Apparatus licences in the 3.4–4.0 GHz band in remote Australia

Summary and response to consultation submissions

JUNE 2023

Canberra

Red Building   
Benjamin Offices  
Chan Street   
Belconnen ACT

PO Box 78  
Belconnen ACT 2616

T +61 2 6219 5555  
F +61 2 6219 5353

Melbourne

Level 32   
Melbourne Central Tower  
360 Elizabeth Street   
Melbourne VIC

PO Box 13112  
Law Courts   
Melbourne VIC 8010

T +61 3 9963 6800  
F +61 3 9963 6899

Sydney

Level 5   
The Bay Centre  
65 Pirrama Road   
Pyrmont NSW

PO Box Q500  
Queen Victoria Building   
NSW 1230

T +61 2 9334 7700 or 1800 226 667  
F +61 2 9334 7799

Copyright notice

[Creative Commons logo](http://i.creativecommons.org/l/by/3.0/88x31.png)

<https://creativecommons.org/licenses/by/4.0/>

With the exception of coats of arms, logos, emblems, images, other third-party material or devices protected by a trademark, this content is made available under the terms of the Creative Commons Attribution 4.0 International (CC BY 4.0) licence.

We request attribution as © Commonwealth of Australia (Australian Communications and Media Authority) 2023.

All other rights are reserved.

The Australian Communications and Media Authority has undertaken reasonable enquiries to identify material owned by third parties and secure permission for its reproduction. Permission may need to be obtained from third parties to re-use their material.

Written enquiries may be sent to:

Manager, Editorial Services  
PO Box 13112  
Law Courts  
Melbourne VIC 8010  
Email: [info@acma.gov.au](mailto:info@acma.gov.au)

Introduction 1

Technical framework 3

Technical framework decisions summary 3

Mitigations for radio altimeters 4

RALI FX3 and the 3.8 GHz PTP channel plan 6

Coordination between AWLs and apparatus-licensed earth station receivers 6

Changes to RALI FX19 8

Views on appropriate device boundary criteria for AWLs and   
fall-back synchronisation 8

Amendment to Spectrum Embargo 78 8

Miscellaneous technical issues 8

Allocation process 10

Allocation quantum policy 10

Tenure and renewal 11

Licence duration 11

Concerns on spectrum hoarding 11

Pricing 12

# Introduction

Thank you to all stakeholders who responded to the ACMA’s [proposed arrangements for allocating apparatus licences in the 3.4–4.0 GHz band in remote Australia consultation](https://www.acma.gov.au/consultations/2022-02/allocation-awls-34-40-ghz-band-remote-australia-ifc-112022).

We consulted on draft arrangements for introducing new apparatus licensing arrangements in the 3.4–4.0 GHz band in remote areas to facilitate a wide range of new wireless broadband (WBB) use-cases while supporting a range of existing services. These WBB use-cases include wireless internet services, public mobile telecommunications services, and enterprise and campus-style private networks, such as for mine sites, agricultural uses or industrial uses.

We proposed to authorise access for these services under area-wide apparatus licences (AWLs).

We sought comments from interested stakeholders on the following aspects of our framework for implementing AWLs in the 3.4–4.0 GHz band in remote areas:

**Technical framework**: Amendments to the Radiocommunications Licence Conditions (Area-Wide Licence) Determination 2020 (AWL LCD) and draft new and amended Radiocommunications Assignment and Licensing Instructions (RALIs) MS47, FX3 and FX19. These new and amended instruments and policy instructions provide a set of conditions and instructions for access that will facilitate local area (LA) WBB and existing use-cases in remote areas, as applicable.

**Allocation process**: Administrative allocation policies and principles to support the allocation of AWLs in remote areas.

**Tenure and renewal**: Our proposed policies in relation to the duration and renewal arrangements for AWLs.

**Pricing**: Amendments to the Radiocommunications (Transmitter Licence Tax) Determination 2015 to calculate the annual apparatus licence tax applicable to AWLs.

We welcomed comments from interested stakeholders on any aspect of the consultation package. The consultation paper also invited comments on these specific questions:

**Technical framework**

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?

1. Do you have any comments on the other issues referred to in the technical framework that have not been resolved in the technical liaison group (TLG), such as WBB coexistence with radio altimeters?

