

EXPLANATORY STATEMENT

Issued by the Australian Communications and Media Authority

Radiocommunications (Low Interference Potential Devices) Class Licence Variation 2016 (No. 1)

Radiocommunications Act 1992

Purpose

The *Radiocommunications (Low Interference Potential Devices) Class Licence Variation 2016 (No. 1)* (**the Variation**) varies the *Radiocommunications (Low Interference Potential Devices) Class Licence 2015* (**the LIPD Class Licence**) to include updated references to laser safety information in the licence and to remove a number of limitations on the use of digital modulation transmitters to support the use of new low data rate “internet of things” devices. The Variation also inserts new frequency bands for existing arrangements for level probing radar devices used in automated manufacturing systems and in-ground parking sensors, introduces new arrangements supporting building material analysis transmitters using Ultra-wideband (UWB) technology, and corrects an erroneous reference to the location of a particular radio-astronomy site.

The Variation authorises the use of new systems and applications of radiocommunications technology as it is a requirement under the *Radiocommunications Act 1992* (**the Act**) that radiocommunications transmitters must only be operated under authorisation of a licence (with some limited exceptions).

Legislative Provisions

Section 132 of the Act allows the Australian Communications and Media Authority (**the ACMA**), by legislative instrument, to issue class licences.

Subsection 33(3) of the *Acts Interpretation Act 1901* (**the AIA**) relevantly provides that, where an Act confers a power to make, grant or issue an instrument of a legislative or administrative character (including rules, regulations or by-laws), 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.

Section 134 of the Act provides that, to avoid doubt, the power to vary a class licence in accordance with subsection 33(3) of the AIA includes the power to vary the class licence by including one or more further conditions; or revoking any conditions of the class licence.

Subsection 136(1) of the Act provides that, before varying a class licence, the ACMA must cause to be published a written notice in accordance with subsection 136(2A). Subsection 136(1A) provides that the ACMA must consult with all spectrum licensees who may be affected by the variation. Details about the consultation undertaken are set out below.

Subsection 136(1A) of the Act also provides that, if the variation of a class licence would affect the spectrum allocated, to be allocated or to be re-allocated by issuing or re-issuing spectrum licences, the ACMA must be satisfied that the variation of the class licence would not result in unacceptable levels of interference to the operation of radiocommunications devices operated, or likely to be operated, under spectrum licences, and that the variation of the class licence would be in the public interest.

Section 137 provides that the ACMA must not issue a class licence that is inconsistent with the spectrum plan or any relevant frequency band plans. The ACMA has made the Variation in accordance with sections 132 and 136 of the Act, and subsection 33(3) of the AIA.

The Variation is a legislative instrument for the purposes of the *Legislation Act 2003*.

Background

It is a general requirement of the Act that the operation of all radiocommunications devices within Australia be authorised by a radiocommunications licence.

A class licence is one type of licence available to authorise the operation of radiocommunications devices. It is an effective and efficient means of spectrum management for services where a limited set of common frequencies is employed, and equipment is operated under a common set of conditions. A class licence is not issued to an individual user, and does not involve the payment of licence fees. A class licence is issued by the ACMA as a legislative instrument registered on the Federal Register of Legislation (**the FRL**).

The LIPD Class Licence authorises the operation of a wide range of low interference radiocommunications transmitters in various segments of the radiofrequency spectrum. The LIPD Class Licence sets out the conditions under which these transmitters may be operated. These transmitters do not require individual frequency coordination because of their low interference potential characteristics. Examples of transmitters covered by the LIPD Class Licence include garage door openers, RFID transmitters, WiFi equipment and personal alarms.

Operation

The Variation makes a number of changes to the LIPD Class Licence. The individual changes introduced by the Variation are:

1. Change to subsection 3A(1), paragraph (c) of the definition of *nominated distance of a specified Australian radio-astronomy site* – correction of coordinate

This change corrects an error in the latitude coordinate for the Canberra Deep Space Communications Complex. The correct latitude coordinate for the Canberra Deep Space Communications Complex is 35° 23' 48.39" south.

