Radiocommunications Spectrum Marketing Plan (3.6 GHz Band) 2018

The Australian Communications and Media Authority makes the following plan under section 39A of the *Radiocommunications Act 1992*.

Dated: 27 July 2018

Creina Chapman
[signed]
Member

James Cameron
[signed]
Member/General Manager

Australian Communications and Media Authority

Contents

Part 1—Preliminary

1 Name

This is the *Radiocommunications Spectrum Marketing Plan (3.6 GHz Band) 2018*.

2 Commencement

This instrument commences on the day after it is registered on the Federal Register of Legislation.

Note: The Federal Register of Legislation may be accessed at www.legislation.gov.au.

3 Authority

This instrument is made under section 39A of the Act.

4 Purpose of the instrument

This instrument describes:

(a) the procedures for issuing spectrum licences in the 3.6 GHz band;
(b) the spectrum licences that will be allocated by the ACMA in accordance with this instrument;
(c) some of the matters a licensee must take into account when operating radiocommunications devices under a spectrum licence allocated in accordance with this instrument; and
(d) other matters which a person should take into account when deciding whether to apply for a spectrum licence under the allocation determination.

5 Definitions

In this instrument:

3.4 GHz band means the following frequency bands:

(a) 3425 MHz to 3492.5 MHz; and
(b) 3542.5 MHz to 3700 MHz.

3.6 GHz band means the frequency range 3575 MHz to 3700 MHz in Australia.

3GPP TS 36.211 means the document entitled "LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); Physical channels and modulation (3GPP TS 36.211 version 14.6.0 Release 14)" published by the European Telecommunications Standards Institute (ETSI), as it existed at the time the interference management direction was made.

Note: 3GPP TS 36.211 is available free of charge on the ETSI website at: https://www.etsi.org.

Act means the *Radiocommunications Act 1992*.

active antenna system (AAS) refers to a base station antenna system where the amplitude and/or phase between antenna elements is continually adjusted, resulting in an antenna pattern that varies in response to short term changes in the radio environment.

advisory guidelines means one or both of the following:

(a) *Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters — 3.4 GHz Band) 2015*; and

(b) *Radiocommunications Advisory Guidelines (Managing Interference to Spectrum Licensed Receivers — 3.4 GHz Band) 2015*.

Note: The advisory guidelines are registered on the Federal Register of Legislation.

allocation determination means the *Radiocommunications (Spectrum Licence Allocation – 3.6 GHz Band) Determination 2018*.

applicant has the meaning given by subsection 4(1) of the allocation determination.

applicant information package has the meaning given by subsection 4(1) of the allocation determination.

assignment price has the meaning given by subsection 4(1) of the allocation determination.

assignment round has the meaning given by subsection 4(1) of the allocation determination.

assignment stage has the meaning given by subsection 4(1) of the allocation determination.

auction has the meaning given by subsection 4(1) of the allocation determination.

Australian spectrum map grid or ***ASMG*** means the *Australian Spectrum Map Grid 2012* published by the ACMA on its website at www.acma.gov.au.

balance of the winning price has the meaning given by subsection 4(1) of the allocation determination.

category has the meaning given by subsection 11(1).

deed of financial security has the meaning given by subsection 4(1) of the allocation determination.

earth station has the meaning given in Schedule 1 to the *Radiocommunications (Interpretation) Determination 2015*.

earth station protection zone has the meaning given by RALI MS 44.

eligibility payment has the meaning given by subsection 4(1) of the allocation determination.

geographic area, for a spectrum licence, means the area within which operation of a radiocommunications device is authorised under the licence.

HCIS identifier means an identifier used to describe a geographic area in the HCIS.

hierarchical cell identification scheme or ***HCIS*** means the cell grouping hierarchy scheme used to describe geographic areas in the ASMG.

interference management direction means the *Australian Communications and Media Authority (Radiocommunications Licence Conditions – 3.4 GHz and 3.6 GHz Bands Interference Management) Direction 2018* as in force on the day this instrument commences.

licence schedule means a schedule to the sample spectrum licence.

lot has the meaning given by subsection 11(3).

lot rating has meaning given by subsection 4(1) of the allocation determination.

maximum true mean power means the true mean power measured in a specified rectangular bandwidth that is located within a specified frequency band such that the true mean power is the maximum of true mean powers produced.

Note: The power within the specified rectangular bandwidth is normally established by taking measurements using either an adjacent channel power meter or a spectrum analyser. Estimation of the accuracy of the measuring equipment, measurement procedure and any adjustments made to measurements to take account of practical filter shape factors should be in accordance with good engineering practice.

mean power means the average power measured during an interval of time that is at least 10 times the period of the lowest modulation frequency.

Metropolitan re-allocation declaration means the *Radiocommunications (Spectrum Re-allocation—3.6 GHz Band for Adelaide and Eastern Metropolitan Australia) Declaration 2018*.

Metropolitan re-allocation zone means the area defined in subsection 5(3) of the Metropolitan re-allocation declaration.

non-active antenna system (non-AAS) means a base station antenna system that is not an AAS.

occupied bandwidth, in relation to a radiocommunications transmitter, means the bandwidth of a frequency band, having fixed upper and lower limits, that is necessary to contain not less than 99 per cent of the true mean power of the transmitter's emissions at any time.

Perth re-allocation declaration means the *Radiocommunications (Spectrum Re-allocation—3.6 GHz Band for Perth) Declaration 2018*.

Perth re-allocation zone means the area defined in subsection 5(3) of the Perth re-allocation declaration.

primary price has the meaning given by subsection 4(1) of the allocation determination.

primary stage has the meaning given by subsection4(1) of the allocation determination.

product has the meaning given by subsection 11(2).

PTS transmitter licence means a transmitter licence of the PTS type.

RALI MS 44 means the Radiocommunications Assignment and Licensing Instruction No. MS 44, *Frequency coordination procedures for the Earth Station Protection Zones*, as in existence from time to time and published by the ACMA.

Note: All RALIs made by the ACMA are available on the ACMA website at www.acma.gov.au.

re-allocation declarations means:

(a) the Metropolitan re-allocation declaration;
(b) the Perth re-allocation declaration; and
(c) the Regional Australia re-allocation declaration.

re-allocation period in relation to a re-allocation zone means the re-allocation period determined in the re-allocation declaration that relates to that re-allocation zone.

re-allocation zone means one of the following zones:

(a) the Metropolitan re-allocation zone;
(b) the Perth re-allocation zone;

(c) the Regional Australia re-allocation zone.

region has the meaning given by clause 1 of Schedule 3.

