

EXPLANATORY STATEMENT

Issued by the Australian Communications and Media Authority

Radiocommunications (Advisory Guidelines and Unacceptable Levels of Interference – 1800 MHz Band) Omnibus Variation Instrument 2015

Radiocommunications Act 1992

Purpose

The purpose of the *Radiocommunications (Advisory Guidelines and Unacceptable Levels of Interference – 1800 MHz Band) Omnibus Variation Instrument 2015 (the Variation Instrument)* is to amend the following instruments that apply to the 1800 MHz spectrum licence band:

- *Radiocommunications Advisory Guidelines (Additional Device Boundary Criteria - 1800 MHz Lower Band) 2012 (the RAG DBC)*
- *Radiocommunications Advisory Guidelines (Managing Interference to Spectrum Licensed Receivers - 1800 MHz Band) 2012 (the RAG Rx)*
- *Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters - 1800 MHz Band) 2012 (the RAG Tx)*
- *Radiocommunications (Unacceptable Levels of Interference – 1800 MHz Band) Determination 2012 (the Determination)*

These amendments are made to support the operation of fixed services under an 1800 MHz band spectrum licence in regional areas while managing interference and the potential for spectrum denial. The amendments also define protection requirements for apparatus licensed fixed services that may continue to operate in the band after the reallocation period.

Legislative provisions

The Variation Instrument has been made by the Australian Communications and Media Authority (ACMA) in accordance with subsection 145(4) and section 262 of the *Radiocommunications Act 1992* (the Act) and in accordance with subsection 33(3) of the *Acts Interpretation Act 1901* (the AIA).

Section 145 of the Act provides that the ACMA may refuse to include details of a radiocommunications transmitter that is proposed to be operated under a spectrum licence on the Register of Radiocommunications Licences if the ACMA is satisfied that the transmitter could cause an unacceptable level of interference to the operation of other radiocommunications devices under that or any other spectrum licence, or any other licence.

Subsection 145(4) of the Act provides that the ACMA may determine, by written instrument, what are unacceptable levels of interference for the purposes of section 145.

Section 262 of the Act provides that the ACMA may make written advisory guidelines about any aspect of radiocommunications or radio emissions.

Under subsection 33(3) of the AIA, where an Act confers a power to make, grant or issue any instrument of a legislative character, the power shall be construed as including a power exercisable in the like manner and subject to the like conditions (if any) to repeal, rescind, revoke, amend, or vary any such instrument.

Background

A spectrum licence permits a licensee, subject to specified conditions, to operate radiocommunications devices within a particular spectrum space, defined by a frequency band and a geographic area. Interference occurring between adjacent spectrum licences consists of in-band

interference across the geographic boundaries, and out-of-band interference across the frequency boundaries. Interference can also occur between spectrum licensed services and services operating under apparatus and class licensing arrangements.

The Act provides a number of means by which the ACMA may manage interference resulting from operation of a radiocommunications transmitter under a spectrum licence. These include the ability to make advisory guidelines under section 262 of the Act about interference management and determine by written instrument what constitutes an unacceptable level of interference under section 145(4) for the purpose of registering transmitters.

The set of legal instruments that manage interference in the 1800 MHz band are the *Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters – 1800 MHz Band) 2012*, *Radiocommunications Advisory Guidelines (Managing Interference to Spectrum Licensed Receivers – 1800 MHz Band) 2012*, *Radiocommunications Advisory Guidelines (Additional Device Boundary Criteria – 1800 MHz Band 2012)* and the *Radiocommunications (Unacceptable Levels of Interference – 1800 MHz Band) Determination 2012*.

On 26 May 2015, the Minister for Communications (the minister) made the *Radiocommunications (Spectrum Re-allocation – Regional 1800 MHz Band) Declaration 2015 (the Declaration)*. The Declaration stated that spectrum in the frequency ranges 1725–1785 MHz and 1820–1880 MHz in regional Australia (**the regional 1800 MHz band**) is to be reallocated by the issue of spectrum licences. This adds to the existing spectrum subject to spectrum licensing in the 1800 MHz band.

Before the Declaration was made, apparatus licensed fixed services were the main incumbent service in the regional 1800 MHz band. The ACMA considers that the set of legal instruments that manage interference in the 1800 MHz band require minor amendments to:

- > support the operation of fixed services under an 1800 MHz band spectrum licence outside areas of high mobile use while managing interference and the potential for spectrum denial
- > define protection requirements for fixed services operating under fixed licences that may continue to operate in the band after the reallocation period.

