR MF-AM RADIO BAND - EXISTING ENTRY UNDER R9 - ILLAWARRA, SOUTH EAST NSW AND THE ACT TO BE DELETED

R9 - MF-AM Radio

Area	Transmission Site	Total Capacity	Channels Available	Licensed Services				Ministerial Reservations for Future Services			Comments
				National	Commercial	Community	Other	National	Community	Nat/Com	
Wollongong		4	2	2	0	0	0	0	0	N/A	Available frequencies of 1575kHz (ex 2OO) and 1314kHz (ex 2WL) have been released for open narrowcasting use.

SCHEDULE TWO

FREQUENCY ALLOTMENT PLAN FOR VHF-FM RADIO BAND - EXISTING ENTRY UNDER R9 - ILLAWARRA, SOUTH EAST NSW AND THE ACT TO BE DELETED

R9 - VHF-FM Radio

Area	Transmission Site	Total Capacity	Channels Available	Licensed Services				Ministerial Reservations for Future Services			Comments
				National	Commercial	Community	Other	National	Community	Nat/Com	
Illawarra	Knights Hill	5	3	2	3	0	0	1	0	N/A	Available channels can be used at Nowra or Wollongong. Licensed commercial services include two from Wollongong and one from Nowra.
Wollongong		0	0	0	0	0	0	0	0	N/A	See Illawarra
Wollongong (city)		1	0	0	0	1	0	0	0	N/A	

SCHEDULE THREE

FREQUENCY ALLOTMENT PLAN FOR MF-AM RADIO BAND - ENTRIES UNDER R9 - ILLAWARRA, SOUTH EAST NSW AND THE ACT TO BE INSERTED

R9 - MF-AM Radio

Area	Transmission Site	Channels Available	Unassigned Channels	Assigned Channels	Ministerial Notification for Reservations	Comments
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			National	Commercial	Community	Other	National	Community	Nat/Com
Wollongong	4	0	2	2 *	0	0	2	0	N/A

* 1 channel if one is made available for open narrowcasting purposes (see Option 4).

SCHEDULE FOUR

FREQUENCY ALLOTMENT PLAN FOR VHF-FM RADIO BAND - ENTRIES UNDER R9 - ILLAWARRA, SOUTH EAST NSW AND THE ACT TO BE INSERTED

R9 - VHF-FM Radio

Area	Transmission Site	Channels Available	Unassigned Channels	Assigned Channels				Ministerial Notification for Reservations			Comments
				National	Commercial	Community	Other	National	Community	Nat/Com	
Illawarra	Knights Hill	5	0	3	2	0	0	3	0	N/A	
Wollongong	Brokers Nose	3	0	0	0	3 **	0	0	1	N/A	

** 2 channels if one is made available for open narrowcasting purposes (see Option 7).

LEGEND:

Area: The geographic area in which the channel is available. The name chosen is that of the town or region that best describes the coverage area of the channel.

Channels Available: The number of channels allotted to the area in the Frequency Allotment Plan.

Unassigned Channels: Any channel, other than an 'assigned' channel, that is allotted to the area in the Frequency Allotment Plan.

Assigned Channels: For 'National', 'Commercial' and 'Community' broadcasting services - channels for which either a transmitter licence has been issued or technical specifications are shown in a licence area plan. For 'Other' broadcasting services - technical specifications for this channel are shown in a licence area plan.

Other: Category of broadcasting service other than 'National' broadcasting service, 'Commercial' broadcasting service or 'Community' broadcasting service eg 'Open Narrowcasting' service, and spectrum reserved for 'National or Community' television.

Ministerial Notification

for Reservation: The number of channels the Minister has notified the ABA to reserve for national and community broadcasting services in the area, including notification for 'national or community' television services.



