



BROADCAST AUSTRALIA

a bai communications company

6 August 2018

Director
National and Community Broadcasting
Department of Communications and the Arts
GPO Box 2154
Canberra ACT 2601

By email: asiapacificmediareview@communications.gov.au

Dear Sir/Madam

Broadcast Australia (BA) appreciates the opportunity to make this brief submission to the Department of Communication and the Arts' review of Australian Broadcast Services in the Asia Pacific.

By way of background, BA owns and operates Australia's largest television and radio transmission network. The company's sites in metropolitan, regional and remote locations are supported by the country's largest in-house broadcast trained field services team. We distribute television and radio services across Australia for the national broadcasters, the Australian Broadcasting Corporation (ABC) and Special Broadcasting Service (SBS), and also work with commercial broadcasters in most markets.

BA previously provided shortwave transmission services to ABC International for its Radio Australia broadcasts in the Asia-Pacific region, and we provide an overview of this, below. Should the Government identify a public policy interest in re-establishing services of this type in the future, we have also set out some initial thinking below on how this could be achieved.

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Previous Broadcasting Services into the Asia Pacific

'Shortwave' broadcasting refers to the use of amplitude modulation in the High Frequency (HF) band (2 to 26 MHz), which distinguishes it from what is commonly called 'AM radio' which refers to medium frequency amplitude modulation (MF-AM). Due to the fact that shortwave/HF transmissions bounce off the ionosphere back to earth, they are able to cover very large geographic areas.

Unlike most VHF and UHF communications (e.g. digital television, FM radio and mobile phone), HF penetration is similar at different topographies, whether flat or mountainous. However, there is some variability associated with HF transmissions due to earth atmospheric conditions, hence the need to change frequencies (day/night).

BA previously provided international shortwave radio transmission services for Radio Australia from our site north of Shepparton, Victoria and Brandon, south of Townsville, Queensland. The Shepparton broadcast site commenced operations in 1944 and provided shortwave transmission services across the Asia-Pacific. The Brandon facility commenced in 1989 and provided shortwave transmission across Papua New Guinea and the Pacific Islands.

One of the benefits of shortwave transmission from Australia (relative to local transmissions from facilities in PNG or the Pacific), was that the former was completely independent of local infrastructure and resources. Shortwave transmissions do, however, require an HF receiver. To complement the shortwave service, Radio Australia and its New Zealand counterpart (Radio New Zealand International) installed low powered local FM transmitters to provide a relay service in local denser populated areas in PNG and the Pacific.

At the end of January 2015, some Radio Australia HF services from Shepparton (those directed to Asia) and all Radio Australia HF services from Brandon servicing PNG and the Pacific Islands ceased transmission.



In July 2015, BA provided a HF service from our Brandon site, for Papua New Guinea's National Broadcasting Corporation (NBC) to transmit coverage of the Pacific Games. NBC was particularly interested in this service due to its high level of reliability and the fact that local topographic and other conditions tend not to disrupt reception. There was significant positive feedback received from listeners on the coverage. This confirmed that our HF service from Brandon was delivering highly effective, reliable and available shortwave communications to PNG.

On 31 January 2017, the ABC ceased its final shortwave transmission services, comprising three domestic transmissions serving remote areas in the Northern Territory and the remaining international services from Shepparton to audiences in the South Pacific. Following the ABC's decision to terminate shortwave services, BA closed the Shepparton transmission site and has decommissioned the relevant equipment.

Mechanism to Re-establish Shortwave Radio Services

If there was interest in re-establishing shortwave services into the Pacific region, BA believes that the most cost-effective pathway would involve transmissions from our Brandon facility. As outlined above, this site has historically provided HF transmissions targeting PNG and the Coral Sea region.



Figure 1 shows the combined coverage to both Papua New Guinea and Coral Sea / South Pacific Islands from the Brandon site. The use of dedicated transmitters to broadcast the content for each area would allow independent, targeted content to be provided to each of these areas.

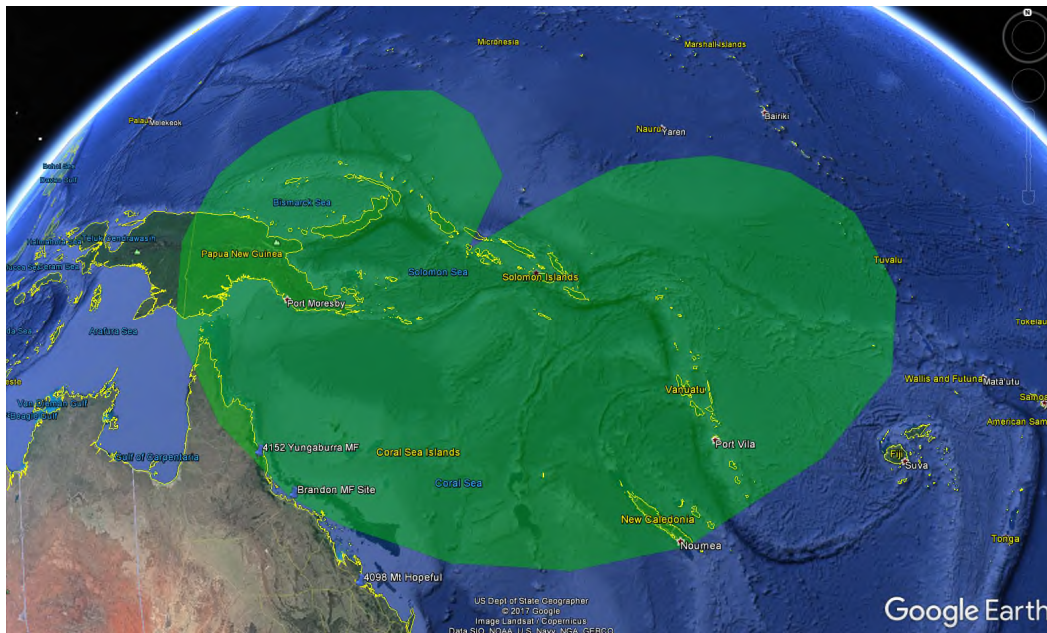


Figure 1 – Projected coverage for Papua New Guinea (northern coverage) and Coral Sea / South Pacific Islands (north eastern coverage)

Should broader coverage to the Pacific be required, BA would be happy to work with Government to tailor a HF solution to provide an appropriate service to the target locations.

Reinstatement of shortwave services would also require allocation of suitable frequencies and licensing by the Australian Communications and Media Authority (ACMA) and international agencies.



Potential Shortwave Application – Disaster Early Warning and Recovery Communications

In 2015, BA engaged in an early stage conceptual discussion with the Department of Foreign Affairs and Trade in relation to the potential for its HF radio infrastructure to be used to provide PNG and the South Pacific with an early warning and recovery communications system in the context of natural disasters.

While this concept was not progressed at the time, it was based on utilising BA's high quality infrastructure and established Australian expertise to deliver a relatively low-cost but highly resilient, reliable and effective communications service to local communities in the context of future natural disasters. The concept advanced by BA comprised two variants:

- A simple one-way HF radio service to assist disaster preparedness and advance warning, as well as providing blanket information coverage after the event; and
- A two-way service to assist in enhancing both disaster preparedness and recovery/response communications, with the return leg delivered via ground-based satellite terminals.

Please do not hesitate to contact me if I can be of further assistance on

Yours sincerely

Stephen Farrugia
Chief Technology Officer