



Navigating Australia's airwaves - exploring spectrum opportunities

Andrew May

Spectrum Engineering Australia

spectrumeng.com.au

Today's Spectrum Canvas

- Microwave point to point
 - FX03 review
 - Millimetre Wave
 - 6 GHz review
- Wireless Broadband
 - 3 GHz Area Wide Licence
 - 3 GHz Highly Localised
 - 1.8 and 2 GHz
- Land Mobile

Microwave Point to Point (~6 to 38 GHz)

Potential review of rules (RALI FX03)

- Protection ratio?
- Minimum path length?
- Antenna compliance? (minimum front-to-back ratio)
- Channel aggregation?

Source: *"Spectrum tune-up: Shaping frequency coordination which was held on Wednesday 5th March 2025"*

Millimetre Wave (75 / 85 GHz)

Minor updates to rules (RALI FX20)

- Still “self coordinated”?
- No real change between point to point services
- Addition of ‘first in time’ principle for Earth Station coordination

Recent consultation;

<https://www.acma.gov.au/consultations/2025-02/updating-earth-station-and-ptp-coordination-rules>

6.7 GHz Replanning

Existing use

- **Point to point** used throughout Australia

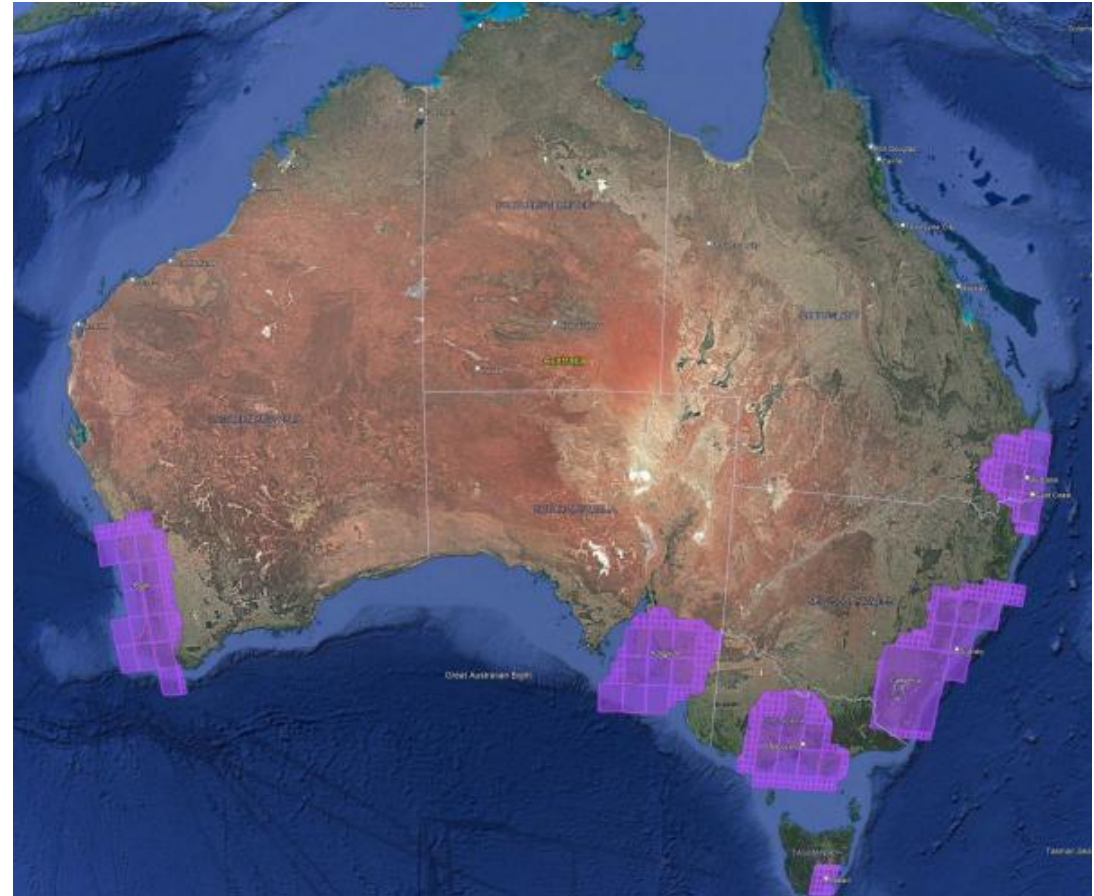
Under consideration

- Expansion of **Wifi** (6/6e/7...) / **RLAN** (Radio Local Area Network)
- Introduction of **Wireless Broadband**

6.7 GHz Replanning

Point to point

- Embargo 81 Australia Wide
- Point to point may be restricted outside of cities?