**Australian
Broadcasting
Authority**

ADDITIONAL INFORMATION ON THE LICENCE AREA PLAN FOR WOLLONGONG (Radio)

**(This information is provided for guidance only and does not form part of the
determination)**

OCTOBER 1998

MAXIMUM EFFECTIVE RADIATED POWER (ERP)

Maximum ERP

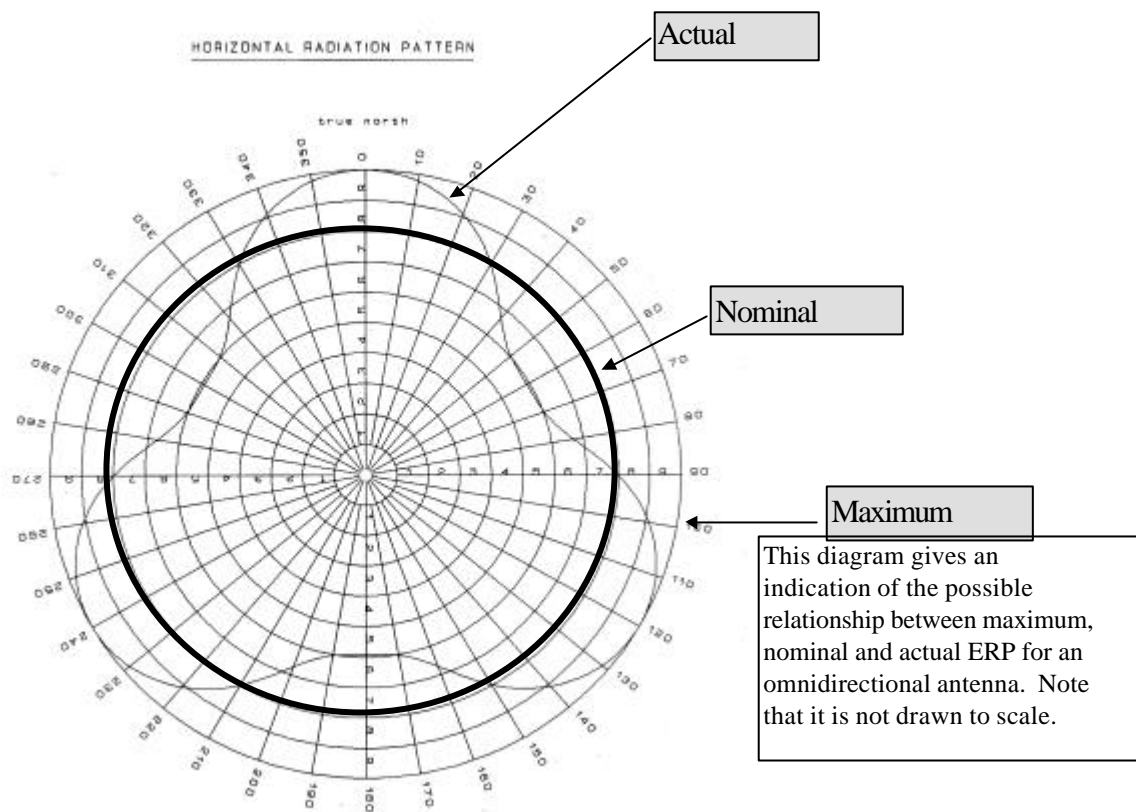
The maximum effective radiated power (ERP) specified indicates the maximum power which may be radiated from the antenna in any direction. This limit has been determined to be sufficient to provide an adequate service while ensuring other services are protected from interference and minimising overspill into neighbouring licence areas. In establishing a maximum ERP level it is recognised that a real antenna system deviates from the ideal nominal level. **This maximum ERP specified must not be exceeded under any circumstances.**

Nominal ERP

The nominal ERP is the power considered necessary to provide adequate coverage of the licence area. In a real antenna system it represents the average or mean power radiated over specified arcs. In practice, antennas do not radiate the same power at all directions within an arc. The diagram below shows this situation with a horizontal radiation pattern for an omnidirectional antenna. The construction and physical attributes of the antenna cause the actual ERP of the transmitting facility to fluctuate above and below the nominal ERP.

The actual ERP in any direction is not to exceed the maximum ERP specified.

