

EXPLANATORY STATEMENT

Approved by the Australian Communications and Media Authority

Radiocommunications Act 1992

Radiocommunications Spectrum Marketing Plan (2 GHz unallocated lots band) 2017

Authority

The Australian Communications and Media Authority (**the ACMA**) has made the *Radiocommunications Spectrum Marketing Plan (2 GHz unallocated lots band) 2017* (**Marketing Plan**) under section 39 of the *Radiocommunications Act 1992* (**the Act**).

Subsection 39(1) of the Act provides that the ACMA must, by legislative instrument, prepare a marketing plan for issuing spectrum licences that authorise the operation of radiocommunications devices at frequencies within a part or parts of the spectrum included in a notice made under section 36 of the Act, and within areas specified in that notice. Subsection 39(4) provides that a marketing plan may indicate:

- (a) the procedures to be followed for issuing spectrum licences in accordance with the plan;
- (b) the timetable for issuing spectrum licences in accordance with the plan;
- (c) how the spectrum dealt with under the plan is to be apportioned among spectrum licences to be issued;
- (d) how much of the spectrum dealt with under the plan is to be reserved for public or community services;
- (e) the conditions, or types of conditions, that may be included in spectrum licences to be issued.

Purpose and operation of the Marketing Plan

The Marketing Plan specifies the nine spectrum lots available for allocation in two pairs of frequency ranges within specified geographic areas of Australia, collectively referred to as **the 2 GHz (unallocated lots) band**:

- (a) 1920 MHz to 1930 MHz and 2110 MHz to 2120 MHz in Darwin, Hobart and Canberra B;
and
- (b) 1930 MHz to 1935 MHz and 2120 MHz to 2125 MHz in Darwin, Hobart, Canberra A, Brisbane A, Adelaide and Perth.

These identified geographic areas are defined in Schedule 2 to the Marketing Plan.

The Marketing Plan also specifies the method by which the lots will be allocated, and the conditions that are likely to apply to spectrum licences issued after the conclusion of the allocation process.

Background

In October 2000, the Minister for Communications, Information Technology and the Arts made the *Radiocommunications (Spectrum Re-allocation) Declaration No.2 of 2000* (**the previous Re-allocation Declaration**) which provided that specified parts of the 2 GHz band (1900–1980 MHz and

Explanatory Statement to the Radiocommunications Spectrum Marketing Plan (2 GHz unallocated lots band) 2017

2110–2170 MHz), within the identified geographic areas of Australia, be re-allocated by issuing spectrum licences. This spectrum was subsequently auctioned in March 2001 (**the preceding 2 GHz allocation**), with ten lots remaining unsold. Spectrum licences that were issued as part of this process had an expiry date of 11 October 2017. The previous Re-allocation Declaration is no longer in force.

Spectrum licence reissue process

Under subsection 82(1) of the Act, the ACMA may re-issue an expiring spectrum licence to the same licensee (subject to payment of the associated spectrum access charge) if:

- > the licence was used in the provision of a service that falls under a Ministerial class of services determination made under subsection 82(3); or
- > the ACMA is satisfied that special circumstances exist as a result of which it would be in the public interest to re-issue the licence.

On 9 February 2012, the Minister for Broadband, Communications and the Digital Economy made the *Radiocommunications (Class of Services) Determination 2012* (**the class of services determination**) on the basis that it would be in the public interest to re-issue licences to licensees who had used the licence to provide certain classes of services, including mobile voice and data communication services, in the 2 GHz band.

As a consequence of the class of services determination, the ACMA made an offer to all existing spectrum licensees in the 2 GHz band to be re-issued their spectrum licences under paragraph 82(1)(a) of the Act. All such licensees accepted the offers. The ACMA has completed the spectrum licence re-issue process for these spectrum licensees, with the re-issued 2 GHz spectrum licences due to commence on 12 October 2017.

Designation of spectrum in 2017

As the previous Re-allocation Declaration was repealed in 2005, a notice given by the Minister under subsection 36(1) of the Act was required to enable the allocation of the 2 GHz (unallocated lots) band. On 21 April 2017, following a recommendation from the ACMA, the Minister for Communications and the Arts made the *Radiocommunications (Spectrum Designation – 2 GHz and 3.4 GHz Bands) Notice 2017* (**the Designation Notice**), which provides that specified spectrum in the 2 GHz band, within the identified geographic areas of Australia, be allocated by issuing spectrum licences. The Designation Notice includes spectrum that was subsequently included in spectrum licences re-issued to existing licensees as part of the spectrum licence re-issue process. The 2 GHz (unallocated lots) band is a subset of the 2 GHz spectrum that was specified in the Designation Notice, being currently unallocated spectrum in the 2 GHz band.

Additional spectrum in Canberra

The Designation Notice also includes spectrum in Canberra that was not included in the previous Re-allocation Declaration. The 1920–1935 MHz and 2110–2125 MHz frequency ranges covering the geographic area of Canberra were not originally spectrum licensed due to possible interference to mobile telecommunications receivers from high-powered deep-space transmitters operating in the Canberra Deep Space Communications Complex (**CDSCC**) at Tidbinbilla. Given advancements in technology, the ACMA re-assessed the risk for interference and recommended to the Minister that this spectrum be included in the Designation Notice.

