Proposed updates to RALI FX 23 Outcomes paper

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[Executive summary 1](#_Toc153355356)

[Introduction 2](#_Toc153355357)

[Responses to submissions and the way forward 3](#_Toc153355358)

[Industry feedback and ACMA response 3](#_Toc153355359)

[Way forward 4](#_Toc153355360)

Executive summary

Frequency coordination and licensing procedures for point-to-multipoint (PMP) services in the 5.6 GHz band (5600–5650 MHz) are detailed in Radiocommunications Assignment and Licensing Instruction FX23 ([RALI FX23](https://www.acma.gov.au/publications/2019-08/instruction/frequency-coordination-and-licensing-procedures-point-multipoint-services-56-ghz-band)). RALI FX23 was identified for review in our [*Spectrum planning framework: Frequency coordination requirements review work program for 2023–24*](https://www.acma.gov.au/ralis-frequency-coordination)document.

In September 2023, we released a [consultation paper](https://www.acma.gov.au/consultations/2023-09/proposed-updates-rali-fx23) seeking stakeholder views on the following proposed updates to RALI FX23:

Updating Annex D of RALI FX23 to remove redundant sites and add new sites for future weather radars (Annex D contains the locations and parameter values for new weather radar sites that are used in the coordination process).

Removing the interim arrangements that support the migration of 3.6 GHz band PMP licences to the 5.6 GHz band, previously contained in section 3.2bis of RALI FX23. These interim arrangements aimed to preserve options for the migration of 3.6 GHz PMP licences to the 5.6 GHz band, however we consider that they are no longer required.[[1]](#footnote-2)

Updating wording to help improve readability and clarity.

We received 4 responses to the proposals in the consultation paper. Respondents generally supported the proposed updates to RALI FX23 and proposed some further changes and additional arrangements.

Following our consideration of submissions, we will proceed with the updates to RALI FX23 as consulted (detailed above), with some additional clarifications to Table 3 and Annex D to address issues identified in submissions.

Some submissions contained proposals that were beyond the scope of this review or outside the remit of RALI FX23. These have been noted and may be considered in a future consultation process.

# Introduction

Arrangements for 5.6 GHz band point-to-multipoint (PMP) licensing were first introduced in December 2018 with the release of Radiocommunications Assignment and Licensing Instruction FX23 ([RALI FX23](https://www.acma.gov.au/publications/2019-08/instruction/frequency-coordination-and-licensing-procedures-point-multipoint-services-56-ghz-band)). This RALI details coordination and licensing procedures for apparatus-licensed PMP services in the 5.6 GHz band – both between PMPs and between PMP and weather radars.

The ACMA regularly reviews spectrum planning technical frameworks to ensure they remain current and consistent with contemporary technologies and operational practices. As outlined in our [*Spectrum planning framework: Frequency coordination requirements review work program for 2023–24*](https://www.acma.gov.au/ralis-frequency-coordination) document, RALI FX23 was identified for review to ensure it remains current.

We consulted on the [proposed review of RALI FX23](https://www.acma.gov.au/consultations/2023-09/proposed-updates-rali-fx23) in September 2023.

We proposed to update Annex D of RALI FX 23, which contains the locations and parameter values for potential sites for future weather radars. This included the addition of new sites and removing sites that are no longer required in Annex D as radar systems are now licensed at these locations or within the general area.

We also proposed to remove section 3.2bis of RALI FX23, which was initially developed to preserve options for the migration of 3.6 GHz PMP licences to the 5.6 GHz band as an interim arrangement in 2018. As detailed in the consultation paper, we are of the view that 5 years was a sufficient timeframe to support that migration and noted that the upcoming release of spectrum in the 3.8 GHz band will also provide another migration option for PMP licensees. As such, we proposed to remove this arrangement from RALI FX23.

In addition, we proposed to make a series of editorial updates to RALI FX23 to help improve readability and clarity.

We received 4 submissions to our consultation. This paper provides a summary of these submissions and provides our responses to the key issues and comments raised by respondents. This paper also outlines the following changes that we have made to RALI FX23 as an outcome of this review:

Removing redundant sites and adding new sites Annex D of RALI FX23 for potential weather radars.

Removing the interim arrangements that supported the migration of 3.6 GHz band PMP licences to the 5.6 GHz band, previously contained in section 3.2bis of RALI FX23.

Updating wording in Table 3 to clarify the applicable bandwidths.

Updating wording throughout the document to help improve readability and clarity.

This outcomes paper should be read in conjunction with the [consultation paper](https://www.acma.gov.au/consultations/2023-09/proposed-updates-rali-fx23).

# Responses to submissions and the way forward

The ACMA received 4 submissions to the consultation process, from the Bureau of Meteorology, Open Spectrum, Optus and Telstra.

## Industry feedback and ACMA response

All respondents supported our proposed updates to RALI FX23. Respondents also provided a number of additional proposals and suggestions. These are summarised below along with our responses.