Example: If the maximum ERP is 50kW then the nominal ERP could be 25kW. The actual ERP would then be 25kW with a tolerance of $\pm 3\text{dB}$ which describes the nominal ERP with fluctuations. This shows that the actual ERP does not exceed the maximum ERP anywhere and the transmissions therefore meet the licence specifications.



Apparatus Licences

The maximum ERP specified in an apparatus licence issued to a licensee may be different to that indicated in the LAP for that service. This would occur where a licensee has different technical requirements to those indicated in the LAP eg a different site, antenna height, etc. However, **the maximum ERP indicated in the apparatus licence will not exceed the radiation pattern envelope specified in the LAP.** This approach differs from that under the *Broadcasting Act 1942* where technical conditions specified a nominal ERP with permitted tolerances.

AM RADIO - SPECIMEN ONLY

LICENCE AREA PLAN : Wollongong

Category :

National

Unique number given to each transmitter

General Area Served :

Wollongong (NSW)

Service Licence Number :

Not applicable

Geographical location of Transmitter Site including brief description of location and standard Australian Grid Map

TECHNICAL SPECIFICATION - AM Radio

Specification Number :

TS4023001

Transmitter Site :-

Nominal location :
WOLLONGONG

Windang 13.5 Km South of

Radius within which the transmitter could be located from the nominal

Australian Map Grid :
Reference

Zone	Easting	Northing
56	303908	6176912

Site Tolerance :

Refer to Technical Planning Guidelines

Emission :-

Frequency Band & Mode

MF-AM

Broadcasting services band and mode of

Carrier Frequency :

1431 kHz

Assigned frequency of transmission.

Output Radiation Pattern :-

Bearing or Sector
(Clockwise direction)

Elevation

Maximum CMF

Directions on compass in which transmissions are

At all angles of azimuth

0

430 V

Any specific notes not contained in main details above.

Horizontal elevation from the ground of a radiated signal. This is the critical angle at which CMF must be limited to protect existing services.

Cymomotive Force (CMF) is the measure of the signal strength of the transmitted signal

FM RADIO - SPECIMEN ONLY

LICENCE AREA PLAN : Wollongong

Category :

National

Unique number given to each transmitter

General Area Served :

Illawarra (NSW)

Service Licence Number :

Not applicable

TECHNICAL SPECIFICATION - FM Radio

Specification Number :

TS3008901

Geographical location of Transmitter Site including brief description of location and standard Australian Grid Map Reference

Transmitter Site :-

Nominal location :
KNIGHTS

NTA ABC Television VHF Tower
HILL

Radius within which the transmitter could be located from the nominal

Australian Map Grid :
Reference

Zone	Easting	Northing
56	288510	6166150

Site Tolerance :

Refer to Technical Planning Guidelines

Emission :-

Frequency Band & Mode

VHF-FM

Broadcasting services band and mode of

Carrier Frequency :
Polarisation

95.7 MHz
Mixed

Assigned frequency of transmission.