2. Change to note 3 to subsection 5(4) – update of reference to particular standards

The reference to the Australia/New Zealand Standard detailing requirements for protecting persons from radiation from lasers is changed from AS/NZS 2211.10:2004 to two new standards: AS/NZS IEC 60825.14 *Safety of laser products – A user's guide* and AS/NZS IEC 60825.1 *Safety of laser products – Equipment classification and requirements*. Copies of these standards are available from [SAI Global](#).

3. Change to Schedule 1, Item 23 – All transmitters

The change adds to column 2 of this item two new permitted operating frequency bands. The two new sub bands, 122250-123000 MHz and 244000-246000 MHz, have been identified overseas as bands for industrial scientific and medical use suitable for the development of new low power radiocommunications devices.

4. Change to Schedule 1, Item 58 – Digital modulation transmitters

This item authorises the operation of digital modulation transmitters in the frequency band 915-928 MHz. The change to this item removes limitation (b) in column 4, which required such a transmitter to have a minimum 6 dB bandwidth of at least 500 kHz. This limitation was originally put in place to encourage the development of broadband technologies; however, international technological development is currently focused on narrowband compatible services in this band supporting wireless links in the 'internet of things', rather than broadband technologies.

5. Change to Schedule 1, Item 59 – Digital modulation transmitters

This item authorises the operation of digital modulation transmitters in the frequency band 2400-2483.5 MHz. The change to this item removes limitation (b) in column 4, which required such a transmitter to have a minimum 6 dB bandwidth of at least 500 kHz. This limitation was originally put in place to encourage the development of broadband technologies; however, international technological development is currently focused on narrowband compatible services in this band supporting wireless links in the 'internet of things', rather than broadband technologies.

6. Change to Schedule 1, Item 60 – Digital modulation transmitters

This item authorises the operation of digital modulation transmitters in the frequency band 5725-5850 MHz. The change to this item removes limitation (b) in column 4, which required such a transmitter to have a minimum 6 dB bandwidth of at least 500 kHz. This limitation was originally put in place to encourage the

development of broadband technologies; however, international technological development is currently focused on narrowband compatible services in this band supporting wireless links in the 'internet of things', rather than broadband technologies.

7. Change to Schedule 1, Item 71 – Radiodetermination transmitters

This change adds three bands for the operation of radiodetermination transmitters, in addition to the current permitted operating frequency band in column 2 of 75000-85000 MHz. The new permitted operating frequency bands are 6000-8500 MHz, 24050-26500 MHz and 57000-64000 MHz.

8. Change to Schedule 1, Item 79 – In-ground ultra-wideband transmitters

This change adds a band for the operation of in-ground ultra-wideband transmitters, in addition to the current permitted operating frequency band in column 2 of 4200-4800 MHz. The new permitted operating frequency band is 6000-6800 MHz.

9. Change to Schedule 1, insertion of new Item 80 – Building material analysis transmitters

This new item authorises the use of a class of transmitters (column 1), called building material analysis transmitters, used to detect inclusions in building materials such as nails in timber or pipes and wiring within walls. The permitted frequency band (column 2) is set as 2200-8500 MHz. This is an extremely broad frequency range and has been taken from the standard that defines these devices, the European Telecommunications Standards Institute Standard (ETSI) Standard EN 302 435. This broad frequency range allows the use of different emissions to detect different size objects or inclusions in the building material being analysed. The maximum EIRP for these devices is that set by EN 302 435, in accordance with the limitations imposed on the use of these devices (column 4). The maximum EIRP has been expressed this way as EN 302 435 places different levels across the permitted operating frequency band to protect radiocommunications services operated in those bands.

In addition to compliance with the maximum EIRP and other requirements imposed by EN 302 435, the use of this class of transmitter is subject to three other limitations. The first additional limitation requires the transmitter to be used such that emissions are directed into the building material being analysed. The second additional limitation is that devices must not be operated within the nominated distances of specified Australian radio-astronomy sites set out in the definitions section of the LIPD Class Licence, to minimise the risk of interference to the sensitive receivers at these sites. The third additional limitation is that the transmitter must not operate in the 8400-8500 MHz band within the nominated distance of specified space research service (SRS) earth stations listed in the definitions section of the LIPD Class Licence.