6.7 GHz Replanning

WiFi / RLAN

- Expanded allocation under class licence
- 5925-6425 becomes 5925-6585 MHz
- 25 mW power limit (250 mW indoors)

Recent onsultation:

- <https://www.acma.gov.au/consultations/2025-03/remaking-low-interference-potential-devices-class-licence>

6.7 GHz Replanning

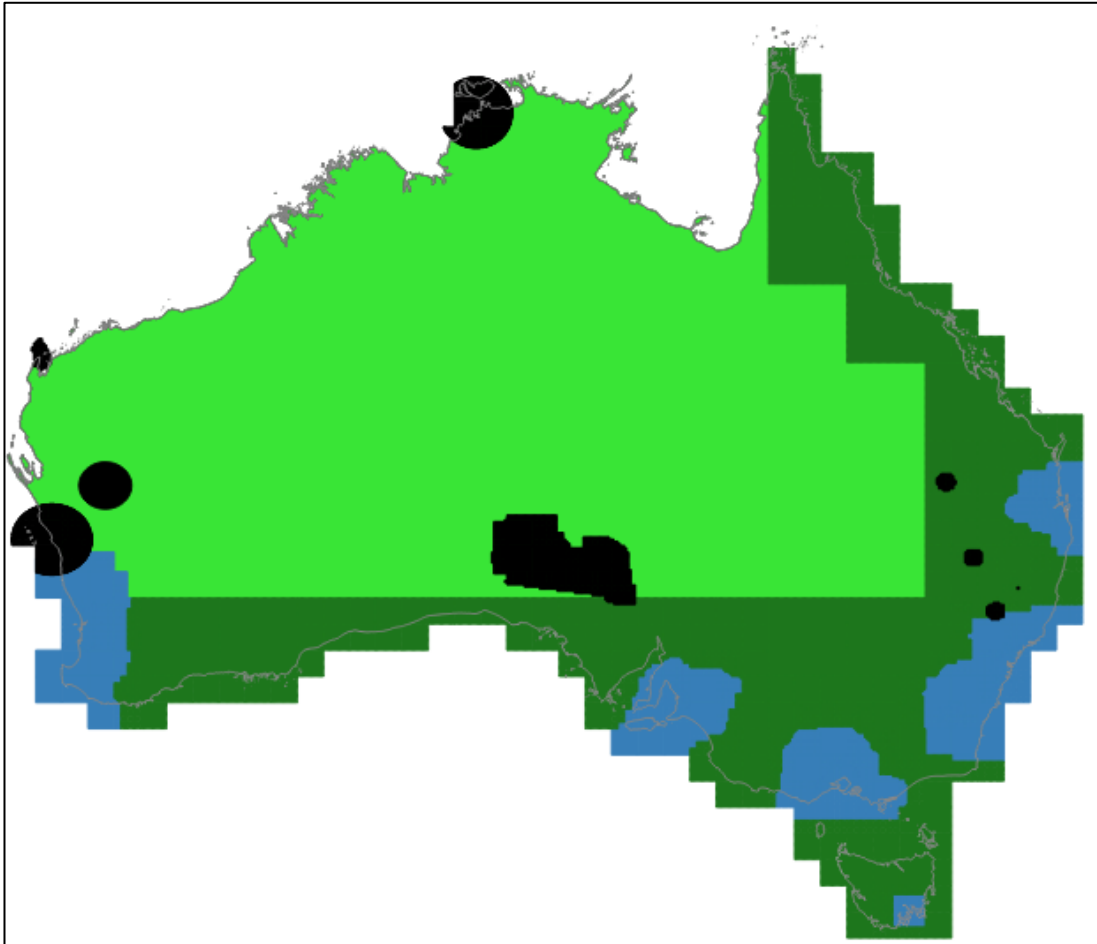
6585-7125 MHz - plans yet to be solidified, but;

