

# Proposal to remake the Australian Radio Quiet Zone Western Australia Band Plan Outcomes paper

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**Canberra**

Red Building  
Benjamin Offices  
Chan Street  
Belconnen ACT

PO Box 78  
Belconnen ACT 2616

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

**Melbourne**

Level 32  
Melbourne Central Tower  
360 Elizabeth Street  
Melbourne VIC

PO Box 13112  
Law Courts  
Melbourne VIC 8010

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

**Sydney**

Level 5  
The Bay Centre  
65 Pirrama Road  
Pyrmont NSW

PO Box Q500  
Queen Victoria Building  
NSW 1230

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

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Written enquiries may be sent to:

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

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# Executive summary

This outcomes paper describes the decisions the Australian Communications and Media Authority (ACMA) has adopted in response to the consultation for our [proposal to remake the Australian Radio Quiet Zone Western Australia Band Plan](#). It details how those decisions have been incorporated into the Radiocommunications (Australian Radio Quiet Zone Western Australia) Frequency Band Plan 2023. It also outlines some further work to be undertaken in response to submissions received, which relates to a number of class licences that are relevant to the protections afforded under the band plan.

We received 3 submissions in response to the consultation paper. This paper summarises these submissions and describes the outcomes adopted by the ACMA. Full copies of the public submissions are available on the [consultation webpage](#).

Following the consultation, the ACMA decided to remake the Radiocommunications (Mid-West Radio Quiet Zone) Frequency Band Plan 2011 with minor changes and retitle it the Radiocommunications (Australian Radio Quiet Zone Western Australia) Frequency Band Plan 2023. The key changes that have been made facilitate the use of class-licensed devices and remove provisions regarding supplementary radio quiet zones.

# Introduction

The ACMA established the Australian Radio Quiet Zone Western Australia (ARQZWA) on 11 April 2005 with the introduction of Spectrum Embargo 41. The ARQZWA aims to maintain the 'radio-quietness' of a site in remote Western Australia, near Boolardy Station, around 300 km north-east of Geraldton. The area has very low levels of radiofrequency energy because of its low population and subsequent minimal presence of radiocommunications infrastructure.

There is a multi-tiered spectrum planning regulatory arrangement in place to support the ARQZWA and its ongoing viability for radio astronomy services. This includes the [Radiocommunications \(Mid-West Radio Quiet Zone\) Frequency Band Plan 2011](#) (the band plan).

The ARQZWA facilitates the development and use of new radioastronomy technologies at that location and supports Australia's hosting of the Square Kilometre Array (SKA). Since 2005, the Murchison Radioastronomy Observatory (MRO) has been developed at the centre of the ARQZWA. It is home to several significant radioastronomy projects, with the construction of the SKA set to commence in 2023.

## Legislative context and policy environment

Under Part 4 of Chapter 3 of the *Legislation Act 2003*, most legislative instruments 'sunset'. That is, they are automatically repealed on the 1 April or 1 October that first occurs 10 years after they are registered. This is an automatic process applying to most legislative instruments, regardless of their content. The band plan sunsets on 1 April 2023. We formed the preliminary view that the band plan is operating effectively and efficiently and continues to form a necessary and useful part of the legislative framework.

## Consultation

We [consulted](#) on changes to the band plan from 14 October to 14 November 2022, seeking comment on the need for the band plan, its effectiveness and efficiency, and some potential enhancements.

The key enhancement was to provide a clear path to support use of radiocommunications devices authorised via class licence within the ARQZWA. Strict interpretation of both section 137 of the *Radiocommunications Act 1992* and the original band plan could conclude that uses of radiocommunications devices authorised via class licences are not able to be provided in the areas and frequency bands covered by the band plan.

The consultation put forward 2 options in response to this issue:

1. maintain the existing band plan provisions
2. include class licences as an 'additional service' in the band plan.

The ACMA's preference was Option 2. The consultation also proposed that any supplementary radio quiet zones be removed from the band plan. If supplementary radio quiet zones became necessary, a variation in the band plan in force could be considered, in consultation with stakeholders.

Additionally, we proposed that:

- > the term 'MRO entity' be replaced by 'CSIRO', meaning the Commonwealth Scientific and Industrial Research Organisation
- > supplementary radio quiet zones be removed
- > ACMA Spectrum Embargo 41 should be suppressed as the band plan performs the same function.

# Summary of submissions

Three submissions were received to the consultation paper (from the CSIRO, the Square Kilometre Array Organisation (SKAO) and Telstra), which are available on the [consultation webpage](#).

## Responses to issues for comment

### **Consultation question: Is the band plan still needed? If so, why? If not, why not?**

CSIRO submitted that 'the Band Plan is still needed. It provides stability for stakeholders'. Both the SKAO and Telstra agreed that the band plan is still needed.

### **Consultation question: Is the band plan effective and efficient? If not, why not?**

The CSIRO, the SKAO and Telstra all submitted that the band plan is effective and efficient.