**Allocation process**

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.

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?

**Tenure and renewal**

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?

**Pricing**

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 received submissions from 30 parties, including members of industry, peak bodies and government agencies.

This document provides our responses to the main issues for each aspect of the package – technical framework, allocation process, tenure and renewal and pricing.

# Technical framework

Most stakeholders expressed general support for the proposed technical framework; however, a range of amendments were proposed to address concerns about specific aspects. We have considered feedback from this consultation and the spectrum tune-up held on 29 March 2022 and made changes in response to issues raised.

The feedback mostly dealt with suggested changes to the draft framework to provide additional protection to incumbent services or to increase deployment flexibility for new wide area (WA) WBB and LA WBB services.[[1]](#footnote-2) The ACMA considers that the proposed allocation process and accompanying technical framework balances the efficient use of spectrum by both WBB and incumbent services in the 3.4–4.0 GHz range.

Compatibility of WBB with radio altimeters in the 4200–4400 MHz range has been addressed in the [Wireless broadband and radio altimeters coexistence outcome paper](https://www.acma.gov.au/5g-and-aviation-services-australia). The technical framework for AWLs in remote areas is consistent with those outcomes.

## Technical framework decisions: summary

The technical framework has been developed from the planning decisions made in January 2021 and is part of the suite that implements those decisions. Those planning decisions were to:

Introduce WBB services into 3400–4000 MHz in remote areas.

Maintain the 4000-4200 MHz range for exclusive use by fixed satellite services (FSS) and point-to-point (PTP) services.

Continue allowing shared access by FSS in 3700–4000 MHz in remote areas.

Continue allowing shared access by PTP services in 3800–4000 MHz in remote areas.

Maintaining the current earth station protection zones (ESPZ) for use by FSS services across the whole 3700–4200 MHz range, largely exclusively.

The decisions on the technical framework are consistent with the policy objectives guiding the allocation of the 3.4–4.0 GHz band, which are to:

support a range of use-cases and users

support digital connectivity and investment in regional Australia

support the deployment of new and innovative technology

support the efficient allocation and use of spectrum.

These objectives are based on the ministerial policy statement ([MPS](https://www.infrastructure.gov.au/department/media/news/ministerial-policy-statement-34-40-ghz-spectrum-band)) made in February 2022, the object of the *Radiocommunications Act 1992* and government communications policy objectives.

The decisions implemented in the technical framework have several benefits:

Introducing WBB services using AWLs to provide potential licensees with both flexibility and predictability across the whole 3400–4000 MHz range.

Providing ongoing access for PTP and FSS earth station receive licence applications.

Protecting existing point-to-multipoint (PMP) services but providing a pathway to transition to AWLs.

Protecting important aviation services by proposing interim mitigations for compatibility with radio altimeters on aircraft.

Allowing FSS earth station operators to better protect themselves from introduced AWL services, while also ensuring future AWL devices are not unduly impeded by future nearby FSS earth stations.

Overall, the technical framework achieves the right balance of opportunities for new applications, while protecting access and the utility of existing users of the band and adjacent bands.

The licensing framework and allocation process for the issue of AWLs in the 3.4–4.0 GHz band give effect to the technical framework.

Some submissions from mobile network and WBB operators promoted changing the minimum AWL geographic area from HCIS level 0 to HCIS level 1. Two submitters responded saying that the minimum geographic area for remote areas should be HCIS Level 1 as that better reflects the spectrum denial area for a typical rural base station. One submitter proposed that the ACMA’s proposed HCIS Level 0 increase to a minimum of HCIS Level 2, with scope for some areas at HCIS Level 1.

### ACMA response

While it could be argued that HCIS Level 1 better reflects the spectrum denial area for a typical rural base station, interference management from an AWL is based on a fixed device boundary criteria level, regardless of the AWL size. Consequently, we consider that maintaining HCIS Level 0 as the minimum geographic size supports a variety of use-cases (small cell, macro cell and in-between) and a high degree of geographic granularity, and therefore optimises flexibility for licensees. Licensees may build their licence using HCIS Level 1 if they wish.