Operation

The RAG DBC, RAG Rx and RAG Tx provide guidance on the management and settlement of interference to and from radiocommunications devices operating under spectrum licences in the 1800 MHz band with radiocommunications devices operating under another licence in an adjacent band or adjacent area. These Advisory Guidelines should be used by holders of spectrum, class and apparatus licences in the planning of services or the resolution of interference. The ACMA also takes the Advisory Guidelines into account when determining whether a spectrum licensee is causing interference to a licensed radiocommunications receiver that is operating in accordance with its licence conditions.

Under subsection 145(1) of the Act, the ACMA may, if it is satisfied that the operation of a radiocommunications transmitter could cause an unacceptable level of interference to other radiocommunications devices, refuse to register the transmitter. The Determination sets out what is meant by an ‘unacceptable level of interference’ in relation to a radiocommunications transmitter operated under a spectrum licence issued in the 1800 MHz band.

Consultation

The ACMA has consulted extensively with stakeholders about the updates to the RAG DBC, RAG Rx, RAG Tx and the Determination.

In March 2015, the ACMA established an advisory body known as a Technical Liaison Group (**TLG**) to update the technical framework for the 1800 MHz band. Incumbent licensees and other interested stakeholders for the 1800 MHz band were invited to participate in the TLG process. The role of the TLG was to consider and provide advice to the ACMA on updates required to ensure that the

technical framework will accommodate the operation of fixed services under a spectrum licence outside areas of high mobile use in the 1800 MHz band.

The ACMA developed a discussion paper which outlined the proposed updates to the spectrum licensing framework for the 1800 MHz band. This paper was provided for comment by the ACMA to TLG members and is available on the ACMA website at www.acma.gov.au.

The ACMA took into account the views expressed by TLG members when preparing drafts of the RAG DBC, RAG Rx, RAG Tx and the Determination. The draft instruments were also made available for public comment from 22 June 2015 to 17 July 2015 in order to give all interested parties a further opportunity to comment on them.

Three submissions were received during public consultation regarding the revised technical framework. As a result of the public consultation, a minor correction was made to remove some duplicated text. Also, changes were made to relevant provisions of the RAG DBC, the RAG Rx and the Determination to make it clear that a 10 MHz frequency separation (measured from the lower or upper limit of the occupied bandwidth) applies when there is a frequency adjacent spectrum licence in the same area.

Regulatory impact

The ACMA consulted with the Office of Best Practice Regulation (the **OBPR**) on the requirement for a Regulation Impact Statement (**RIS**). The OBPR advised that the Variation Instrument does not warrant the preparation of a RIS because the instrument is likely to have only minor and machinery impacts. The reference number for the OBPR's assessment is OBPR, ID 19214.

Documents incorporated by reference

Changes to the RAG Tx have resulted in the following document being incorporated by reference:

- > The *Radiocommunications Spectrum Marketing Plan (1800 MHz Band) 2015*, as in force from time to time (accessible at www.comlaw.gov.au).

Variation Instrument Details

Further details of the Variation Instrument are provided in Attachment A.

Statement of compatibility with human rights

Subsection 9(1) of the *Human Rights (Parliamentary Scrutiny) Act 2011* requires the rule maker in relation to a legislative instrument to which section 42 (disallowance) of the *Legislative Instruments Act 2003* applies to cause a statement of compatibility with human rights to be prepared in respect of that legislative instrument. This statement is in Attachment B.

ATTACHMENT A

Detailed description of the instrument

Part 1 – Introduction

Section 1 – Name of Instrument

This section provides that the name of the instrument is the *Radiocommunications (Advisory Guidelines and Unacceptable Levels of Interference – 1800 MHz Band) Omnibus Variation Instrument 2015*.

Section 2 – Commencement

This section provides that the Variation Instrument commences on the day after it was registered.

Part 2 – Variations

Section 3 – Variations to the *Radiocommunications Advisory Guidelines (Additional Device Boundary Criteria – 1800 MHz Lower Band) 2012*

This section provides that Schedule 1 varies the *Radiocommunications Advisory Guidelines (Additional Device Boundary Criteria – 1800 MHz Lower Band) 2012*

Section 4 – Variations to the *Radiocommunications Advisory Guidelines (Managing Interference to Spectrum Licensed Receivers – 1800 MHz Band) 2012*

This section provides that Schedule 2 varies the *Radiocommunications Advisory Guidelines (Managing Interference to Spectrum Licensed Receivers – 1800 MHz Band) 2012*

Section 5 – Variations to the *Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters – 1800 MHz Band) 2012*

This section provides that Schedule 3 varies the *Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters – 1800 MHz Band) 2012*

Section 6 – Variations to the *Radiocommunications (Unacceptable Levels of Interference – 1800 MHz Band) Determination 2012*

This section provides that Schedule 4 varies the *Radiocommunications (Unacceptable Levels of Interference – 1800 MHz Band) Determination 2012*

Schedule 1 – Variations to the *Radiocommunications Advisory Guidelines (Additional Device Boundary Criteria – 1800 MHz Lower Band) 2012*

Item 1 – Part 4

Part 4 of the RAG DBC summarises how interference is managed outside areas of high mobile use. New text is being substituted into this Part to reflect changes in how such interference is managed. The substituted text summarise changes made to the Determination and RAG Rx to support the operation of fixed services in the 1800 MHz band.