- City areas
 - Potential for some form of Wireless Broadband to be supported
- Elsewhere
 - May see mix of point to point, wireless broadband, and RLAN

See 'outcomes' paper:

- <https://www.acma.gov.au/consultations/2024-05/planning-options-upper-6-ghz-band>

Wireless Broadband – 3.4 to 4 GHz

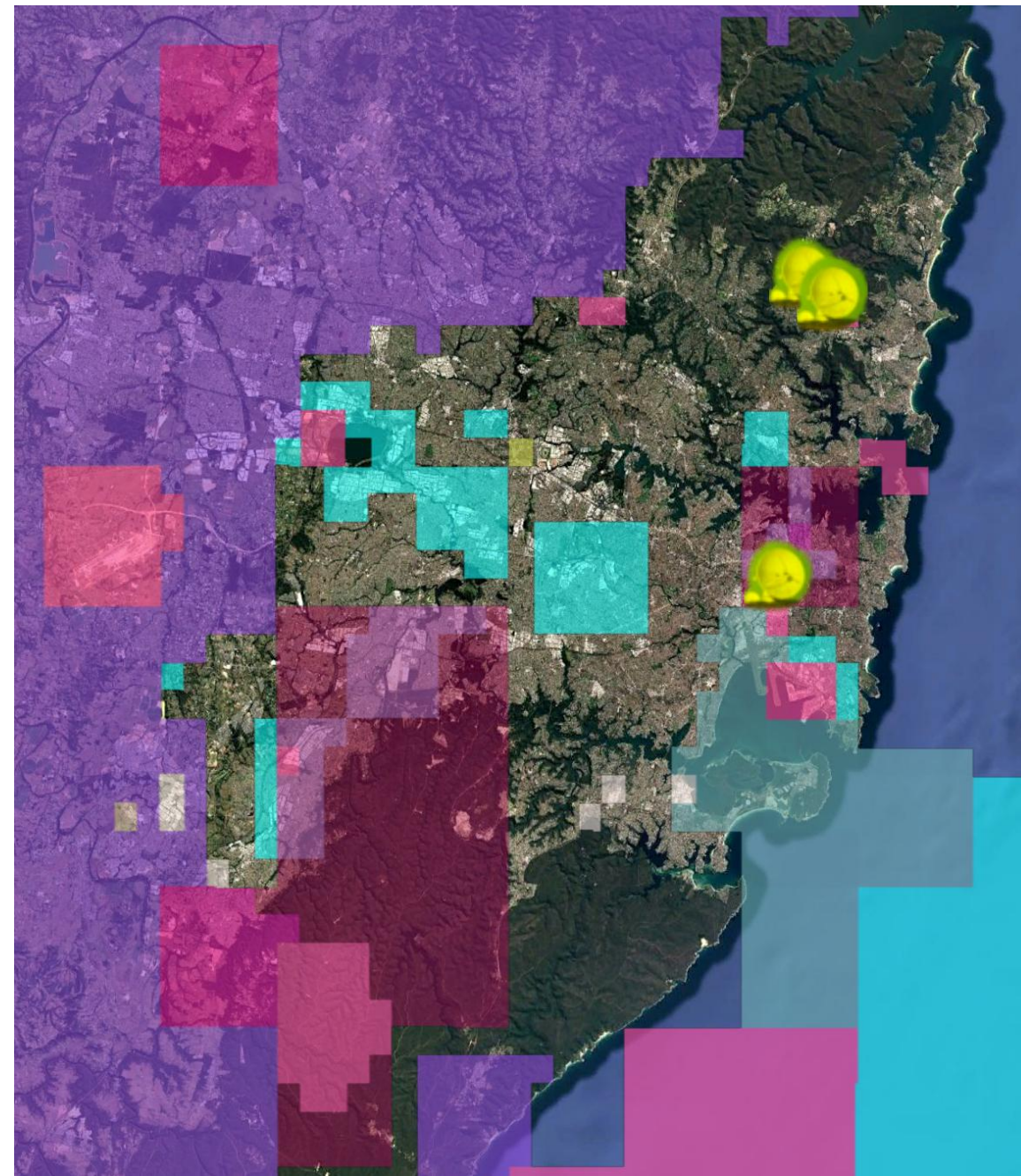


3 GHz Area Wide Licence

- Remote
3400-4000 MHz
- Rural
3750-3950 MHz
- Metro and Regional
3800-3950 MHz

Wireless Broadband 3.4 to 4 GHz

- “Area Wide Licence”
Now **over-the-counter!**
- Remote Area
