Area-wide apparatus licences in the 3.8 GHz band in metropolitan and regional Australia

Licensing, allocation process, technical framework and pricing arrangements

Consultation paper

June 2023

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# Introduction

The Australian Communications and Media Authority (ACMA) is consulting on arrangements for allocating apparatus licences in the 3.8 GHz band (3750–3950 MHz in regional areas, and 3800–3950 MHz in metropolitan and immediate surrounding areas). The arrangements in the 3.8 GHz band are intended to facilitate a wide range of new local area wireless broadband (LA WBB) use cases on a shared basis with fixed point to point (PTP) and fixed satellite services (FSS).

We propose to authorise access to the 3.8 GHz band by issuing [area-wide licences](https://www.acma.gov.au/publications/2020-02/guide/area-wide-licensing-acma-approach-introducing-area-wide-licences) (AWLs). Key features of AWLs are that they are scalable in bandwidth and geographic area by aggregating geographic licence cells and/or spectrum blocks.

We are consulting on 2 allocation options for issuing AWLs. Under allocation Option 1, we are seeking stakeholder views on employing a 2-stage administrative allocation window process with additional allocation limits to prioritise LA WBB access. Under allocation Option 2, we are proposing a general allocation window approach which would issue AWLs via administrative criteria, similar to the process adopted by the ACMA for the 26/28 GHz AWL allocation. Under both options, the ACMA would consider applications from LA WBB, PTP and FSS use-cases for both AWL transceiver (tx) licenses and AWL receiver (rx) licences.

To support the allocation of AWLs in the 3.8 GHz band, we are proposing to make legislative instruments setting out the technical conditions and pricing arrangements for AWLs in the band. These instruments may be supported by administrative policies on aspects of the technical framework and our process for allocating AWLs. Detailed discussion on the proposed instruments and administrative policies are in the [Technical framework](#_Technical_Framework), [Allocation process](#_Allocation_process), [Tenure and renewal](#_Licence_tenure_and) and [Pricing](#_Pricing) sections of this paper.

The proposed technical framework changes also include some proposed consequential amendments to the Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters ­– 3.4 GHz Band) 2015. If proceeded with, amendments to this instrument would be expedited ahead of the 3.4/3.7 GHz spectrum licensing allocation, so that potential spectrum licence applicants are fully aware of any changed obligations.

Following ACMA consideration of stakeholder submissions to this consultation, we will announce further details about the 3.8 GHz band allocation on our website.

# Background

As outlined in the January 2021 [*Replanning the 3700–4200 MHz band* outcomes paper](https://www.acma.gov.au/sites/default/files/2021-01/Replanning%20the%203700-4200%20MHz%20band_Outcomes%20paper.docx) (the 2021 outcomes paper), the ACMA intends to introduce apparatus licensing arrangements in the 3.8 GHz band to support LA WBB services on a shared basis with FSS and PTP services. LA WBB services are deployments by operators servicing limited 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.

The allocation of apparatus licences in the 3.8 GHz band in metropolitan and regional areas is part of a larger planning and allocation activity in which the ACMA is making mid band spectrum available in across broader 3.4–4.0 GHz band as follows:

Summary of upcoming 3.4–4.0 GHz band allocations

|  |  |  |  |
| --- | --- | --- | --- |
| Allocation type | Band/area | Allocation commencement | Next steps |
| AWLs, administrative allocation | 3.4–4.0 GHz band – remote areas | Q2 2023 | Administrative allocation to occur in Q2 2023 |
| Spectrum licences, price-based allocation | 3.4/3.7 GHz bands – metropolitan and regional areas | Q4 2023 | Publication of applicant information pack/applications open – July 2023 |
| AWL (subject of this paper) | 3.8 GHz band[[1]](#footnote-2):  3800–3950 MHz – metropolitan and immediate surrounding areas  3750–3950 MHz – other regional areas | Q1 2024 | Current consultation (subject of this paper) |
| Highly localised apparatus licences | 3.95–4.0 GHz frequency range – regional and metropolitan areas  3.4–3.475 GHz frequency range – ‘urban excise’ areas[[2]](#footnote-3) | TBD | Convene TLG in Q3 2023 |

The 3.8 GHz band is currently used by a mixture of services and applications including PTP links and earth receive stations. The proposed allocation process and accompanying technical frameworks look to carefully balance the needs of both LA WBB operators and incumbent services.

## Planning decisions

The 2021 outcomes paper (released in January 2021) described our planning outcomes and preliminary views to introduce WBB services in the 3.7–4.2 GHz band, using a combination of apparatus and spectrum licensing arrangements.

The 2021 outcomes paper also stated that we would, as far as practical, extend or align frameworks and the timing of their development with similar ones in the   
3.4–3.7 GHz band. [*Optimising arrangements for the 3400–3575 MHz band: Planning decisions and preliminary views*](https://www.acma.gov.au/consultations/2019-08/optimising-3400-3575-mhz-band-consultation-122019) (the 2019 outcomes paper) outlines the planning outcomes for the 3400–3575 MHz part of the 3.4 GHz band.

New planning arrangements for the development of LA WBB include:

Australia-wide in the 3.8–4.0 GHz frequency range, introducing arrangements to support LA WBB services on a shared basis with existing FSS and PTP services. New apparatus licences for FSS and PTP services would be issued on a coordinated, shared basis with LA WBB services.

In remote areas in the 3.7–3.8 GHz range, introducing apparatus licensing arrangements to support LA WBB services on a shared basis with existing FSS and PTP services. New apparatus licences for FSS would be issued on a coordinated, shared basis with licences for LA WBB services, but new apparatus licences for PTP services will likely not be issued to simplify new PTP technical arrangements in the band. Existing licences used for PTP services would be allowed to continue.

In remote areas in the 3.4–3.7 GHz range, introducing apparatus licensing arrangements to support LA WBB services.

In regional areas in the 3.4–3.575 GHz range, introducing apparatus licensing arrangements to support LA WBB services.

This consultation package considers the process of implementing apparatus licences in the 3.8 GHz band for metropolitan and regional areas only.

## AWLs

We want to allocate AWLs to authorise access to spectrum in the 3.8 GHz band in regional and metropolitan (and immediate surrounding) areas. Unlike ‘service-specific’ apparatus licence types, which typically align with specific uses and purposes, the AWL type may be used for a wide range of purposes, uses, services, applications, and technologies. This flexibility is intended to allow the licensee to tailor the spectrum capacity and geographic reach of the licence to specific use-cases, including smaller-scale and/or bespoke deployments. We have previously allocated AWLs in parts of the 26 GHz and 28 GHz bands to facilitate both WBB and FSS use-cases.

In this allocation, AWLs are intended for WBB applications. The area-wide receive (AWL rx) licence type will be used to authorise earth receive stations for FSS applications.

## Legislative context and policy environment

### Guiding legislation

The ACMA’s decisions are guided by the objects of the *Radiocommunications Act 1992* (the Act) to promote the long-term public interest derived from the use of the spectrum by providing for the management of the spectrum in a manner that:

facilitates the efficient planning, allocation and use of the spectrum

facilitates the use of the spectrum for:

commercial purposes

defence purposes, national security purposes and other non-commercial purposes (including public safety and community purposes)

supports the communications policy objectives of the Australian Government.

### Ministerial policy statement

The former Minister responsible for the Communications portfolio issued the [Radiocommunications (Ministerial Policy Statement – 3.4–4.0 GHz) Instrument 2022](https://www.legislation.gov.au/Series/F2022N00015) (MPS) for the allocation of the spectrum in the 3.4–4.0 GHz band, containing the following objectives:

* supporting the deployment of new and innovative technology, including 5G
* supporting a range of use-cases and users
* supporting digital connectivity and investment in regional Australia
* promoting competitive markets.

Under section 28C of the Act, the ACMA must have regard to the MPS in exercising its powers and performing its functions under the Act. In making any decisions in relation to the 3.8 GHz band, the ACMA will have regard to the MPS.

### Government communications policy objectives

As part of the government’s October 2022 Budget announcements, the Minister for Communications (the minister), the Hon Michelle Rowland MP, [restated](https://minister.infrastructure.gov.au/rowland/media-release/albanese-government-better-connect-inform-and-empower-australians) the government’s commitment to deliver better connectivity to Australians, including to increase connectivity for rural, regional, remote and First Nations communities and to enable the ACMA to continue to auction high value spectrum.

In her [speech to the Radcomms conference in November 2022](https://minister.infrastructure.gov.au/rowland/speech/address-radcomms-2022-conference), the minister noted that the allocation of spectrum in the 3.4–4.0 GHz band will support digital connectivity and investment in regional Australia, as well as its importance for the deployment of new and innovative technology including 5G services.

In its [statement of expectations for the ACMA](https://minister.infrastructure.gov.au/rowland/media-release/albanese-government-sets-expectations-two-key-communications-regulators) (SoE), the government has articulated its expectation that the ACMA take a proactive regulatory approach. Of relevance for the ACMA’s spectrum management functions, the SoE outlined the government’s expectation that the ACMA will support the government’s communications and media objectives, including:

* promoting investment, innovation and the adoption of new and emerging technologies while continuing to safeguard the interests of consumers and small businesses
* supporting government policies related to regional, rural, and remote Australia including by having regard to relevant ministerial policy statements in the planning and allocation of spectrum to support innovation and competition in these areas
* promoting the long-term public interest derived from spectrum, including the benefits of technological developments that improve spectrum utilisation.

### Guiding objectives for the 3.8 GHz AWL allocation

Taken together, the suite of allocations across the 3.4–4.0 GHz band and different licensing approaches are intended to support the MPS objectives in conjunction with the other relevant policy and legislative objectives listed above.

For this allocation of AWLs in the 3.8 GHz band, we consider that the following objectives are of most relevance:

supporting a range of use cases and users

supporting digital connectivity and investment in regional Australia

supporting the deployment of new and innovative technology

promoting competitive markets

supporting the efficient allocation and use of spectrum.

In designing our allocation settings, we seek to strike a balance between these different objectives.

# Consultation package

We are seeking comments from interested stakeholders on the following aspects of our framework for implementing AWLs in the 3.8 GHz band in metropolitan and regional areas of Australia using ‘allocation windows’.

