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The Manager
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Australian Communications and Media Authority
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via online submission at: <https://www.acma.gov.au/consultations/2026-05/proposal-vary-horsham-licence-area-plan>

Dear Sir/Madam,

Proposal to vary the Horsham licence area plan

I welcome the opportunity to provide a response to the proposal to vary the Horsham licence area plan (LAP).

The proposal seeks to vary the Horsham LAP to allocate new and amended broadcasting technical specifications for the commercial radio broadcasting services operated by ACE Radio Broadcasters Pty Ltd.

The proposed variation to the Horsham LAP aims to expand and improve radio services in the region. In summary, the proposal would:

- Make FM spectrum available to enable the 3WM commercial radio broadcasting service in the Horsham RA1 licence area to convert its transmission from AM to FM.
- Make FM spectrum available for one new FM infill transmitter for the 3WM commercial radio broadcasting service to serve the Horsham RA1 licence area at Edenhope.
- Make FM spectrum available for one new FM infill transmitter for the 3WWM commercial radio broadcasting service to serve the Horsham RA1 licence area at Edenhope.
- Vary the technical specifications for the existing 3WM Ararat FM infill transmitter by increasing its maximum effective radiated power (ERP) and decreasing its maximum antenna height.
- Vary the technical specifications for the existing 3HHH community radio broadcasting service in the Horsham RA2 licence area, changing its frequency from 96.5 MHz to 106.3 MHz to enable the 96.7 MHz frequency to be used for the proposed 3WM FM transmission.
- Make other minor amendments to modernise and update the Horsham LAP.

The proposed amendments to the Horsham LAP are intended to make spectrum available for FM transmitters for 3WM and 3WWM to serve Horsham and surrounding regions extending into western Victoria and south-east South Australia.

The 3WM and 3WWM commercial radio broadcasting services will have extended and improved coverage areas that overlap with the following commercial radio broadcasting licence areas:

- Ballarat RA1
- Bendigo RA1
- Geelong RA1
- Hamilton RA1
- Maryborough (Vic) RA1
- Mt Gambier RA1

- Remote Commercial Radio Service Central Zone RA1
- Swan Hill RA1

The ACMA proposes to vary the Horsham LAP to:

- Allow 3WM in the Horsham RA1 licence area to simulcast in AM and FM.
- Make spectrum available for an FM transmitter for 3WM to serve Horsham. The proposed technical specification will permit an FM transmitter to operate on a frequency of 96.7 MHz at 20 kW maximum ERP, with an omnidirectional (OD) antenna pattern at a maximum antenna height of 165 m from the Broadcast Australia Site (Cnr Henty Hwy and Dooen School Rd, Dooen).
- Make spectrum available for a new FM infill transmitter for 3WM to serve Edenhope. The proposed technical specification will permit an FM transmitter to operate on a frequency of 97.7 MHz at 100 W maximum ERP, with an OD antenna pattern at a maximum antenna height of 25 m from GWM Water Tower 2 (David Street, Edenhope).
- Make spectrum available for a new FM infill transmitter for 3WWM to serve Edenhope. The proposed technical specification will permit an FM transmitter to operate on a frequency of 100.1 MHz at 100 W maximum ERP, with an OD antenna pattern at a maximum antenna height of 25 m from GWM Water Tower 2 (David Street, Edenhope).
- Vary the technical specifications for the existing 3WM Ararat FM infill transmitter, increasing its maximum ERP from 250 W to 1 kW, and decreasing its maximum antenna height from 30 m to 20 m.

In the Horsham RA1 licence area, the ACMA has planned for:

- The commercial radio broadcasting service 3WM, with an AM transmitter serving Horsham and FM transmitters serving Ararat and Nhill.
- The commercial radio broadcasting service 3WWM, with an FM transmitter serving Horsham and FM transmitters serving Ararat, Hopetoun (Vic), and Nhill.

Both commercial radio broadcasting services planned in the Horsham RA1 licence area are licensed to Ace Radio Broadcasters Pty Limited (Ace Radio).

The AM transmitter for 3WM is planned, and operates, on 1089 kHz with a maximum cymomotive force (CMF) of 840 V and a directional antenna (DA) pattern. The nominal location of the site is in Lubeck and serves the Horsham area. 3WM has two additional FM transmitters. One is sited at Ararat to serve the Ararat area, operating on 96.1 MHz with a maximum 250 W ERP and a DA pattern. The other is sited at Lawloit to serve the Nhill area, operating on 92.9 MHz with a maximum 2 kW ERP and an OD antenna pattern.

