



TELSTRA CORPORATION LIMITED

Allocation of AWLs in the 3.4–4.0 GHz band in remote Australia

Public Submission

4 May 2022



Contents

01	Introduction	3
02	Response to consultation paper	3
2.1.	Allocation quantum policy – 100 MHz limit is supported	3
2.2.	Minimum channel size – 10 MHz supports current technology	4
2.3.	Minimum geography – HCIS Level 1 is required	4
2.4.	Initial allocation window and principles – Two weeks is sufficient	4
2.5.	Assignment priority	5
2.6.	Tenure and renewal – Licences can operate up to 13 Dec 2030	5
2.7.	Renewal – Licences should include a renewal statement	6
2.8.	Price – we support the ACMA's proposed price and construct	6
2.9.	Radio Altimeters – no additional mitigation is required	6
2.10.	Fallback synchronisation	7
2.11.	Point-to-Point links	7
03	Comments on draft AWL LCD	8
3.1.	Definition of 3.4 GHz band spectrum licence	8
3.2.	Legislative requirement to comply with RALI MS-47	8
3.3.	Synchronisation requirement	9
04	Comments on draft RALI MS-47	10
4.1.	Apparatus licensed Point-to-Multipoint (PMP) devices	10
4.2.	Minimum geographic area	10
4.3.	Assignment Priority	10
4.4.	Coordination at the boundary of a spectrum licensed area	11
4.5.	Protecting co-channel AWL licensed receivers	11
4.6.	Adjacent channel coordination	12
4.7.	Receiver spurious emission limits	12
4.8.	Compatibility with Radio Altimeters	12
4.9.	Support for AMTA's comments on RALI MS-47	13
4.10.	Administrative errors	13
05	Comments on amendments to RALI FX-03	14
5.1.	Support for AMTA's comments on amendments to RALI FX-03	14
06	Comments on amendments to RALI FX-19	14
6.1.	Support for AMTA's comments on amendments to RALI FX-19	14
07	Responses to questions	15



01 Introduction

We welcome the opportunity to provide our views to the ACMA's consultation on **Allocation of AWLs in the 3.4-4.0 GHz band in remote Australia** (IFC 11/2022). Area-wide licences (AWLs) in remote parts of Australia are an important step to delivering the latest 5G technology to Australians living and working in remote parts of Australia. Without access to spectrum through these licences, companies such as Telstra cannot provide the latest mobile technology that provides an experience comparable to that in metro and regional areas to remote Australians, and we are pleased to be able to contribute our views to this important step towards delivering 5G technology to these members of Australia's community.

Our submission is structured as follows:

- Section 2 contains our response to matters raised in the consultation paper;
- Section 3 contains our comments on the Licence Condition Determination (LCD);
- Sections 4, 5 and 6 contain our comments on the three RALIs (MS-47, FX-3 and FX-19); and
- Section 7 contains answers to specific questions posed in the consultation.

02 Response to consultation paper

This section contains comments and observations on the consultation paper.

2.1. Allocation quantum policy – 100 MHz limit is supported

The ACMA states its intention to develop an administrative allocation quantum policy.¹ For remote areas, we support an allocation quantum policy limit of 100 MHz, with the ACMA having the discretion to allocate a larger quantum than this if provided sufficient evidence by the applicant as to why more than 100 MHz of spectrum is required. Allowing MNOs the option to have access to up to 100 MHz of mid-band spectrum in remote areas, aligned (as much as practicable) with their existing 3.4-3.7 GHz regional holdings will be important to promote the rollout of 5G networks into these areas and avoid creating a digital divide. The growth of an internationally competitive Australian digital economy in line with the Government's communications policy objectives is dependent on the mobile sector having access to adequate spectrum throughout metro, regional and remote areas in Australia.