## Mitigations for radio altimeters

Mobile network and WBB operators generally proposed that Approach A (no additional measures) was sufficient as there is no demonstrated problem in current deployments, in Australia or internationally, that warrant extra mitigations. Aviation industry submissions were more cautious, indicating that there are a range of reasons for no apparent confirmed incidents to date and no level of interference to any aircraft operations was acceptable. Those submissions that pointed to overseas approaches generally suggested that the approaches used by France and Canada should be adopted to mitigate any risks. We received comment on the technical studies from a range of aviation sector submitters.

### ACMA response

We reviewed submissions and undertook a further body of work in relation to radio altimeters.

### Subsequent work

The ACMA re-opened the 3.4–4.0 GHz technical liaison group (TLG) in September and October 2022 to consider the radio altimeter issue and the spectrum licensing technical framework proposed for certain spectrum spaces in the 3400–4000 MHz band. The evidence-based radio altimeter document (RA report), including the proposed approach to mitigations, was presented to the TLG after an initial review by CASA. The RA report and a record of the TLG discussions can be found on the ACMA [website](https://www.acma.gov.au/spectrum-licence-technical-liaison-groups).

Further public consultation was conducted on radio altimeter mitigations as part of the draft allocation and technical instruments for the 3.4/3.7 GHz bands auction consultation, which closed on 29 March 2023. See the paper [*Wireless broadband and radio altimeter coexistence outcomes paper*](https://www.acma.gov.au/5g-and-aviation-services-australia)for a detailed discussion of this consultation and further ACMA consideration of radio altimeter mitigations.

The final radio altimeter decisions for remote Australia included some changes from the proposal taken to the 3.4/3.7 GHz bands consultation.

Ongoing and interim mitigations are contained in the [AWL LCD](https://www.legislation.gov.au/Details/F2020C01124) and [RALI MS47](https://www.acma.gov.au/ralis-frequency-coordination), available on the ACMA website.

### Changes to coexistence measures following consultation

1. Removing the equivalent isotropically radiated power (EIRP) based interim unwanted emissions limits above 3800 MHz, with limits instead being defined by ongoing total radiated power (TRP) or conducted power limits, combined with the introduction of an ongoing EIRP limit for transmitters operating above 3700 MHz.
2. Changing the definition of the spurious domain for ongoing unwanted emissions limits from within the radio altimeter band to below the radio altimeter band.
3. Reducing width for the sizes of the restriction zones for the interim mitigations.
4. Rewording the interim mitigation concerning beam pointing to restrict physical or electrical tilt, but not beam-forming, to below the horizon.
5. Changing the interim mitigations frequency boundary from 3800 MHz to 3700 MHz (developed jointly with CASA).

Changing the interim mitigations end date from 31 March 2025 to 31 March 2026 (developed jointly with CASA).

As previously proposed, we will not include a general guidance requirement for WBB deployments to coordinate with airports in the technical frameworks.

In summary, the radio altimeter/WBB mitigations the ACMA intends to implement in remote areas in the 3400–4000 MHz band are:

### Ongoing mitigations

1. A 200 MHz guard band, 4000–4200 MHz, where WBB deployments will not be permitted (previously determined*).*
2. A total radiated power (TRP) limit of 48 dBm/5 MHz.
3. The introduction of a total EIRP limit of 72 dBm/5 MHz for WBB deployments above 3700 MHz (an equivalent of 65 dBm/MHz total or 62dBm/MHz per plane of linear polarisation).
4. Unwanted emissions limits of -21 dBm/MHz TRP for active antenna systems (AAS) and -30 dBm/MHz per antenna port for non-AAS within the radio altimeter band. With a change in the frequency boundary for the spurious domain of unwanted emissions for AWLs to 4040 MHz, specific interim EIRP-based unwanted emission limits are not required.

### Interim mitigations, ending on 31 March 2026

1. For deployments above 3700 MHz around identified runways, where an ‘identified runway’ is one identified by CASA as requiring the protection of radio altimeters due to safety and/or important operational requirements:

exclusion zones, where no WBB services are permitted.

restricted zones, except in the 3950–4000 MHz range in metro and regional highly localised areas, with a power flux density (PFD) limit in the restricted zones. The restricted zones are narrower than the previous proposal, due to new evidence around base station side-lobe performance.

For deployments above 3700 MHz everywhere:

The fixed mechanical or electrical tilt of any WBB base station antenna system is to be directed below the horizon.

grating lobes of WBB antenna systems should be minimised as much as is practicable.