### Technical framework

Amendments are proposed to Radiocommunications Assignment and Licensing Instruction (RALI) MS47 ‘Frequency coordination and licensing procedures for Area-Wide Licences (AWL) in the 3400–4000 MHz band’ to:

expand the use of AWLs to include spectrum spaces proposed by this allocation process

include AWL rx licences for earth receive stations in the scope of RALI MS47 and provide assignment and licensing guidance for those licences

prioritise spectrum in the AWL spectrum spaces for defined point-to-multipoint (PMP) apparatus licences affected by the [Radiocommunications (Spectrum Re-allocation – 3.4  GHz and 3.7 GHz Bands) Declaration 2022](https://www.legislation.gov.au/Details/F2022L00983) (the re-allocation declaration), during the reallocation period

adopt a policy to not issue additional fixed PTP licences in the 3800–4000 MHz range in metropolitan areas

other identified proposed changes from the first issue of RALI MS47 to improve coexistence between different services.

Additional changes are proposed to the [Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters – 3.4 GHz Band) 2015](https://www.legislation.gov.au/Series/F2015L00728)from what was consulted in the March 2023 [Draft allocation and technical instruments for the 3.4/3.7 GHz bands auction](https://www.acma.gov.au/consultations/2023-02/draft-allocation-and-technical-instruments-3437-ghz-bands-auction) consultation. These additional changes relate to reflecting different coordination requirements for spectrum licensed transmitters for earth stations registered under an AWL rx compared with earth receive licences.

Amendments to the [Radiocommunications (Interpretation) Determination 2015](https://www.legislation.gov.au/Series/F2015L00178) are proposed to enable the area-wide service and AWL rx licence type to accommodate earth receive stations.

**Allocation process**

The ACMA is seeking comment on 2 potential draft allocation instruments; one to support a nil MHz allocation limit and a second to restrict licence transfer/use authorisation as follows:

Draft Radiocommunications (Area-Wide Licence Allocation Limits) Determination 2023

Draft Radiocommunications (Limitation of Authorisation of Third-Party Users and Transfer of Area-Wide Licences) Determination 2023.

We are also seeking comments on proposed cross-band limits and an allocation quantum policy in the package.

Details on the proposed legislative instrument amendments and draft administrative policies are found in the Technical framework, Allocation process, Tenure and renewal and Pricing sections of this consultation paper.

# Technical framework

## Introduction

In proposing a technical framework for the 3.8 GHz band in metropolitan and regional areas, we have considered the object of the Act to promote the long-term public interest derived from the band by facilitating the efficient planning and use of the band.

The technical framework is designed to support AWLs and AWL rx licences in the 3.8 GHz band Australia-wide in relevant spectrum spaces and sets out the conditions and arrangements that allow coexistence with other services operating in, and adjacent to, the band in which AWLs and AWL rxs are proposed to be issued. The conditions and arrangements are described in:

the Radiocommunications Licence Conditions (Apparatus Licence) Determination 2015, which imposes conditions that apply to all apparatus licences

draft revised RALI MS47, which provides information about, and describes necessary steps for the frequency coordination and licensing of AWLs and AWL rxs in the 3.8 GHz band in metropolitan and regional areas and the technical requirements that should be met before devices are registered

conditions on individually issued licences

other legislative instruments or ACMA policy documents referenced in any the above.

A draft revised RALI MS47 is included in this consultation package, and we welcome views on any element of the technical framework that relate to this proposed allocation.

## Background to the proposed technical arrangements

As well as outlining planning decisions and preliminary views on how those decisions could be implemented, the 2021 outcomes paper also indicated preliminary views on some technical framework aspects, as they relate to metropolitan and regional areas:

technical parameters for LA WBB use should align with those under the future spectrum licensing framework in the band as much as is practicable

any AWL framework proposed should ideally attempt to accommodate WBB, FSS and PTP services within the one framework if practicable

future consideration of low-power or indoor deployment WBB arrangements is desirable

PTP arrangements should be consolidated to the 3.8–4.2 GHz frequency range Australia-wide

earth station protection zone areas should not be identified for any spectrum licensing or apparatus licensing in the band other than for FSS receivers

arrangements for radiolocation services in the 3.1–3.5 GHz band should not change, nor those permitted in the 3.7–4.2 GHz band under in accordance with subsection 10(7) of the Australian Radiofrequency Spectrum Plan 2021 (the Spectrum Plan)

arrangements for existing low interference potential devices permitted in the   
3.4–4.2 GHz band should not change.

## Technical Liaison Group (TLG)

A TLG is a short-term advisory body convened by us which offers an informal discussion forum between the ACMA, industry and other stakeholders with an interest in the technical aspects of licences. Its purpose is to provide advice on the development of, or possible changes to, a licensing technical framework.

To facilitate development of apparatus and spectrum licence arrangements, we formed the 3.4–4.0 GHz TLG to review and develop spectrum and apparatus licensing technical frameworks for the 3.4–4.0 GHz band. There were 2 phases of the TLG, and the outcome of discussions are available on the [ACMA website](https://www.acma.gov.au/spectrum-licence-technical-liaison-groups).

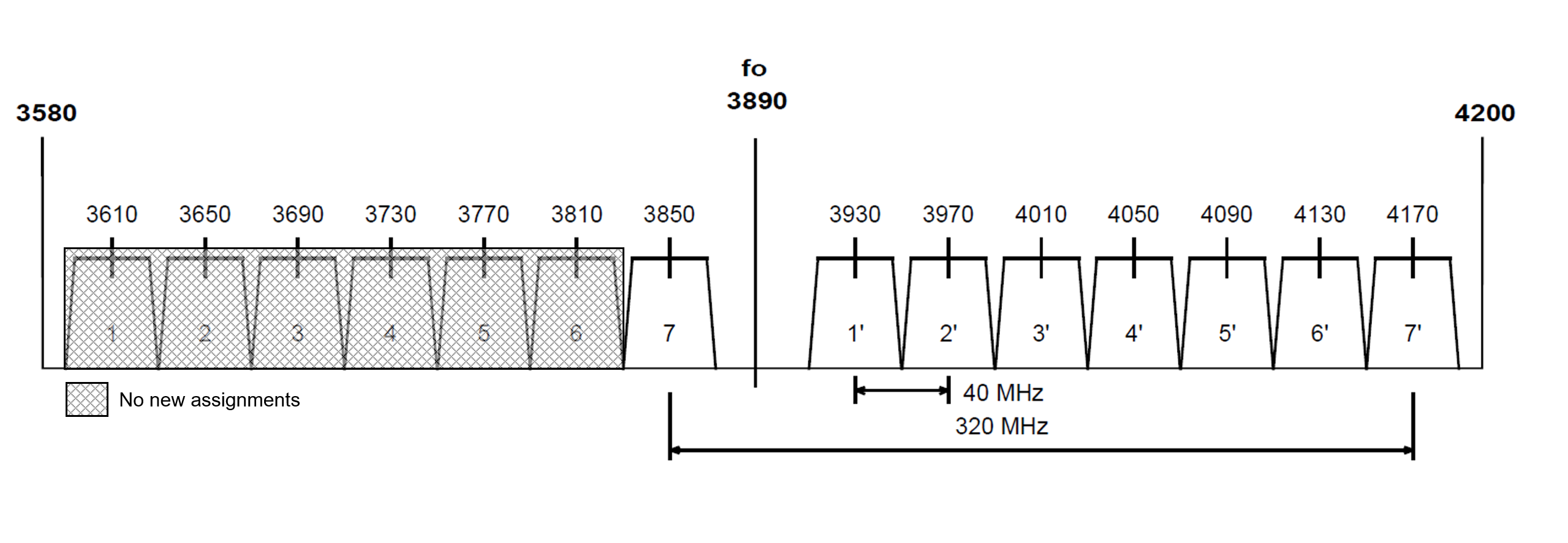
The draft technical framework proposed for AWLs in these bands is informed by TLG discussions, submissions to the March 23 [Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters — 3.4 GHz Band) 2015 consultation](https://www.acma.gov.au/consultations/2023-02/draft-allocation-and-technical-instruments-3437-ghz-bands-auction), other engagements and ACMA staff considerations.

## Summary of proposed arrangements

### PTP services

Apparatus licences for new PTP services will generally be restricted to the 3.8–4.2 GHz range, based on flexible use of the remaining channels of the current channel raster (see Figure 1) and to areas outside of specified metropolitan areas described in the RALI MS47 as proposed to be amended.

1. Restricted existing channel raster



Coordination requirements for PTP services are proposed to remain the same as described in the current [RALI FX3](https://www.acma.gov.au/publications/2019-09/instruction/rali-fx3-microwave-fixed-services), and current RALI MS47.

### The fixed satellite service

In regional and metropolitan areas in the 3750–4000 MHz band, new earth receive stations will generally be licensed using the AWL receive (AWL rx) licence type. Existing earth receive licences will generally be appropriate for renewal.

The draft revised RALI MS47 now includes provisions for assignment and coordination of AWL rxs to support new earth receive stations:

No minimum bandwidth or set channel raster for AWL rx is proposed.

The device boundary criteria defined in the Radiocommunications (Unacceptable Levels of Interference – 3.4 GHz Band) Determination 2015 (the ULOI) is proposed to apply in relation to AWLs and spectrum licensed devices at the boundary of an AWL rx.

For AWLs operating transmitters, coordination requirements with earth receive stations registered under AWL rxs are introduced. Only the receiver overload mechanism is proposed to be considered. The assumed RF filter for earth station receivers is proposed to be more stringent than that to be assumed for AWL coordination with earth stations under earth receive licences.

It is intended that prospective AWL rx licensees will consider the size of the AWL spectrum space (both in area and frequency) that is needed to ensure their operations are provided suitable co-channel and adjacent channel protection from existing and future registered transmitters. This can, for example, take into account the spectrum required for sufficient RF filtering roll-off to apply.

### Spectrum licensed services in 3400–3800 MHz and AWL rxs

The intent is that provisions should apply for the coordination of SL transmitters with AWL rxs. To achieve this, the *Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters* – *3.4 GHz Band) 2015* (RAG Tx) needs to be varied. Relevant parts of the current RAG Tx apply to coordination with all earth stations. As earth stations will now be licensed as either earth receive or AWL rx, depending on the spectrum space, these variations are required to be able to apply separate coordination requirements between the two. Below is a summary of the proposed variations to address this matter. These proposed variations are in addition to those that were subject to consultation in the March 2023 [Draft allocation and technical instruments for the 3.4/3.7 GHz bands auction](https://www.acma.gov.au/consultations/2023-02/draft-allocation-and-technical-instruments-3437-ghz-bands-auction).

The earth station filter requirements proposed for AWL rx are based on those implemented by the US Federal Communications Commission that apply below 3980 MHz. In our proposal, the filter roll-off is assumed to commence 20 MHz inside the AWL rx frequency boundary. The AWL rx applicant can manage this risk by acquiring a wider licence if necessary. Alternatively, we could consider having it apply 20 MHz before the spectrum licence frequency boundary, that is, fixed at below 3820 MHz in metro areas and below 3770 MHz in regional areas. The benefit of this approach is it reduces the level of spectrum denial between earth stations and spectrum licence devices thereby increasing spectrum utility. This is particularly useful in populated areas where the density of deployments is expected to be greater. However, this complicates situations where the AWL rx is adjacent in frequency to both spectrum licences and AWLs at the same time. This could happen near a regional/remote boundary.