In relation to the additional spectrum in Canberra, the Designation Notice does not include the 1920–1930 MHz and 2110–2120 MHz frequency ranges in the area immediately surrounding the CDSCC,

to ensure CDSCC deep-space transmitters could continue to operate without interference. In addition, any spectrum licences issued for the Canberra area will include a licence condition stating that licensees will be unable to claim protection from interference from CDSCC deep-space transmitters.

2 GHz (unallocated lots) band for allocation in 2017

The ACMA intends to allocate the 2 GHz (unallocated lots) band, together with unallocated lots in the 1800 MHz, 2.3 GHz and 3.4 GHz bands, in a single process in 2017, known as **the multiband auction**.

As mentioned above, under subsection 39(1) of the Act, the ACMA must prepare a marketing plan for issuing spectrum licences that authorise the use of radiocommunications devices at frequencies within the parts of the spectrum, and within the areas, specified in the Designation Notice.

The Marketing Plan specifies that spectrum licences are to be allocated authorising the use of radiocommunications devices in particular parts of the 2 GHz (unallocated lots) band in the seven identified geographic areas of Australia, which are defined in Schedule 2 to the Marketing Plan. These areas are a subset of the areas specified for allocation in the Designation Notice.

Operation of the Marketing Plan

The ACMA has made the Marketing Plan in relation to the upcoming allocation of spectrum licences in the 2 GHz (unallocated lots) band under the *Radiocommunications (Spectrum Licence Allocation – Multi-band Auction) Determination 2017 (Allocation Determination)*.

The Marketing Plan is one of a set of legislative instruments that enables the allocation of the 2 GHz (unallocated lots) band, including:

- > the Allocation Determination;
- > the Designation Notice;
- > the *Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters – 2 GHz Band) 2016*;
- > the *Radiocommunications Advisory Guidelines (Managing Interference to Spectrum Licensed Receivers – 2 GHz Band) 2016*; and
- > the *Radiocommunications (Unacceptable Levels of Interference – 2 GHz Band) Determination 2016*.

The purpose of the Marketing Plan is to describe the spectrum ‘products’ that will be offered at auction. In doing so, it identifies the spectrum that will be allocated and defines how this spectrum will be divided into lots for applicants to acquire in the auction process, or possibly for a pre-determined price, under the Allocation Determination. In addition, it sets out some of the technical and non-technical conditions that may apply to spectrum licences, and other matters that licensees should take into account when deciding whether to participate in the allocation process and when operating radiocommunications devices under a spectrum licence.

The Marketing Plan also briefly describes the procedures by which the ACMA will conduct the allocation. Full details of the allocation procedures are set out in the Allocation Determination. The ACMA will employ a price-based method of allocation, namely an auction, to allocate this spectrum. The ACMA has chosen the Simple Clock Auction (SCA) methodology, delivered through a secure online system, as the auction method to be used to conduct the auction. If, in particular

circumstances, the ACMA considers there is no need for an auction, the Allocation Determination allows the ACMA to allocate a licence to an applicant without conducting an auction. The Allocation Determination also provides for a post-auction allocation process, should lots remain unsold after an auction process (**post-auction allocation process**).

The 2 GHz (unallocated lots) band is divided into nine lots that are defined by geographic area and frequency range. The lots will be available in a paired configuration (three lots will be a pair of 10 MHz frequency ranges, and six lots will be a pair of 5 MHz frequency ranges). The paired configuration enables the use of technologies such as 4G Long Term Evolution (LTE), used to deliver mobile broadband services. The three 10 MHz lots will consist of a block of 10 MHz in each of the lower and upper parts of the 2 GHz band, namely, 1920 MHz to 1930 MHz and 2110 MHz to 2120 MHz, in the regions Canberra B, Darwin and Hobart. The six 5 MHz lots will consist of a block of 5 MHz in each of the lower and upper parts of the 2 GHz band, namely, 1930 MHz to 1935 MHz and 2120 MHz to 2125 MHz, in the regions Adelaide, Brisbane A, Canberra A, Darwin, Hobart and Perth.

The technical conditions to be included in spectrum licences allocated in accordance with the Marketing Plan and the Allocation Determination are drawn from the ACMA's existing technical framework for the 2 GHz band, developed in consultation with industry stakeholders. These technical conditions are set out in the Marketing Plan, in the parts that deal with licence conditions that will be included and the sample spectrum licence. The broader technical framework is set out in the following legislative instruments:

- > the *Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters – 2 GHz Band) 2016*;
- > the *Radiocommunications Advisory Guidelines (Managing Interference to Spectrum Licensed Receivers – 2 GHz Band) 2016*; and
- > the *Radiocommunications (Unacceptable Levels of Interference – 2 GHz Band) Determination 2016*.