## RALI FX3 and the 3.8 GHz PTP channel plan

Several submissions commented on the point-to-point (PTP) channel plan and proposed changes to RALI FX3. An incumbent PTP licensee indicated their comfort in proceeding with using a restricted range (3.8–4.2 GHz) version of the existing channel plan. One submitter suggested that PTP could be used under an AWL.

### ACMA response

We agree there may be some benefit to PTP licensees in making any restricted range for PTP use align with spectrum in the 3.4–4.0 GHz range that is not spectrum licensed. For simplicity of the technical framework, we consider that the restricted range should be 3.8–4.2 GHz Australia-wide consistently for new licences in spectrum that is not reallocated.

We are making changes to RALI FX3 to restrict future PTP licences in the 3.8 GHz band to 3.8–4.2 GHz but permit more technical flexibility in use of the restricted number of channels available – that is, normal site sense and channel pairing policy will not apply to PTP for the remaining channels to enable use of channels 1’ to 6’ in a flexible manner, where possible.

Spectrum Embargo 78 will also be updated after the initial remote allocation window to allow PTP fixed licenses in the 3.8–4.2 GHz range in remote areas and in the 4.0–4.2 GHz range, Australia-wide.

We remain of the view that, while the AWL framework has not been optimised for PTP services, any PTP-like service in any part of an AWL could be deployed, subject to the technical framework.

## Coordination between AWLs and apparatus-licensed earth station receivers

Satellite sector interests indicated that the proposed coordination approach was not workable, on the basis that it is not practical to apply RF filtering to individual carriers that share a single antenna (‘filter issue’).

At the spectrum tune-up, we highlighted that an issue with AWLs and earth station coordination (‘denial issue’) needed to be solved. The framework, as consulted upon, had no mechanism to prevent an apparatus-licensed earth station being registered near an AWL boundary. If the AWL had not yet registered devices, then the earth station could greatly restrict AWL device registration, as those AWL devices would likely fail the required coordination with the earth station.

### ACMA response

#### Denial issue

To address the potential for earth stations to prevent the coordination, and therefore registration, of future AWL devices located near an AWL boundary, we have revised RALI MS47 to include an additional coordination requirement for earth stations to assess the potential for denial when near an AWL boundary. As new PTP services can also prevent the coordination and registration of AWL devices located near an AWL boundary, a similar new coordination requirement has also been introduced for new PTP services. These requirements support the efficient use of spectrum.

#### Filter issue

We have also considered approaches to allow earth stations to use the bandwidth of a practicable RF bandpass filter. Our policy is to support the application of an earth station receive licence where the applied frequency range can cover more than the frequencies specified in special conditions for space systems coordination. This will allow earth station operators to use a frequency range that aligns with the practical bandwidth of an RF filter. This can be achieved by either taking out a single new licence across the entire bandwidth of a RF filter, or multiple licences that supplement the existing licence.

The technical liaison group (TLG) re-engaged to consider the spectrum licensing technical framework. They also considered the timing of when the existence of a bandpass filter can be assumed for coordination of AWLs (and spectrum licences). In the TLG paper, the ACMA asked for views on for coordination with earth receive stations, with particular reference to the application of an RF filter. The TLG paper described several scenarios related to the reallocation period and whether the earth receive station was incumbent or not.

Following consideration of TLG views on the matter, we have made the following decisions:

For coordination of an AWL transmitter before the end of the spectrum licensing reallocation period (17/07/2027) with an earth receive station first registered before the start of the reallocation period (16/07/2022), then RF *filtering at the* *lower frequency edge of the AWL only* is to be assumed. If there are multiple earth receive licences operating on the same antenna, the RF filter should only be applied from the lower edge of the lowest frequency licence. This is the provision in the extant framework.

For all other cases, *filtering at* *both frequency edges of a licence* is to be assumed. Where there are multiple earth receive licences operating on the same antenna contiguous in frequency, the RF filter should be applied from the relevant lower or upper frequency edge of the group of licences contiguous in frequency.

These provisions will allow a reasonable period for incumbent earth receive station licensees to fit new RF filters and obtain new licences that reflect the filtering, if they wish. The intent is that this aligns with the same proposed provisions for the spectrum licensing technical framework proposed for the band.