While spectrum in low-frequency bands (700 MHz, 850 MHz and 900 MHz) is normally used by MNOs to supply wireless broadband services in remote areas, the bandwidth in these bands is very limited compared to the mid-bands and 3.4-3.8 GHz in particular. Setting the allocation quantum policy for remote Australia to 100 MHz would allow carriers to provide remote Australians with 5G speeds and capacity similar those available to people in regional centres and metro locations, where it is economic to do this.

We consider 100 MHz is sufficient to avoid creating a digital divide, i.e., 150 MHz is not required.² The GSMA currently considers that 80-100 MHz per operator is required for the 3.3-4.2 GHz band, with more

¹ Consultation paper, p.12.

² The ACMA's two options for a remote allocation quantum policy are 100 MHz and 150 MHz.



capacity required as demand increases,³ and that 100 MHz in remote areas should be a sufficient allocation.

2.2. Minimum channel size – 10 MHz supports current technology

The ACMA proposes an assignment scheme with a minimum allocated bandwidth of 10 MHz. We support the ACMA's proposal, as this aligns with the bandwidths supported in the existing 3GPP standards for the 3.4-3.8 GHz spectrum band and is the minimum usable bandwidth for technologies likely to be used in the band. For example, the technology most likely to be deployed in 3.4-4.0 GHz in remote areas is 5G (3GPP New Radio) which has a minimum channel size of 10 MHz, with all carrier sizes supported in multiples of 10 MHz to 100 MHz.

The existing PMP channel plan in the 3.6 GHz band, described in RALI FX-19, is currently a TDD scheme using 10 MHz or 20 MHz bandwidths for new assignments (i.e., multiples of 10 MHz), and the spectrum licensing trading rule determination⁴ for the 3.4 GHz and 3.6 GHz bands defines a minimum contiguous bandwidth of 10 MHz.

2.3. Minimum geography – HCIS Level 1 is required

Section 3.3.1 of RALI MS-47 sets the minimum geographic area as HCIS Level 0. We do not support the use of HCIS Level 0 as the minimum geographic area for remote allocations in this band and recommend that the minimum geographic area should be set to HCIS Level 1.⁵

Our concern with setting the minimum geographic area to HCIS Level 0 is the likely spectrum denial that is caused to a potential outdoor macro cell operator.

Our view is that allocating spectrum on an HCIS Level 0 basis will lead to excessive geographic fragmentation as well as not being sufficiently representative of the radio coverage achievable in this band, which with outdoor antennas at height can travel many kilometres. Therefore, HCIS Level 1 is a more realistic indicator of the level of spectrum denial caused by a transmitter in this band.

We recommend the minimum geographic area should be HCIS Level 1, commensurate with the spectrum denial caused.

2.4. Initial allocation window and principles – Two weeks is sufficient

The ACMA intends to adopt an 'allocation window/allocation principles' approach⁶ to contend with a possible excess demand. We support this approach as it provides a measured approach for prospective licensees to apply for licences and avoids the otherwise inevitable race to be "first in the queue" which, given previous experience when the ACMA has opened spectrum allocations on a first-come first-served

³ <https://www.gsma.com/spectrum/wp-content/uploads/2021/04/3.5-GHz-for-5G.pdf>, p.2.

⁴ <https://www.legislation.gov.au/Details/F2021C00941>

⁵ Note: One HCIS Level 1 block is equivalent to 25 HCIS level 0 blocks.

⁶ Consultation paper, p.13.



basis, tends to become a lottery. Commensurate with the 28 GHz initial AWL allocation, we consider a two-week period within which prospective licensees can lodge an application is appropriate.

We also agree with and support the ACMA's proposed four principles⁷ for contending with competing demand (i.e., where demand exceeds supply), and suggest that the principles would also make a pragmatic approach to assessing applications where demand does not exceed supply. Principles such as efficient use of spectrum and the extent to which an application causes spectrum denial are good principles for the ACMA to consider when assessing any licence application. See also our commentary in section 2.3 on minimum geography and spectrum denial.