10. Change to Schedule 2, insertion of new Item 13A – ETSI Standard EN 302 435

This new item, included in Schedule 2 to the LIPD Class Licence in the table of instruments that apply to a transmitter, refers to the new ETSI standard introduced by the new item 80 added to Schedule 1. The instrument that applies to the transmitter is the international standard ETSI EN 302 435: *Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Technical characteristics for SRD equipment using Ultra WideBand technology (UWB); Building Material Analysis and Classification equipment applications operating in the frequency band from 2,2 GHz to 8,5 GHz*; . Copies of this standard are available from the ETSI website: www.etsi.org.

Incorporation by reference

The Variation inserts into the LIPD Class Licence references to documents as existing at the commencement of the Variation, as permitted by section 314A of the Act. These documents are:

- AS/NZS IEC 60825.14 *Safety of laser products – A user's guide*
- AS/NZS IEC 60825.1 *Safety of laser products – Equipment classification and requirements*
- ETSI Standard EN 302 435 *Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Technical characteristics for SRD equipment using Ultra WideBand technology (UWB); Building Material Analysis and Classification equipment applications operating in the frequency band from 2,2 GHz to 8,5 GHz*;

The AS/NZ Standards are available from [SAI Global](#). The ETSI Standard is available from the ETSI website: www.etsi.org.

Consultation

Section 17 of the *Legislation Act 2003* requires the ACMA to be satisfied that any consultation it considers to be appropriate and reasonably practicable to undertake has been undertaken before making a legislative instrument. Section 136 of the Act also requires that a notice setting out particular details of the proposed variation be published on the ACMA's website and in one or more other forms that are readily accessible by the public. The notice must allow for a period of at least one month for public comment.

Section 136 also requires the ACMA to consult with all licensees of spectrum licences who may be affected by the proposed variation of a class licence.

On 22 December 2015, the ACMA published a notice on its website and in the *Gazette*, inviting public comment on the draft Variation until 26 February 2016. Individual notification was also sent to spectrum licensees who may be affected by the Variation.

Four submissions were received in response to the invitation for public comment. Three submissions supported the changes proposed in the draft Variation. The fourth submission from the CSIRO requested additional restrictions on the use of building material analysis transmitters and industrial radiodetermination devices in the vicinity of SRS antennae. However, the ACMA obtained information from European studies showing that such restrictions were not required, and this information was provided to the CSIRO.

Statement of Compatibility with Human Rights

A Statement of Compatibility with Human Rights for the purposes of Part 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011* is at Attachment B.

Regulation Impact Statement

Prior to releasing the draft Variation for comment, the ACMA consulted with the Office of Best Practice Regulation (**the OBPR**) on the requirement for a Regulation Impact Statement (**the RIS**) for this Variation. The OBPR advised that the ACMA may self-assess the performance of the Variation and the regulatory change made by the Variation. The ACMA considers that the Variation does not give rise to the need for a RIS because it is only likely to have minor and machinery impacts. The OBPR reference for this assessment is ID 19895.

Detailed description of the Variation

Details of the Variation are set out in Attachment A.

Details of the *Radiocommunications (Low Interference Potential Devices) Class Licence Variation 2016 (No.1)*

Section 1 Name of Variation

Section 1 provides that the name of the Variation is the *Radiocommunications (Low Interference Potential Devices) Class Licence Variation 2016 (No.1)*.

Section 2 Commencement

Section 2 provides that the Variation commences on the day after it is registered on the Federal Register of Legislation.

Section 3 Variation of *Radiocommunications (Low Interference Potential Devices) Class Licence 2015*

Section 3 provides that the *Radiocommunications (Low Interference Potential Devices) Class Licence 2015* is varied as set out in Schedule 1 to the Variation.

Schedule 1 Variations

Item 1 – Subsection 3A (1), paragraph (c) of the definition of *nominated distance of a specified Australia radio-astronomy site*

Paragraph (c) of the definition of *nominated distance of a specified Australia radio-astronomy site* provides that the latitude coordinate for the Canberra Deep Space Communications is 32° 23' 48.39" south. This is erroneous.