Below are the proposed revised clauses in the RAG tx:

1. Section 4.2, heading

Omit the heading, substitute:

Protection requirements – FSS Earth receive stations operating in the 3400-3600 MHz band under earth receive licences

1. Section 4.3, heading

Omit the heading, substitute:

Protection requirements – FSS Earth receive stations operating in the 3600-4200 MHz band under earth receive licences

1. Paragraph 4.3(1)(a)

Omit the paragraph, substitute:

(a) is the subject of an earth receive licence issued under the Act;

1. Section 4.4, heading

Omit the heading, substitute:

Additional protection requirements – incumbent FSS Earth receive stations operating in the 3600-3800 MHz band under earth receive licences

1. Subsection 4.5(2)

After ‘earth receive stations’ insert ‘the subject of an earth receive licence’.

1. After section 4.4

Insert:

4.5 Protection requirements – FSS Earth receive stations operating in the 3750-4000 MHz band under area wide receive licences

(1) Radiocommunications transmitters operated under a spectrum licence [in the 3.4 GHz band] must protect earth receive stations from receiver overload, if the radiocommunications receiver for the earth receive station:

(a) is the subject of an area-wide receive licence issued under the Act;

(b) was registered in the Register prior to the date on which the radiocommunications transmitter operated under the spectrum licence is registered

(c) is located within 100 km of the radiocommunications transmitter.

(2) A radiocommunications transmitter operated under a spectrum licence in the 3.4 GHz band is not considered to overload the receiver of an earth station mentioned in paragraph (a) if the total power received from the transmitter at the input of an earth station receiver ( after considering antenna gain, radiofrequency filtering and other losses) does not exceed a total of -65 dBm at frequencies outside of the frequencies authorised by area-wide receive licence. The minimum radiofrequency filtering level described in Table 2, at the front end of the earth receive station for different frequency offsets, is assumed to apply at each lower limit for the licence and the upper limit for the station. In this subsection:

***lower limit for the station*** means, in relation to the geographic area specified in an area-wide receive licence that contains the station, the lowest frequency specified in the licence for the operation of radiocommunications receivers in that geographic area.

***upper limit for the station*** means, in relation to the geographic area specified in an area-wide receive licence that contains the station, the highest frequency specified in the licence for the operation of radiocommunications receivers in that geographic area.

Minimum frequency response of earth receive station’s radiofrequency filter, under an area-wide receive licence

| **Frequency offset from lower or upper limit for the earth receive station receiver licence frequency (MHz)** | **Rejection (dB)** |
| --- | --- |
| < 80 | 60 |
| ≥ 80 | 70 |

(3) When assessing interference caused by receiver overload:

* Propagation loss between a radiocommunications transmitter and an earth receive station for an FSS should be calculated using Recommendation ITU-R P.452 with *p*= 20%.

*Note:* The parameter *p*is defined inRecommendation ITU-R P.452 as the required time percentage for which the calculated basic transmission is not exceeded.

* In the event actual antenna radiation patterns are not available for an earth receive station in an FSS, the antenna radiation pattern defined in ITU-R Recommendation S.465 can be assumed.
* For coordination occurring before 17 July 2027, the first time a spectrum licensee performs adjacent channel coordination with an earth receive station operating in the 3800 to 4000 MHz band, and before the spectrum licensee registers the relevant device, the spectrum licensee must notify the affected area-wide receive licensee. This is to ensure the area-wide receive licensee has the opportunity to install a radiofrequency filter with the relevant characteristics from Table 2 to the front end of their earth station receiver.

If we proceeded with the proposed changes to the RAG tx above, our intention would be to expedite those changes to the RAG tx. This is so they can be made ahead of the planned 3.4/3.7 GHz spectrum licensing allocations. As they involve coordination requirements for spectrum licences devices, prospective spectrum licensees need to have certainty of arrangements for the planned allocation.

**Spectrum licensed services in 3400**–**3800 MHz and AWLs**

As per the [proposed spectrum re-allocation for the 3.4 GHz and 3.7 GHz bands outcomes paper](https://www.acma.gov.au/consultations/2022-03/proposed-spectrum-re-allocation-declaration-34-ghz-and-37-ghz-bands-ifc-102022), we indicated that we intended to apply 15 MHz ‘restricted use bands’ across any spectrum licence and AWL frequency boundary. In these restricted use bands, unless an applicant can demonstrate satisfactory coordination measures, the ACMA will generally not issue AWLs authorising the operation of radiocommunications transmitters in in the 15 MHz of spectrum directly adjacent to a 3.4 GHz or 3.7 GHz spectrum licence.

### Point-to-multipoint (PMP) services

As incumbent PMP services may continue to operate in the band, elements remain in in RALI MS47 to coordinate between AWL and PMP licences.

### AWL services

RALI MS47 is proposed to be revised to extend the application of AWLs for WBB applications to the 3.8 GHz band, and to introduce the use of AWL rxs for satellite receive applications in regional and metropolitan areas.

Updates are also proposed to RALI MS47 to be clear which clauses apply to AWLs for WBB applications and which apply only to AWL rxs. While any permitted type of receiver can be registered under an AWL rx, some specific coordination requirements for AWLs and spectrum licences, as discussed above, are proposed only to apply in coordination with earth receive stations registered under an AWL rx.

### AWL coexistence with radio altimeters

Managing coexistence from AWLs to radio altimeters on aircraft remains the same as for AWLs in remote areas described in the existing RALI MS47.

### Other incumbent services

RALI MS47 already outlines coordination arrangements with other incumbent services in the band. Relevant services in the spectrum space for this allocation would include spectrum licences, point to point services, earth receive services, amateur services, and point-to-multipoint services.

### Restricted and protected areas

RALI MS47 also outlines specific coordination arrangements that apply in certain geographic areas. These are based on arrangements in other RALIs for the same areas, with some additional restrictions due to the expected ubiquitous nature of AWL WBB services. The geographic areas relevant to this allocation are:

Darwin and Geraldton coordination zones

Earth Station Protection Zones (ESPZ)

Australian Radio Quiet Zone in Western Australia (ARQZWA).

### Preservation of spectrum options for affected PMP licences

Amendments are proposed to RALI MS47 to preserve options for PMP licences affected by the [re-allocation declaration](https://www.legislation.gov.au/Details/F2022L00983) to transition services into the 3.8 GHz band. These changes are intended to prioritise spectrum in defined areas to enable the affected licensees to apply for AWLs in the 3.8 GHz band before the end of the re-allocation period (that is, 15 July 2027). The relevant provisions will be removed at the end of the re-allocation period and will be periodically updated as affected PMP licensees apply for AWLs and transition their services.

The ACMA has identified 31 PMP licences operating in the 3475–3520 MHz frequency range that these provisions are proposed to apply to. The locations of these licences are shown in Figure 4. Other prospective licensees will be required to coordinate with these PMP licences as though they are operating in the 3.8 GHz band. The existing coordination criteria defined in RALI MS47 for PMP licences in the 3400–3700 MHz frequency range are proposed to be applied.

The ACMA has written to all affected PMP licensees and confirmed they wish to take up the offer transitioning to the 3.8 GHz band. Table 1 details the affected PMP licences and licensees as well as the proposed frequency ranges to coordinate against them with in the 3.8 GHz band. These frequencies:

represent the lowest frequency ranges available at the location of each licence

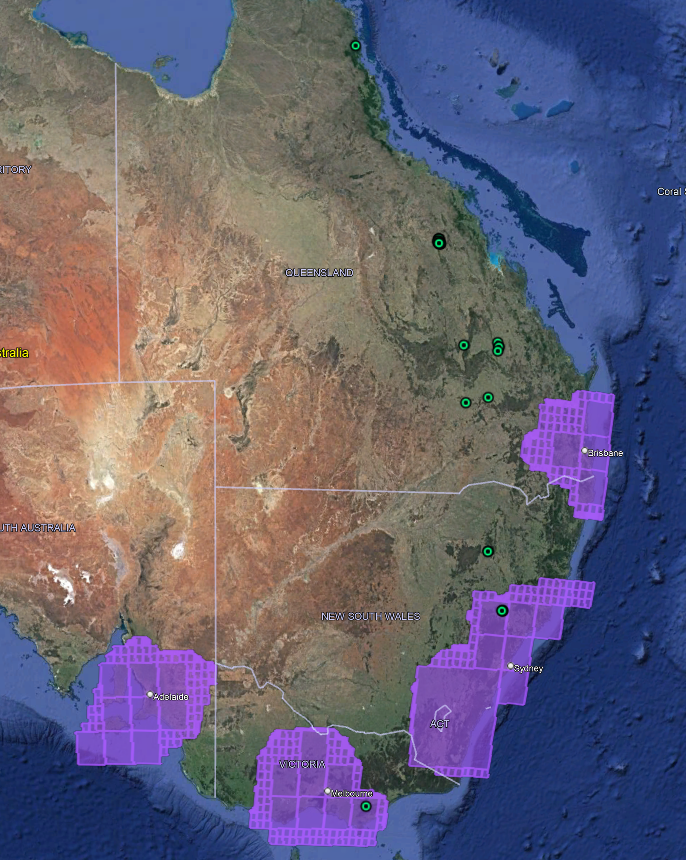
maintain the existing licence frequency separations at each PMP site

implement a 15 MHz frequency separation with the adjacent frequency spectrum licence space (to enable coexistence without the need for synchronisation).