The technical framework places constraints on, and regulates the use of, spectrum licences to allow licensees to operate services without causing undue interference to other services operating in other parts of the radiofrequency spectrum. Core conditions (in accordance with section 66 of the Act) will be included in spectrum licences to:

- > define their geographic boundaries;
- > define their range of frequencies;
- > set out-of-area radio emission limits;
- > set spurious and non-spurious radio emission limits.

In addition, the Marketing Plan discusses other relevant obligations, including spectrum trading rules, use by third parties and registration of transmitters with the ACMA, and payment obligations imposed by the Allocation Determination.

Licence commencement and licence duration are also described in the Marketing Plan. Spectrum licences issued as a result of the auction, or for a pre-determined price under Part 5 of the Allocation Determination, will commence on the date that the licence was issued. Spectrum licences allocated through the post-auction allocation process will commence on the later of:

- (a) the date stated in the post-auction application;

- (b) the date the licence is issued;
- (c) 1 February 2018.

All spectrum licences will be for a fixed term with an expiry date of 11 October 2032, in line with the existing spectrum licences in 2 GHz band.

A sample spectrum licence set out in Schedule 5 to the Marketing Plan also contains information relating to core and other licence conditions that may apply to the operation of radiocommunications devices under the spectrum licence. However, the spectrum licences actually issued by the ACMA may contain additional or different conditions.

A provision-by-provision description of the Marketing Plan is set out in the notes at **Attachment A**.

The Marketing Plan is a legislative instrument for the purposes of the *Legislation Act 2003 (the LA)*.

Documents incorporated by reference

The Marketing Plan incorporates the Australian Spectrum Map Grid 2012. The Australian Spectrum Map Grid (**ASMG**) is used to identify geographic areas of spectrum licences. The Australian Spectrum Map Grid 2012 describes the ASMG and the associated Hierarchical Cell Identifier Scheme (**HCIS**) that the Marketing Plan uses to define licences' geographic areas. The Australian Spectrum Map Grid 2012 is available from the ACMA's website: www.acma.gov.au. The Australian Spectrum Map Grid 2012 is incorporated as existing from time to time, as permitted by subsection 314A(2) of the Act.

The Marketing Plan also incorporates a reference to the Radiocommunications Assignment and Licensing Instruction MS 32 (**the RALI**). The RALI sets out procedures to be followed to coordinate radiocommunications transmitters with the devices whose use is protected in the Mid-West Radio Quiet Zone (**RQZ**) through the *Radiocommunications (Mid-West Radio Quiet Zone) Frequency Plan 2011*. The RALI is available from the ACMA's website: www.acma.gov.au. The RALI is incorporated as existing from time to time, as permitted by subsection 314A(2) of the Act.

The Marketing Plan also incorporates the International Telecommunication Union (**ITU**) Radio Regulations (**the Radio Regulations**). The ITU describes itself as the United Nations' specialised agency for information and communication technologies, and the Radio Regulations are an instrument made by decisions at World Radiocommunications Conferences. The Radio Regulations are available to be downloaded for free from the ITU's website: www.itu.int. The Radio Regulations are incorporated as existing from time to time, as permitted by subsection 314A(2) of the Act.

The Marketing Plan also incorporates the following Acts and legislative instruments (including by the adoption of definitions), or otherwise refers to them:

- > the Act;
- > the *Acts Interpretation Act 1901*;
- > the *Administrative Appeals Tribunal Act 1975*;
- > the Allocation Determination;
- > the *Australian Communications and Media Authority Act 2005*;
- > the Designation Notice;
- > the *Income Tax Assessment Act 1997*;
- > the *International Tax Agreements Act 1953*;

Explanatory Statement to the Radiocommunications Spectrum Marketing Plan (2 GHz unallocated lots band) 2017

- > the LA;
- > the *Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters – 2 GHz Band) 2016*;
- > the *Radiocommunications Advisory Guidelines (Managing Interference to Spectrum Licensed Receivers – 2 GHz Band) 2016*;
- > the *Radiocommunications (Interpretation) Determination 2015*;
- > the *Radiocommunications (Labelling) Determination 2013*;
- > the *Radiocommunications Licence Conditions (Apparatus Licence) Determination 2015*;
- > the *Radiocommunications (Mid-West Radio Quiet Zone) Frequency Band Plan 2011*;
- > the *Radiocommunications (Register of Radiocommunications Licences) Determination 2017*;
- > the *Radiocommunications (Trading Rules for Spectrum Licences) Determination 2012*; and
- > the *Radiocommunications (Unacceptable Levels of Interference – 2 GHz Band) Determination 2016*.

The Acts and legislative instruments listed above may be obtained from the Federal Register of Legislation (<http://www.legislation.gov.au>). The Acts listed above are incorporated as in force from time to time, in accordance with section 10 of the *Acts Interpretation Act 1901* and subsection 13(1) of the LA. The legislative instruments listed above are incorporated as in force from time to time, in accordance with section 6 of the Marketing Plan and subsection 14(1) of the LA.