Regional Australia re-allocation declaration means the *Radiocommunications (Spectrum Re-allocation—3.6 GHz Band for Regional Australia) Declaration 2018.*

Regional Australia re-allocation zone means the area defined in subsection 5(3) of the Regional Australia re-allocation declaration.

relevant area has the meaning given by subsection 4(1) of the interference management direction.

relevant band means the part of the spectrum from 3400 to 3700 MHz.

residual lots has the meaning given by subsection 4(1) of the allocation determination.

sample spectrum licence: see section 22.

secondary price has the meaning given by subsection 4(1) of the allocation determination.

secondary stage has the meaning given by subsection 4(1) of the allocation determination.

special subframe configuration 6 means a special subframe configuration, as referred to in clause 4.2 of 3GPP TS 36.211, that is consistent with special subframe configuration 6, as referred to in Table 4.2-1 of 3GPP TS 36.211.

total radiated power or ***TRP*** is the integral of the power transmitted in different directions over the entire radiation sphere. It is measured considering the combination of all radiating elements on an antenna panel or individual device.

true mean power means:

(a) if an unmodulated carrier is present – the mean power measured while the unmodulated carrier is present;

(b) if an unmodulated carrier is not present – the mean power measured while transmitter information is present.

unwanted emission, in relation to the operation of a transmitter authorised by a spectrum licence, means an emission outside the lower and upper frequency limits of the licence.

uplink-downlink configuration 2 means an uplink-downlink configuration, as referred to in clause 4.2 of 3GPP TS 36.211, that is consistent with uplink-downlink configuration 2, as referred to in Table 4.2-2 of 3GPP TS 36.211.

winning bidder has the meaning given by subsection 4(1) of the allocation determination.

Note: A number of other expressions used in this instrument are defined in the Act, including the following:

(a) ACMA;
(b) apparatus licence;
(c) core conditions;
(d) frequency band;
(e) interference;
(f) licensee;
(g) radio emission;
(h) radiocommunications device;
(i) Register;

(j) transmitter licence; and
(k) spectrum licence.

6 References to other instruments

In this instrument, unless the contrary intention appears:

(a) a reference to another legislative instrument is a reference to that other legislative instrument as in force from time to time; and

(b) a reference to any other kind of instrument is a reference to that other instrument as in force from or existing from time to time.

Note 1: For references to Commonwealth Acts, see section 10 of the *Acts Interpretation Act 1901*; and see also subsection 13(1) of the *Legislation Act 2003* for the application of the *Acts Interpretation Act 1901* to legislative instruments.

Note 2: All Commonwealth Acts and legislative instruments are registered on the Federal Register of Legislation.

Note 3: See section 314A of the Act.

7 References to frequency ranges

In this instrument, the range of numbers that identifies a frequency range includes the higher, but not the lower, number.

Part 2—Allocation of spectrum licences

8 Simplified outline of this Part

This Part describes the procedures for allocating spectrum licences that authorise the operation of radiocommunications devices in the 3.6 GHz band.

9 Parts of the spectrum

The ACMA will allocate and issue spectrum licences for spectrum in the 3.6 GHz band in the manner described in this instrument and the allocation determination.

10 How licences will be allocated

Spectrum licences for spectrum in the 3.6 GHz band will be allocated by auction in accordance with the procedures set out in the allocation determination.

Note: Neither the ACMA nor the Commonwealth accepts any liability for any loss or damage suffered by any person participating in the auction. Any person intending to participate in the auction should obtain independent legal, technical and financial advice before applying.

11 The auction

(1) There are three ***categories*** for the 3.6 GHz band. The categories are characterised by:
  (a) the frequencies set out in columns 3 and 4 of Schedule 1; and
  (b) the bandwidth described in column 5 of Schedule 1.

(2) The ACMA has divided up the 3.6 GHz band into ***products*** described in Schedule 2. Each product is characterised by:
  (a) the region for the product, specified in an item of column 3 of Schedule 2; and
  (b) the category to which the product belongs, set out in an item of column 2 of Schedule 2.

(3) The number of units of each product that will be available at the auction is set out in column 4 of Schedule 2. A unit of a product is referred to in this instrument as a ***lot***.

(4) The size of each lot is 5 MHz unpaired.

(5) The ACMA will set a lot rating for each lot under paragraph 28(1)(b) of the allocation determination. All lots in the same region within the same category will have the same lot rating.

(6) The lot rating will be used as the basis for calculating the amount of an applicant's eligibility payment or deed of financial security. Details of this are in section 38 of the allocation determination.

(7) The auction will be held in accordance with the procedures set out in the allocation determination. All lots of each product will be available for allocation in accordance with the allocation determination.

(8) The auction will be carried out in three stages:
  (a) the ***primary stage***, at which all lots are offered and which determines the number and type of lots allocated to, and the primary price to be paid by, each winning bidder in accordance with the allocation determination;

(b) the ***secondary stage***, at which residual lots are offered and which determines the number and type of those lots allocated to, and the secondary price to be paid by, each winning bidder in accordance with the allocation determination; and

(c) the ***assignment stage***, which determines the frequencies that will apply to each lot of each product allocated to each winning bidder and the assignment price to be paid in accordance with the allocation determination.

Note: The allocation determination sets out the detailed rules and procedures for each stage of the auction. There will only be a secondary stage if there is at least one product for which there is exactly one lot remaining unallocated after the end of the primary stage.

(9) Subject to the requirements of the Act, any other relevant laws and the allocation determination, the ACMA will issue a spectrum licence to each person allocated a lot in the auction. The spectrum licence will be for the number and type of lots allocated to that person during the primary or secondary stage, at the frequencies assigned to that person for those lots during the assignment stage of the auction.

12 Advertising the auction

The ACMA will publish details of the auction and invite persons to apply to take part in the auction, in accordance with the allocation determination.

13 Taking part in the auction

(1) The ACMA will make available an applicant information package that contains more details about application requirements and the auction process in accordance with the allocation determination. Details of what must be in the applicant information package are in subsection 27(1) of the allocation determination.

(2) Details of how to apply to take part in the auction are set out in Part 4 of the allocation determination.

Part 3—Spectrum licences to be issued

14 Simplified outline of this Part

This Part describes:

(a) the spectrum licences that will be issued in accordance with this instrument;

(b) some of the matters a licensee must take into account when operating devices under a spectrum licence issued in accordance with this instrument;

(c) conditions to be included in spectrum licences issued in accordance with this instrument; and

(d) other matters which a person should take into account when deciding whether to apply for a spectrum licence to be issued in accordance with this instrument.

15 Issue of licences

Subject to the Act, the allocation determination and other relevant law, the ACMA will issue a spectrum licence to the person to whom it is allocated as soon as practicable after the person pays to the ACMA, on behalf of the Commonwealth, the balance of the winning price in accordance with Division 2 of Part 6 of the allocation determination.