Affected PMP licences in the 3475–3520 MHz frequency range

|  |  |  |  |
| --- | --- | --- | --- |
| **Licensee** | **Licence number**  **(as of 26/4/2023)** | **ACMA site ID** | **Frequency range to coordinate against** |
| Bm Alliance Coal Operations Pty Limited | 10615470/1 | 10014668 | 3765–3770 MHz |
| 10615471/1 | 3770–3775 MHz |
| 10615472/1 | 3765–3770 MHz |
| 10615473/1 | 3770–3775 MHz |
| 10615474/1 | 10014677 | 3770–3775 MHz |
| 10615475/1 | 3775–3780 MHz |
| 10615476/1 | 3770–3775 MHz |
| 10615477/1 | 3775–3780 MHz |
| 10615478/1 | 10014667 | 3775–3780 MHz |
| 10615479/1 | 3765–3770 MHz |
| 10615480/1 | 3775–3780 MHz |
| 10615481/1 | 3765–3770 MHz |
| 10615482/1 | 10014669 | 3765–3770 MHz |
| 10615483/1 | 3770–3775 MHz |
| 10615484/1 | 3765–3770 MHz |
| 10615485/1 | 3770–3775 MHz |
| Loy Yang Power Management Pty Ltd | 10501450/1 | 52625 | 3815–3825 MHz |
| Mach Mount Pleasant Operations Pty Ltd | 10397784/4 | 10008121 | 3815–3835 MHz |
| 10397786/4 | 10008122 | 3815–3835 MHz |
| 10397788/4 | 10008120 | 3815–3835 MHz |
| March IT Pty Ltd | 11017396/1 | 136455 | 3780–3795 MHz |
| 10526824/1 | 9025962 | 3765–3780 MHz |
| 11017397/1 | 9025962 | 3780–3795 MHz |
| 10526825/1 | 10010747 | 3765–3780 MHz |
| 10675863/1 | 10016795 | 3765–3775 MHz |
| 10682649/1 | 10016944 | 3765–3780 MHz |
| 10773862/1 | 10017871 | 3765–3775 MHz |
| Maules Creek Coal Pty Ltd | 10317309/1 | 10005408 | 3765–3780 MHz |
| 10956247/1 | 10020288 | 3765–3800 MHz |
| Wujal Wujal Aboriginal Shire Council | 12030990/1 | 10007599 | 3780–3795 MHz |
| 10334477/2 | 3765–3780 MHz |

1. Location of affected PMP licences operating in the   
   3475–3520 MHz band



Green dots: PMP licences.

Purple area: area re-allocated for the issue of spectrum licences in the 3750**–**3800 MHz frequency range.

## Future changes

It is expected that RALI MS47 will be further updated after the [future proposed spectrum licensing allocation process](https://www.acma.gov.au/allocating-34-40-ghz-band) in the band. Some elements in RALI MS47, such as section 4.10, have been included temporarily until changes in the [Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters–3.4 GHz Band) 2015](https://www.legislation.gov.au/Series/F2015L00728) are updated. Once that instrument is changed, relevant parts of MS47 will be amended to reference that instrument directly.

# Tenure and renewal

The ACMA proposes the following arrangements for tenure and renewal for AWLs in the 3.8 GHz band, which are broadly consistent with the approach proposed for the 3.4–4.0 GHz remote allocation.

## Licence duration

The Act enables the ACMA to issue apparatus licences for a period of up to 20 years and includes processes for the renewal of apparatus licences (including renewal statements and public interest tests). Our [licensing and allocation information paper](https://www.acma.gov.au/publications/2021-03/rules/our-approach-radcomms-licensing-and-allocation) provides an overview of our approach to licence duration.

Because a high number of users and mixed-use-cases is anticipated in the band, we consider that AWLs in the 3.8 GHz band best satisfy the criteria for medium term (up to 5–10 years) licence duration. This would also provide users with a higher degree of investment confidence in deploying equipment and utilising the spectrum (compared to short term licence duration), likely an important factor for encouraging user to deploy within the band.

By supporting investment certainty through tenure arrangements, we have also had regard to our allocation objectives. In particular, longer licence durations are useful in supporting investment in regional areas and deployment of new and innovative technology, by promoting investment confidence. This can encourage more efficient use of the spectrum.

We propose generally to limit the duration for these AWLs to 13 December 2030, aligning with the expiration of spectrum licences in the 3.4 GHz band, to facilitate potential replanning or defragmentation activity, as well adopting a consistent approach with the licences in the 3.4–4.0 GHz remote allocation. This would limit the initial maximum duration of licences issued in 2024 to approximately 6 years; licences issued in 2025 to approximately 5 years, and so forth. It will still be open for applicants to seek a licence of a shorter duration (for example, annual licences). However, such shorter duration licences would generally not be renewed beyond a date that aligned with replanning timeframes.

## Licence renewal

The Act also includes processes for the renewal of apparatus licences, such as by including renewal statements and related statements on an apparatus licence. At this stage, we do not propose to include renewal statements or related statements on AWLs, and renewal will be at our discretion. We consider that there is limited additional utility and added complexities meaning renewal statements are not warranted for these licences.

The extent of demand for AWLs in the 3.8 GHz band remains uncertain currently, reflecting the early development of business cases for service deployment. To address the risk that initial licence allocations may not ultimately be used as planned, and the potential that licensees may not have adequate incentive to surrender or transfer unused licences to the market, we are considering including an advisory note on each AWL that notes that when deciding whether to renew a licence, we may have regard to whether the spectrum has been used and whether there is unmet demand for spectrum in the 3.4–4.0 GHz band.

On application for renewal, we may decide not to renew an AWL, or to renew the licence with different conditions (including a reduced quantum of spectrum within which the operation of radiocommunications transmitters is authorised). We will monitor allocation and use of the band over time. If we identify that there is continued unmet demand in 3.75–3.95 GHz in metropolitan and regional areas that will require a consideration of spectrum use at renewal, we propose to communicate this to licensees no less than 6 months before the expiry date of the licence. Our policy will be to not renew a licence for any period that would take the licence term beyond 13 December 2030 for metropolitan and regional AWLs. This policy will apply until planning and licensing decisions regarding spectrum licences in the 3.4–4.0 GHz (which are due to expire in 2030) are known.

More information about [apparatus licence renewal](https://www.acma.gov.au/policy-apparatus-licence-renewals) is available on our website.

We are proposing to apply the default renewal application and decision-making periods. The default renewal application period for apparatus licences begins 6 months from expiry and ends 60 days after the licence expires. The default decision-making period is 90 days.

# Allocation process

The ACMA can allocate apparatus licences via either a price-based allocation process (for example, an auction), or via administrative allocation. Where we expect significant excess demand for spectrum, as is often the case for spectrum licences, we tend to allocate the spectrum via auction. However, allocation via auction requires the spectrum to be configured into lots, with specific geographic and frequency dimensions, that may not be consistent with the demand arising from all market sectors.

The ACMA generally issues apparatus licences administratively. Usually, in instances where supply is expected to exceed demand, the ACMA uses a first-in-time approach, where interested parties apply to the ACMA and the application that is received first is considered before subsequent applications. We have also allocated apparatus licences via an ‘allocation window’ approach, where applications are called for during an ‘application window’ and all applications made during that period are assessed against decision-making principles after the end of the application window.

The allocation window approach is suitable where demand may exceed supply in some frequencies or geographies. A first-in-time approach in a high demand setting would involve the risk that the allocation outcome depends on the sequence of applications. The allocation window approach, potentially coupled with targeted allocation limits and policies, ultimately provides for a staged or managed approach to considering applications, where there are competing applications and/or insufficient spectrum to issue all licences applied for.

Under the allocation window approach, where the ACMA receives applications for licences that do not exceed the available supply of spectrum, a licence will generally be issued to the respective applicants (subject to any allocation policies and/or limits). Where the ACMA receives applications for AWLs and the aggregate quantum of spectrum covered by the licences applied for exceeds the available supply of spectrum in a particular geographic area, we will generally decide which applicants are issued AWLs, and the quantum of spectrum covered by the AWLs. The decision making will have regard to matters required by the Act as well as being based on the assessment of applications against the decision-making principles alongside other matters such as technical arrangements outlined in the applicant information pack that will be published before the allocation opens.[[3]](#footnote-4)

An administrative allocation of AWLs provides a level of flexibility that enabled aspirant licensees, particularly smaller use cases, to tailor their licences to more bespoke applications. The AWL type is intended to be a highly flexible licence type that is adaptable to licensee needs. It is intended to provide licensees with ‘building blocks’ – aggregate frequency and area blocks in a single licence, which can meet a range of network sizes or topographies and can be service or technology neutral, as long as the standard licence conditions and technical framework requirements for the relevant band are met. The AWL type can authorise the operation of one or more radiocommunications transmitters within a defined geographic area at a frequency or frequencies specified on the licence, subject to the conditions included in the licence. The allocation window approach to allocating licences is suitable for the allocation of AWLs.

In addition to AWLs in the band, the ACMA acknowledges that there are also a number of receiver licences authorising the operation of earth receive stations for FSS. Applications for AWL rx licences can also be made during the application windows, and the applications will be considered alongside applications for AWLs, as outlined under allocation Options 1 and 2 set out below.

We intend to design allocation settings that can manage demand for this spectrum in a way that provides for outcomes that are consistent with the [guiding policy objectives](#_Legislative_context_and)  listed above. Accordingly, we have identified 2 options[[4]](#footnote-5) for allocating AWLs in this band:

1. 6-month LA WBB priority period option including:

allocation principles for the initial allocation window

a nil MHz limit applying to mobile network operators (MNOs) and NBN Co in the LA WBB priority period window

an allocation quantum policy for all other entities

third-party authorisation and licence trading restrictions applying to MNOs and NBN Co

a cross-band limit for all entities that carries through priority window and second allocation process

allocation principles/window for the second allocation process, or a first-in-time approach.

Under this option, during the initial application window, the ACMA would consider applications from LA WBB, PTP and FSS use cases. Pending ACMA consideration of applications, FSS use cases would be licensed via AWL receive apparatus licences. This option would include a second allocation process, approximately 6 months after the commencement of the initial application window. During (and after) the second allocation process, applications from LA WBB, PTP, FSS and WA WBB use cases would be considered (subject to the proposed cross-band allocation limit).

General allocation window approach including:

allocation principles

an allocation quantum policy

a cross-band limit that is in force from the beginning of the allocation.

Under this option, applications to support LA WBB, PTP, FSS and WA WBB use-cases would be considered (subject to the proposed cross-band allocation limit).

Within these 2 allocation options there are further consideration on allocation limits and timing periods that we are seeking stakeholders’ views on.

Overview of allocation options

|  |  |  |
| --- | --- | --- |
|  | **Option 1: LA WBB priority period** | **Option 2: General allocation window approach** |
| **Process** | 1. Two stage administrative allocation approach | 1. General allocation window approach |
| **Initial allocation window** | 1. Allocation principles | 1. Allocation principles |
| **Limits** | 1. Nil MHz limit 2. Allocation quantum policy 3. Third party authorisation and licence trading restrictions 4. Cross-band limits | 1. Allocation quantum policy 2. Cross-band limits |
| **Quantum policy options** | 1. 50 MHz 2. 60 MHz 3. 70 MHz | 1. 50 MHz 2. 60 MHz 3. 70 MHz |
| **Nil MHz limit time period** | 1. 3 months 2. 6 months 3. 12 months | N/A |
| **Cross-band limits options** | 1. 140 MHz in metropolitan/regional areas in 3.4–3.95 GHz band 2. 140 MHz in metropolitan areas and 160 MHz in regional areas in the 3.4–3.95 GHz band 3. No limits   **Time period options**   1. 3 months 2. 6 months 3. 12 months | 1. 140 MHz in metropolitan/regional areas in 3.4–3.95 GHz band 2. 140 MHz in metropolitan areas and 160 MHz in regional areas in the 3.4–3.95 GHz band 3. No limits   **Time period options**   1. 6 months 2. 12 months 3. 18 months |
| **Second allocation process** | 1. Allocation principles or 2. First-in-time approach | N/A |

## Comparative analysis

As previously outlined, we consider that the objectives for this allocation are as follows:

supporting a range of use-cases and users

supporting digital connectivity and investment in regional Australia

supporting the deployment of new and innovative technology

promoting competitive markets

supporting the efficient allocation and use of spectrum.