 - 20 MHz limit per application
 - 100 MHz total limit per licensee
- Metro/Regional/Rural Area
 - 50 MHz total limit per licensee



Wireless Broadband – 3.4 to 4 GHz

Area Wide Licensing

- Main 3 GHz Page

<https://www.acma.gov.au/allocating-34-40-ghz-band>

- Remote 3.4 GHz

<https://www.acma.gov.au/area-wide-apparatus-licensing-34-40-ghz-band>

- Rural/Regional/Metro 3.8 GHz



<https://www.acma.gov.au/area-wide-licence-allocation-38-ghz-band>

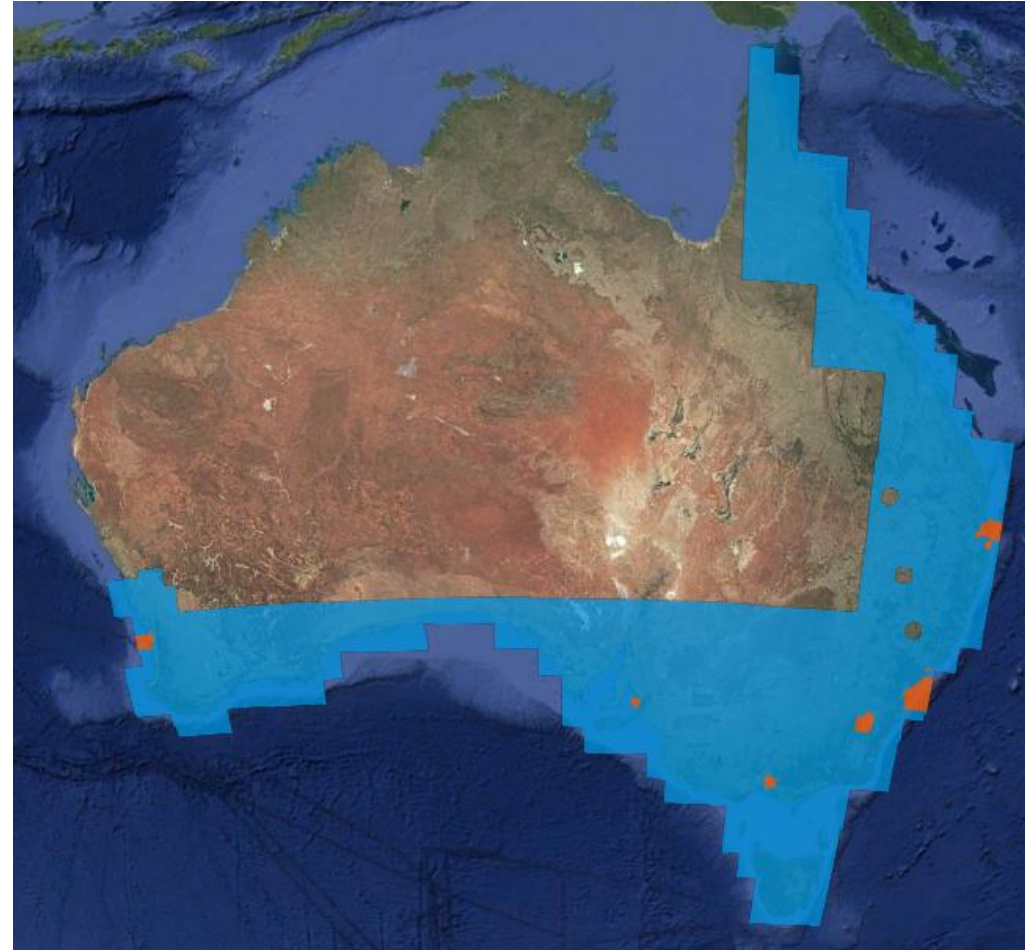
Wireless Broadband Highly Localised Point to Multipoint