16 Duration of licences

Licences issued to a person who has been allocated a lot or lots as a result of the auction will start on the date set out in section 17 and will be for a fixed term with an expiry date of 13 December 2030

Note 1: In accordance with the Act, a licence may be resumed or cancelled before the expiry date.

Note 2: Potential applicants should note that new spectrum legislation is proposed that, if made, would replace the Act and may affect licences issued under this instrument. Further information about the proposed legislation can be found at www.communications.gov.au/what-we-do/spectrum/spectrum-reform.

17 Commencement of licences

A licence issued to a person who has been allocated a product as a result of the auction will come into force on 30 March 2020.

18 Core licence conditions

(1) Section 66 of the Act requires spectrum licences to include the following core conditions:

(a) a condition specifying the part or parts of the spectrum in which operation of radiocommunications devices is authorised under the licence;

(b) a condition specifying the maximum permitted level of radio emission, in parts of the spectrum outside such a part, that may be caused by operation of radiocommunications devices under the licence;

(c) a condition specifying the area within which operation of radiocommunications devices is authorised under the licence;

(d) a condition specifying the maximum permitted levels of radio emission, outside that area, that may be caused by operation of radiocommunications devices under the licence.

(2) These conditions will be included in the spectrum licences issued in accordance with this instrument.

Note 1: These core conditions may be varied by the ACMA, with the licensee's agreement, under section 72 of the Act.

Note 2: Potential applicants should note that new spectrum legislation is proposed that, if made, would replace the Act and may these licence conditions and/or affect the ACMA's ability to vary licence conditions. Further information about the proposed legislation can be found at www.communications.gov.au/what-we-do/spectrum/spectrum-reform.

19 Determining core licence conditions

(1) For each spectrum licence issued to a person as a result of the auction:

(a) the licence will be for the frequencies, or the aggregation of the frequencies, assigned to the lots allocated to the person in accordance with the allocation determination; and

(b) the geographic area of a licence will be, for the frequencies assigned to each lot allocated to the person in accordance with the allocation determination, the region described in Schedule 3 that is the region for the lot.

(2) The emission limits outside the geographic area for all licences issued in accordance with this instrument will be calculated in accordance with Schedule 4.

(3) The emission limits outside part or parts of the spectrum for each licence issued in accordance with this instrument will be calculated in accordance with Schedule 5.

20 Other licence conditions

(1) Each spectrum licence will also include conditions about:

(a) the payment of charges (section 67 of the Act);

(b) use by third parties (section 68 of the Act);

(c) registration of transmitters (section 69 of the Act); and

(d) residency (section 69A of the Act).

(2) Each spectrum licence will include a condition requiring the licensee to provide protection to any radiocommunications devices operating in a re-allocation zone in the 3.6 GHz band in accordance with an apparatus licence in the manner set out in Parts 3, 4 and 5 of the *Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters — 3.4 GHz Band) 2015* until the end of the re-allocation period for the relevant re-allocation zone.

Note: For the Perth re-allocation zone, the re-allocation period ends in 2023. For the Regional re-allocation zone, the re-allocation period ends in 2025. Accordingly, for these zones there will be a period during which spectrum licences will co-exist with apparatus licences. Also, apparatus licences may be issued in spectrum covered by a re-allocation declaration in the circumstances set out in section 153P of the Act.

(3) Each spectrum licence will include a condition requiring the licensee to follow the procedures specified in RALI MS44 for coordination with, and protection of, any earth stations operating in the 3.6 GHz band in earth station protection zones.

(4) Each spectrum licence will include a condition requiring licensees to synchronise operation of devices operated under their licence with other devices operating in the relevant band and within any relevant area under a spectrum licence or PTS transmitter licence, in certain circumstances. The condition will be in the terms set out at clause 11 of Licence Schedule 4 of the sample spectrum licence.

Note: This condition is included in this instrument on the basis that the ACMA will include equivalent conditions on existing spectrum licences and PTS transmitter licences in the 3.4 GHz band. For

more, see the interference management direction. However, if such a condition is not included on such a spectrum licence of PTS transmitter licence, the ACMA may consider applying different interference management arrangements to 3.6 GHz spectrum licences.

(5) Each spectrum licence will include a condition requiring licensees to manage interference caused by spurious emissions at frequencies below 3360 MHz and above 3740 MHz which are not caused by operation of the radiocommunications device in a manner that does not comply with the conditions of the licence (other than this condition).

21 Registration of transmitters

(1) Each spectrum licence will include a condition that prohibits operation of a radiocommunications transmitter unless the requirements under Part 3.5 of the Act to have the transmitter registered have been met.

Note 1: Under subsection 145(1) of the Act, the ACMA may refuse to include in the Register details of a radiocommunications transmitter that is proposed to be operated under a spectrum licence if the ACMA is satisfied that operation of the transmitter could cause an unacceptable level of interference to the operation of other radiocommunications devices under that or any other licence.

Note 2: Subsection 145(4) of the Act states that the ACMA may determine, by written instrument, what are acceptable levels of interference for the purposes of section 145 of the Act.

Note 3: The *Radiocommunications (Unacceptable Levels of Interference — 3.4 GHz Band) Determination 2015* sets out what are the unacceptable levels of interference for the purpose of registering devices to be operated under a licence issued in accordance with this instrument, and is to be used for the issue of certificates by accredited persons under subsection 145(3) of the Act.

(2) Each spectrum licence will include a condition that states that radiocommunications transmitters that operate in the 3.6 GHz band with a maximum total radiated power of less than or equal to 28 dBm per occupied bandwidth are exempt from registration.

(3) Each spectrum licence will include a condition that states that the licensee must ensure that operation of a radiocommunications transmitter that is exempt from registration under subsection (2) does not cause harmful interference to other radiocommunications devices operated in the 3.6 GHz band under a different spectrum or apparatus licence.

22 Draft sample licence

Schedule 6 sets out a sample spectrum licence (***sample spectrum licence***) including conditions that may be included in each spectrum licence that is issued in the 3.6 GHz band.

Note: The ACMA may include conditions in a spectrum licence that are not included in the sample spectrum licence.

23 Advisory guidelines

The advisory guidelines provide a means of coordinating services operating under spectrum licences with other services.

Part 4—After allocation

24 Simplified outline of this Part

This Part describes various matters that apply after licences are issued in accordance with this instrument.

25 Registration of licences

The ACMA will register all spectrum licences in accordance with Part 3.5 of the Act.

Note 1: Details about registration are in the *Radiocommunications (Register of Radiocommunications Licences) Determination 2017*.

Note 2: Potential applicants should note that new spectrum legislation is proposed that, if made, would replace the Act. Further information about the proposed legislation can be found at https://www.communications.gov.au/what-we-do/spectrum/spectrum-reform.