In Table 5 below, a tick/cross analysis identifies how the two different options support the four identified objectives. We are seeking to strike the right balance between these objectives. For example, while our allocation design emphasises opportunities for supporting a range of use cases and users, we are looking to design allocation settings that will also promote efficiency in the way that successful licensees use their spectrum.

Analysis of how allocation options support policy objectives

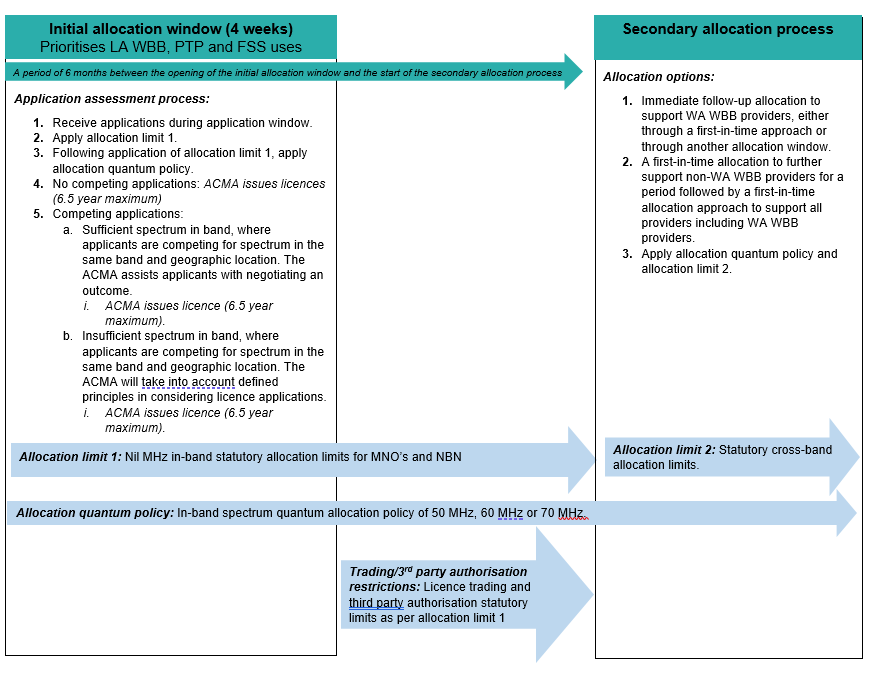
|  |  |  |
| --- | --- | --- |
| **Objectives** | **Option 1: LA WBB priority period** | **Option 2: General allocation window approach** |
| **Support a range of use cases and users** | * By limiting wide area wireless broadband (WA WBB) providers, a broader range of use cases is likely able to be allocated spectrum. * Does not support WA WBB use cases in the initial allocation window due to nil MHz limit. | * Reduces possibility of spectrum areas being bought out giving opportunity for more use cases to be allocated spectrum. * Risks of WA WBB users crowding LA WBB in high demand areas. |
| **Support digital connectivity in regional Australia** | * Allows smaller operators to establish LA WBB networks in regional areas. * MNOs and NBN Co will have the opportunity (after 6 months) to apply for AWLs, reducing the likelihood of vacant spectrum. * Available AWLs in the secondary window for MNOs and NBN might not be suitable for their services. | * Allocation in regional areas supports digital connectivity via AWLs. * Risks of WA WBB use cases precluding or impeding the development/rollout of LA WBB use cases in regional areas. |
| **Support the deployment of new and innovative technology, including 5G** | * Prioritises LA WBB providers, including private network providers, supports delivery of service offerings poorly catered for under alternative allocation mechanisms (like spectrum auctions). | * Allows for deployment of 5G technology by WA WBB providers. * Risks of WA WBB users obtaining a large proportion of the spectrum, precluding access to the band by other market players. |
| **Promoting competitive markets** | * A 6-month priority access window provides an opportunity for LA WBB providers to access the spectrum. As noted by the ACCC in its letter to the ACMA, such an approach is likely to promote competition. * This approach inhibits WA WBB providers getting access to the band for a period, and as such may not optimally promote competition in the WA WBB market. However, by supporting smaller market players, this approach may promote competition overall, noting that there is an extent of overlap between WA WBB and LA WBB markets. * The second allocation process provides an opportunity for equal access to the spectrum, which may foster competition across both LA WBB and WA WBB markets. | * Immediate access to the band by WA WBB supports national market competition * While smaller players may be prioritised via the initial allocation window, those not ready to apply at this time may not be able to access the spectrum, reducing their ability to compete. * A shorter period where LA WBB providers are prioritised may risk smaller market players becoming crowded out by national market players. |
| **Supporting the efficient allocation and use of spectrum** | * Will better support use in the band by market participants that are not well catered for by the spectrum licence allocation. * May result in short term lower use of the band. | * Allowing WA WBB users may facilitate immediate use of spectrum. * More WA WBB users in this band will potentially preclude use by LA WBB, who’s demand is inconsistent with the products offered in the spectrum licence auction. |

## Option 1: 6-month LA WBB priority period

In the [*Draft allocation and technical instruments for the 3.4/3.7 GHz bands auction* consultation paper](https://www.acma.gov.au/sites/default/files/2023-02/Consultation%20paper_Draft%20allocation%20and%20technical%20instruments%20for%203.4-3.7%20GHz%20bands%20auction_0.docx), released in February 2023, we outlined that:

The ACMA is considering applying allocation limits that would preclude existing 3.4–3.7 GHz spectrum licensees (currently NBN Co, Telstra, Optus and TPG Telecom, and related parties) from being issued an AWL for a period of time after applications open; that is, a nil limit would be applied to NBN Co and the MNOs for a specified period of time from the start of the initial allocation window. This nil limit would provide LA WBB, PTP and FSS initial priority to access spectrum in the band. We are currently considering the approach to allocating licences for the spectrum that may remain following this initial priority access period. We are considering imposing cross-band limits that would take into account spectrum-licensed holdings across the 3.4–4.0 GHz band (including spectrum acquired in the 3.4/3.7 GHz auction).

Applying a time-limited nil MHz limit to the specified four major 3.4–3.7 GHz spectrum licensees (MNO’s and NBN) is one means by which we can manage demand for the spectrum in a way that achieves the objectives for the band. We also consider that under this approach, it would be appropriate to impose a time-limited cross-band allocation limit following the cessation of the nil MHz limit, and to also support a range of users via the use of an allocation quantum policy. These elements are presented pictorially in Figure 3 and discussed further below.

1. Representation of limits under Option 1

## Allocation window approach with allocation limits and an allocation quantum policy

The ACMA can manage demand in an allocation window process in a way that meets relevant allocation objectives and policies in 2 ways:

Under section 102G of the Act, we can impose allocation limits via a legislative instrument, on the administrative issue of apparatus (transmitter) licences, following consultation with the Australian Competition and Consumer Commission (ACCC).

Under subsection 100(4C) of the Act, when deciding whether to issue a transmitter licence, we may have regard to the aggregate of the parts of spectrum that may be used by an applicant under transmitter and spectrum licences. We can, through an administrative allocation quantum policy[[5]](#footnote-6), provide guidance to the decision-maker when considering whether to issue a licence, including in relation to the preferred maximum aggregate of spectrum that may be used by a licensee.

These mechanisms can be used to manage risks associated with an administrative allocation, such as monopolisation of spectrum, but each mechanism is suited to different contexts. A section 102G allocation limit is inflexible, meaning that we cannot (without amending the legislative instrument) deviate from the limit once established, and is better suited to allocations with a limited quantum of available spectrum and where there is reasonable certainty about the likely demand for spectrum in the allocation. An allocation quantum policy is more flexible and is better suited to allocations where there is less likely to be excess demand. For this allocation, we are consulting on whether both approaches might be used together to meet our objectives.

### Allocation quantum policy

Under Option 1, we are proposing to develop an administrative in band allocation quantum policy in relation to the licensing of spectrum in the 3.8–3.95 GHz band for metropolitan and surrounding areas and regional areas.

We have the power, under subsection 100(4C) of the Act to, when deciding whether to issue a transmitter licence, have regard to the aggregate of the parts of spectrum that may be used by an applicant under apparatus and spectrum licences. We can, through an administrative allocation quantum policy, provide guidance to the decision-maker when considering whether to issue a licence, including in relation to the maximum aggregate of spectrum that may be used by a licensee.

We consider that an allocation quantum policy can support an efficient allocation and support the deployment of new and innovative technology and support a range of use-cases and users. An allocation quantum policy also provides flexibility to respond to demand and use-cases as they emerge.

We note for example, that an applicant may seek a quantum of spectrum more than the allocation quantum policy in a given geographic area such as to facilitate a ‘consolidated’ network with multiple use-cases (for example, a combined mine site and rail network). Where an applicant applies for a quantum of spectrum more than the allocation policy, we would consider any other relevant matters cited by the applicant and whether those matters justify issuing a licence for a larger quantum of spectrum and the expected demand for spectrum in that area.

We have considered 3 options for an in-band allocation quantum policy:

50 MHz

60 MHz

70 MHz.

We note that in metropolitan and surrounding regional areas the overall supply is a maximum of 150 MHz, and in other regional areas the supply is 200 MHz. There may be some areas where a smaller quantum is available due to incumbent services or coordination with incumbent services. As such, a lower maximum may apply to some locations.

We invite views from stakeholders about the application of an allocation quantum policy, and its relevant quantum, for the issue of apparatus licences in the 3.8 GHz band.

### Allocation window/allocation principles

There are areas in the 3.8 GHz band where demand is expected to exceed spectrum supply. A first-in-time allocation approach where applications are considered in the sequential order in which they are received, would involve the risk that in circumstances where demand exceeds supply, the allocation outcome would ultimately be decided or significantly affected by the sequence of those applications.