- Draft only (see RALI MS50)

“localised private and enterprise networks, such as services at warehouses, factories, airports, ports, transport hubs, hospitals, schools and smart buildings. ”

Wireless Broadband Highly Localised Point to Multipoint

-  Metro + Regional
3950-4000 MHz
-  Defined Urban Areas
3400-3475 MHz



Highly Localised Point to Multipoint

- Low Power Limit
 - 50 mW (17 dBm) per MHz
- One licence for multiple stations
 - Within 100m
 - Within controlled premise

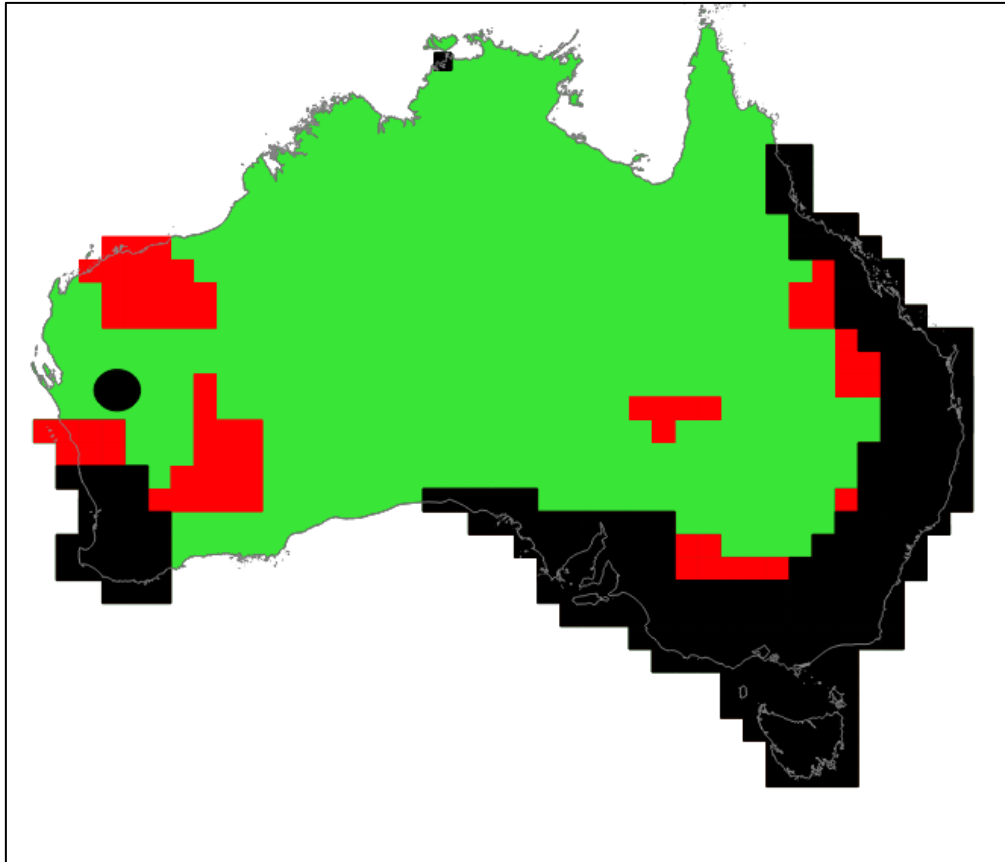
Recent consultation;

- <https://www.acma.gov.au/consultations/2024-10/remaking-fixed-licence-lcd-and-revised-arrangements-34-4-ghz-band>