Schedule 2 – Variations to the *Radiocommunications Advisory Guidelines (Managing Interference to Spectrum Licensed Receivers – 1800 MHz Band) 2012*

Item 1 – After subsection 4(2)

A new subsection 4(3) has been included. This new subsection makes it clear that affected licensees can negotiate and implement alternative arrangements, to those specified in the RAG Rx, to manage interference. The ACMA would take into account any such agreements when determining whether interference is being caused to a receiver operated under an 1800 MHz spectrum licence.

Item 2 – Subsection 5(2)

Guidance on where to find the definition for 'areas of high mobile use' has been included in section 5. This reflects changes made to Part 4 of the RAG Rx to include this term.

Item 3 – Part 4

Subsection 4.1(1) defines the circumstances in which the compatibility requirement applies. The compatibility requirement defines the protection afforded to a radiocommunications receiver operating under a spectrum licence from a radiocommunications transmitter operating under another apparatus or spectrum licence.

Specific deployment scenarios have been defined where a receiver operated under a spectrum licence will be afforded the protection provided by the compatibility requirement. This update to the RAG Rx extends the circumstances in which a receiver operated in the 1800 MHz upper band will be afforded the protection provided by the compatibility requirement. Specifically, in addition to the pre-existing deployment scenarios, a receiver is now also afforded the protection provided by the compatibility requirement when it is:

- operated in the 1800 MHz upper band;
- deployed with an effective antenna height greater than 10 metres;
- operated more than 10 MHz (measured from the lower or upper limit of the occupied bandwidth of the received signal) from a frequency adjacent spectrum licence; and
- not located within an area of high mobile use as defined in the Determination.

The aim of these changes is to manage interference and the potential for spectrum denial while supporting use of the 1800 MHz band for fixed services and frequency division duplex mobile broadband systems. It should be noted that receivers can still be deployed if they do not meet these requirements. However, they will not be afforded the protection provided by the compatibility requirement.

A note has also been included to notify licensees that receivers operated in the 1800 MHz upper band are not afforded protection from devices exempt from registration (as specified in an 1800 MHz spectrum licence). This typically includes, for example, mobile phones and femtocells. Licensees will be required to make their own risk assessment on the potential for interference from such devices before deploying services.

Subsection 4.1(2) provides that a licensee is expected to implement stricter out-of-band emission limits on radiocommunications transmitters operated under its licence if and when required to facilitate compatibility with radiocommunications receivers operated under a 1800 MHz band spectrum licence.

The note under this subsection reflects the fact that strict out-of-band core condition limits at the frequency boundaries between spectrum licences have not been imposed to manage interference between fixed services and mobile broadband services in the 1800 MHz band. Rather, this measure was put in place to avoid any unnecessary costs and burden on licensees to implement arrangements that are only required to enable compatibility in specific situations. Licensees need only implement the stricter out-of-band emission limits when required to facilitate compatibility with other services.

Subsection 4.1(3) provides the methodology for how the effective antenna height of a receiver is to be calculated.

Subsection 4.1(4) notes that a radiocommunications transmitter operating under a class licence must comply with the conditions of the class licence. If the conditions of the class licence are met then the class licensed device will be considered to have met the compatibility requirement.

Item 4 – After Schedule 2

A new Schedule 3 has been inserted into the RAG Rx. This Schedule defines the stricter out-of-band emissions limits for radiocommunications transmitters that should be implemented if and when required to facilitate compatibility with services operated under another 1800 MHz band spectrum licence.

Schedule 3 – Variations to the *Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters – 1800 MHz Band) 2012*

Item 1 – Part 2, section 2.2

This new section explains that for the purpose of the RAG Tx, radiocommunications receivers of a fixed service operating in the 1800 MHz band are taken to belong to a certain category. The section has been updated to include a third category of fixed service.

Category 3 receivers are for those apparatus licensed fixed service receivers operating inside the spectrum space of an 1800 MHz band spectrum licence under the same parameters as a fixed service included in table 1 at Schedule 6 of the *Radiocommunications Spectrum Marketing Plan (1800 MHz Band) 2015*. This category includes fixed services that have been identified in that marketing plan as potentially requiring more time than afforded by the reallocation period to move to alternative frequencies.