To enhance the efficiency of allocation, Option 1 adopts an ‘allocation window/allocation principles’ approach. An allocation window provides for a staged approach to considering applications, depending on whether there are competing applications and sufficient spectrum to issue licences because of all applications.

Where the ACMA receives applications for spectrum that do not exceed the available supply, a licence will generally be issued to the respective applicants (subject to any allocation quantum policy). Where the ACMA receives applications for AWLs and the aggregate quantum of spectrum applied for across all applications exceeds the available supply in a particular geographic area, we will generally decide which applicants are issued AWLs, and the quantum of spectrum covered by the AWLs, based on an assessment of the competing demand for spectrum.

Use of an allocation window necessitates the development of allocation principles to provide the decision-maker with guiding criteria when considering whether to issue an AWL if there is excess demand from competing applications.

### Allocation principles in the first allocation window

Given the proposed imposition of a nil MHz allocation limit under Option 1, we consider that the allocation principles used in the forthcoming allocation of remote 3.4–4.0 GHz AWLs are fit for purpose. Therefore, under Option 1, in circumstances where there is competing demand for spectrum in a geographic area within the allocation window, we would consider applications in accordance with the following allocation principles:

the geographical area of each licence issued should be consistent with the proposed use-cases of the application received

each licence issued should promote the efficient use of spectrum in a manner consistent with the technical arrangements supporting planned uses

the allocation will seek to accommodate all applicants

consider for each applicant the extent to which a refusal to issue the licence applied for would affect the ability of the applicant to deploy services.

In addition to the principles, each application would need to be considered on its own merits with respect to any other relevant matters that apply to a decision whether to issue a licence.

For decisions about licence issue, we would have regard to the object of the Act, the MPS and any relevant government policies, as well as the desirable planning outcomes we have identified for the band. In all decisions whether to issue an apparatus licence, we must consider the matters in subsections 100(4) and (6) of the Act. Other parts of section 100 may also be relevant to any decision.

### Second allocation process under Option 1

Given that the nil MHz limit will cease 6 months following the start of the allocation window, there is a question about how to open the band up for applications from a potentially wider group of applicants, including for example WA WBB applicants.

We consider that these options would be reasonable for the second allocation process:

Option 1: issue licences via allocation window approach, akin to the approach used for the first allocation process

Option 2: issue licences via a first-in-time approach.

Reapplying the allocation window approach would provide a comprehensive review of applications in line with our guiding policy objectives for this allocation, rather than decision-making being guided by the sequence of applications, which could potentially result in some application being unnecessarily denied access to an AWL. In our view, where there exists a greater risk of excess demand, an allocation window may provide for a more efficient allocation than a first-in-time process.

Under this approach, for the second allocation window, we consider that the criteria used for the first allocation window would be fit-for-purpose to be reused in the decision-making for this allocation window.

We invite views from stakeholders about whether an allocation principles approach or first-in time approach is suitable for the second allocation window.

### Allocation limits

As noted above, one of the relevant objectives for this band is to support a range of users and use cases. As per the 2021 outcomes paper, this 3.8 GHz band allocation is specifically designed to support LA WBB providers, which contrasts with the allocation of spectrum licences in the 3.4 GHz and 3.7 GHz bands, which will more likely support WA WBB providers like the MNOs and NBN Co.

It should be noted that allocation restrictions discussed in this consultation paper, be they statutory or quantum policy based, for either Option 1 or Option 2, will be applied to AWLs only (and not AWL rxs).

### Nil MHz limit

One means by which we can prioritise LA WBB providers is by specifically applying a time limited nil MHz limit on WA WBB providers, specifically NBN Co, TPG, Telstra and Optus, and their associates (discussed further below). The separate allocation of spectrum licences in the 3.4/3.7 GHz bands is designed to support WA WBB providers and limiting their access to the 3.8 GHz AWLs would provide an opportunity for more localised services to obtain spectrum. Under Option 1, we consider that a nil MHz limit could be applied for a period during and following the allocation window, to provide LA WBB, PTP and FSS initial priority to access spectrum in the band.

If adopted, the nil MHz limit would apply to the following named persons and their associates:

NBN Co Limited (ACN 136 533 741)

Optus Mobile Pty Limited (ACN 054 365 696)

Telstra Limited (ACN 086 174 781)

TPG Internet Pty Ltd (ACN 068 383 737).

Applying a nil MHz limit during, and for a period following the allocation window, may be important in achieving the objective of supporting LA WBB providers given that it is possible that not all potential applicants will be ready to apply at the point of the allocation window. We consider that options for a reasonable time period for this allocation limit to apply (from the commencement of the allocation window) are:

3 months

6 months

12 months.

Under this option, our preliminary view is a period of 6 months is appropriate for a nil MHz limit.

### Cross-band allocation limit

We consider that following the cessation of the nil MHz limit, a cross-band limit on all applicants would promote competition in markets where the MNOs and NBN Co compete with each other and may also provide greater opportunity for LA WBB players gaining access to the band over time.

The proposed cross band limit would apply to the 3.4–3.95 GHz frequency range. In the [Draft allocation and technical instruments for the 3.4/3.7 GHz bands auction: consultation paper,](https://www.acma.gov.au/sites/default/files/2023-02/Consultation%20paper_Draft%20allocation%20and%20technical%20instruments%20for%203.4-3.7%20GHz%20bands%20auction_0.docx) we consulted on 3 allocation limits:

Option 1: 140 MHz in metropolitan and regional areas in the 3.4–3.95 GHz frequency range.

Option 2: 140 MHz in metropolitan areas and 160 MHz in regional areas, in the 3.4–3.95 GHz frequency range.

Option 3: no limits

We consider that options for a reasonable time period for this cross-band allocation limit to apply (from the commencement of the allocation window) are:

3 months

6 months

12 months.

If this option is adopted, our preliminary view is that a period of 12 months is appropriate for the application of a cross-bandlimit. The cross-band limit will likely not commence until Q3 2024. We will make the cross-band limits instrument at an appropriate time to coincide with the Application information pack.

We invite views from stakeholders about the application of allocation limits and further views on a suitable quantum for spectrum (apparatus and spectrum licensed) holdings across the 3.4–3.95 GHz frequency range.

### Licence transfer and third-party authorisation limit

An additional measure that may be taken under Option 1 is to apply limits to the transfer of AWLs and authorising the operation of radiocommunications transmitters under AWLs to the MNO’s and NBN Co, and their associates. The licence transfer and third-party authorisation limits may be made under section 131AC and section 115 of the Act respectively and will restrict MNOs and NBN Co from obtaining access to the spectrum through the secondary market before the secondary allocation process commences.

These limits work to prevent an applicant from being issued an AWL and subsequently transferring that AWL to, or authorising the operation of, a radiocommunications transmitter under an AWL by a WA WBB provider. These limits would complement the time-limited nil MHz limit and would only apply for the period that the nil MHz limit is in force.

Arguably, allowing transferring to and authorisations in favour of the parties to whom that nil MHz limit applies would be inconsistent with the notion that the band is being prioritised for LA WBB provides, in pursuit of the objective to support a range of users and use cases.

We invite views from stakeholders on the proposed licence transfer and third-party authorisation limit and their suitability in providing prioritising access for LA WBB applicants in the 3.8GHz band on a shared basis with PTP and FSS applicants and use cases.

#### Associates policy

When we impose allocation limits in our spectrum licence auctions, the limits are applied to each applicant and all the applicant’s associates collectively. This mitigates the risk that applicants will use related entities to circumvent the allocation limit. We consider that, if we are to apply the limits as proposed under this option, it would be appropriate to apply a similar policy.

However, we note the significantly different context of an ongoing allocation of apparatus licences as compared with a ‘point-in-time’ auction of spectrum licences.

In an auction setting, limits generally have a cessation date corresponding with the end of the auction, meaning there is no ongoing requirement for applicants to assess associations.

Under this option, and for the first time, the ACMA would apply allocation limits by legislative instrument to an administrative allocation process over an extended period. In an ongoing allocation of apparatus licences, we would have to be assured that an applicant’s requested quantum of spectrum, and the existing spectrum holdings in that area held by its associates, does not breach the allocation limit. As such, a robust statutory allocation limit applying to an ongoing allocation of apparatus licences would require the continued application to associated applicants. We therefore consider that, due to the significantly different context, a simplified associates policy is required. The ACMA proposes that the nil limit and the cross-band limit would apply to MNOs and NBN Co, and each of the following:

a related body corporate of an MNO or NBN Co

a director or secretary of an MNO or NBN Co

a foreign company for which an MNO or NBN Co is a local agent

any person who has an arrangement, agreement or understanding with a named person or another associate of a named person.[[6]](#footnote-7)

’Foreign company, ‘local agent’ and ‘related body corporate’ all have the same meaning in the *Corporations Act 2001.* As mentioned before, these specifications are intended to identify any close, direct relationship with an MNO or NBN Co and ensure that those associated applicants are subject to the Nil MHz limit and/or the cross-band limit.

We invite views from stakeholders about the definition of associates in the draft Radiocommunications (Area-Wide Licence Allocation Limits) Determination 2023 and draft Radiocommunications (Limitation of Authorisation of Third-Party Users and Transfer of Area-Wide Licences) Determination 2023, and their suitability for AWL applicants in the 3.8 GHz band.

## Option 2: General allocation window approach

As with Option 1, we consider that licence allocation via an allocation window provides the flexibility that is required to enable aspirant licensees, particularly smaller use cases, to tailor their licence applications to more bespoke uses of the spectrum.

Option 2 would allow all parties to be allocated and issued AWLs (that is, without imposing a nil MHz allocation limit on any person), subject to a time-limited cross-band allocation limit and an in-band ‘allocation quantum policy’ (AQP) and use the allocation principles to sufficiently prioritise LA WBB, PTP and FSS use cases.

Option 2 retains an initial 4-week allocation window but discards a secondary allocation process. Under this option, NBN Co. and MNOs would not be precluded from being issued an AWLs because of an application submitted during the application window. However, under this option, while applications from MNOs and NBN Co would be considered, it would still be the ACMA’s intention to initially prioritise LA WBB, PTP and FSS use cases over WA WBB applications received during the allocation window.

Following the allocation window, licence issue decisions would revert to, generally, a first-in-time over-the-counter approach, subject to the time-limited cross band allocation limit and in-band AQP.

### Cross-band limit

As under the proposed cross band limits in Option 1, it is the ACMA’s preliminary view that the Option 2 cross band limits for the 3.4–3.95 GHz frequency range mirror those to be implemented for the 3.4/3.7 GHz spectrum auction due to commence in Q4 2023.

We consider that, under this option, cross-band limits, imposed by legislative instrument, are necessary to support a range of users and use cases, and will also promote competitive markets.