26 Third party use

A licensee may authorise other persons to operate radiocommunications devices under any spectrum licence issued to it, provided it does so in accordance with Division 1 of Part 3.2 of the Act.

Note: Potential applicants should note that new spectrum legislation is proposed that, if made, would replace the Act. Further information about the proposed legislation can be found at www.communications.gov.au/what-we-do/spectrum/spectrum-reform.

27 Trading in spectrum licences

(1) A licensee may assign, or otherwise deal with, the whole or any part of a spectrum licence, provided it does so in accordance with Division 5 of Part 3.2 of the Act.

(2) The ACMA has made rules under section 88 of the Act to regulate trading in spectrum licences. Section 85 of the Act requires assignments of the whole or part of any spectrum licence to comply with these rules.

Note 1: The rules are set out in the *Radiocommunications (Trading Rules for Spectrum Licences) Determination 2012*.

Note 2: Potential applicants should note that new spectrum legislation is proposed that, if made, would replace the Act. Further information about the proposed legislation can be found at www.communications.gov.au/what-we-do/spectrum/spectrum-reform.

28 Agreements about emission limits

A licensee may enter into an agreement for the purpose of one or more of the following:

(a) clause 1 of Schedule 4 (about emission limits outside the geographic area of the licence); or

(b) clause 1 of Schedule 5 (about emission limits outside the band of the licence).

Note: Potential applicants should note that new spectrum legislation is proposed that, if made, would replace the Act. Further information about the proposed legislation can be found at www.communications.gov.au/what-we-do/spectrum/spectrum-reform.

29 Spectrum licences that are about to expire

As required by section 78 of the Act, the ACMA must, from time to time, publish on its website a notice that:

(a) states where information may be obtained about:

(i) the spectrum licences that will expire during a period specified in the notice; and

(ii) the parts of the spectrum to which they relate; and

(b) invites expressions of interest from persons who wish to have issued to them spectrum licences relating to those parts of the spectrum.

Note: Potential applicants should note that new spectrum legislation is proposed that, if made, would replace the Act and may affect requirements and processes relating to expiring spectrum licence. Further information about the proposed legislation can be found at www.communications.gov.au/what-we-do/spectrum/spectrum-reform.

30 Re-issue of licence

(1) The ACMA re-issues licences in accordance with Division 4 of Part 3.2 of the Act.

(2) Spectrum licences that are re-issued may not take the same form as originally issued, as the lots may be divided and distributed differently. Conditions on the spectrum licences may also change upon re-issue. A person considering applying to participate in the allocation process should not assume that, if the person is issued with a licence in accordance with this instrument:

(a) the licence will be re-issued to the person; or

(b) if the licence is re-issued to the person – the re-issued licence will have the same conditions as the licence originally issued to the person.

Note: Potential applicants should note that new spectrum legislation is proposed that, if made, would replace the Act and may affect requirements and processes relating to the re-issue spectrum licences. Further information about the proposed legislation can be found at www.communications.gov.au/what-we-do/spectrum/spectrum-reform.

Schedule 1—Categories

(subsection 11(1))

Table 1 Categories

Column 1	Column 2	Column 3	Column 4	Column 5
Category No.	**Category Name**	**Lower frequency**	**Upper frequency**	**Lot Bandwidth**
1	3.6 GHz (ex PERTH)	3575 MHz	3700 MHz	5 MHz
2	3.6 GHz PERTH LOWER	3575 MHz	3655MHz	5 MHz
3	3.6 GHz PERTH UPPER	3655 MHz	3700 MHz	5 MHz

Schedule 2—Products

(subsection 11(2))

Table 1 Products

Column 1	Column 2	Column 3	Column 4
Product	**Category No**	**Region**	**No. of lots**
ADEL01	1	Adelaide	25
BRIS01	1	Brisbane	25
CANB01	1	Canberra	25
MELB01	1	Melbourne	25
SYDN01	1	Sydney	25
PERT01	2	Perth	16
PERT02	3	Perth	9
NQLD01	1	North Queensland	25
CQLD01	1	Central Queensland	25
RNSQ01	1	Regional Northern NSW/Southern Queensland	25
RSWN01	1	Regional Southern/Western NSW	25
RVIC01	1	Regional Victoria	25
TASM01	1	Tasmania	25
RESA01	1	Regional South Australia	25
REWA01	1	Regional Western Australia	25

Schedule 3—Regions

(section 5 and paragraph 19(1)(b))

1 The regions

(1) Each of the following areas is a ***region***:

(a) Adelaide;
(b) Brisbane;
(c) Canberra;
(d) Melbourne;
(e) Sydney;
(f) Perth;
(g) North Queensland;
(h) Central Queensland;
(i) Regional Northern NSW/Southern QLD;
(j) Regional Southern/Western NSW
(k) Regional Victoria;
(l) Tasmania;
(m) Regional South Australia; and
(n) Regional Western Australia.

Note: Each region falls entirely within one or more of the re-allocation zones.

(2) The regions are described using the hierarchical cell identifier scheme in the ASMG. The 14 regions are described by the HCIS identifiers specified in Table 1 for each region. There are four levels to the HCIS, corresponding to 3 degree cells, 1 degree cells, 15 minute cells and 5 minute cells of the ASMG.

(3) The geographic area of each region can be determined by the aggregation of block areas represented by the HCIS identifiers used to describe the region. Refer to the ASMG for a complete description of the HCIS naming convention, as published by the ACMA.

Note: The map included in this Schedule is included for information only. The ACMA does not accept responsibility for the accuracy of that information. Potential participants in the allocation should obtain their own advice and make their own inquiries into the pictorial representation of the region.

Table 1 HCIS identifiers for spectrum licences in the 3.6 GHz band

Region	HCIS identifiers
Adelaide	IW3J, IW3K, IW3N, IW3O, IW3P, IW6B, IW6C, IW3E5, IW3E6, IW3E8, IW3E9, IW3F4, IW3F5, IW3F7, IW3F8, IW3F9, IW3I2, IW3I3, IW3I5, IW3I6, IW3I8, IW3I9, IW3L4, IW3L7, IW3M2, IW3M3, IW3M5, IW3M6, IW3M8, IW3M9, IW6A2, IW6A3, IW6A5, IW6A6, IW6A8, IW6A9, IW6D1, IW6D2, IW6D3, IW6D4, IW6D5, IW6D6, IW6E2, IW6E3, IW6F1, IW6F2, IW6F3, IW6G1, IW6G2, IW6G3
Brisbane	NT8D, NT8H, NT8L, NT9A, NT9B, NT9E, NT9F, NT8C3, NT8C6, NT8C9, NT8G1, NT8G2, NT8G3, NT8G5, NT8G6, NT8G8, NT8G9, NT8K2, NT8K3, NT8K6, NT8K9, NT8O3, NT8P1, NT8P2, NT8P3, NT9C1, NT9C4, NT9C7, NT9G1, NT9G4, NT9G7, NT9I1, NT9I2, NT9I3, NT9I4, NT9I5, NT9I6, NT9I7, NT9I8, NT9J1, NT9J2, NT9J3, NT9J4, NT9J5, NT9J6, NT9K1, NT9K4, NT9M1, NT9M2