2.5. Assignment priority

We welcome the ACMA's introduction of the assignment priority, specified in section 3.3.5 of RALI MS-47, and we strongly support the inclusion of priority assignment to a licensee who already has an AWL or spectrum licence issued within the band in a directly or near adjacent geographic area, such that the licensee is preferentially assigned a frequency range aligned as closely as possible with their existing licence. Although the risk of "dead zones" between regional spectrum licences and remote area AWLs is small due to the very low population density in the remote area, there are some towns very close to the 3.6 GHz spectrum licence boundary with the remote area AWL space⁸ and hence aligned spectrum is desirable

We recommend section 3.3.5 of RALI MS-47 is amended to make 3400-3800 MHz (i.e. not 3400-3700 MHz) the range where the assignment priority will be offered, to accommodate the price allocation of spectrum in 3700-3800 MHz. See section 4.3 of our submission for more detail.

We also recommend the ACMA amend section 3.3.5 of RALI MS-47 to explicitly state that the assignment priority is preferential and non-binding, such that spectrum licensees are still free to apply for any unincumbered spectrum in the band.

2.6. Tenure and renewal – Licences can operate up to 13 Dec 2030

In our submission to the ACMA's parallel consultation on the proposal to reallocate the 3.4 GHz and 3.7 GHz bands, we advocate for the new licences to expire on the same date as existing 3.4 GHz and 3.6 GHz licences, namely, 13 December 2030. Our purpose in proposing this is to put in place the best possible set of arrangements to facilitate a full defragmentation of the entire 3400-3800 MHz range when licences are renewed after 2030. Tenure of AWLs in remote areas has the potential to be an impediment to a defragmentation, especially where the AWL is immediately geographically adjacent to a regional area spectrum licence. We note the ACMA can issue AWLs with 20-year licence terms, and if remote AWLs are allowed to operate for this duration, and are geographically immediately adjacent to a regional area, it could impact the ability to re-stack the 3400-3800 MHz range in regional areas which would then flow through, domino-like, into the ability to re-stack the 3400-3800 MHz range in metro areas.

We have no concern with the ACMA issuing renewal statements to remote area AWL licensees permitting them to apply for renewal of their AWL for the period commencing 14 December 2030,

⁷ Consultation paper, p.13.

⁸ e.g. the town of Moranbah in QLD, which is located only 3km from the 3.6 GHz spectrum licence / AWL boundary.



although we strongly recommend that any such renewal statement should include notice that the ACMA will have the ability to require the licensee to re-tune to a different frequency in the wider 3400-4000 MHz range, but retain the same bandwidth. This will provide the ACMA with the ability to re-stack remote areas of Australia to line up with any restack of 3400-3800 MHz in regional/metro areas, such that spectrum licensees in metro/regional areas can have geographically contiguous spectrum holdings nation-wide (i.e., the ACMA also re-stacks 3400-4000 MHz in remote areas to align with any re-stack in regional/metro areas).

2.7. Renewal – Licences should include a renewal statement

We disagree with the ACMA's proposal to not include licence renewal statements in AWLs being issued in the 3.4–4.0 GHz band in remote areas.⁹

As explained in section 2.6 above, we believe that renewal of remote AWLs beyond 13 December 2030 should be possible, albeit with conditions to facilitate a restack. We consider it important that AWLs issued for remote areas include a renewal statement, outlining conditions relevant to renewal of the licence on or after 14 December 2030. One of these conditions should be a statement that the ACMA reserves the right to require the licensee to re-tune to a different frequency in the range 3400-4000 MHz.

Providing the renewal statement at the time of issuance provides the licensee with the greatest possible notice period about the likelihood of future imposed requirements. This additional certainty is helpful for investment planning.

2.8. Price – we support the ACMA's proposed price and construct

We support the ACMA's proposed price of \$0.0041/MHz/Pop and the minimum licence tax of \$41.37.

We consider a pricing construct that scales with both population and bandwidth to be most appropriate (rather than just scaling with bandwidth) as it reduces the licence price in areas where the population is smaller. This should make it more affordable to deploy WA WBB or LA WBB in the more remote locations where populations are lower.