Consultation

Before the Marketing Plan was made, the ACMA was satisfied that consultation was undertaken to the extent appropriate and reasonably practicable, in accordance with section 17 of the LA.

A draft version of the Marketing Plan was released for public consultation on 2 August 2017, together with the explanatory information paper [*Draft allocation instruments for multiband spectrum—residual lots auction*](#). Consultation closed on 25 August 2017.

The ACMA received a total of four written submissions to this information paper. The ACMA took the views of stakeholders into consideration during the revision of the Marketing Plan. Submissions were generally in relation to the multiband allocation process overall and did not raise specific comments about the Marketing Plan or the proposed licence conditions set out in the sample spectrum licence in the Marketing Plan. The submissions made in relation to the multiband allocation process are discussed in more detail in the explanatory statement to the Allocation Determination.

Regulation Impact Statement

Prior to making the Marketing Plan, the ACMA was informed that the Office of Best Practice Regulation (**the OBPR**) considered that the proposal to allocate licences via the multiband auction was sufficiently related to previous spectrum allocation processes considered by the OBPR, such that there was an exemption from the requirement for a Regulation Impact Statement for this legislative instrument.

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 LA applies to cause a statement of compatibility to be prepared in respect of that legislative instrument.

The statement of compatibility set out below has been prepared to meet that requirement.

Overview of the Marketing Plan

On 21 April 2017, following a recommendation from the ACMA, the Minister for Communications and the Arts made the *Radiocommunications (Spectrum Designation – 2 GHz and 3.4 GHz Bands) Notice 2017 (the Designation Notice)*, which provides that specified spectrum in the 2 GHz band and 3.4 GHz band, within the identified geographic areas of Australia, be allocated by issuing spectrum licences.

The Designation Notice includes spectrum that remained unallocated following a preceding 2 GHz allocation and the additional spectrum in 2 GHz band around Canberra that has been identified by the ACMA as available for spectrum licensing. This is the 2 GHz (unallocated lots) band.

The Designation Notice also includes spectrum that was subsequently included in spectrum licences re-issued to existing licensees as part of the spectrum licence re-issue process. That spectrum is not available for allocation in accordance with the Marketing Plan. The 2 GHz (unallocated lots) band is a subset of the 2 GHz spectrum that was specified in the Designation Notice, being currently unallocated spectrum in the 2 GHz band.

The ACMA intends to allocate the 2 GHz (unallocated lots) band, together with unallocated lots in 1800 MHz, 2.3 GHz and 3.4 GHz bands, in a single process in 2017, known as the multiband auction.

Subsection 39(1) of the Act provides that the ACMA must, by legislative instrument, prepare a marketing plan for issuing spectrum licences that authorise the operation of radiocommunications devices at frequencies with a part or parts of the spectrum included in the Designation Notice.

Subsection 39(4) provides that a marketing plan may indicate:

- (a) the procedures to be followed for issuing spectrum licences in accordance with the plan;
- (b) the timetable for issuing spectrum licences in accordance with the plan;
- (c) how the spectrum dealt with under the plan is to be apportioned among spectrum licences to be issued;
- (d) how much of the spectrum dealt with under the plan is to be reserved for public or community services;
- (e) the conditions, or types of conditions, that may be included in spectrum licences to be issued.

Any person may apply to be allocated a spectrum licence in accordance with the Marketing Plan.

Human rights implications

The ACMA has assessed whether the Marketing Plan is compatible with human rights, being the rights and freedoms recognised or declared by the international instruments listed in subsection 3(1) of the *Human Rights (Parliamentary Scrutiny) Act 2011* as they apply to Australia.

Having considered the likely impact of the instrument and the nature of the applicable rights and freedoms, the ACMA has formed the view that the Marketing Plan does not engage any of those rights or freedoms.

Conclusion

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

Explanatory Statement to the Radiocommunications Spectrum Marketing Plan (2 GHz unallocated lots band) 2017

Notes to the *Radiocommunications Spectrum Marketing Plan (2 GHz unallocated lots band) 2017*

PART 1 PRELIMINARY

Section 1 Name

This section provides for the Marketing Plan to be cited as the *Radiocommunications Spectrum Marketing Plan (2 GHz unallocated lots band) 2017*.

Section 2 Commencement

This section provides for the Marketing Plan to commence on the day after it is registered.

Section 3 Authority

This section identifies the provision that authorises the making of the Marketing Plan, namely section 39 of the *Radiocommunications Act 1992*.

Section 4 Purpose of the instrument

This section lists the main matters dealt with by the Marketing Plan. The Marketing Plan should be read in conjunction with the Allocation Determination for a more complete understanding of all allocation procedures.

Section 5 Definitions

This section defines a number of key terms used throughout the Marketing Plan, and indicates where other key terms are defined. A number of other expressions used in the Marketing Plan are defined in the Act.

Section 6 References to other legislative instruments and to other instruments or writing

This section provides that in the Marketing Plan, unless the contrary intention appears, a reference to another legislative instrument is a reference to that other legislative instrument as in force from time to time, and a reference to another instrument or writing is a reference to that instrument or writing as existing from time to time.