Schedule 3 Regions

Region	HCIS identifiers
Canberra	MW4H, MW4L, MW5A, MW5E, MW5I, MW4D7, MW4D8, MW4D9, MW4P3, MW5B4, MW5B7, MW5B8, MW5F1, MW5F2, MW5M1, MW5M2, MW4G1, MW4G2, MW4G3, MW4G5, MW4G6, MW4G8, MW4G9, MW4K2, MW4K3, MW4K5, MW4K6, MW4P6, MW5M4, MW5M5
Melbourne	KX3K, KX3L, KX3O, KX3P, KX6A, KX6B, KX6C, KX6D, KX6E, KX6F, KX6G, KX6H, KX6I, KX6J, KX6K, KX6L, LX1I, LX1M, LX4A, KX3F8, KX3F9, KX3G7, KX3G8, KX3G9, KX3H7, KX3H8, KX3H9, KX3J2, KX3J3, KX3J5, KX3J6, KX3J8, KX3J9, KX3M5, KX3M6, KX3M8, KX3M9, KX3N2, KX3N3, KX3N4, KX3N5, KX3N6, KX3N7, KX3N8, KX3N9, KX5D2, KX5D3, KX5D5, KX5D6, KX5D8, KX5D9, KX5H2, KX5H3, KX5H5, KX5H6, KX5H8, KX5H9, KX5L2, KX5L3, KX5L5, KX5L6, KX5L8, KX5L9, LX1E7, LX1E8, LX1E9, LX1J1, LX1J4, LX1J5, LX1J7, LX1J8, LX1N1, LX1N2, LX1N4, LX1N5, LX1N6, LX1N7, LX1N8, LX1N9, LX4B1, LX4B4, LX4B7, LX4E1, LX4E2, LX4E3, LX4E4, LX4E5, LX4E6, LX4E7, LX4I1, LX4I4, LX4I7
Sydney	MV9K, MV9L, MV9O, MV9P, MW3C, NV4P, NV5M, NV7B, NV7C, NV7D, NV7E, NV7F, NV7G, NV7H, NV7I, NV7J, NV7K, NV7L, NV7M, NV7N, NV7O, NV7P, MV9D6, MV9D9, MV9G4, MV9G5, MV9G6, MV9G7, MV9G8, MV9G9, MV9H3, MV9H4, MV9H5, MV9H6, MV9H7, MV9H8, MV9H9, MW3D1, MW3D2, MW3D3, MW3D4, MW3D5, MW3D6, MW3D7, MW3D8, MW3G1, MW3G2, MW3G3, MW3H1, NV4L4, NV4L5, NV4L6, NV4L7, NV4L8, NV4L9, NV4M5, NV4M6, NV4M8, NV4M9, NV4N4, NV4N5, NV4N6, NV4N7, NV4N8, NV4N9, NV4O3, NV4O4, NV4O5, NV4O6, NV4O7, NV4O8, NV4O9, NV5I4, NV5I5, NV5I6, NV5I7, NV5I8, NV5I9, NV5J4, NV5J7, NV5N1, NV5N4, NV5N7, NV7A2, NV7A3, NV7A4, NV7A5, NV7A6, NV7A7, NV7A8, NV7A9, NW1A1, NW1A2, NW1A3, NW1A4, NW1A5, NW1A6, NW1B1, NW1B2, NW1B3, NW1B4, NW1B5, NW1B6, NW1C1, NW1C2, NW1C3, NW1C4, NW1C5, NW1C6, NW1D1, NW1D2, NW1D3, NW1D4, NW1D5, NW1D6
Perth	BV1I, BV1J, BV1K, BV1L, BV1M, BV1N, BV1O, BV1P, BV2I, BV2J, BV2M, BV2N, BV4A, BV4B, BV4C, BV4D, BV4E, BV4F, BV4G, BV4H, BV4I, BV4J, BV4K, BV4L, BV5A, BV5B, BV5E, BV5F, BV5I, BV5J, BV1E7, BV1E8, BV1E9, BV1F7, BV1F8, BV1F9, BV1G7, BV1G8, BV1G9, BV1H7, BV1H8, BV1H9, BV2E7, BV2E8, BV2E9, BV2F7, BV2F8, BV2F9, BV4M1, BV4M2, BV4M3, BV4N1, BV4N2, BV4N3, BV4O1, BV4O2, BV4O3, BV4P1, BV4P2, BV4P3, BV5M1, BV5M2, BV5M3, BV5N1, BV5N2, BV5N3
North Queensland	KP6, LP4, KP7, KP8, KP9, LP7, KQ, LQ1, LQ2, LQ4, LQ5, KO1, KO4, KO5, KO7, KO8, KP1, KP2, KP4, KP5
Central Queensland	LR, MS, LQ7, LQ8, MR1, MR4, MR5, MR7, MR8, MR9, NS4, NS7A, NS7B, NS7C, NS7D, NS7E, NS7F, NS7G, NS7H, NS8A, NS8B, NS8C, NS8D, NS8E, NS8F, NS8G, NS8H, NS9A, NS9B, NS9C, NS9D, NS9E, NS9F, NS9G, NS9H
Regional Northern NSW/Southern Queensland	MT1, MT2, MT3, MT6, MT7, MT8, MT9, MU1, MU2, MU3, MU4, MU7, MU8, MU9, NT1, NT2, NT3, NT4, NT5, NT6, NT7, NU1, NU2, NU3, NU4, NU5, NU6, NU8, NU9, MT4A, MT4B, MT4C, MT4D, MT4E, MT4I, MT4M, MT4N, MT5A, MT5B, MT5C, MT5D, MT5F, MT5G, MT5H, MT5J, MT5K, MT5L, MT5N, MT5O, MT5P, MU5A, MU5B, MU5E, MU5F, MU5I, MU5J, MU5M, MU5N, MU5O, MU5P, MU6B, MU6C, MU6D, MU6F, MU6G, MU6H, MU6J, MU6K, MU6L,