The FM transmitter for 3WWM is planned, and operates, on 101.3 MHz with a maximum ERP of 20 kW and a DA pattern. The nominal location of the site is in Laharum and serves the Horsham area. 3WWM has three additional FM transmitters. One is sited at Ararat to serve the Ararat area, operating on 98.5 MHz with a maximum 1 kW ERP and a DA pattern. The second is sited at Hopetoun to serve the Hopetoun (Vic) area, operating on 93.1 MHz with a maximum 50 W ERP and an OD antenna pattern. The third is sited at Lawloit to serve the Nhill area, operating on 94.5 MHz with a maximum 2 kW ERP and an OD antenna pattern.

The 3WM service has been provided since 1933 under various call signs. The licence was acquired by Ace Radio in 1986. In 2022, Ace Radio expanded by launching the service in the Ararat area. It broadcasts local news, rural news, local sports, talkback, and music.

The ACMA assessed coverage loss by comparing the coverage of the existing:

- 3WM Horsham AM transmitter located at Lubeck, operating on 1089 kHz with a maximum CMF of 840 V with a DA pattern
- 3WM Ararat FM infill transmitter located at Ararat, operating on 96.1 MHz with a maximum ERP of 250 W with a DA pattern
- 3WM Nhill FM infill transmitter located at Lawloit, operating on 92.9 MHz with a maximum ERP of 2 kW with an OD antenna pattern

with the proposed:

- 3WM Horsham FM transmitter to be located at the 3WM Broadcast Australia Site (Cnr Henty Hwy and Dooen School Rd, Dooen), operating on 96.7 MHz with a maximum ERP of 20 kW with a DA pattern
- 3WM Ararat FM infill transmitter located at Ararat, operating on 96.1 MHz with a maximum ERP of 1 kW with a DA pattern
- 3WM Nhill FM infill transmitter located at Lawloit, operating on 92.9 MHz with a maximum ERP of 2 kW with an OD antenna pattern
- 3WM Edenhope FM infill transmitter located at Edenhope, operating on 97.7 MHz with a maximum ERP of 100 W with an OD antenna pattern.

The existing 3WM FM infill transmitter at Nhill is proposed to continue operating under the same specifications. Details of the new specifications are set out in the draft variation to the Horsham LAP for 3WM FM at Horsham in Attachment 1.11 and the 3WM Ararat FM infill transmitter at Attachment 1.10.

The proposed 3WWM FM infill transmitter at Edenhope would have the same specifications as the proposed 3WM FM transmitter at Edenhope in terms of nominal location, maximum ERP, maximum antenna height, and antenna pattern.

The ACMA's assessments of coverage loss predict that the proposed 3WM Horsham FM transmitter, combined with the three infill transmitters at Ararat, Nhill, and Edenhope, would result in between 23.04% and 37.48% less noise-limited coverage of the overall population within the Horsham RA1 licence area compared with the existing 3WM Horsham AM transmitter combined with the existing two infill transmitters at Ararat and Nhill. When assessed for interference-limited coverage, the coverage loss is predicted to be similar—between 23.88% and 37.89% of the overall population within the Horsham RA1 licence area.

These coverage loss figures are significant, and such a loss is generally considered unacceptable. Consequently, the ACMA and Ace Radio have agreed that the 3WM AM transmitter should continue operating after the FM transmission is enabled.

The ACMA published an update in October 2025 to its AM–FM conversion program policy, stating openness to considering proposals for AM/FM simulcasts in certain situations (page 1 of the update). While the preference is to plan for a conversion where all listeners in the licence area can receive the benefits of FM transmission, this is not always practical. In cases where most of the population lives in a town or towns—and the surrounding areas are sparsely populated—it is practical for the more populous, town-based areas to be upgraded to FM coverage while the others continue to receive AM transmission. This is called a town-based dual-coverage FM upgrade, which is the approach being taken in the Horsham area.

An analysis of the predicted signal overspill from the proposed main 3WM FM transmitter at Horsham and the existing and new 3WM FM infill transmitters indicates that the proposed FM transmission will overspill significantly less into the overlapping and adjacent licence areas of Swan Hill RA1, Bendigo RA1, Maryborough (Vic) RA1, and the Remote Commercial Radio Service Central Zone RA1 compared with the existing AM transmission overspill (which is planned to remain operational). The current total overspill from the 3WM AM transmission is estimated at approximately 152,061 people. The overspill for the proposed 3WM FM transmission, including all proposed infill transmitters, is predicted to be only 133–248 people, which is acceptable. This overspill is considered minor and incidental to providing the service.