Section 7 References to frequency ranges

This section provides that in the Marketing Plan the range of numbers that identifies a frequency range includes the higher, but not the lower, number.

PART 2 ALLOCATION OF SPECTRUM LICENCES

Section 8 Simplified outline of this Part

This section sets out a simplified outline of Part 2.

Section 9 Parts of the spectrum

This section provides that spectrum licences in the 2 GHz (unallocated lots) band will be allocated and issued in the manner described in the Marketing Plan and Allocation Determination.

Explanatory Statement to the Radiocommunications Spectrum Marketing Plan (2 GHz unallocated lots band) 2017

Section 10 How licences will be allocated

This section provides that the primary means of allocating spectrum licences in the 2 GHz (unallocated lots) band will be by auction using the SCA methodology. The rules and procedures that apply to the auction are set out in the Allocation Determination. However, the ACMA may offer to allocate a spectrum licence in relation to a lot for a pre-determined price if there is only one applicant that has nominated the lot as a preferred lot, in accordance with procedures set out in the Allocation Determination. This section also provides that parts of the 2 GHz (unallocated lots) band that are offered at auction or for a pre-determined price but not allocated, may be later offered for allocation in accordance with Schedule 4 to the Allocation Determination.

Section 11 Lots for the auction

This section describes the lots for the auction. The 2 GHz (unallocated lots) band has been divided by the ACMA into smaller blocks (referred to as lots) for auction. Each lot is defined by a frequency range (and resultant bandwidth), as set out in Schedule 1 to the Marketing Plan, and a specific geographic area (region), as set out in Schedule 2 to the Marketing Plan.

There are nine lots in the auction. The three 10 MHz lots will consist of a block of 10 MHz in each of the lower and upper parts of the 2 GHz band, namely, 1920 MHz to 1930 MHz and 2110 MHz to 2120 MHz. The six 5 MHz lots will consist of a block of 5 MHz in each of the lower and upper parts of the 2 GHz band, namely, 1930 MHz to 1935 MHz and 2120 MHz to 2125 MHz.

Each lot is also defined by the geographic area (region). There are a total of seven regions, described in Schedule 2 to the Marketing Plan.

This section also provides that an auction will be held in accordance with the procedures set out in the Allocation Determination. In some circumstances, the Allocation Determination allows the ACMA to allocate a spectrum licence without conducting an auction (see Part 5 of and Schedule 4 to the Allocation Determination), or after conducting an auction (see Schedule 4 to the Allocation Determination).

Section 12 Advertising the auction

This section provides that the ACMA will advertise the details of the auction and invite persons to take part, in accordance with the Allocation Determination (which sets out requirements for this process in more detail). The ACMA will publish a notice to advertise the allocation process on its website.

Section 13 Taking part in the auction

This section provides that detailed information about the auction and the application process will be made available by the ACMA in an applicant information package (**AIP**), to be published in accordance with the Allocation Determination. The AIP will be made available at the beginning of the allocation process. The mandatory contents of the AIP are set out in section 28 of the Allocation Determination.

The AIP will contain important information about the allocation process for potential participants. It will describe how to apply to participate in the allocation process, and will include copies of all necessary forms and documents to commence participation in the process.

This section also states that information about how to apply to participate in the auction is included in Part 4 of the Allocation Determination.

PART 3 SPECTRUM LICENCES TO BE ISSUED

Section 14 Simplified outline of this Part

This section sets out a simplified outline of Part 3.

Section 15 Issue of licences

This section sets out when the ACMA will issue spectrum licences in the 2 GHz (unallocated lots) band. A licence will be issued to a successful applicant or winning bidder as soon as practicable after that applicant or bidder has paid the full spectrum access charge that the Allocation Determination requires to be paid before a licence will be issued (the balance of the winning price, or the balance of any pre-determined price, or the post-auction pre-determined price, as applicable).

The Allocation Determination sets out the relevant procedures for payment of spectrum access charges in more detail.

Section 16 Commencement and duration of licences

This section explains that licences issued as a result of the auction or for a pre-determined price under Part 5 of the Allocation Determination will commence on the date that the licence was issued.

Spectrum licences allocated through the post-auction allocation process will commence on the later of:

- (a) the date stated in the post-auction application;
- (b) the date the licence is issued;
- (c) 1 February 2018.

All spectrum licences will be for a fixed term with an expiry date of 11 October 2032, in line with the existing spectrum licences in the 2 GHz band.

Section 17 Core licence conditions

Under section 66 of the Act, there are a number of core conditions which a spectrum licence must include. This section sets out the types of core conditions to be included in a spectrum licence allocated in accordance with the Marketing Plan, including the geographic area and frequency bands in which a radiocommunications device can be operated under a spectrum licence, and the out-of-area and out-of-band emission levels.

Section 18 Determining core licence conditions

This section explains how the core conditions for spectrum licences issued in the 2 GHz (unallocated lots) band as a result of an auction, or for pre-determined price allocation, will be determined.