In the [Draft allocation and technical instruments for the 3.4/3.7 GHz bands auction: consultation paper](https://www.acma.gov.au/sites/default/files/2023-02/Consultation%20paper_Draft%20allocation%20and%20technical%20instruments%20for%203.4-3.7%20GHz%20bands%20auction_0.docx) (auction consultation paper) we consulted on the following allocation limits:

Option 1: 140 MHz in metropolitan and regional areas in the 3.4–3.8 GHz frequency range.

Option 2: 140 MHz in metropolitan areas and 160 MHz in regional areas, in the 3.4–3.8 GHz frequency range.

No limits.

In the abovementioned auction consultation paper, the ACMA advised that, in relation to limits applicable to the 3.8 GHz band AWL allocation, it was considering imposing cross-band limits that would consider spectrum-licensed holdings across the broader 3.4–4.0 GHz band (including spectrum acquired in the 3.4/3.7 GHz auction). With this in mind, we are now consulting on cross-band allocation limits that would include spectrum holdings across the broader 3.4 GHz to 3.95 GHz range

We consider that options for a reasonable period for any cross-band allocation limit to apply (from the commencement of the priority allocation window) include:

6 months

12 months

18 months.

If the cross-band limit option is adopted, our preliminary view is a period of 12 months is appropriate for the application of a cross-band limit. In addition to this, we consider that the associates definition as outlined in the section above to be fit-for-purpose for the cross-band limit.

We would create this instrument for release alongside the applicant information pack in Q1 2024.

### Allocation quantum policy (AQP) and allocation principles

As under Option 1, under Option 2 the ACMA would propose to implement an AQP to manage demand to initially prioritise LA WBB, PTP and FSS use cases before LA WBB use cases. Under Option 2, to achieve this, we would in the absence of the Option 1 nil allocation limit, implement a slightly enhanced or tailored set of the allocation principles for Option 2 as follows:

the geographical area of each licence issued should be consistent with the proposed use-cases of the application received

each licence issued should promote the efficient use of spectrum in a manner consistent with the technical arrangements supporting planned uses

as far as possible and reasonable, accommodate all applications

consider for each applicant the extent to which a denial of the spectrum in question would affect the ability of the applicant to deploy services

where there are competing applications between LA WBB, PTP and FSS use cases and WA WBB use cases (that is, NBN Co. and or MNOs), the ACMA will prioritise LA WBB, PTP and FSS use cases.

Following the closing of the priority allocation window, the ACMA decision maker, having regard to allocation principles, would look to initially prioritise the issue of licences to LA WBB, PTP and FSS use cases. Following this prioritisation and licence issue for these use cases, the ACMA would then assess any remaining applications from MNOs and NBN Co. Where there was still adequate spectrum supply and no competing applications, the ACMA would consider issuing licences to WA WBB use cases. After all applications submitted during the priority window have been considered and relevant licences issued, it would be proposed that allocations in the band would revert to a ‘first in time’ allocation process where applications would generally be considered in the order in which they are received with no limitations on use cases or users.

We have considered 3 potential options for an in-band AQP:

50 MHz

60 MHZ

70 MHz.

For decisions about licence issue, we would have regard to the object of the Act, the MPS, any relevant government policies, as well as the desirable planning outcomes we have identified for the band. In all decisions whether to issue an apparatus licence, we must consider the matters in subsections 100(4) and (6) of the Act. Other parts of section 100 may also be relevant to any decision.

## Consultation with the ACCC

In February 2023, as required under subsection 102G, we consulted with the ACCC about whether the ACMA should make an instrument imposing allocation limits and if so, the nature of those limits. We specifically consulted on the following:

an allocation limit of nil MHz for MNOs and NBN Co for a specified period of time from the commencement of the allocation process

immediately following the cessation of the nil limit, the implementation of a cross band limit across the 3.4–3.95 GHZ frequency range aligning with any limit to be imposed for the 3.4/3.7 GHz spectrum auction on MNOs and NBN Co and associated parties

to apply an allocation quantum policy to in-band spectrum (3.8–3.95 GHz band).

We invited preliminary views from the ACCC by 27 March 2023 to inform the development of public consultation material. We also requested substantive advice from the ACCC by 30 September 2023 so that the ACCC’s views can be considered by the ACMA when finalising the AIP of this allocation in Q1 2024 to support commencement of the allocation process in Q1 2024. The ACCC provided preliminary views in March 2023 on the proposed allocation limits and noted that:

the proposed approach is likely to enable smaller operators including LA WBB providers to access spectrum within the band

the proposed limits are likely to support the ACMA’s objectives for this allocation and for the wider band.

The ACCC has stated it intends to provide finalised advice using submissions made in response to this consultation and to undertake further targeted consultation where necessary, rather than undertaking a separate consultation process on the same issue. To support its analysis, the ACCC has provided several questions that are being asked of stakeholders as part of this ACMA consultation. The questions are listed below and under the ‘Issues for comment’ section of this paper.

**Use cases**

1. What are the likely intended uses of 3.8GHz band spectrum?
2. In which geographic areas is the spectrum intended to be used?
3. How much spectrum is needed to support the intended use case?

**Downstream markets**

1. What is the good or service that the 3.8GHz band spectrum can support the production of?

Where is the good or service intended to be supplied?

Are there substitutes available to the good or service?

How could the spectrum allocation impact the state of competition and/or incentives to invest in downstream markets?

**Alternative spectrum**

1. Do you consider that substitutable spectrum exists for the 3.8 GHz band that can similarly enable the production of the goods or services in downstream markets? If so, what spectrum bands do you consider to be substitutable?

# Pricing

## Receiver and transmitter licence tax arrangements

### Proposed AWL[[7]](#footnote-8) and AWL rx tax arrangements

The ACMA has set the transmitter licence tax rate of $0.0041/MHz/pop for AWLs in the 3.4–4.0 GHz band in all geographic areas. Accordingly, this tax rate will apply to AWLs in the 3.8 GHz band.

Total annual transmitter licence tax is calculated as follows:

AWL tax = $/MHz/pop price × bandwidth (MHz) × population of geographic area

where:

‘$/MHz/pop price’ is the tax rate for one MHz of spectrum per head of population (in this case, the proposed $/MHz/pop price is $0.0041).

‘Bandwidth’ is the total amount of spectrum in MHz authorised by the licence.

‘Population’ (based on the 2021 Census) is the population of the geographic area authorised by the licence. The area will be defined in terms of the Hierarchical Cell Identification Scheme (HCIS).[[8]](#footnote-9) The population is based on the aggregate population of all the geographic cells to be authorised by the licence. The effective population of a single HCIS 0 cell (the minimum cell size) for the purposes of tax calculations will be determined by taking the average population of all HCIS 0 cells in the broader HCIS 1 cell that the particular HCIS 0 cell is located within. There are 25 HCIS 0 cells within one HCIS 1 cell. We maintain on our website a document that sets out the population of each HCIS cell or block.[[9]](#footnote-10)

The ACMA is proposing the same rate of tax for AWL rx, to be calculated in the same manner.

The receiver and transmitter licence tax for licences with durations less than a year will be adjusted on a pro rata basis.

Where the tax calculated using the method above is less than the minimum annual tax, the tax will be the minimum annual tax (currently $41.37).

### Context to the taxation arrangements

The AWL and proposed AWL rx taxation arrangements differ from most apparatus licence tax arrangements, which are typically based on the number of stations or spectrum accesses included in the licence. AWLs and AWLs rx permit any number of transmitters and receivers, respectively to be used within any given area, if these comply with licence conditions and otherwise satisfy the technical framework. Accordingly, the tax rate for AWLs and AWLs rx is not based on the number of stations, but rather on the amount of spectrum and the population of the geographic area in which operation of radiocommunications devices is authorised.

The proposed tax formula is similar to that for PMTS Class B licences, which also use a $/MHz/pop formula to determine the tax.[[10]](#footnote-11) The tax rate for AWLs in the 3.4–4.0 GHz band and proposed for AWL rx of $0.0041/MHz/pop is the same as the tax rate for PMTS Class B licences in the 3.5 GHz and 3.6 GHz bands. Given that similar services will be using AWLs across the broader spectrum range, we consider that a similar tax rate to that for PMTS Class B licences should apply.

### Examples of taxes

To illustrate the tax arrangements for AWLs and proposed for AWLs rx, the following examples are provided using 3 locations, based on 10 MHz of bandwidth and 6 geographic areas of different sizes (one HCIS 0 cell[[11]](#footnote-12), 4 HCIS 0 cells, one HCIS 1 block[[12]](#footnote-13), one HCIS 2 block[[13]](#footnote-14), one HCIS 3 block[[14]](#footnote-15), and one HCIS 4 block[[15]](#footnote-16)). The locations chosen have relatively large populations at the HCIS 1 level to highlight how to calculate the taxes. Other locations will have lower populations and therefore taxes will be lower.

The following examples use the $0.0041/MHz/pop tax rate in several different regions located in metropolitan and regional areas proposed to be included in this allocation:

HCIS 1 cell NV7M6 is in Sydney and has a population of 372,076 on the 2021 Census date, which was the most populous of all HCIS 1 cells. Based on the $0.0041/MHz/pop tax rate, the AWL tax for this area is $15,255. We have calculated the taxes for 6 different sized geographies in and around the NV7M6 Sydney area, shown in table 6.

HCIS 1 cell IW3L4 is in the Adelaide Hills and has a population of 7,924 on the 2021 Census date. Based on the $0.0041/MHz/pop tax rate, the AWL tax for this area is $325. We have calculated the taxes for 6 different sized geographies in and around the Adelaide Hills area (but excluding central Adelaide), shown in table 6.

HCIS 1 cell LQ1O9 is in the Cairns and has a population of 45,776 on the 2021 Census date. Based on the $0.0041/MHz/pop tax rate, the AWL tax for this area is $1,877. We have calculated the taxes for 6 different sized geographies in and around the Cairns area, shown in table 6.

Table 6 details the potential annual tax amounts for the examples above, noting that the taxes are rounded to the nearest dollar and the minimum annual tax (currently $41.37) will also apply.