2.9. Radio Altimeters – no additional mitigation is required

Despite the effort invested, both domestically and internationally, into predicting the potential for interference between C-Band transmitters (including, but not limited to, 5G networks) and airborne radio altimeters, no final comprehensive studies have been produced, and the studies that do exist have not been sufficiently tested and peer-reviewed and are not sufficient to develop a set of rules to be imposed on 5G deployments. At this point in time, no clear correlation between the reported incidents of radio altimeter malfunctions or warnings has been established, and it is simply not possible to prescribe mitigation measures against an alleged problem that is not clearly understood or defined.

⁹ Consultation paper, p.14.



We strongly agree with and support “Approach A” proposed by the ACMA,¹⁰ which is for there to be no additional mitigations between the proposed 200 MHz guard band¹¹ between WBB AWL services and radio altimeters operating above 4400 MHz. To this end, we strenuously oppose the inclusion of Section 4.6 in RALI MS-47 - see section 4.8 of our submission for further details.

2.10. Fallback synchronisation

We support the ACMA’s proposal for a single synchronisation fallback requirement to address the two scenarios of AWL-AWL and AWL-SL coordination.¹² We expect WA-WBB licensees will acquire a mixture of spectrum licensed and AWL-licensed spectrum space to meet their needs, and it is essential that such operators are able to have a common synchronisation pattern for use across the entire network. While our very strong preference is that coordination is achieved through mutual agreement, to accommodate the possibility of this not being achieved along with the ACMA imposing the mandatory fallback synchronisation, it is essential that the same approach is used regardless of whether the spectrum is acquired under a spectrum licence or an AWL.

2.11. Point-to-Point links

The ACMA states its view that there should only be one channel raster (the existing 40 MHz channel raster) for PTP links in the 3.8 GHz band.¹³ The ACMA does ask for views on whether the 29 MHz channel raster should nevertheless be introduced, and we maintain our view expressed through the TLG that there is no need for the ITU-R F.382-8 compliant 29 MHz channel raster to be introduced.

We note that the draft updates to RALIs FX-3 and FX-19 helpfully do not include the introduction of the 29 MHz channel raster.

¹⁰ Consultation paper, p.9.

¹¹ The guard band is 4.0–4.2 GHz.

¹² This wasn’t the case at the end of Round 2 of the TLG, and there was no opportunity to comment on Round 3 documentation which had consolidated to a single, unified sync fallback arrangement based on 3GPP.

¹³ Consultation paper, p.8.



03 Comments on draft AWL LCD

This section of our submission sets out our comments on the draft amendment instrument for the Area-Wide Licence (AWL) Licence Conditions Determination (LCD). By way of introduction to this section of our submission, we are pleased to see the ACMA aligning many aspects of the AWL LCD with existing 3.4 GHz spectrum licences including the synchronisation fallback scheme and the device registration exemption threshold.

3.1. Definition of 3.4 GHz band spectrum licence

Schedule 4 clause 1 of the AWL LCD amendment instrument contains a definition for the **3.4 GHz band spectrum licence**, which is defined as a spectrum licence ... operating in any part of the frequency range 3.4 GHz–3.7 GHz. Given the forthcoming auction for 3.7-3.8 GHz in metro and regional areas, we propose this might be better described as the 3.4-3.8 GHz range, to avoid the need to update the AWL LCD again once the auction is complete.