### **Consultation question: Should Option 1 or Option 2 be pursued regarding the operation of services provided via class licence within the ARQZWA? Why? If Option 2, which class licences should be modified, if any, and what changes, if any, should be made regarding operations within the ARQZWA? Why?**

The CSIRO's submission supported Option 2 with revision of some class licences, such that the CSIRO can inform users that they will cause interference and must therefore not transmit within the inner RQZ. The SKAO submitted that they supported Option 2, with wording in the Band Plan or relevant class licences that empowers CSIRO to enforce powering-off of interfering devices. Telstra supported Option 2, with specific carve-outs in individual class licences, as required.

The CSIRO supported the use of class-licensed equipment within the ARQZWA when used in emergency situations or when used for day-to-day communications that does not interfere with radioastronomy. The CSIRO submitted that it seeks a framework that supports radiocommunications, provided it is not causing interference to radioastronomy, with the onus for managing interference put on the CSIRO. It suggested that this could be implemented by class licences permitting radio use within the ARQZWA as the default situation and ceasing radiocommunications when advised by the CSIRO that interference is being caused.

Relevant class licences mentioned by the CSIRO were:

- > Radiocommunications (Cellular Mobile Telecommunications Devices) Class Licence 2014
- > Radiocommunications (Citizen Band Radio Stations) Class Licence 2015
- > Radiocommunications (Communication with Space Object) Class Licence 2015
- > Radiocommunications (Cordless Communications Devices) Class Licence 2014
- > Radiocommunications (Intelligent Transport Systems) Class Licence 2017
- > Radiocommunications (Low Interference Potential Devices) Class Licence 2015
- > Radiocommunications (Overseas Amateurs Visiting Australia) Class Licence 2015

The SKAO also supported the use of devices, such as satellite phones and handheld radios licensed under class licences and used according to established procedures or in emergency situations.



Telstra submitted it supports use of class-licensed equipment in the RQZ, noting that the ACMA should consider amending the following class licences:

- > Radiocommunications (Aircraft and Aeronautical Mobile Stations) Class Licence 2016
- > Radiocommunications (Cellular Mobile Telecommunications Devices) Class Licence 2014
- > Radiocommunications (Cordless Communications Devices) Class Licence 2014
- > Radiocommunications (Emergency Locating Devices) Class Licence 2016
- > Radiocommunications (Overseas Amateurs Visiting Australia) Class Licence 2015
- > Radiocommunications (Public Safety and Emergency Response) Class Licence 2013.

**Consultation question: Do you support the making of the Radiocommunications (Australian Radio Quiet Zone Western Australia) Frequency Band Plan 2023? If not, why not?**

The CSIRO submitted that they strongly support this; the SKAO and Telstra submitted that they support it.

**Consultation question: Is the proposed suppression of Embargo 41 supported?**

The CSIRO and the SKAO submitted they both support this. Telstra submitted that they support this proposal and added that accredited persons should be informed of the requirements of the band plan so that they can advise any aspirant licensees of the band plan's requirements.

# Consultation outcomes

The ACMA has decided to remake the Radiocommunications (Mid-West Radio Quiet Zone) Frequency Band Plan 2011 with the changes described below, and to retitle it the Radiocommunications (Australian Radio Quiet Zone Western Australia) Frequency Band Plan 2023.

Adoption of Option 2, as consulted, means that services provided under a class licence are now included as a permitted purpose under the band plan to provide additional flexibility to authorise class-licensed services within the ARQZWA where it is beneficial to do so. Consultation on changes to relevant class licences will follow in due course.

Provisions regarding supplementary radio quiet zones have been removed. These provisions were originally intended to enable the identification of other radio quiet zones in other locations throughout Australia if required as part of the SKA project, but they have not been used since the current band plan began. The removal of these provisions in the new band plan streamlines the instrument.

A further minor amendment is the replacement of the term 'MRO entity' with a direct reference to the Commonwealth Scientific and Industrial Research Organisation (CSIRO). The term 'MRO entity' is intended to refer to the entity responsible for operating the Murchison Radioastronomy Observatory (MRO), and that entity is the CSIRO.

Submissions also supported the suppression of Spectrum Embargo 41, as the current and proposed band plans provide the required regulatory function. Spectrum Embargo 41 has therefore been withdrawn. This change, and changes to the band plan, will be communicated to accredited persons via an e-bulletin.

## Further work

Changes contemplated in the consultation and suggested in responses related to amendments to class licences to reduce constraints on certain operations within the ARQZWA (for some class licences), or to provide additional clarity on constraints where they exist. Additional work will be needed to assess relevant class licences to determine if/what conditions on use within the ARQZWA should be applied, including interference resolution and compliance paths, and how these amendments might be implemented. Our preliminary view is that authorised devices in the vicinity of the ARQZWA ought to be able to operate with appropriate safeguards (to be determined) to ensure coexistence with the MRO/SKA.

We are considering how such an arrangement may be implemented but note that any potential class-licence modifications are not contingent on a decision to remake the ARQZWA band plan. Accordingly, this work will be considered under our annual work program.