An analysis by the ACMA indicates a risk of potential interference to nearby services from the proposed 3WM FM Horsham transmitter on 96.7 MHz. The risk of potential interference to the Latrobe Valley (3JJJ) co-channel broadcasting on 96.7 MHz is predicted to affect between 0 and 2,328 people. Most of the population predicted to suffer interference is in Ballarat and west of Melbourne, which is outside the intended area of coverage; these listeners should receive alternative coverage from the 3JJJ Ballarat (Lookout Hill) and 3JJJ Melbourne services. Due to these alternate services, the risk of interference is regarded as low.

There is also a risk of potential interference with the national broadcasting service planned to serve Nhill on 97.3 MHz in the Horsham LAP. The affected population is predicted to be between 0 and 176 people. The areas affected are at the edge of coverage and near Horsham. However, the Nhill transmission of the national broadcasting service is not currently active and is not expected to serve the area where interference is predicted (the Pimpino area). The areas that might be affected, if it were activated in the future, are better served by transmissions from Horsham. There are two national radio broadcasting services (3PNN and 3ABCRN) operational in Horsham that could provide alternate coverage. The risk of interference is considered low in the current circumstances. Should the Nhill transmission of the national broadcasting service be activated in the future and interference issues arise, Ace Radio would be expected to work with the ABC to mitigate them.

The risk of potential interference to nearby services from the proposed 3WM FM Edenhope infill transmitter on 97.7 MHz is regarded as low and acceptable. A standard advisory note limiting protection to the suburban grade coverage of 66 dBµV/m is proposed to be added to the 3WM Edenhope and Ararat infill transmitter specifications to manage the risk of interference (see Schedule 4, Attachment 1.12A in the draft variation to the Horsham LAP).

In October 2025, Ace Radio contacted the ACMA noting that the specifications of the existing 3WM Ararat FM infill transmitter did not match the specifications of the 3WWM Ararat FM infill transmitter. The 3WM FM infill transmitter had a lower ERP because, at the time, it was considered that the AM signal was deficient in Ararat alone but adequately covered the areas of Great Western and Stawell just north-west of Ararat.

The ACMA previously indicated to Ace Radio that it may be possible to match the Ararat FM infill transmitter specifications when an AM to FM conversion was done. Ace Radio confirmed via email that it remains interested in a power increase for the 3WM FM infill transmitter. Because 3WM will now be transmitting on FM just as 3WWM does, it is appropriate for its Ararat FM infill transmitters to have matching specifications where possible.

Interference Analysis

An analysis by the ACMA indicates a risk of potential interference to nearby services from the proposed 3WM FM Ararat infill transmitter on 96.1 MHz. The risk of potential interference to the Goulburn Valley (3ABCFM) co-channel broadcasting on 96.1 MHz is predicted to affect between 270 and 843 people. Most of the population predicted to suffer interference is in Enmore, Harcourt, and east of Bendigo. This is outside the intended area of coverage, and they should receive alternative, higher-grade coverage from the 3ABCFM Ballarat service (Lookout Hill). Due to this alternate coverage availability, the risk of interference is regarded as low and acceptable.

There is also a risk of potential interference with the Ballarat (Warrenheip) retransmission of 3SBSFM broadcasting on 95.9 MHz. The population predicted to suffer interference is between 2 and 51 people, located at the edge of coverage around Carngham, Hillcrest, and Scarsdale, mainly in elevated state forest areas. Due to the low number of people predicted to be affected, the risk of interference is regarded as low and acceptable.

3WWM operates four transmitters in the Horsham RA1 licence area—one serving the Horsham area and three infill transmitters serving the Ararat, Hopetoun (Vic), and Nhill areas. The transmitter serving the Horsham area is currently planned with a frequency of 101.3 MHz, a maximum ERP of 20 kW, and a DA pattern from a nominal site location in Laharum, with a maximum antenna height of 30 m. However, the transmitter does not currently operate with these specifications.

In October 2020, Ace Radio submitted an application to vary its apparatus licence for the 3WWM Horsham FM transmitter so it could operate from the Broadcast Australia Site (Cnr Henty Hwy and Dooen School Rd, Dooen) and increase the antenna height to 180 m. This was approved in December 2020. An assessment undertaken by the ACMA found that operating under these new specifications would not breach the relevant criteria in Part 3 and Part 4 of the *Broadcasting Services (Technical Planning) Guidelines 2017*, meaning a variation of the Horsham LAP was not necessary at the time.