Region	HCIS identifiers
	MU6M, MU6N, MU6O, MU6P, MV1A, MV1B, MV1C, MV1D, MV1E, MV1F, MV1G, MV1H, MV2A, MV2B, MV2C, MV2D, MV2E, MV2F, MV2G, MV2H, MV3A, MV3B, MV3E, NS7I, NS7J, NS7K, NS7L, NS7M, NS7N, NS7O, NS7P, NS8I, NS8J, NS8K, NS8L, NS8M, NS8N, NS8O, NS8P, NS9I, NS9J, NS9K, NS9L, NS9M, NS9N, NS9O, NS9P, NT8A, NT8B, NT8E, NT8F, NT8I, NT8J, NT8M, NT8N, NT9D, NT9H, NT9L, NT9N, NT9O, NT9P, NU7A, NU7B, NU7C, NU7D, NU7E, NU7F, NU7G, NU7H, NU7I, NU7J, NU7L, NU7M, NU7N, NU7O, NU7P, NV1A, NV1B, NV1C, NV1D, NV1E, NV1F, NV1G, NV1H, NV2A, NV2B, NV2C, NV2D, NV3A, NV3B, NV3C, NV3D, MT4F1, MT4F2, MT4F3, MT4F4, MT4F5, MT4F6, MT4F7, MT4F8, MT4G1, MT4J1, MT4J2, MT4J4, MT4J5, MT4J7, MT4J8, MT4J9, MT4O4, MT4O5, MT4O7, MT4O8, MT4O9, MT4P6, MT4P7, MT4P8, MT4P9, MT5E1, MT5E2, MT5E3, MT5E5, MT5E6, MT5E8, MT5E9, MT5I3, MT5I6, MT5I8, MT5I9, MT5M2, MT5M3, MT5M4, MT5M5, MT5M6, MT5M7, MT5M8, MT5M9, MU5C1, MU5C2, MU5C3, MU5C4, MU5C5, MU5C6, MU5C7, MU5D1, MU5D2, MU5D3, MU5D4, MU5D5, MU5D6, MU5K7, MU6A1, MU6A2, MU6A3, MU6A4, MU6A5, MU6A6, MU6A8, MU6A9, MU6E3, MU6E6, MU6E9, MU6I3, MU6I6, MU6I8, MU6I9, MV3C1, MV3C2, MV3C3, MV3C4, MV3C5, MV3C6, MV3C7, MV3D1, MV3D2, MV3D3, MV3D4, MV3D5, MV3D6, MV3D8, MV3D9, MV3F1, MV3F2, MV3F4, MV3F7, NT8C1, NT8C2, NT8C4, NT8C5, NT8C7, NT8C8, NT8G4, NT8G7, NT8K1, NT8K4, NT8K5, NT8K7, NT8K8, NT8O1, NT8O2, NT8O4, NT8O5, NT8O6, NT8O7, NT8O8, NT8O9, NT8P4, NT8P5, NT8P6, NT8P7, NT8P8, NT8P9, NT9C2, NT9C3, NT9C5, NT9C6, NT9C8, NT9C9, NT9G2, NT9G3, NT9G5, NT9G6, NT9G8, NT9G9, NT9I9, NT9J7, NT9J8, NT9J9, NT9K2, NT9K3, NT9K5, NT9K6, NT9K7, NT9K8, NT9K9, NT9M3, NT9M4, NT9M5, NT9M6, NT9M7, NT9M8, NT9M9, NU7K1, NU7K2, NU7K3, NU7K5, NU7K6, NU7K7, NU7K8, NU7K9
Regional Southern/Western NSW	LV, JV3, JV6, KV1, KV2, KV3, KV4, KV5, KV6, KV8, KV9, KW3, LW1, LW2, LW3, MV4, MV5, MV6, MV7, MV8, MW1, MW2, MW6, MW7, MW8, MW9, KV7A, KV7B, KV7C, KV7D, KV7E, KV7F, KV7G, KV7H, KV7J, KV7K, KV7L, KV7O, KV7P, LW6A, LW6B, LW6C, LW6D, LW6E, LW6F, LW6G, LW6H, LW6L, LW6P, MV1I, MV1J, MV1K, MV1L, MV1M, MV1N, MV1O, MV1P, MV2I, MV2J, MV2K, MV2L, MV2M, MV2N, MV2O, MV2P, MV3I, MV3M, MV3N, MV9A, MV9B, MV9C, MV9E, MV9F, MV9I, MV9J, MV9M, MV9N, MW3A, MW3B, MW3E, MW3F, MW3I, MW3J, MW3K, MW3L, MW3M, MW3N, MW3O, MW3P, MW4A, MW4B, MW4C, MW4E, MW4F, MW4I, MW4J, MW4M, MW4N, MW4O, MW5C, MW5D, MW5G, MW5H, MW5J, MW5K, MW5L, MW5N, MW5O, MW5P, MX2A, MX2B, MX2C, MX2D, MX3A, MX3B, MX3C, MX3D, NV1I, NV1J, NV1K, NV1L, NV1M, NV1N, NV1O, NV1P, NV2E, NV2F, NV2G, NV2H, NV2I, NV2J, NV2K, NV2L, NV2M, NV2N, NV2O, NV2P, NV3E, NV3F, NV3G, NV3H, NV3I, NV3J, NV3K, NV3L, NV3M, NV3N, NV3O, NV3P, NV4A, NV4B, NV4C, NV4D, NV4E, NV4F, NV4G, NV4H, NV4I, NV4J, NV4K, NV5A, NV5B, NV5C, NV5D, NV5E, NV5F, NV5G, NV5H, NV5K, NV5L, NV5O, NV5P, NW1E, NW1F, NW1G, NW1H, NW1I, NW1J, NW1K, NW1L, NW1M, NW1N, NW1O, NW1P, MV3J1, MV3J4, MV3J7, MV3J8, MV3O4, MV3O5, MV3O6, MV3O7, MV3O8, MV3O9, MV3P2, MV3P3, MV3P4, MV3P5, MV3P6, MV3P7, MV3P8, MV3P9, MV9D1, MV9D2, MV9D3, MV9D4, MV9D5, MV9D7, MV9D8, MV9G1, MV9G2, MV9G3, MV9H1, MV9H2, MW3D9, MW3G4, MW3G5, MW3G6, MW3G7, MW3G8, MW3G9, MW3H2, MW3H3, MW3H4, MW3H5,