Each licence will specify a range of frequencies within which the licensee may operate radiocommunications devices. The range of frequencies will depend on the lots the licensee has been allocated in accordance with the Allocation Determination. If a licensee has been allocated multiple lots, the licence issued may specify the aggregate frequency range for the lots.

Each licence will also specify the geographic area within which the licensee may operate radiocommunications devices. The geographic area will be the region, or regions, described in

Schedule 2 to the Marketing Plan for the lots allocated in accordance with the Allocation Determination.

The regions are defined by an identifier scheme adopted by the ACMA in 2012 (the HCIS). Under the HCIS, areas are defined by referring to a set of identifiers which collectively correspond to a single area on the ASMG. The ASMG is described in more detail, including with the use of geographic co-ordinates to define the ASMG outer boundary, in the Australian Spectrum Map Grid 2012, available from the ACMA's website at www.acma.gov.au.

The ASMG divides the Australian land mass into a grid of squares (**cells**) of four sizes, with the side lengths of the largest to smallest cells being, respectively, 3 degrees, 1 degree, 15 minutes and 5 minutes of arc. The HCIS names the cells in this tiered structure, with cells of each size given a unique identifier name. Under this system, the region for a lot is comprised of a collection of unique identifiers that cover the required geographic area on the ASMG. Spatial data files (in Shapefile format), which are available from the ACMA's website, may be used to generate a map of an area defined by a set of HCIS identifiers with geographic information software. A HCIS area description to Placemark conversion tool has also been developed and is available online at the ACMA website: www.acma.gov.au.

Three indicative maps that illustrate the areas of the regions are shown in Schedule 2.

Subsections 18(2) and 18(3) of the Marketing Plan provide that the emission limits, which will be licence conditions included in the spectrum licences issued in accordance with the Marketing Plan, will be calculated in accordance with Schedules 3 and 4 to the Marketing Plan. These Schedules are, respectively, used to calculate the maximum emission limits allowable outside the geographic area, and outside the frequency band, of a spectrum licence, and they form part of the core conditions of each licence.

Section 19 Other licence conditions

This section identifies other kinds of statutory licence conditions and other licence conditions that may be included in each spectrum licence issued under this allocation process, but which are not core conditions of the licence. These include the conditions in relation to payment to the ACMA of applicable charges, use by third parties, registration requirements for radiocommunications transmitters and residency requirements of the licensee. The ACMA may also include conditions about other matters, including conditions relating to interference management. Some of these conditions are included in the sample licence at Schedule 5.

This section also states that the spectrum licence will include certain other conditions, including a condition that radiocommunications receivers operating in the 2110 MHz to 2125 MHz frequency range cannot claim protection from harmful interference caused by radiocommunications transmitters of the space research service operated at the CDSCC and a condition requiring licensees to comply with the procedures and requirements set out in RALI MS 32 before registering a transmitter for use in or around the RQZ. These conditions are designed to ensure that particular services operated at the CDSCC or provided in the RQZ are afforded interference protection.

Each spectrum licence will also include a condition requiring any radiocommunications transmitter operated under a spectrum licence that is exempt from registration requirements under subsection 20(2) not to cause any harmful interference to other radiocommunications devices operating in the 2 GHz band.

Pursuant to section 71 of the Act, the ACMA may include conditions about such other matters as it thinks fit. The ACMA may also include conditions in a spectrum licence that are not included in the Marketing Plan or the sample spectrum licence.

Section 20 Registration of transmitters

Under Part 3.5 of the Act, the ACMA is required to register all spectrum licences, and certain details of radiocommunications devices (except in particular cases) that are operated under each spectrum licence. This section of the Marketing Plan states that all spectrum licences issued pursuant to the Marketing Plan will include a condition that prevents the operation of a radiocommunications transmitter unless all requirements for registering the transmitter under Part 3.5 have been met. This is a mandatory licence condition for inclusion in all spectrum licences, under subsection 69(1) of the Act.

The ACMA has the discretion to refuse to register a transmitter under subsection 145(1) of the Act if it forms the view that operating the device in question will cause unacceptable levels of interference to the operation of other radiocommunications devices, either under the same licence or another licence. For the 2 GHz band, including the 2 GHz (unallocated lots) band, unacceptable levels of interference are defined in the *Radiocommunications (Unacceptable Levels of Interference – 2 GHz Band) Determination 2016* made under subsection 145(4) of the Act.

Under subsection 69(2) of the Act, the ACMA may include an exemption from the registration requirements in the mandatory spectrum licence condition required by subsection 69(1) of the Act.

The following radiocommunications transmitters operating in the 2 GHz band will be exempt from the requirement to be registered:

- (a) transmitters with a maximum EIRP of less than or equal to 25 dBm per occupied bandwidth; and
- (b) high altitude platform stations (HAPS) that do not exceed a power flux density of -121.5 dB(W/(m²MHz)) at the Earth's surface outside the spectrum space for the spectrum licence.

These devices are still required to meet all the core and other conditions of the licence, including emission limit requirements. This exemption is included in Licence Schedule 3 of the sample spectrum licence at Schedule 5 to the Marketing Plan.