## Changes to RALI FX19

Mobile network operator representatives submitted that the scope of proposed changes to RALI FX19 went beyond removing point-to-multipoint (PMP) services in the 3.575–3.7 GHz range, and that it proposed coordination changes to services in 1.90–1.92 GHz. This was outside of the scope of the TLG. While the proposed changes were necessary to manage a coordination issue in that band, one submitter requested more time to consider those aspects. This request was granted until 4 June and they provided a further response to the ACMA on 7 June.

### ACMA response:

We reviewed submissions and adopted some of the proposals into the draft RALI FX19.

## Views on appropriate device boundary criteria for AWLs and fall-back synchronisation

There were different views on the use of a different device boundary criteria (DBC) to manage coexistence between AWLs, and between AWLs and spectrum-licensed services. Most telecommunications providers supported the use of a different DBC for spectrum licences adjacent to AWLs, compared with AWLs adjacent to AWLs. This was because it was not practicable for spectrum licensees to be able to use a single fall-back synchronisation scheme where there was risk of AWLs wanting to use different frame structures. One submitter disagreed with separate DBCs and proposed the use of the DBC for coordination between spectrum-licensed devices and AWL-licensed devices.

### ACMA response

Our view on the use of a different DBC remains the same, in that, due to potential desired different time division duplex frame structures being different between AWL and spectrum licence WBB use-cases, a more stringent AWL>SL DBC needs to be used so that fallback synchronisation should not be required.

While some respondents encouraged the consideration of an additional 5G fallback frame structure, or one with a different uplink/downlink ratio, our view is that in most remote areas, there should not be significant AWL coexistence issues.

It should be noted that there are mechanisms contained within RALI MS47 and the AWL LCD to accommodate possible exemptions from the DBC (and other) RALI requirements.

## Amendment to Spectrum Embargo 78

Spectrum Embargo 78 currently articulates a policy that the ACMA does not generally permit any new apparatus licences, including possible AWLs, in the 3.7–4.0 GHz range, Australia-wide. No submissions addressed the proposed changes to Spectrum Embargo 78. It will be changed as proposed.

Spectrum Embargo 78 will be modified after the initial AWL allocation window to support the issue of new PTP licences in the 3.8–4.2 GHz range, FSS earth licences in the 3.7–4.2 GHz range, and future AWLs in remote areas.

## Miscellaneous technical issues

We received and considered other suggestions regarding the technical framework. These included suggestions relating to aspects of the AWL LCD and RALI MS 47.

These have all been considered in detail and the following amendments made:

RALI MS 47 has been amended to reference the allocation quantum policy, specifically that the allocation quanta policy applies for ongoing AWL over-the-counter allocation, until such time the policy is otherwise amended or revoked.

The AWL LCD has been amended to address concerns expressed by telecommunications providers that the proposed changes to the AWL LCD might imply that in some cases, a spectrum licensee would have to synchronise their devices with devices operated under an AWL.

After the consultation closed, one submitter raised practical issues with incumbent PMP licences and new AWLs, which were allowed to overlap under the draft RALI MS47. As this creates potential issues for PMP licences transitioning to AWLs, additional restrictions have now been placed in RALI MS47 to limit AWLs being issued near incumbent PMP licences to preserve transition opportunities, unless by agreement.

The Darwin and Geraldton coordination zones under RALI MS47 have now been defined using HCIS identifiers, as this enables an easier check of licence applications.

An additional coordination zone has been prescribed in RALI MS47, around Exmouth, WA, to protect a planned radio-determination service in the band.

Spectrum Embargo 52, covering the Woomera Protected Area, will be revised to include the 3.4–4.0 GHz range and define the area using HCIS identifiers.

# Allocation process

Broad support was expressed by several stakeholders for the allocation approach outlined in the consultation paper. This approach includes:

issuing AWLs in a 2-stage administrative allocation

assessing competing applications.

The 2-stage allocation process supports the efficient allocation of spectrum. This involves considering applications in accordance with allocation principles where there is not sufficient spectrum to facilitate a negotiated outcome between applicants. Stakeholders were broadly supportive of the proposed principles.

A small number of stakeholders had diverging views about the allocation quantum policy. This issue is discussed in more detail below.