Maximum antenna height

167 m

Polarisation of radiowaves. Either vertical, horizontal or mixed to earth's

Output Radiation Pattern :-

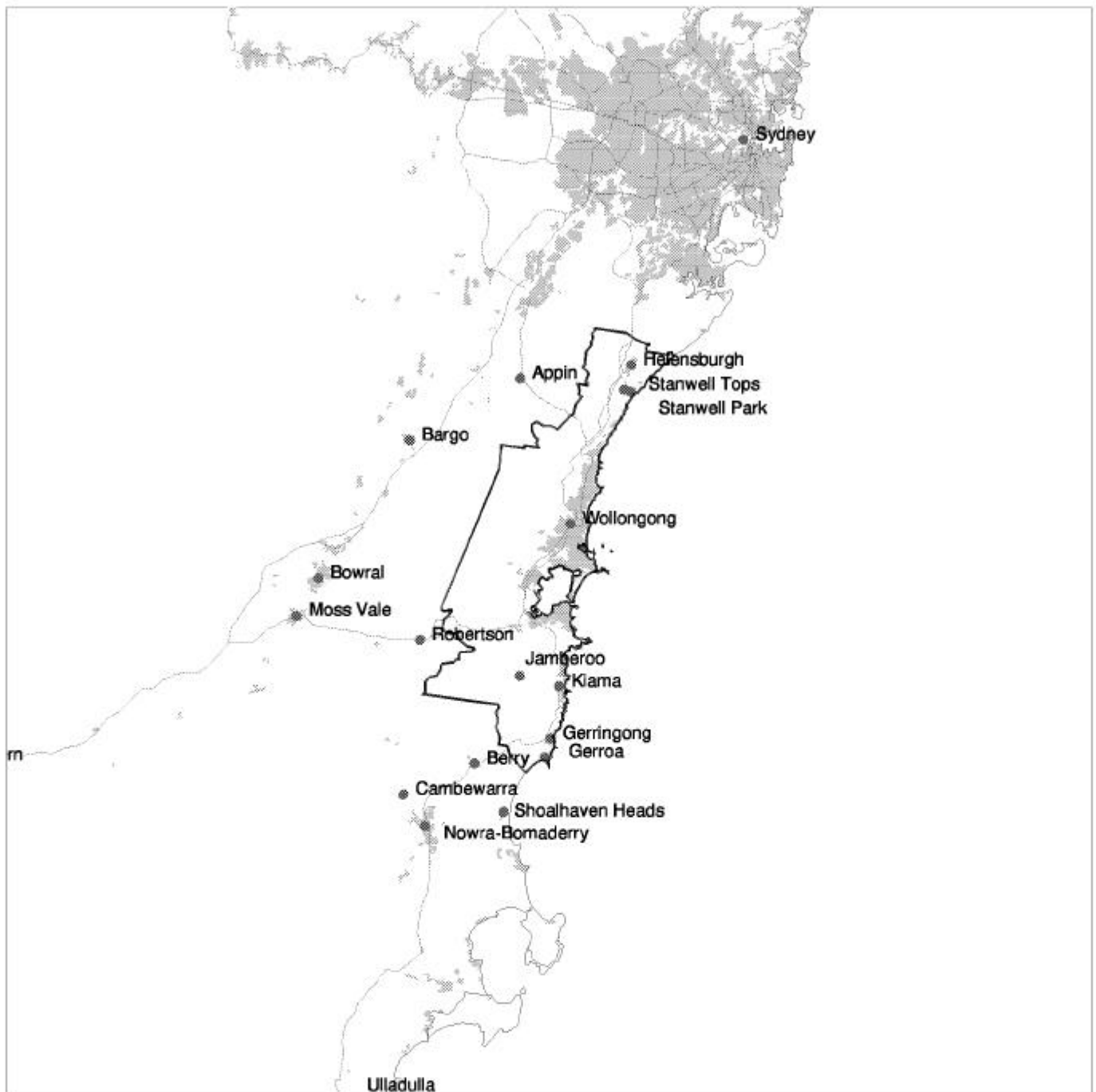
Bearing or Sector (Clockwise direction)	Maximum ERP	Height of transmit antenna above ground
0°T - 160°T	40 kW	Maximum effective radiated power, a measure of the signal strength of the transmitted
160°T - 350°T	150 kW	
200°T - 200°T	100 kW	
300°T - 300°T	100 kW	
350°T - 360°T	40 kW	

Any specific notes not contained in main details above.






Directions on compass in which transmissions are emitted

WOLLONGONG RA1

Licence Area



Legend

-  Built Up Areas
-  Roads
-  State Border/Coastline
-  Towns
-  WOLLONGONG RA1

LICENCE AREA PLAN
WOLLONGONG - RADIO - DRAFT

SERVICE LICENCE NUMBERS:
SL4128, SL4137
SL1150237, SL1150249
COMMERCIAL

TOTAL POPULATION (1996 CENSUS):
246795



Scale 1:1000000
0 km 50 100

**Australian
Broadcasting
Authority**

DISCLAIMER: This map should be used only as a guide. The precise details are defined in the respective report.