Section 21 Draft sample licence

This section provides that a sample spectrum licence is included at Schedule 5 to the Marketing Plan. The sample spectrum licence sets out the technical and other conditions that may apply to spectrum licences issued as a result of the allocation process. However, the conditions in the sample spectrum licence may not reflect the actual conditions included in a spectrum licence issued to a successful applicant or winning bidder.

Section 22 Compatibility requirements

This section provides that the purpose of the *Radiocommunications Advisory Guidelines (Managing Interference to Spectrum Licensed Receivers – 2 GHz Band) 2016* and the *Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters – 2 GHz Band) 2016* is to provide a means of coordinating services operating under spectrum licences in the 2 GHz band.

PART 4 AFTER ALLOCATION

Section 23 Simplified outline of this Part

This section sets out a simplified outline of Part 4.

Section 24 Registration of licences

This section provides that, in accordance with Part 3.5 of the Act and the *Radiocommunications (Register of Radiocommunications Licences) Determination 2017 (the Register Determination)*, the ACMA must register the details of spectrum licences in the Register of Radiocommunications Licences (**Register**). The Register is a publicly available database that is available on the ACMA's website.

Part 3.5 of the Act and the Register Determination set out the information that the Register is required to contain, including the name and postal address of the licensee, the licence date of issue and expiry date. The Register may also include details of radiocommunications devices operated under a spectrum licence.

Section 25 Third party use

This section provides that a licensee may permit third parties to operate radiocommunications devices under any spectrum licences it holds. Any such arrangement must comply with Division 1 of Part 3.2 of the Act, which includes provisions governing third party use.

Section 26 Trading in spectrum licences

This section provides that a licensee may assign, or otherwise deal with, the whole or any part of a spectrum licence in accordance with Division 5 of Part 3.2 of the Act. The *Radiocommunications (Trading Rules for Spectrum Licences) Determination 2012* made under section 88 of the Act provides further details about rules for trading in spectrum licences. In part, these rules define the minimum block of spectrum and geographic area that may be traded to a third party, and must be retained by the licensee.

Section 27 Agreements about emission limits

This section provides that a licensee in the 2 GHz (unallocated lots) band may enter into an agreement about emission limits. Licensees of licences that are adjacent to one another may wish to enter agreements that allow a licensee to exceed their emission limits specified in the core licence conditions. The word 'adjacent' can refer to spectrum licences that share a geographic boundary, a frequency boundary, or both. This section notes the provisions of Schedules 3 and 4 to the Marketing Plan, which underpin such agreements.

When such an agreement is in place, that agreement effectively sets the emission limits that apply to that licence under section 18 of the Marketing Plan and in accordance with Schedules 3 and 4 to the Marketing Plan. Schedules 3 and 4 require that such an agreement must be in writing.

Section 28 Spectrum licences that are about to expire

This section sets out the actions that the ACMA takes under the Act to determine market interest in spectrum licences which are about to expire. In accordance with section 78 of the Act, the ACMA will publish a notice about spectrum licences that are due to expire within the period specified in the notice. The notice will invite expressions of interest from persons wishing to obtain spectrum

licences relating to the relevant parts of the spectrum. This information will be published on the ACMA's website.

Section 29 Re-issue of licence

This section sets out what the ACMA does under the Act when spectrum licences expire. Under Division 4 of Part 3.2 of the Act, the ACMA may decide to re-issue a spectrum licence to the existing licence holder when it expires, if the licence is used to provide a service included in a class of services determined by the Minister for which re-issuing licences to the same licensee would be in the public interest, or if special circumstances exist as a result of which the ACMA is satisfied it is in the public interest for that person to be re-issued the licence. Alternatively, the ACMA may offer the spectrum licence for re-allocation by auction, tender, or pre-determined or negotiated price. A re-issued licence may be different to the original licence, including by having different conditions placed on the licence.

SCHEDULE 1 LOTS

This Schedule defines each lot that will be auctioned. There are nine lots.

For each lot, Schedule 1 lists the lot number, lot name, region, lower and upper paired frequency ranges and bandwidth.

SCHEDULE 2 REGIONS

This Schedule defines the geographic areas (**regions**) for spectrum licences to be allocated in accordance with the Marketing Plan. It provides the names for the regions and precise geographic definitions.

The Canberra B region does not include the area immediately surrounding the CDSCC, in order to protect deep space transmitters.

To define a region, this Schedule lists a set of HCIS identifiers that correspond to the region on the ASMG.

Three maps of the regions are also provided (for illustrative purposes only).

SCHEDULE 3 EMISSION LIMITS OUTSIDE THE AREA

This Schedule sets the method for calculating the limits that will be placed on radiofrequency emissions that are produced by radiocommunications devices operating under a spectrum licence outside a spectrum licence's geographic area (**the out-of-area core licence condition**). The limit is expressed as a radiated power limit that applies to all radiocommunications devices operated within the licence's geographic area.