3.2. Legislative requirement to comply with RALI MS-47

Schedule 4 clause 4 of the AWL LCD amendment instrument requires licensees to comply with RALI MS-47. A feature of RALIs is that they remain discretionary administrative documents, reflecting ACMA policy that does not bind the ACMA by law and allows for exceptions in certain cases. However, an LCD is a legislative instrument, and potentially 'bakes in' the requirements of RALI MS-47. If read this way, it would have the effect of making any policy change by the ACMA (unless reflected in an update to RALI MS-47) or case-by-case exception, ineffective. This is because the condition requires licensees to act consistently with any requirement in RALI MS-47, which they would technically not be doing if the ACMA grants an exception from a particular requirement. At a minimum, there needs to be an exception to a strict requirement to comply with RALI MS-47 for the following cases:

- where the ACMA grants out-of-policy exemption;
- to allow flexibility to register transmitters under "guard space" as in the spectrum licensing framework;
- where there is an agreement with the affected licensee (noting that draft RALI MS 47 only mentions agreements in the context of device boundaries and for coordination between AWL transmitters and adjacent-channel AWL receivers); and
- where the affected receiver or transmitter is that of the same licensee (i.e., self-management of interference).

We consider this matter could be adequately resolved by amending clause 4 of Schedule 4 of the LCD by adding the words "*Unless otherwise determined by the ACMA,*" at the start of the clause.

Alternatively, if the LCD is not amended, ensure that the terms of any exception granted by the ACMA are included as a condition in the licence itself. This will be effective because section 4(2) of the LCD provides that where a condition in the LCD is inconsistent with a condition specified in the licence, the condition specified in the licence applies.



3.3. Synchronisation requirement

The Australian Mobile Telecommunications Association (AMTA) has made a submission to this consultation and has commented on a possible amendment to the fallback synchronisation mechanism to address the scenario where a spectrum licensee is not currently employing the fallback synchronisation frame structure.

If a situation occurs where the spectrum licensee is not currently using the fallback synchronisation frame structure and an interference matter with an AWL licensee cannot be amicably resolved, according to the arrangement defined in the AWL LCD, the interference issue would only be resolved if the spectrum licensee also implemented the fallback synchronisation frame structure.

We support AMTA's position that it is not acceptable for an AWL licensee to be able to force a spectrum licensee onto the fallback synchronisation mechanism. AMTA has proposed some possible options to address this scenario, and we would welcome the opportunity to discuss these options through the continued TLG on the 3400-4000 MHz band.



04 Comments on draft RALI MS-47

This section of our submission contains comments on the draft Radiocommunications Assignment and Licensing Instruction (RALI) MS-47.

By way of introduction to this section of our submission, we observe section 1.3 and section 3 of RALI MS-47 both refer to an Applicant Information Pack (AIP), stating that RALI MS-47 should be read in conjunction with this pack. The AIP has not yet been released, and it is possible we will have further comments on RALI MS-47 once we have had the opportunity to review the AIP.

4.1. Apparatus licensed Point-to-Multipoint (PMP) devices

Section 3.1 of RALI MS-47 says “No new Point to Multipoint licences are to be issued in the 3400-4000 MHz range in the areas defined by Appendix A, **but can be applied for on an exceptional basis in areas outside Appendix A.**” (emphasis added). Separately, Embargo 78 prohibits new frequency assignments in the range 3700-4000 MHz Australia-wide. We presume the statement in RALI MS-47 that new PMP licences “...can be applied for on an exceptional basis...” is simply for alignment with Embargo 78.

However, we are concerned that under this guidance, the ACMA could make case-by-case exceptions for new PMP apparatus licences in 3700-3800 MHz in metro and regional areas (i.e., “... in areas outside Appendix A”). 3700-3800 MHz is expected to be reallocated for spectrum licensing in metro and regional areas. Similarly, AWLs are the appropriate licence type (not the PMP apparatus licence type) for 3800-4000 MHz in metro and regional areas (i.e., “... areas outside Appendix A”).

We are strongly of the view that the ACMA should not issue new PMP apparatus licences in metro and regional areas in 3700-4000 MHz, and that the statement that PMP apparatus licences “...can be applied for on an exceptional basis in areas outside Appendix A” should be removed from section 3.1 of RALI MS-47.

4.2. Minimum geographic area

Section 3.3.1 of RALI MS-47 sets the minimum geographic area as HCIS Level 0. We do not support the use of HCIS Level 0 as the minimum geographic area universally across all use cases for this band. See our comments in section 2.3 of our submission for further detail.