## Allocation quantum policy

An allocation quantum of 100 MHz was supported by most stakeholders, with a caveat that ACMA applies discretion for cases where greater than 100 MHz is required. One submitter suggested that the allocation quantum may need to be less than 100 MHz in high-demand areas.

Another submitter suggested that the allocation quantum be 160 MHz to support 4 x 40 MHz channels, while others supported up to 200 MHz in areas of low demand after the allocation window.

### ACMA response

We support an administrative allocation quantum of 100 MHz as this facilitates more licensees at a given location and likely preserves spectrum in the longer term for smaller operators that generally seek spectrum on an as-needs basis. We may approve an allocation quantum greater than 100 MHz, depending on spectrum availability in the relevant area and the merits of the application.

The adoption of a 100 MHz quantum allocation limit is intended to support a range of new and innovative technologies (including 5G) and a range of use-cases and users, as well as promoting competitive markets, especially in areas of high demand. Having an administrative limit means that the ACMA has discretion to allocate a larger amount of spectrum, depending on the availability of spectrum in the relevant area and the circumstances of the individual application and associated use-case.

# Tenure and renewal

Stakeholders generally supported our proposed licence duration and renewal arrangements.

## Licence duration

Two submitters supported medium-term 10-year licences with shorter options if needed, while 2 other submitters supported maximum tenures no shorter than 5 years, with the flexibility of shorter tenures. One submission supported tenure beyond December 2030, while another proposed a guaranteed 5-year initial term and renewals of 5-years.

### ACMA response

Our views on licence tenure remain unchanged. We will proceed with tenure arrangements for AWLs, such that they expire no later than 13 December 2030, aligning with the expiration of spectrum licences in 3.4 GHz to facilitate potential replanning or defragmentation activity. Aligning expiry dates for licences within the same band supports the future efficient allocation of spectrum.

## Concerns on spectrum hoarding

Several submitters expressed concerns about hoarding of spectrum. Concepts such as ‘use it or lose it’ (UIOLI) conditions or statutory declarations that spectrum is to be used were suggested.

### ACMA response

We are aware that there is demand for mid-band spectrum from a range of different parties. Across our suite of allocations in the 3.4–4.0 GHz band, we have made planning decisions and are designing allocation processes to facilitate a range of use-cases via the 3.4/3.7 GHz spectrum licence auction and administrative allocation processes for apparatus licences, including AWLs. The allocation quantum policy is also designed to address concerns about potential hoarding and efficient use of spectrum

We do not see a justification for requiring upfront deployment obligations, especially given the significant amount of spectrum being made available to support LA WBB use-cases. The Applicant information pack (AIP) notes that the ACMA may consider use on renewal, such as where there are indications of unmet demand. This is consistent with the approach taken for AWLs in 26/28 GHz.

# Pricing

Overall, the submissions received from this consultation process supported the $/MHz/pop pricing construct for the AWLs, as well as a transmitter licence tax rate of $0.0041/MHz/pop for AWLs in the 3.4–4.0 GHz band.

Satellite industry representatives noted that FSS receive earth stations will continue to be licensed in remote areas through site-specific apparatus licences. They considered that the AWL pricing methodology may be appropriate for WBB in remote and metro/regional areas. However, they considered that applying it to FSS receive Earth stations is not appropriate in metro/regional areas.

One submitter noted that the proposed arrangements are an effective method of pricing. They also noted an alternative option would be to use a dynamic spectrum model that would offer a pay-as-you-go model. The dynamic spectrum model is not part of the proposed arrangements for this allocation.

### ACMA response

Given the general support for the proposed tax, we have amended the Radiocommunications (Transmitter Licence Tax) Determination 2015 to include the transmitter licence tax rate of $0.0041/MHz/pop for AWLs in the 3.4–4.0 GHz band

There will be an opportunity soon for all stakeholders to comment on the allocation, licensing, planning and pricing arrangements for the allocation of apparatus licences in the 3.8–3.95 GHz band when we consult on these arrangements.

1. WA WBB services are typically network deployments over large, often contiguous, geographical areas, such as those traditionally undertaken by mobile network operators (MNOs). LA WBB services are deployments by operators needing smaller geographic areas, including wireless internet service providers (WISPs), fixed wireless access providers, as well as campus-style and private network deployments by industry vertical and enterprise users. [↑](#footnote-ref-2)