### Radar receiver bandwidth

One respondent suggested adding a new column in Annex D of RALI FX 23 to specify the bandwidth of potential weather radars. This respondent also proposed that the radar protection levels in Table 4 should apply over the actual receiver bandwidth (current radars operate with bandwidths in the range 1–8 MHz), rather than the normalised reference bandwidth of 1 MHz (however, no bandwidth scaling was applied to the protection values).

#### ACMA response

Specifying the radar protection values over the actual radar bandwidth without any bandwidth scaling would result in the over-protection of radars that use a bandwidth greater than 1 MHz (by up to 9 dB for a radar with an 8 MHz bandwidth). Noting this over-protection and that the current protection values, specified as a power spectral density (over 1 MHz), will provide adequate protection of radars operating with any bandwidth, we have decided not to adopt this proposal. We will, however, include the bandwidth of the potential radars in Annex D, as suggested.

### Migration options for 3.6 GHz band PMP licensees

Two respondents indicated support for the proposed removal of section 3bis and provided commentary and suggestions in relation to migration options for PMP licensees in the 3.6 GHz band (3575–3700 MHz).

One respondent suggested that the licence area definition in section 2.2 should be expanded to encompass both regional and remote areas of Australia, suggesting that this would provide flexibility for PMP operators in remote areas to move to the 5.6 GHz band as an alternative to their existing PMP licence in the 3.4–4 GHz range.

The other respondent indicated that their support for the proposed removal of the interim arrangements supporting the migration of existing 3.6 GHz band PMP licensees to the 5.6 GHz band (under section 3.2bis) is based on the understanding that the ACMA intends to introduce new arrangements in the 3.8 GHz band that may provide an alternate migration option for the remaining regional PMP licensees in the 3.6 GHz band. This respondent also suggested the ACMA consider mechanisms that would encourage 3.6 GHz band PMP licensees to vacate the band earlier.

#### ACMA response

We agree that RALI FX23 currently does not allow PMP licences to be issued in remote areas. However, as this proposal wasn’t included in the consultation paper and we are not aware of any notable demand for access to 5.6 GHz in remote areas, we do not intend to expand RALI FX23 to permit access in remote areas at this stage. We will continue to monitor demand and may consider further expansion in the future as needed. Public consultation would be undertaken before any decisions on permitting 5.6 GHz band PMP services in remote areas.

As mentioned in the consultation paper, the release of area-wide licences in the 3.8 GHz band presents another option for regional PMP licensees that need to vacate the 3.6 GHz band. We intend to begin the allocation of 3.8 GHz band area-wide licences in Q1 2024, as outlined in the [*Five-year spectrum outlook 2023–28*](https://www.acma.gov.au/publications/2023-10/five-year-spectrum-outlook-2023-28).

We note the proposal for us to consider mechanisms to encourage regional 3.6 GHz PMP licensees to vacate the band earlier, however as this issue is outside the scope of this review, we won’t provide further commentary in this paper.

### Proposed simplification of the PMP protection values

One respondent proposed options to simplify how the PMP protection values are described (Table 3 in the consultation paper). These options included replacing Table 3 with a single power spectral density interference threshold value (equivalent to the values currently specified for different bandwidths) or amending Table 3 to clarify that the values apply over the portion that the transmit and receive bandwidths overlap.

#### ACMA response

We believe there is benefit in continuing to specify the PMP protection values in a table, for the various combinations of channel bandwidth and overlaps. However, we agree that modifications that clarify and simplify the application of Table 3 would be helpful. In particular, we have modified Table 3 to specify that the protection level is specified within the bandwidth of the transmitter and receiver channel overlap.

It should also be noted that for scenarios of a 10 MHz transmitter coordinating with a 15 or 20 MHz receiver, the protection values include an additional 3 dB margin to cover the potential for two 10 MHz channel interferers overlapping the receiver bandwidth. There may have been some confusion when these limits were compared to the protection requirement for other channel scenarios (that do not have this additional margin), so Footnote 4 in RALI FX23 has been expanded to clarify this point.

## Way forward

After reviewing submissions received, we will proceed with the updates proposed in the consultation paper, with the additional amendments discussed above. In summary, we will:

update the list of potential weather radar sites in Annex D and include the applicable channel bandwidth

remove the interim arrangements that preserved options for the migration of 3.6 GHz PMP licences to the 5.6 GHz band, previously contained in section 3.2bis

update Table 3 to clarify the applicable bandwidths

make a series of editorial updates to help improve readability and clarity.

We thank those who contributed responses to the consultation process and note that feedback on RALIs is welcome at any time, and when we consult on our next update as per our [frequency coordination requirements review work program](https://www.acma.gov.au/ralis-frequency-coordination).

1. Background on the requirement for regional PMP services to vacate the 3.6 GHz band is contained in the paper [*Future use of the 3.6 GHz band – Decisions and preliminary views*](https://www.acma.gov.au/publications/2020-02/report/future-use-36-ghz-decisions-and-preliminary-views). [↑](#footnote-ref-2)