4.3. Assignment Priority

Section 3.3.5 of RALI MS-47 outlines the assignment priority for AWLs. Subsection a), second bullet (p.10) specifies that “Entities without 3.4 GHz spectrum licence holdings should be assigned spectrum **above 3700 MHz and preferably occupying the same frequencies as any existing apparatus licence holdings**” (emphasis added). We propose this should be changed to “above 3800 MHz” given the range 3700-3800 MHz in metro and regional areas is to be re-allocated to spectrum licensing by auction.

We also recommend the ACMA should amend section 3.3.5 of RALI MS-47 to explicitly state that the assignment priority is preferential and non-binding, such that spectrum licensees are still free to apply for any unincumbered spectrum in the band. See section 2.5 of our submission for further details.



4.4. Coordination at the boundary of a spectrum licensed area

Section 4.1.2 of RALI MS-47 sets out the requirements an AWL transmitter must meet in order to coordinate at the boundary of a spectrum licensed area.¹⁴ The RALI places more stringent conditions on the AWL transmitter (which we agree with) by modifying the requirements in the 3.4 GHz Band Section 145 Determination¹⁵ as shown in the following table.

s.145 Determination Modification (as per draft RALI MS-47)	Telstra comment
The maximum value of 'm' is 800 (max radial length = 200km)	<ul style="list-style-type: none"> The increments along each radial are at 100m intervals (see Part 1, Schedule 2, Step 1 of s.145 Determination). Therefore, 800 intervals = 80km, not 200km. If the ACMA intends to increase the length of each radial to 200km, then the maximum value of 'm' should be 2000. Note: The s.145 determination currently specifies a maximum value of 'm' as 1010 (i.e., 101km), and we do not support a reduction of the length of DBC radials, even in remote areas. As a minimum, the DBC radial length should be 101km.
Level of protection (LOP) is to be set to -115 dBm/MHz;	<ul style="list-style-type: none"> RALI MS-47 describes the LOP as being an attribute of Part 1 of Schedule 2, however LOP is specified in Part 2 of Schedule 2.
Nominal receiver antenna gain (G_r) is set to 24 dBi;	<ul style="list-style-type: none"> RALI MS-47 describes the Nominal receiver antenna gain (G_r) as being an attribute of Part 1 of Schedule 2, however it is specified in Part 2 of Schedule 2.
The height of the nominal receiver is set to 30m above ground level.	<ul style="list-style-type: none"> RALI MS-47 describes the Nominal receiver antenna gain (G_r) as being an attribute of Part 1 of Schedule 2, however it is specified in Part 3 clause 2, where it is set to 5m.

4.5. Protecting co-channel AWL licensed receivers

Section 4.2.1 of RALI MS-47 sets out the co-channel coordination requirements to protect an AWL licensed receiver from either an AWL licensed transmitter (first paragraph of s.4.2.1) or from an apparatus licensed transmitter (first paragraph of section 4.2.1). In the first paragraph (protection of the AWL receiver from an **AWL licensed** transmitter), the operator of the AWL transmitter need only comply with the standard requirements in Part 1 of Schedule 2 of the s.145 determination (section 4.2.1 references section 4.1.1 which calls up the existing DBC calculation in the s.145 determination).

However, when protecting an AWL licensed receiver from an **apparatus licensed** transmitter, the conditions on the apparatus licensee are significantly tighter, as the second paragraph of section 4.2.1

¹⁴ Draft RALI MS-47, bottom of p.11 and top of p.12

¹⁵ Radiocommunications (Unacceptable Levels of Interference — 3.4 GHz band) Determination 2015, available at <https://www.legislation.gov.au/Details/F2021C01290>



calls up section 4.1.2 of RALI MS-47 (which has the tighter LOP, higher G_r and 30m antenna height) rather than section 4.1.1.