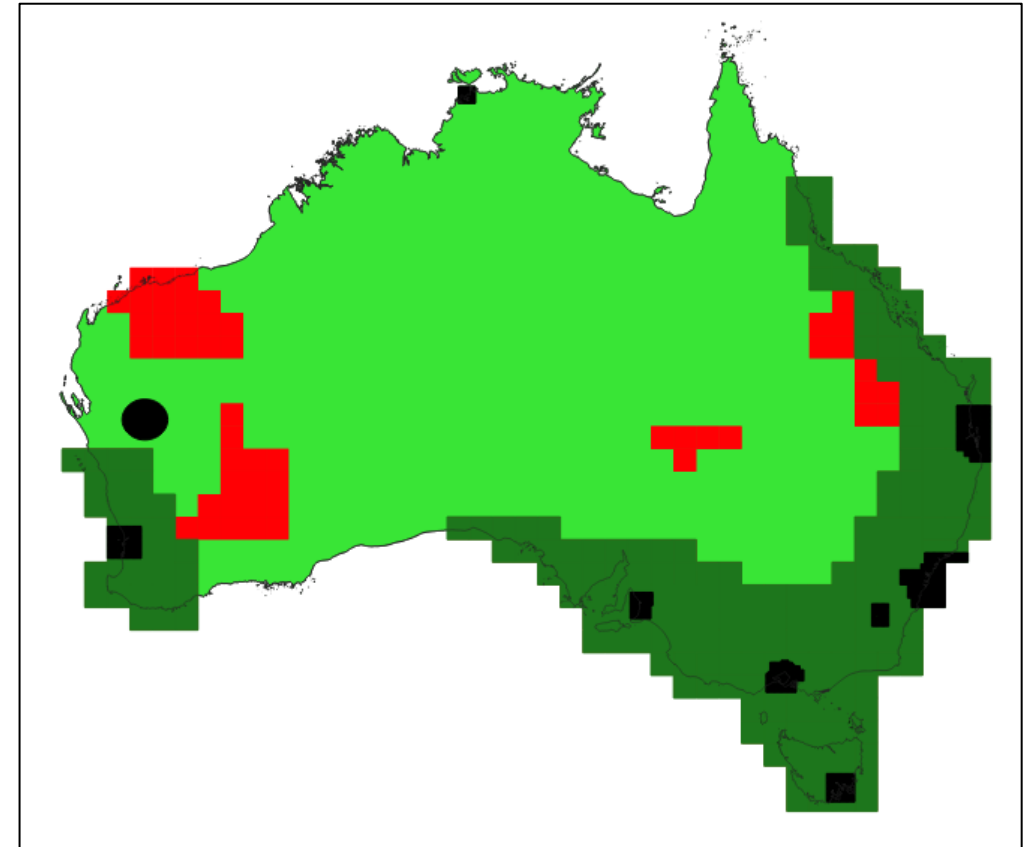
1.8/2 GHz Review

- Underutilised by mobile network operators
- Shortage of spectrum for others
- Spectrum denial causes

Wireless Broadband



1.8 GHz



2 GHz

1.8/2 GHz Review - possibilities

- Increased channel size
- “Cross band” channel limits
- Increased channel limits
- Tighter channel reuse
- Relaxed channel priority

1.8/2 GHz Review - possibilities

- Replan 1.8 GHz point to point
- Associates test
- 'Over the top' licensing

Previous consultation:

- <https://www.acma.gov.au/consultations/2024-06/1800-mhz-and-2-ghz-bands-outside-spectrum-licensed-areas-review-arrangements>

‘Secondary Licensing System’

ACMA are considering more generally:

“explore the use of a secondary licensing framework ”

See “*Views on alternative licensing conditions*”

- <https://www.acma.gov.au/publications/2024-12/report/expiring-spectrum-licences-acma-report-alternative-licensing-conditions>

Open consultation ‘Stage 3 Expiring Spectrum Licences’

- <https://www.acma.gov.au/consultations/2025-04/expiring-spectrum-licences-stage-3-preliminary-views>

Land Mobile

- ACMA Internal Review (rules RALI LM08)

“opportunities to reduce the distance constraints”

- Potential consultation Q3 2025 at the earliest.

- Current Work Program 2025-2026
 - https://www.acma.gov.au/sites/default/files/2025-02/draft_rali_review_work_program_2025-26.pdf

Keep an eye on ACMA here

- All ACMA consultations
 - <https://www.acma.gov.au/have-your-say>
- Rolling annual “Five Year Spectrum Outlook” (FYSO)
 - <https://www.acma.gov.au/five-year-spectrum-outlook>