$/MHz/pop annual transmitter licence taxes (using 10 MHz) in various metro and regional locations

|  |  |  |  |
| --- | --- | --- | --- |
| **Price ($0.0041/MHz/pop)** | **HCIS 1 cell** | | |
| **Inner Sydney**  **(NV7M6)** | **Adelaide Hills**  **(IW3L4)** | **Cairns**  **(LQ1O9)** |
| 1 HCIS 0 cell | $610 | $41\* | $75 |
| 4 HCIS 0 cells | $2,441 | $52 | $300 |
| 1 HCIS 1 block (equivalent to 25 HCIS 0 cells) | $15,255 | $325 | $1,877 |
| 1 HCIS 2 block | $87,074 | $937 | $4,692 |
| 1 HCIS 3 block | $129,294 | $44,573 | $6,541 |
| 1 HCIS 4 block\*\* | $160,421 | $61,425 | $11,172 |

\* Tax amounts were lower than $41.37 minimum tax, causing the minimum tax to be applied (rounded to the nearest dollar).

\*\* Where the population figure for a HCIS 4 cell was not available, the sum of the populations of all HCIS level 3 cells with the same prefix was used

Population information for the HCIS system can be found on the [ACMA website](https://www.acma.gov.au/convert-hcis-area-description-placemark).

We have also developed a fee calculator (available with this consultation on the ACMA website) to help work out how much tax would be paid under the proposed arrangements for the combination of spectrum and geographic area wanted.

### Proposed FSS Earth Receive pricing arrangements in the 4.0 to 4.2 GHz band

Spectrum in the 4.0–4.2 GHz range has been planned for FSS earth receive stations. It is proposed that users operating in the 4.0 to 4.2 GHz frequency range can be issued space receive licences or site-based earth receive licences priced at the minimum annual tax (currently $41.37). The proposed new tax is designed to provide an alternative to FSS earth receive operators in the 3.8 GHz band.

## Proposed amendments to the tax determinations

As the ACMA has just made amendments to the [Radiocommunications (Transmitter Licence Tax) Determination 2015](https://www.legislation.gov.au/Series/F2015L00322) (Transmitter Licence Tax Determination) to specify a tax rate for AWLs in the 3.4 to 4 GHz range no further amendment is required to the Transmitter Licence Tax Determination to specify the AWL tax rate of $0.0041/MHz/pop.

However the [Radiocommunications (Receiver Licence Tax) Determination 2015](https://www.legislation.gov.au/Details/F2022C00700) (the Receiver Licence Tax Determination) will need to be amended to include the proposed AWL tax rate, as the rate that will apply to the 3.75 to 4 GHz frequency range. Part 4 of the Receiver Licence Tax Determination will also need to be amended to specify that earth receive licences and space receive licences authorising the operation of receivers in the frequency range 4 to 4.2 GHz will be taxed the minimum annual amount, currently $41.37.

## Charging arrangements

A cost-recovery charge is payable for considering an application for the issue of an apparatus licence. This charge is payable whether or not the application results in the issue of a licence. The charge recovers the direct costs of the ACMA spectrum management activities in considering the application. Different charges are applicable to different types of apparatus licence.

As specified under Schedule 1 to the [Radiocommunications (Charges) Determination 2022](https://www.legislation.gov.au/Details/F2022L01245), the charge for considering an application for an AWL is $847. An additional amount may apply if the application for the AWL needs to be assessed against one or more other applications (that is, there are multiple applications for the same spectrum in the same area). The amount of the additional charge is dependent on the time taken to undertake the additional assessment and the number of contending applications. The ACMA is proposing to apply the same charging arrangements for consideration of an application for an AWL rx.

# Issues for comment

We welcome comment from interested stakeholders on any aspect of the consultation package. In addition, we invite comments on the following.

## Technical framework

We invite comments on all aspects on the technical framework that are relevant to this allocation process.

We invite comments on the additional proposed changes to the RAG Tx.

## Allocation process

We invite comments on the general suitability of allocation options and whether they are fit-for-purpose in supporting our allocation principles and identified objectives for this allocation.

### Allocation Option 1: 6-month LA WBB priority period

We invite comments on the 2-window allocation approach and its suitability in facilitating the ACMA’s and wider government policy objectives, particularly in facilitating a wide range of use cases in this spectrum bands and providing priority access to LA WBB use cases.

We invite comments on whether an allocation window or first-in-time approach would be suitable for the second allocation process.

### Allocation limits

We invite comments on the proposed statutory limits (nil MHz limit, cross-band limit, licence trading and third-party restrictions).

We invite comments on the proposed options of 50/60/70 MHz for the allocation quantum policy.

We invite comments on the proposed time limits of 3 months/6 months/12 months for the nil MHz limit.

We invite comments on the cross-band limit options:

* 140 MHz in metropolitan/regional areas in the 3.4-3.95 GHz band
* 140 MHz in metropolitan areas and 160 MHz in regional areas in the 3.4–3.95 GHz band
* no limits.

We invite comments on the proposed time of 3 months/6 months/12 months for the cross-band limits to be in effect.

### Allocation Option 2: general allocation approach

We invite comment on whether a general allocation approach on agreed criteria indicated in the consultation paper would be fit for purpose.

We invite comments on the proposed options of 50/60/70 MHz for the allocation quantum policy.

We invite comments on the cross-band limit options:

140 MHz in metropolitan/regional areas in the 3.4–3.95 GHz band

140 MHz in metropolitan areas and 160 MHz in regional areas in the 3.4–3.95 GHz band.

no limits.

We invite comments on the proposed time of 6 months/12 months/18 months for the cross-band limits to be in effect.

## Questions from the ACCC

### Use cases

1. What are the likely intended uses of 3.8–3.95 GHz band spectrum?

In which geographic areas is the spectrum intended to be used?

How much spectrum is needed to support the intended use case?

### Downstream markets

1. What is the good or service that the 3.8–3.95 GHz spectrum can support the production of?

Where is the good or service intended to be supplied to?

Are there substitutes available to the good or service?

How could the spectrum allocation impact the state of competition and/or incentives to invest in downstream markets?

### Alternative spectrum

1. Do you consider that substitutable spectrum exists for the 3.8–3.95 GHz bands that can similarly enable the production of the goods or services in downstream markets? If so, what spectrum bands do you consider to be substitutable?

### Pricing

1. Do you have any comments on the suite of pricing arrangements proposed?

# Invitation to comment

## Making a submission

The ACMA invites comments on the issues set out in this consultation paper.

[Online submissions](https://www.acma.gov.au/have-your-say) can be made by uploading a document. Submissions in PDF, Microsoft Word or Rich Text Format are preferred.

Submissions by post can be sent to:

The Manager

Major Spectrums Allocation Section

Australian Communications and Media Authority

PO Box 13112

Law Courts Melbourne VIC 8010

The closing date for submissions is **COB, Tuesday 1 August 2023**.

Consultation enquiries can be emailed to [SpectrumAllocations@acma.gov.au](mailto:SpectrumAllocations@acma.gov.au).

#### Publication of submissions

The ACMA publishes submissions on our website, including personal information (such as names and contact details), except for information that you have claimed (and we have accepted) is confidential.

Confidential information will not be published or otherwise released unless required or authorised by law.

#### Privacy

View information about our policy on the [publication of submissions](https://www.acma.gov.au/publication-submissions), including collection of personal information during consultation and how we handle that information.

Information on the *Privacy Act 1988,* how to access or correct personal information, how to make a privacy complaint and how we will deal with the complaint, is available in our [privacy policy](https://www.acma.gov.au/privacy-policy).

1. AWL rx arrangements will extend up to 4.0 GHz in some areas. [↑](#footnote-ref-2)
2. Urban excise areas include inner metropolitan areas in Melbourne, Sydney, Brisbane, Adelaide, and Perth where NBN Co surrendered part of its 3.4 GHz spectrum licences. [↑](#footnote-ref-3)
3. We note that unless an applicant can demonstrate satisfactory coordination measures, the ACMA will generally not issue AWLs authorising the operation of radiocommunications transmitters in in the 15 MHz of spectrum directly adjacent to a 3.4 GHz spectrum licence to help manage interference between 3.4 GHz spectrum licences and AWLs in the 3.8 GHz band. [↑](#footnote-ref-4)
4. We acknowledge that there are potentially other allocation options for this spectrum, however, these are the two options that the ACMA considers are most likely to support the stated allocation objectives for the 3.8 GHz band. [↑](#footnote-ref-5)
5. Similar to that being proposed for the upcoming Q2 2023 allocation of apparatus licences in the 3.4-4.0 GHz band in remote Australia (ref. pg. 11 of [the consultation paper](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.acma.gov.au%2Fsites%2Fdefault%2Ffiles%2F2022-02%2Fapparatus_licences_in_the_3.4-4.0_ghz_band_in_remote_australia_consultation_paper.docx&wdOrigin=BROWSELINK)). [↑](#footnote-ref-6)
6. For the full definition of ‘arrangement, agreement or understanding’ refer to the draft Radiocommunications (Limitation of Authorisation of Third-Party Users and Transfer of Area-Wide Licences) Determination 2023or the draft Radiocommunications (Area-Wide Licence Allocation Limits) Determination 2023 provided as part of this consultation. [↑](#footnote-ref-7)
7. Where other apparatus licence types are permitted in the 3.4-4.0 GHz range, the existing tax arrangements are detailed in the Radiocommunications (Transmitter Licence Tax) Determination 2015 and the apparatus licence fee schedule. We are not proposing changes to the arrangements for those licences. [↑](#footnote-ref-8)
8. The HCIS is the system used to define geographic areas for radiocommunications licensing and is based on the Australian Spectrum Map Grid (ASMG). HCIS is a naming convention developed by the ACMA that applies unique ‘names’ to each of the cells that make up the Australian Spectrum Map Grid (ASMG). More information is on our website: <https://www.acma.gov.au/australian-spectrum-map-grid>. [↑](#footnote-ref-9)
9. See [Hierarchical Cell Identification Cell Identification Scheme (HCIS) - List of Population Data](https://www.acma.gov.au/convert-hcis-area-description-placemark) document. [↑](#footnote-ref-10)
10. The taxation arrangements for PMTS Class B licences that use the $/MHz/Pop pricing construct assume a population from at least an HCIS 2 cell. If more than one HCIS 2 cell is authorised, then the populations from those cells are added together to estimate the population in the tax calculation. HCIS 2 cells are larger than HCIS 0 cells, which are the proposed minimum for AWLs and AWLs rx in the 3.8 GHz band. [↑](#footnote-ref-11)
11. Approximately 1.8 km × 1.8 km. [↑](#footnote-ref-12)
12. Equivalent to 25 HCIS 0 cells, approximately 9.25km x 9.25km. [↑](#footnote-ref-13)
13. Equivalent to 225 HCIS 0 cells, approximately 27.75km x 27.75km. [↑](#footnote-ref-14)
14. Equivalent to 3600 HCIS 0 cells, approximately, 111km x 111km. [↑](#footnote-ref-15)
15. Equivalent to 32400 HCIS 0 cells, approximately, 333km x 333km. [↑](#footnote-ref-16)