Now that the Horsham LAP is being varied, the ACMA proposes to alter the specifications of the 3WWM service to reflect its actual operating parameters. This involves changing the nominal location of the 3WWM Horsham FM transmitter operating on 101.3 MHz to the Broadcast Australia Site (Cnr Henty Hwy and Dooen School Rd, Dooen), increasing the maximum antenna height to 165 m, and adopting an OD antenna pattern. The increase in maximum antenna height will be capped at 165 m (rather than the 180 m approved in December 2020) because subsequent follow-ups with Ace Radio confirmed that 165 m more accurately reflects current operations (see item 14, changes to Attachment 1.13 in the draft variation to Horsham LAP).

The licensee has also requested that an FM infill transmitter for 3WWM be planned at Edenhope to match the one being implemented for 3WM. The proposed 3WWM Edenhope FM infill transmitter would broadcast on 100.1 MHz from GWM Water Tower 2 (David Street, Edenhope), with a maximum ERP of 100 W, an OD antenna pattern, and a maximum antenna height of 25 m. These nominal specifications match those of the 3WM Edenhope FM infill transmitter (see Schedule 5, Attachment 1.16A in the draft variation to Horsham LAP).

The Edenhope FM infill transmitter, like the Hopetoun (Vic) FM infill transmitter, will include a protection note stating that any transmission in accordance with the technical specification is planned on the basis that it will be protected to a minimum median field strength of 66 dBµV/m against interference from other broadcasting services.

Interference Analysis of the Proposed 3WWM Edenhope Transmitter

Analysis indicates that the proposed 3WWM FM Edenhope infill transmitter on 100.1 MHz may cause interference to the existing 3ABCRN Horsham service broadcasting on 99.7 MHz. The affected population is predicted to be between 124 and 768 people under the current LAP specifications, where the 3ABCRN transmitter is sited in Arapiles.

However, the proposed variation to the Horsham LAP will move the 3ABCRN Horsham transmitter to co-site with the proposed 3WM FM transmitter in Dooen. No interference is expected following this nominal location change, meaning the risk of interference remains low and acceptable. A standard advisory note limiting protection to the suburban grade coverage of 66 dBµV/m is recommended to be added to the 3WWM Edenhope infill transmitter specification to manage any interference risks (see Schedule 5, Attachment 1.16A in the draft variation to the Horsham LAP).

The ACMA proposes to vary the Horsham LAP to:

- Allow the community radio broadcasting service 3HHH in the Horsham RA2 licence area to change frequency from 96.5 MHz to 106.3 MHz.
- Make spectrum available for an FM transmitter for 3HHH to serve Horsham in the Horsham RA2 licence area. The proposed technical specification will permit an FM transmitter to operate on a frequency of 106.3 MHz at 500 W ERP, with an OD antenna pattern and a maximum antenna height of 45 m from the Horsham CBD 41m Lattice Tower (19 McLachlan Street, Horsham).
- Vary the existing technical specification for the 3HHH community radio broadcasting service planned on 96.5 MHz so that it ceases to have effect upon the commencement of the new 3HHH transmission on 106.3 MHz.

Community Radio Broadcasting Services in Horsham

In the Horsham RA2 licence area, the ACMA has planned for one community radio broadcasting service, 3HHH, with an FM transmitter serving Horsham. This service is licensed to Horsham & District Community FM Radio Inc (Horsham Community Radio).

The proposed new FM transmitter for 3HHH is planned to operate on 106.3 MHz with a maximum ERP of 500 W and an OD antenna pattern from the Horsham CBD 41m Lattice Tower (19 McLachlan Street, Horsham). Aside from the frequency swap, these are the exact same operating specifications as those previously planned for 96.5 MHz.

The 3HHH service provides a variety of programming, including specialist music styles, content catering to community groups, sporting clubs, local church groups, and youth programs.

To enable the 3WM FM transmission in Horsham RA1 to operate on the 96.7 MHz frequency, the 3HHH FM transmission in RA2 must move to a different frequency. The 96.7 MHz frequency has the potential for severe mutual interference with 3HHH if it remains on 96.5 MHz. The frequency 106.3 MHz has been identified as a suitable alternative for 3HHH, allowing the station to maintain all other existing technical specifications.