Item 1 of Schedule 1 to the Variation substitutes the correct latitude coordinate for the Canberra Deep Space Communications, 35° 23' 48.39" south.

Item 2 – Subsection 5(4), note 3

Item 2 of Schedule 1 to the Variation removes an outdated reference to AS/NZS 2211.10:2004, and inserts new text referring to the two AS/NZS IEC standards mentioned above.

Item 3 – Schedule 1, item 23, column 2, after paragraph (c)

Item 3 of Schedule 1 to the Variation inserts two new permitted operating frequency bands in relation to all transmitters.

Item 4 – Schedule 1, item 58, column 4

Item 4 of Schedule 1 to the Variation removes the existing limitation at paragraph (b). The only limitation retained is that the radiated peak power spectral density in any 3 kHz must not exceed 25 mW per 3 kHz.

Item 5 – Schedule 1, item 59, column 4

Item 5 of Schedule 1 to this Variation removes the existing limitation at paragraph (b). The only limitation retained is that the radiated peak power spectral density in any 3 kHz must not exceed 25 mW per 3 kHz.

Item 6 – Schedule 1, item 60, column 4

Item 6 of Schedule 1 to the Variation removes the existing limitation at paragraph (b). The only limitation retained is that the radiated peak power spectral density in any 3 kHz must not exceed 25 mW per 3 kHz.

Item 7 – Schedule 1, item 71, column 2

Item 7 of Schedule 1 to the Variation adds the three new frequency bands of 6000-6500 MHz, 24050-26500 and 57000-64000, in addition to the existing frequency band of 75000-85000, as permitted operating frequency bands for the operation of radiodetermination transmitters.

Item 8 – Schedule 1, item 79, column 2

Item 8 of Schedule 1 to the Variation effectively adds the new frequency band of 6000-6800 MHz as a permitted frequency band, in addition to the existing frequency band of 4200-4800, for the operation of in-ground ultra-wideband transmitters.

Item 9 – Schedule 1, after item 79

Item 9 of Schedule 1 to the Variation inserts a new item in Schedule 1 to the LIPD Class Licence to authorise the use of building material analysis transmitters; the use of these transmitters must conform to the international standard from the European Telecommunications Standards Institute Standard (ETSI) EN 302 435. These transmitters must also be operated in a position such that emissions are directed into building material, and must not operate within a nominated distance of a specified radio-astronomy site or SRS earth station.

Item 10 – Schedule 2, after Item 13

Item 10 of Schedule 1 to the Variation inserts a new item to the table titled “Instruments that apply to a transmitter” in Schedule 2 of the LIPD Class Licence, in relation to building material analysis transmitters. The new entry lists the ETSI Standard EN 302 435: *Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Technical characteristics for SRD equipment using Ultra WideBand technology (UWB); Building Material Analysis and Classification equipment applications operating in the frequency band from 2,2 GHz to 8,5 GHz*; as applying to building material analysis transmitters. Copies of this standard are available from the ETSI website: www.etsi.org.

Statement of Compatibility with Human Rights

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

Radiocommunications (Low Interference Potential Devices) Class Licence Variation 2016 (No.1)

The *Radiocommunications (Low Interference Potential Devices) Class Licence Variation 2016 (No.1)* (**the Variation**) 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

The Variation is a disallowable legislative instrument for the purposes of the *Legislation Act 2003* and is made by the Australian Communications and Media Authority (**the ACMA**) under section 132 of the *Radiocommunications Act 1992* (**the Act**).

The Variation amends various arrangements in the *Radiocommunications (Low Interference Potential Devices) Class Licence 2015* (**the LIPD Class Licence**). In particular, the Variation includes updated references to laser safety information in the LIPD Class Licence and removes a number of current limitations on the use of digital modulation transmitters to support the use of new low data rate “internet of things” devices. The Variation also inserts new frequency bands to existing authorisations for level probing radar devices often used in automated manufacturing systems and in-ground parking sensors, introduces new arrangements supporting building material analysis transmitters using Ultra-wideband (UWB) technology, and corrects an error in the location of a radio-astronomy site.

Human rights implications

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

Conclusion

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

The Australian Communication and Media Authority