Schedule 3 Regions

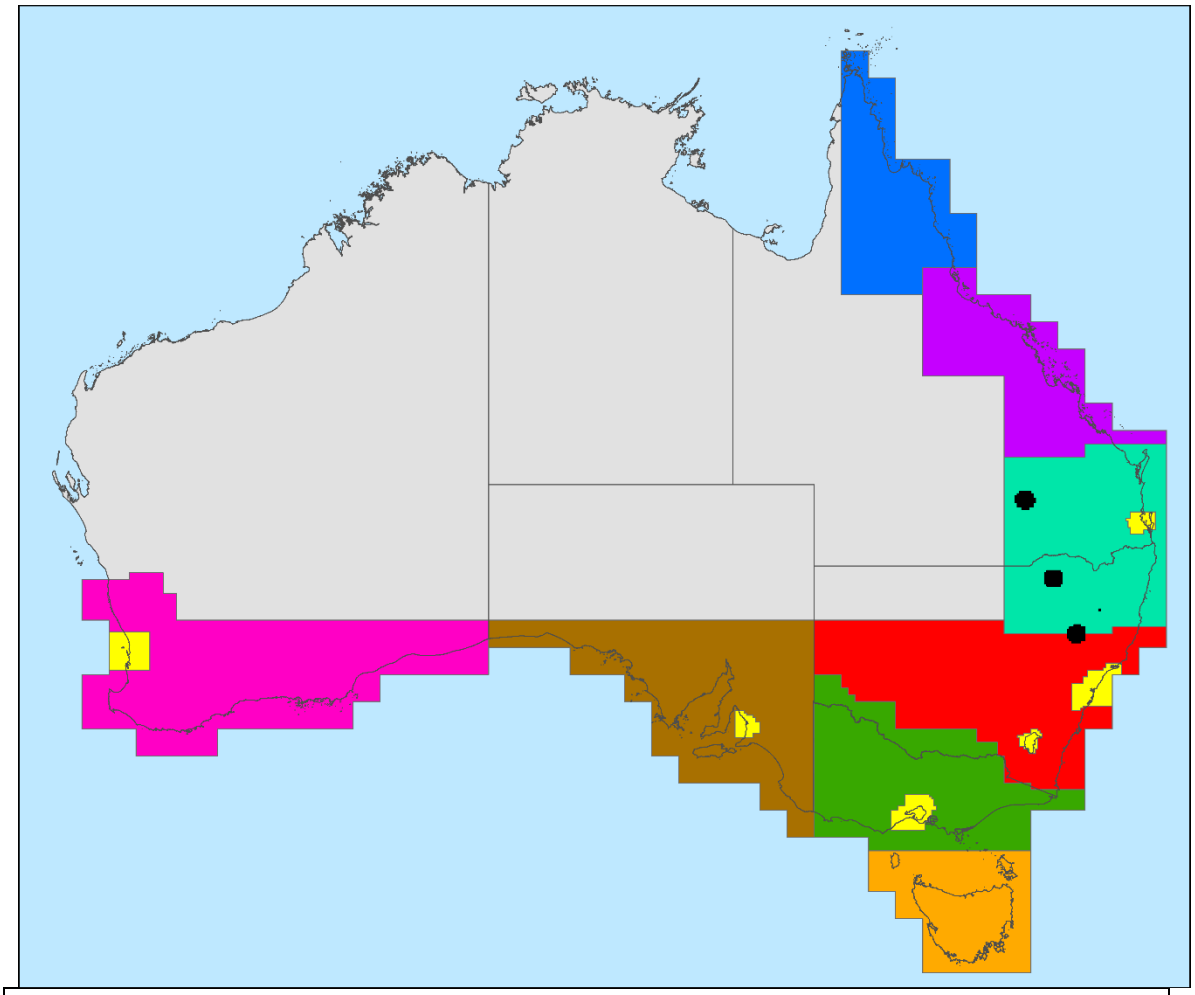
Region	HCIS identifiers
	MW3H6, MW3H7, MW3H8, MW3H9, MW4D1, MW4D2, MW4D3, MW4D4, MW4D5, MW4D6, MW4G4, MW4G7, MW4K1, MW4K4, MW4K7, MW4K8, MW4K9, MW4P1, MW4P2, MW4P4, MW4P5, MW4P7, MW4P8, MW4P9, MW5B1, MW5B2, MW5B3, MW5B5, MW5B6, MW5B9, MW5F3, MW5F4, MW5F5, MW5F6, MW5F7, MW5F8, MW5F9, MW5M3, MW5M6, MW5M7, MW5M8, MW5M9, NV4L1, NV4L2, NV4L3, NV4M1, NV4M2, NV4M3, NV4M4, NV4M7, NV4N1, NV4N2, NV4N3, NV4O1, NV4O2, NV5I1, NV5I2, NV5I3, NV5J1, NV5J2, NV5J3, NV5J5, NV5J6, NV5J8, NV5J9, NV5N2, NV5N3, NV5N5, NV5N6, NV5N8, NV5N9, NV7A1, NW1A7, NW1A8, NW1A9, NW1B7, NW1B8, NW1B9, NW1C7, NW1C8, NW1C9, NW1D7, NW1D8, NW1D9
Regional Victoria	JV9, JW3, JW6, JW9, JX3, JX6, KW1, KW2, KW4, KW5, KW6, KW7, KW8, KW9, KX1, KX2, KX4, LW4, LW5, LW7, LW8, LW9, LX2, LX3, LX5, LX6, MX1, MX4, KV7I, KV7M, KV7N, KX3A, KX3B, KX3C, KX3D, KX3E, KX3I, KX5A, KX5B, KX5C, KX5E, KX5F, KX5G, KX5I, KX5J, KX5K, KX5M, KX5N, KX5O, KX5P, KX6M, KX6N, KX6O, KX6P, KX8A, KX8B, KX8C, KX8D, KX8E, KX8F, KX8G, KX8H, KX9A, KX9B, KX9C, KX9D, KX9E, KX9F, KX9G, KX9H, LW6I, LW6J, LW6K, LW6M, LW6N, LW6O, LX1A, LX1B, LX1C, LX1D, LX1F, LX1G, LX1H, LX1K, LX1L, LX1O, LX1P, LX4C, LX4D, LX4F, LX4G, LX4H, LX4J, LX4K, LX4L, LX4M, LX4N, LX4O, LX4P, LX7A, LX7B, LX7C, LX7D, LX7E, LX7F, LX7G, LX7H, LX8A, LX8B, LX8C, LX8D, LX8E, LX8F, LX8G, LX8H, LX9A, LX9B, LX9C, LX9D, LX9E, LX9F, LX9G, LX9H, MX2E, MX2F, MX2G, MX2H, MX2I, MX2J, MX2K, MX2L, MX2M, MX2N, MX2O, MX2P, MX3E, MX3F, MX3G, MX3H, MX3I, MX3J, MX3K, MX3L, MX3M, MX3N, MX3O, MX3P, MX7A, MX7B, MX7C, MX7D, MX7E, MX7F, MX7G, MX7H, KX3F1, KX3F2, KX3F3, KX3F4, KX3F5, KX3F6, KX3F7, KX3G1, KX3G2, KX3G3, KX3G4, KX3G5, KX3G6, KX3H1, KX3H2, KX3H3, KX3H4, KX3H5, KX3H6, KX3J1, KX3J4, KX3J7, KX3M1, KX3M2, KX3M3, KX3M4, KX3M7, KX3N1, KX5D1, KX5D4, KX5D7, KX5H1, KX5H4, KX5H7, KX5L1, KX5L4, KX5L7, LX1E1, LX1E2, LX1E3, LX1E4, LX1E5, LX1E6, LX1J2, LX1J3, LX1J6, LX1J9, LX1N3, LX4B2, LX4B3, LX4B5, LX4B6, LX4B8, LX4B9, LX4E8, LX4E9, LX4I2, LX4I3, LX4I5, LX4I6, LX4I8, LX4I9
Tasmania	LY, KY2, KY3, KY6, LZ1, LZ2, LZ3, MY1, MY4, MY7, MZ1, KX8I, KX8J, KX8K, KX8L, KX8M, KX8N, KX8O, KX8P, KX9I, KX9J, KX9K, KX9L, KX9M, KX9N, KX9O, KX9P, LX7I, LX7J, LX7K, LX7L, LX7M, LX7N, LX7O, LX7P, LX8I, LX8J, LX8K, LX8L, LX8M, LX8N, LX8O, LX8P, LX9I, LX9J, LX9K, LX9L, LX9M, LX9N, LX9O, LX9P, MX7I, MX7J, MX7K, MX7L, MX7M, MX7N, MX7O, MX7P
Regional South Australia	IV, FV3, GV1, GV2, GV3, GV6, HV1, HV2, HV3, HV4, HV5, HV6, HV8, HV9, HW3, HW6, IW1, IW2, IW4, IW5, IW7, IW8, IW9, JV1, JV2, JV4, JV5, JV7, JV8, JW1, JW2, JW4, JW5, JW7, JW8, JX1, JX2, JX5, IW3A, IW3B, IW3C, IW3D, IW3G, IW3H, IW6H, IW6I, IW6J, IW6K, IW6L, IW6M, IW6N, IW6O, IW6P, IW3E1, IW3E2, IW3E3, IW3E4, IW3E7, IW3F1, IW3F2, IW3F3, IW3F6, IW3I1, IW3I4, IW3I7, IW3L1, IW3L2, IW3L3, IW3L5, IW3L6, IW3L8, IW3L9, IW3M1, IW3M4, IW3M7, IW6A1, IW6A4, IW6A7, IW6D7, IW6D8, IW6D9, IW6E1, IW6E4, IW6E5, IW6E6, IW6E7, IW6E8, IW6E9, IW6F4, IW6F5, IW6F6, IW6F7, IW6F8, IW6F9, IW6G4, IW6G5, IW6G6, IW6G7, IW6G8, IW6G9
Regional Western Australia	CV, DV, AU9, AV9, AW3, BU7, BU8, BV3, BV6, BV7, BV8, BV9, BW1, BW2, BW3, BW5, BW6, CW1, CW2, CW3, CW4, DW1, DW2, DW3, EV1, EV2, EV3,

