



Addendum

Proposal to vary the Perth and Remote Western Australia radio licence area plans

OCTOBER 2025

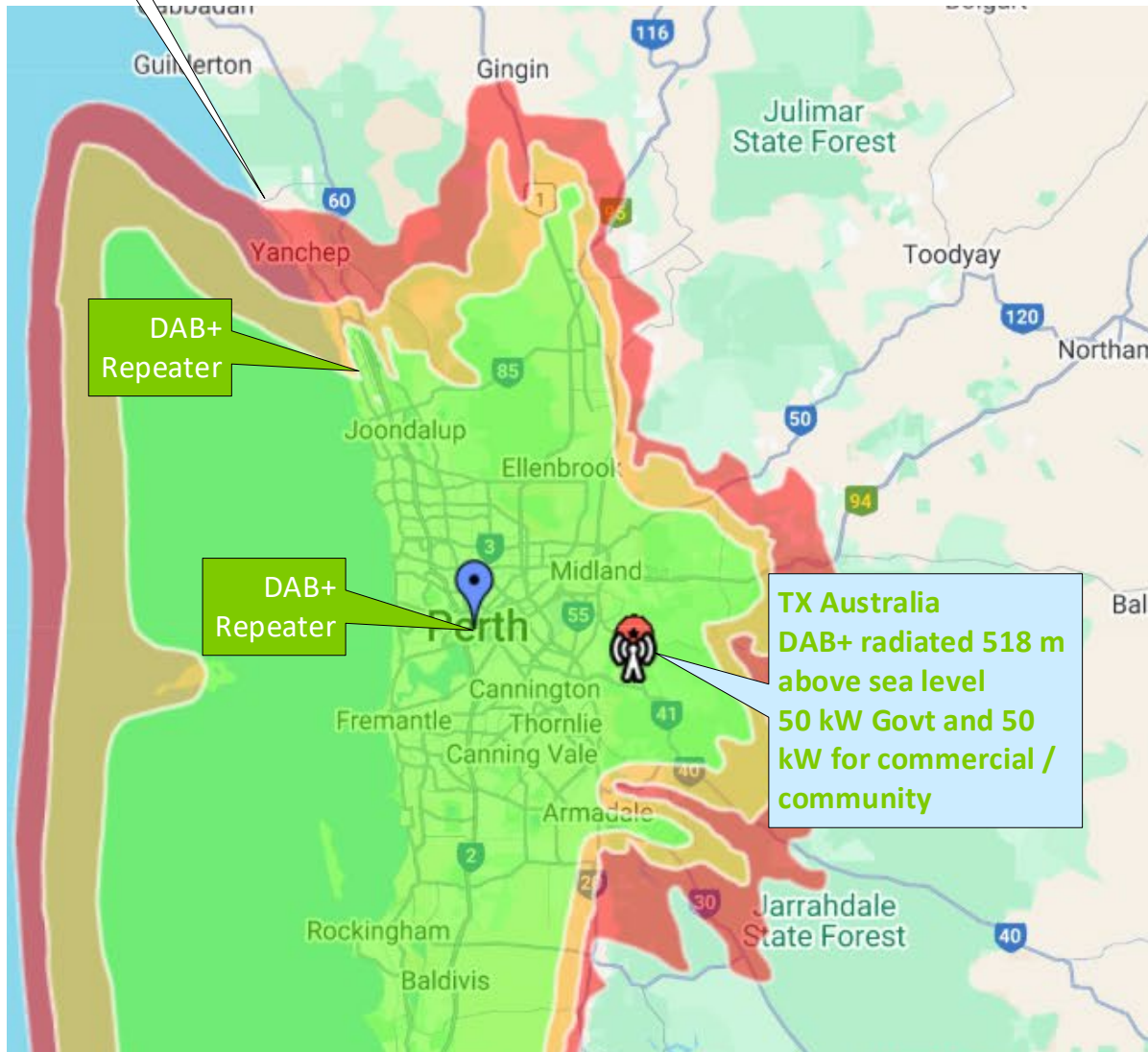
Alan Hughes Submission to This Addendum

acma.gov.au

6SEN's existing coverage from its commencement

0.3 kW Low power DAB+ repeaters retransmit an identical signal as the main transmitter on the same channel.
Their coverage area is not shown