Interference Analysis of the Proposed 3HHH Horsham Frequency (106.3 MHz)

Analysis indicates that the proposed 3HHH FM Horsham transmitter on 106.3 MHz may cause interference to the existing 3ABCFM Ballarat (Lookout Hill) service broadcasting on 105.5 MHz. The population affected is predicted to be between 13,894 and 15,188 people. It may also cause interference to the existing 3JJJ Ballarat (Lookout Hill) service broadcasting on 107.1 MHz, potentially affecting between 13,927 and 15,190 people.

The expected disruption is known as fourth-adjacent-channel interference and is most likely to affect legacy receivers. Additionally, the affected populations in both cases are located at the periphery of the relevant services and outside their intended coverage zones. There are two currently unused national broadcasting frequencies planned in the Horsham LAP that could provide alternative coverage if implemented. While the numbers affected are potentially large, the risk is considered low and acceptable due to the location being outside primary coverage areas, legacy hardware limitations, and alternative transmissions planned for Horsham.

Should interference occur, Ace Radio—as the primary beneficiary of 3HHH's frequency move—will be expected to work with the ABC to mitigate these issues. This could involve receiver replacements or other appropriate measures. Ace Radio has been made aware of and has agreed to this responsibility. 3HHH has also stated in writing that it understands the interference risks and acknowledges Ace Radio's responsibility to handle mitigation.

In addition to the changes above, the ACMA proposes minor text, schedule, and attachment amendments to the Horsham LAP to:

- Update the introductory text to maintain consistency with modern LAP standards.
- Change the nominal locations in Attachments 1.4–1.6 to reflect the actual operating locations of the services.
- Update the nominal location in Attachment 2.2 to be more descriptive of the site name without altering the actual geographic position.
- Convert the Australian Map Grid References in Attachments 1.2, 1.3, 1.7–1.12, 1.14–1.21, and Attachment 2.2 to the modern Nominal Coordinates (GDA94) standard used in current licence area plans. This includes corresponding coordinate updates in special conditions, with no changes made to physical nominal locations.
- Remove references to the *Broadcasting Services (Technical Planning) Guidelines 2017* from Attachments 1.2–1.21 and Attachment 2.2, consolidating them into a single substantive clause at the start of the Horsham LAP.
- Add standard special conditions to Attachments 1.2 and 1.11 clarifying that the CMF at all elevations must not exceed the specified CMF at 0 degrees elevation across all angles of azimuth.
- Decrease maximum antenna heights in Attachments 1.3–1.6, 1.10, 1.14, and Attachment 2.2 to match current operating parameters accurately.
- Simplify and clarify the phrasing of advisory notes in Attachments 1.17–1.21 to make them more accessible without changing their regulatory meaning or effect.
- Apply minor formatting corrections across the Horsham LAP and its attachments.

This comprehensive proposal will successfully extend the reach of the 3WM and 3WWM commercial radio broadcasting services across Horsham. It significantly improves radio coverage entering Ballarat, Bendigo, Hamilton, Geelong, Maryborough (Vic), Swan Hill, the western districts of Victoria, south-east South Australia, and the Remote Commercial Radio Service Central Zone.

Upon successful completion of the Horsham LAP variation, the regional broadcasting framework will achieve the following:

- The 3WM commercial radio service in the Horsham RA1 licence area will convert its transmission from AM to FM, supported by a continuing AM/FM simulcast to secure long-range coverage.
- New FM infill transmitters will be established at Edenhope for both 3WM and 3WWM services.
- The antenna power for the existing 3WM Ararat FM infill transmitter will be increased to improve service strength.
- The existing 3HHH community radio broadcasting service in the Horsham RA2 licence area will transition from 96.5 MHz to 106.3 MHz, successfully freeing up the 96.7 MHz frequency for 3WM's primary FM transmission.
- The region will be robustly served by five national radio broadcasting services in Horsham, three national services in Nhill, one commercial service serving Ararat, Horsham, and Nhill, and one commercial service covering Ararat, Horsham, Hopetoun (Vic), and Nhill.
- Five open narrowcasting radio services will remain active, individually serving Ararat, Stawell, Warracknabeal, Horsham, and St Arnaud.
- One community radio broadcasting service will continue to serve the Horsham area within the Horsham RA2 licence area.

Overall, I firmly support these technical adjustments, as they optimize overlapping and adjacent licence areas across Victoria and South Australia while modernizing transmission infrastructure for the community.

Yours sincerely,



Brendon Agpasa