Schedule 3 provides for base emission limits that apply to parts of the spectrum that are not covered by an agreement made between adjacent licensees to exceed the out-of-area core licence condition. A written agreement between a licensee and all affected licensees of frequency-adjacent and area-adjacent spectrum licences can allow the first licensee to exceed the limits in the out-of-area core licence condition up to the maximum level of radio emissions specified in the agreement.

SCHEDULE 4 EMISSION LIMITS OUTSIDE THE BAND

This Schedule sets the method for calculating the limits that will be placed on radiofrequency emissions that are produced by radiocommunications devices operated under a spectrum licence outside the licence's authorised frequency band (**the out-of-band core licence condition**).

Schedule 4 provides for base emission limits for spurious and non-spurious emissions by radiocommunications devices operating in relevant parts of the 2 GHz band under a spectrum licence, which are not covered by an agreement made between adjacent licensees to exceed the out-of-band core licence condition. A written agreement between a licensee and all affected licensees of frequency-adjacent and area-adjacent spectrum licences can allow the first licensee to exceed the limits in the out-of-band core licence condition up to the maximum level of radio emissions specified in the agreement.

Spurious emissions are emissions that are outside the licence's frequency band that are not deliberately generated or transmitted. These emissions include parasitic emissions, intermodulation products, harmonic emissions and frequency conversion products not associated with the transmission of information by the transmitter.

Non-spurious emissions are emissions that are outside the licence's frequency band that are generated in the process of generating the emission within the licence's frequency band. They include modulation products, wideband noise and switching transients produced as the transmitter is turned on and off.

SCHEDULE 5 SAMPLE SPECTRUM LICENCE

This Schedule sets out a sample spectrum licence for the 2 GHz (unallocated lots) band that will be allocated under the Allocation Determination. It is an example, constructed for the purposes of illustration only, and is not an actual licence. It includes five licence schedules, which are explained below.

Licence Schedule 1 Licence details, bands and areas

This licence schedule sets out the fields for the licensee, the licence issue and expiry dates, and other details of the licence, including the frequency bands of the licence and the geographic area over which they apply.

Licence Schedule 2 Core Conditions

This licence schedule includes the core conditions of the licence. Licence schedule 2 also authorises the operation of radiocommunications devices in accordance with these core conditions.

The core conditions are the conditions in relation to the geographic area and frequency ranges within which devices may be used, the out-of-area core licence condition and the out-of-band core licence condition.

This licence schedule also makes provision for the licensee to exceed the out-of-area and the out-of-band core licence conditions in circumstances where there is a written agreement between the licensee and all affected licensees of frequency-adjacent and area-adjacent spectrum licences. Where such a written agreement exists, the licensee must comply with the maximum permitted level of radio emission specified in the agreement.

Licence Schedule 3 Statutory Conditions

This licence schedule contains other statutory conditions that apply to the licence relating to liability for charges, third party operation of radiocommunications transmitters and transmitter registration requirements. It also includes conditions regarding when a radiocommunications transmitter will be exempt from the requirement to be registered, and residency requirements for licensees.

Licence Schedule 4 Other Conditions

This licence schedule contains other licence conditions that may be included by the ACMA in accordance with section 71 of the Act. One such condition imposes on the licensee the responsibility to manage interference between radiocommunications devices operated under the licence, and between radiocommunications devices operated under the licence and under any other spectrum licence held by the licensee (sample conditions 2(a) and (b) in licence schedule 4). **Managing interference** is defined as including the investigation of the possible causes of interference and the taking of steps reasonably likely to reduce the interference to acceptable levels.

Other conditions included in the sample licence under this licence schedule are:

- > a condition in relation to interference management for radiocommunications devices that are co-sited (located within 200 metres of each other) (sample condition 3);
- > a requirement to provide the ACMA with information to be included in the Register (sample condition 4);
- > a requirement to prevent harmful interference to a receiver operating in another country and in accordance with the ITU Radio Regulations (sample condition 5);
- > a requirement to comply with specified electromagnetic energy regulation (sample condition 6);
- > a requirement to comply with record-keeping requirements for radiocommunications transmitters located at communal sites (sample condition 7);
- > a requirement to follow the procedures set out in the RALI MS 32 in relation to the operation of radiocommunications transmitters in or around the RQZ (sample condition 8);
- > a requirement to ensure that operation of a radiocommunications transmitter that is exempt from registration does not cause harmful interference to other radiocommunications devices operating in the 2 GHz band (sample condition 9);
- > a requirement to ensure that radiocommunications devices operated under the spectrum licence do not exceed the specified spurious emission limits applying to emissions occurring within a continuous guide (i.e. emissions that are not 'radio emissions' within the meaning of the Act), measured at the antenna connector (sample conditions 10-14); and
- > a condition that radiocommunications receivers operating in the 2110-2125 MHz frequency range cannot claim protection from harmful interference caused by radiocommunications transmitters of the space research service operated at the CDSCC (sample condition 15).

Licence Schedule 5 Licence Notes

Example licence notes are included in the sample licence for the purposes of clarification and guidance on the use of the spectrum licence.