We do not understand, or see the need, for the protection requirements for an AWL receiver to be significantly increased where the transmitter is licensed under an apparatus licence. We propose the two paragraphs in section 4.2.1 of RALI MS-47 are merged into a single paragraph with the same obligations placed on both AWL and Apparatus Licensed transmitters based on section 4.1.1 (not on section 4.1.2).

4.6. Adjacent channel coordination

Section 4.2.2 of RALI MS-47 sets out the co-channel coordination requirements to protect an AWL licensed receiver from adjacent channel interference. The first sentence of section 4.2.2 only refers to transmitters operated under an **apparatus license**, thereby omitting transmitters operated under an **AWL**. Further down in section 4.2.2, where a remedy is required when either “... *replanning the deployment is not possible and a negotiated resolution cannot be reached...*” the two bullet points prescribe different procedures for AWL licensed and Apparatus licensed transmitters, suggesting that section 4.2.2 is intending to address adjacent channel coordination issues from either AWL licensed or Apparatus licensed transmitters.

We consider the absence of reference to AWL licensed transmitters in the first sentence of section 4.2.2 to simply be an omission and suggest that the ACMA reinstate the reference to AWL licensed transmitters in the first sentence. NB: AWL licensed transmitters were referenced in draft RALI MS-47 circulated for comment in Round 2 of the TLG, but it dropped out in the Round 3 version.

4.7. Receiver spurious emission limits

Section 4.3.1 of RALI MS-47 sets out the receiver spurious emission limits for non-AAS systems (Table 3) and AAS systems (Table 4). We agree with the content of both tables.

However, a note should be added to accompany both tables that states: “*The unwanted emission limits in Table [3/4] only apply during periods an associated radiocommunications transmitter in the device is not operating.*” The addition of these two notes (one for each of Table 3 and Table 4) would align with the same note that appears in the spectrum licence core conditions for receiver unwanted emissions limits,¹⁶ and with 3GPP TS 38.104, section 10.7.2 where it states: “*For a BS operating in TDD, the OTA RX spurious emissions requirement shall apply during the transmitter OFF period only.*”¹⁷

4.8. Compatibility with Radio Altimeters

In accordance with “Approach B” described in the AWL Consultation Paper, the ACMA have drafted text in section 4.6 of RALI MS-47 outlining the scope of potential additional mitigations to protect radio

¹⁶ For example, see one of Telstra’s 3.4 GHz spectrum licences, licence number [10388334](#), Note 2 for Core Condition 10 and Note 2 for Core Condition 10A.

¹⁷ See [3GPP TS 38.104](#), section 10.7.2, top of p.178.



altimeters. The start of section 4.6 of RALI MS-47 describes the text as “*for comment*” and that they “...do not yet represent a formed ACMA view.”

We strenuously oppose the inclusion of this text in RALI MS-47. We consider it is not appropriate to include text that is characterised as being “*for comment*” when the subject has not yet been fully resolved at the TLG and the ACMA has not yet formed its own view on the matter. Retaining these clauses, even with the caveats, risks creating an impression of the type of mitigation measures that may be introduced when such measures have not been adequately discussed and agreed at the TLG.

We strongly recommend section 4.6 is removed from RALI MS-47 before it is published.

4.9. Support for AMTA’s comments on RALI MS-47

The Australian Mobile Telecommunications Association (AMTA) has made a submission to this consultation, and we support their comments on the draft RALI MS-47.

4.10. Administrative errors

This section contains what we consider to be drafting errors in RALI MS-47.

- Section 1.4 of RALI MS-47, at step 2 (p.4) notes that “Schedule 4 **Section 2** paragraph 2 of the AWL LCD shows the types of transmitters that are exempt from registration...”. It is Schedule 4 **Section 3** paragraph 2 that specifies the threshold for registration exemption.
- In Appendix C (p.26), the first section is numbered “C.1” (in a similar fashion to the way sections in Appendix B are numbered “B.1” then “B.2”), however after section C.1, the numbers of the subsections revert to using the letter “A” (i.e., “A.1.1”, “A.2”). Similarly, the table in Appendix C is numbered “Table A.1”. We recommend subsections and tables in Appendix C commence with the letter “C”. Note that this needs to include references elsewhere in RALI MS-47 that reference subsections in Appendix C, such as in the last row of Table A.1 (which should be renumbered to “Table C.1”).