Item 2 – Part 2, subsection 2.3(2)

This section defines the level of protection afforded to different categories of fixed service receivers.

Protection requirements for Category 3 receivers have now been included. These have been added to ensure adequate protection is afforded to specific fixed services that may need to continue operating for a time beyond the reallocation period.

Schedule 4 – Variations to the *Radiocommunications (Unacceptable Levels of Interference – 1800 MHz Band) Determination 2012*

Item 1 – Section 9

This section provides what is an unacceptable level of interference for the purposes of interference management in the 1800 MHz band. A radiocommunications transmitter producing emissions that do not meet the requirements of the Determination will, in most circumstances, be refused registration by the ACMA under subsection 145(1) of the Act. Licensees who operate such devices without registration will be in breach of the licence condition referred to in section 69 of the Act and may be subject to further compliance action under the Act.

A new paragraph 9(e) has been included to this section to support use of the 1800 MHz band for fixed services outside areas of high mobile use. Specifically, this new paragraph is designed to help manage interference and possible spectrum denial from fixed service transmitters that:

- are deployed in the 1800 MHz lower band;
- have an effective antenna height greater than 10 metres; and
- the lower or upper frequency limits of the occupied bandwidth of which are less than 10 MHz from a frequency adjacent spectrum licence.

Item 2 – Schedule 4

This Schedule provides a description of areas of high mobile use. These areas define where deployment constraints regarding the height of transmitters apply, as specified under paragraphs 9(d) and 9(f) of the Determination. The aim is to restrict the registration of transmitters which have an effective antenna height greater than 10 metres in the 1800 MHz lower band in the defined areas of high mobile use.

The number of locations defined as areas of high mobile use has been increased. Previously, only the areas in and around capital cities were defined. This has been extended to include centres with populations greater than 30,000; as defined by the 2011 census.

This change was made to restrict the deployment of fixed service transmitters in the 1800 MHz lower band in populated areas where the density of mobile broadband deployments is likely to be high. Such a restriction assists in the management of interference and possible spectrum denial caused by fixed and mobile broadband services operating in the same areas.

ATTACHMENT B**Statement of Compatibility with Human Rights**

Prepared in accordance with Part 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*

Radiocommunications (Advisory Guidelines and Unacceptable Levels of Interference – 1800 MHz Band) Omnibus Variation Instrument 2015

This legislative instrument is compatible with the human rights and freedoms recognised or declared in the international instruments listed in section 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*.

Overview of the Legislative Instrument

Section 145 of the *Radiocommunications Act 1992* (the Act) provides that the Australian Communications and Media Authority (ACMA) may refuse to include details of a radiocommunications transmitter that is proposed to be operated under a spectrum licence on the Register of Radiocommunications Licences if the ACMA is satisfied that the transmitter could cause an unacceptable level of interference to the operation of other radiocommunications devices under that or any other spectrum licence, or any other licence.

Subsection 145(4) of the Act provides that the ACMA may determine, by written instrument, what are unacceptable levels of interference for the purposes of section 145.

Section 262 of the *Radiocommunications Act 1992* permits the ACMA to make advisory guidelines about any aspect of radiocommunication or radio emissions.

The purpose of the *Radiocommunications (Advisory Guidelines and Unacceptable Levels of Interference – 1800 MHz Band) Omnibus Variation Instrument 2015* (the Variation Instrument) is to amend the following instruments that apply to the 1800 MHz spectrum licence band:

- *Radiocommunications Advisory Guidelines (Additional Device Boundary Criteria - 1800 MHz Lower Band) 2012*
- *Radiocommunications Advisory Guidelines (Managing Interference to Spectrum Licensed Receivers - 1800 MHz Band) 2012*
- *Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters - 1800 MHz Band) 2012*
- *Radiocommunications (Unacceptable Levels of Interference – 1800 MHz Band) Determination 2012*.

These amendments are made to support the operation of fixed services under an 1800 MHz band spectrum licence in regional areas while managing interference and the potential for spectrum denial. The amendments also define protection requirements for apparatus licensed fixed services that may continue to operate in the band after the reallocation period.

Subsection 9(1) of the *Human Rights (Parliamentary Scrutiny) Act 2011* requires the rule-maker in relation to a legislative instrument to which section 42 (disallowance) of the *Legislative Instruments Act 2003* (the LIA) applies to cause a statement of compatibility with human rights to be prepared in respect of that legislative instrument.

The Variation Instrument is a legislative instrument that is subject to disallowance under section 42 of the LIA.

Human Rights Implications

The Variation Instrument does not engage any of the applicable rights or freedoms.

Conclusion

The Variation Instrument is compatible with human rights as it does not raise any human rights issues.