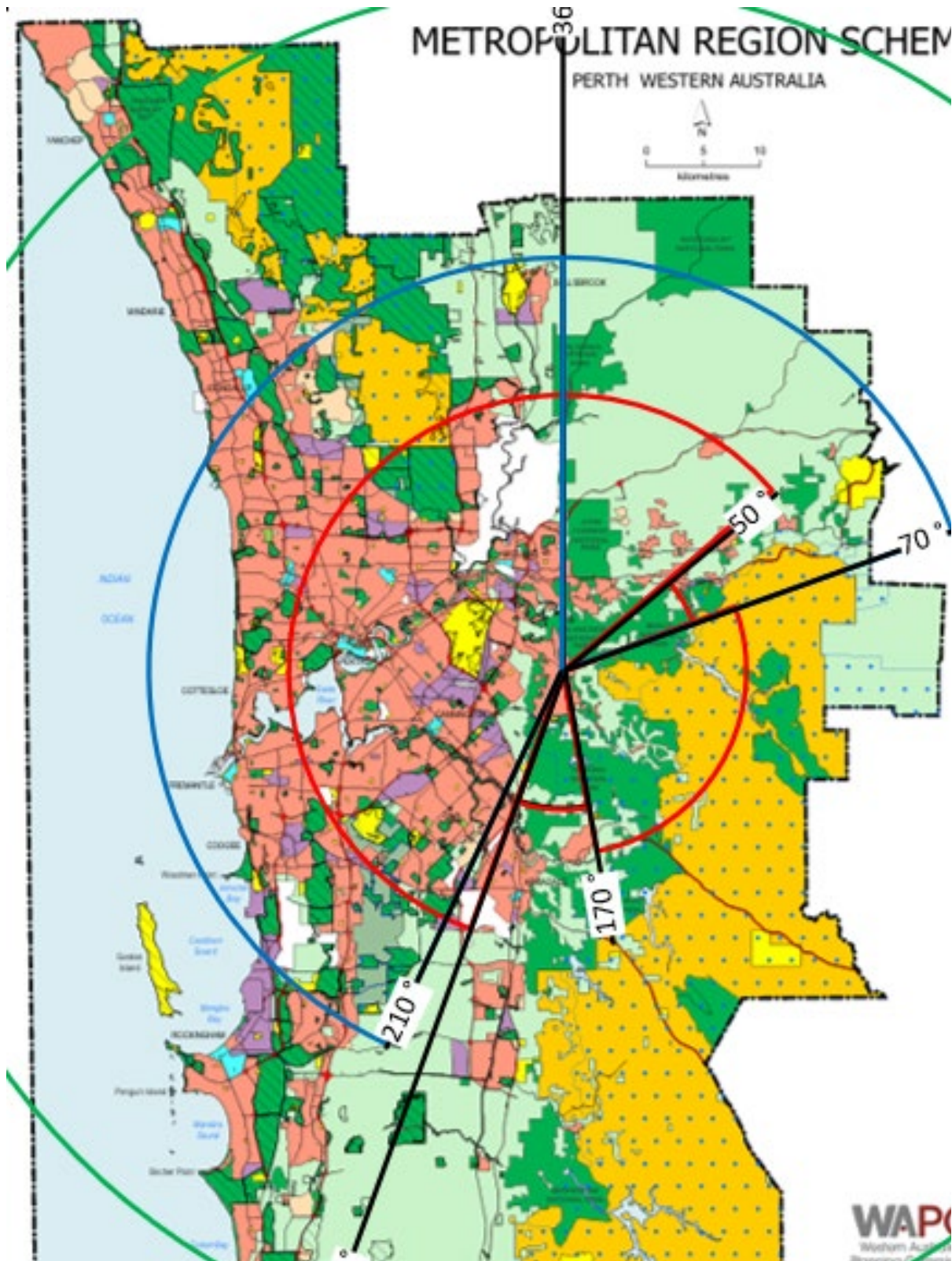
75 km from
Perth FM
transmitters



A sensitive DAB+
VHF antenna

It is the same coverage as digital ABC, SBS, commercials and all metro-wide community stations

Theoretical FM coverage Guide



Green ABC/SBS 100 kW_{ERP} maximum Blue Commercial 40 kW_{ERP} maximum

Red Metro Wide Community 16 kW_{ERP} maximum

Transmitter sites

- TXA FM 4 Television Rd Bickley.
- TXA TV/ FM 10 Television Rd Bickley
- **TV/FM** 40 Television Rd Bickley
- **TXA DAB+/TV/FM** 255 Welshpool Rd East, Carmel 2.5 km to West of BAI Comms.

Accuracy

The distance indicated is where FM reception failed using the receiver which was in a train in my main submission. The angles are to scale from the LAP specifications. The radii are scaled from the formula below and the maximum radiating power of existing and proposed transmitters. All the curved lines represent identical received signal strength.

$$\text{Free Space Loss} = 20 \times \log_{10}(d) + 20 \times \log_{10}(f) + 20 \times \log_{10}\left(\frac{4 \times \pi}{v}\right)$$

$$\text{Received signal level} = 10 \times \log_{10}(p) - FSL$$

d = distance (m) f = frequency (Hz) v = velocity (m/s) p= ERP Power (W)

My map does not show the effect of terrain. The [ACMA's](#)¹ shows areas of signal terrain blocking in ocean side areas and in the far North coastal suburbs.

In addition, new housing developments in outer areas are mostly metal roofing which stops radio waves, which is important for indoor portable FM & DAB+. Car radios are more sensitive receivers.

My Rejection of this Proposal for 6SEN

Existing Metro Wide Community Digital DAB+ radio, as a much larger than existing and proposed FM improvements.

Capital Radio is a charity, which it distributes its programs to its listeners using 4 % of the DAB+ broadcasting transmitter, streaming and by FM broadcast which cannot cover all of the metropolitan area. FM broadcast is the most expensive method for your charity.

Sonshine Extra is a DAB+ digital only community Perth Christian music station.

Smooth Perth, 6IX 60's Music and 6IX 70's Music are also DAB+ digital only commercial stations produced in Perth

¹ <https://myswitch.digitalready.gov.au/>

Unexpectedly, I have seen a number of seniors with DAB+ receivers, probably because they are easy to tune by station name and push buttons. Your target senior audience can program a single button to select your station. Community Broadcasting Association of Australia has a DAB+ Service Development Manager could be of assistance could be of assistance in a move to all digital broadcasting.

Finally, encourage all the Perth community broadcasters to expand their coverage areas to match the ABC, SBS and commercial broadcasters by switching off FM on the same date. Whilst you will have to do some advertising in your own programs, you will all save much of your transmission costs. Those who don't want to buy a receiver can stream on tablets & phones

alan@right.net.au

20251006