05 Comments on amendments to RALI FX-03

This section of our submission contains comments on the draft amendment instrument for the RALI FX-03.

5.1. Support for AMTA's comments on amendments to RALI FX-03

AMTA has made a submission to this consultation, and we support their comments on the proposed amendments to RALI FX-03.

06 Comments on amendments to RALI FX-19

This section of our submission contains comments on the draft amendment instrument for the RALI FX-19.

6.1. Support for AMTA's comments on amendments to RALI FX-19

AMTA has made a submission to this consultation and has requested an extension to provide comments on the 2 GHz amendments to RALI FX-19. We will provide our comments on the 2 GHz amendments in RALI FX-19 through AMTA.



07 Responses to questions

This section contains our responses to the six questions posed by the ACMA in the consultation paper.

Technical framework

1. Do you have any comments, and supporting additional information, on the proposed technical framework, including the revised AWL LCD, draft RALI MS 47, and updated RALI FX3 and FX19?
2. Do you have any comments on the other issues referred to in the technical framework that have not been resolved in the TLG, such as WBB coexistence with radio altimeters?

See sections 03 and 04 for details.

Allocation process

3. Do you have any comments on our proposal to use a multi-stage administrative allocation for apparatus licences in the 3.4–4.0 GHz band in remote Australia? Please provide any additional information in support of your views.
4. Do you have any views on the appropriateness of an allocation quantum policy? If an allocation quantum policy is adopted, do you have any views on whether that quantum should be 100 MHz or 150 MHz or some other quantum per single HCIS level 0 cell?

We support the proposal to use a multi-stage administrative allocation for apparatus licences in the 3.4–4.0 GHz band in remote Australia. We provide our thoughts on the allocation window and the assignment priority in sections 2.4 and 2.5 respectively.

We support the use of an allocation quantum policy and propose the limit should be set to 100 MHz, noting that the ACMA must have the discretion to allocate a larger quantum than this if provided sufficient evidence by the applicant as to why more than 100 MHz of spectrum is required and if aggregate demand for spectrum at that location does not exceed the available spectrum.

We provide further detail in section 2.1.

Tenure and renewal

5. Do you have any comments on our licence tenure and renewal policy for AWLs in the 3.4–4.0 GHz band in remote areas?

We note that under the “modernised” Radiocommunications Act, the ACMA can issue AWLs with licence terms of up to 20 years. In our submission to the ACMA’s parallel consultation on the Reallocation Determination, we advocate for all new licences to expire on the same date as existing 3.4 GHz and 3.6 GHz licences, namely, 13 December 2030 to put in place the best possible set of arrangements to facilitate a full defragmentation of the entire 3400-3800 MHz range when licences are renewed after 2030.

We strongly recommend AWLs for remote areas in 3400-4000 MHz are similarly set to expire on 13 December 2030 and propose that licences issued prior to this date contain a renewal statement allowing licensees to apply for renewal of their AWL for the period commencing 14 December 2030 with a statement that the ACMA will have the discretion and ability to require the licensee to re-tune to a different frequency in the wider range of 3400-4000 MHz on 14 December 2030.

See sections 2.6 and 2.7 for further details.



Pricing

6. We are proposing \$/MHz/pop tax arrangements for AWLs in this band, similar to AWLs in the 26/28 GHz band, and similar to other area-based licences such as PMTS B apparatus licences, because we believe it to be a simple pricing arrangement well-suited to area-based licences no matter the size of the licence or where it is located. Do you have any other pricing alternatives, or suggestions that may improve upon our proposal?

We support the ACMA's proposed price of \$0.0041/MHz/pop and consider a flat price per MHz per population is the most appropriate mechanism. See also section 2.8 in our submission.