

## EMBARGO NO. 49

<b>FREQUENCY RANGE(S):</b>	2015–2100 MHz 2100-2130 MHz 2190–2280 MHz 2280-2310 MHz 6700–7075 MHz 7135–7245 MHz 7250–7750 MHz 7900–8390 MHz 8390-8460 MHz 8460-8510 MHz 8540–8660 MHz 10700–14800 MHz 15349-15410 MHz 15430-15630 MHz 17200-21400 MHz 22200-22510 MHz 29500-31000 MHz 33400-36000 MHz 37500-43500 MHz 47200-51400 MHz 52590-59300 MHz
<b>SUBJECT:</b>	Embargo on new frequency assignments for terrestrial radiocommunication services
<b>DATE OF EFFECT:</b>	2 April 2009 (last revised 28 July 2022)
<b>COVERAGE:</b>	Within the following distances from Depot Hill Road site, Yarragadee, 18.5 kilometres NW of Mingenew, Western Australia (29 degrees, 2 minutes, 47 seconds South Latitude and 115 degrees, 20 minutes, 35 seconds East Longitude): <ul style="list-style-type: none"><li>• 300 kilometres for 2100-2130 MHz, 2280-2310 MHz;</li><li>• 190 kilometres for 7135-7200 MHz and 8390-8460 MHz; otherwise</li><li>• 150 kilometres for bands below 12 GHz;</li><li>• 100 kilometres for bands above 12 GHz.</li></ul>
<b>TIME FRAME:</b>	Until further notice

## **INSTRUCTIONS**

No new frequency assignments for terrestrial services are to be made within the specified distances of the Mingenew site, Western Australia in the frequency bands listed above. This includes assignments for existing licensees seeking to expand or modify their communications systems in the bands.

Terrestrial services are all services other than the space research service and Earth stations communicating with space objects (GSO and non-GSO communications satellites).

The embargo does not apply to stations operated by Australian Defence Force or the Department of Defence in the band 8500-8510 MHz.

Exceptions to this embargo require case-by-case consideration and the approval of the Manager, Spectrum Engineering Section.

## **REASONS**

The purpose of this embargo is to support the development of space communications facilities in the general area of the Mingenew site. Space communications stations typically have particular interference protection requirements and can result in unacceptably large areas of spectrum denial to terrestrial services. In addition, consequences of communications failure due to interference can have unacceptable consequences for some space activities particularly space exploration in the space research service. The potential impact of space communications services on spectrum availability for other services is such that ACMA encourages restriction of their operation to locations beyond propagation range of areas of significant spectrum use by other services.

## **COMMENTS**

Lead times for planning space communications, including deep space for space research, are typically many years. In order for such planning to have certainty of spectrum access it is necessary for spectrum to be withheld from other services for considerable periods of time. This requirement can be difficult to satisfy in areas of spectrum demand by terrestrial services. Considering this, ACMA encourages the siting of such stations at locations beyond propagation range of areas of spectrum demand in order to minimise the impact on spectrum availability for other services. The Mingenew site is one such location which ACMA intends to protect for space related communications activities.

The 300 kilometres criterion for 2100-2130 MHz and 2280-2310 MHz and the 190 kilometres criterion for 7135-7200 MHz and 8390-8460 MHz recognise the particular requirements for deep-space communications involving space exploration missions and the interference protection levels specified in the Radio Regulations of the International Telecommunication Union.

Note that embargo 23 also applies limitation on the bands 2190-2300 MHz and 2015-2110 MHz to facilitate the introduction of television outside broadcast services. Arrangements for the coordination and operation of TOB services with respect to Mingenew are contained in RALI FX 21 and that RALI should be referred to when considering assignments for TOB services in bands covered by this embargo.

## **HISTORY**

This embargo was put in place in April 2009 to support the development of space communications facilities in low spectrum impact areas.

This embargo was updated in July 2015 to include minor additions (2015-2025 MHz, 2190-2200 MHz, 7200-7245 MHz and 8500-8510 MHz) to existing frequency ranges to further encourage the support the development of space communications facilities in the general area of the Mingenew site.

In August 2019, 3400–4200 MHz and 5850-6700 MHz bands were removed from embargo 49. These bands are now subject to the coordination procedures contained in RALI MS 44.

In July 2022, the frequency ranges 24.75-25.25 GHz and 25.5-29.5 GHz were removed from Embargo 49. These bands are now subject to the coordination procedures contained in RALI MS44 and RALI MS46 which maintain the intent of Embargo 49, which is to protect and preserve the utility of the Mingenew area for current and future earth stations.

## **EMBARGO AUTHORISATION:**

Approved 25/7/2022

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