Schedule 3 Regions

Region	HCIS identifiers
	EV4, EV5, EV6, EV7, FV1, FV2, FV4, FV5, AU6I, AU6J, AU6K, AU6L, AU6M, AU6N, AU6O, AU6P, BU4H, BU4I, BU4J, BU4K, BU4L, BU4M, BU4N, BU4O, BU4P, BU5E, BU5F, BU5G, BU5H, BU5I, BU5J, BU5K, BU5L, BU5M, BU5N, BU5O, BU5P, BU9A, BU9B, BU9E, BU9F, BU9I, BU9J, BU9M, BU9N, BV1A, BV1B, BV1C, BV1D, BV2A, BV2B, BV2C, BV2D, BV2G, BV2H, BV2K, BV2L, BV2O, BV2P, BV5C, BV5D, BV5G, BV5H, BV5K, BV5L, BV5O, BV5P, BV1E1, BV1E2, BV1E3, BV1E4, BV1E5, BV1E6, BV1F1, BV1F2, BV1F3, BV1F4, BV1F5, BV1F6, BV1G1, BV1G2, BV1G3, BV1G4, BV1G5, BV1G6, BV1H1, BV1H2, BV1H3, BV1H4, BV1H5, BV1H6, BV2E1, BV2E2, BV2E3, BV2E4, BV2E5, BV2E6, BV2F1, BV2F2, BV2F3, BV2F4, BV2F5, BV2F6, BV4M4, BV4M5, BV4M6, BV4M7, BV4M8, BV4M9, BV4N4, BV4N5, BV4N6, BV4N7, BV4N8, BV4N9, BV4O4, BV4O5, BV4O6, BV4O7, BV4O8, BV4O9, BV4P4, BV4P5, BV4P6, BV4P7, BV4P8, BV4P9, BV5M4, BV5M5, BV5M6, BV5M7, BV5M8, BV5M9, BV5N4, BV5N5, BV5N6, BV5N7, BV5N8, BV5N9

2 Indicative pictorial representation

The areas shaded in the map are only an indicative pictorial representation of each region. The ACMA does not accept responsibility for the accuracy of the information in the map.



KEY:		
Black	Excised areas	Moree, NSW
		Quirindi, NSW
		Roma, QLD
		Uralla, NSW
Yellow	Metro areas	Adelaide
		Brisbane
		Canberra
		Melbourne
		Sydney
		Perth
Blue	Regional areas	North Queensland
Purple		Central Queensland
Turquoise		Regional Northern NSW/Southern Queensland
Red		Regional Southern/Western NSW
Green		Regional Victoria
Orange		Tasmania
Brown		Regional South Australia
Pink		Regional Western Australia

Schedule 4—Emission limits outside the area

(subsection 19(2))

1 Emission limits outside the area specified by written agreement

(1) Where a written agreement specifying the maximum permitted level of radio emissions exists between:
  (a) the licensee; and
  (b) all the affected licensees of frequency-adjacent spectrum licences and area-adjacent spectrum licences;
the licensee must comply with that specified maximum permitted level of radio emission.

(2) Where there is no written agreement for the purpose of this clause in force, the licensee must comply with clause 2.

2 Emission limits outside the area without agreement

The licensee must ensure that the maximum permitted level of radio emissions for an area outside of the geographic area for which the licence authorises the operation of radiocommunications devices caused by operation of radiocommunications transmitters under the licence does not exceed a total radiated power of 48 dBm/5 MHz.

Schedule 5—Emission limits outside the band

(subsection 19(3))

1 Emission limits outside the band specified by written agreement

(1) Where a written agreement specifying the maximum permitted level of radio emission exists between:
  (a) the licensee; and
  (b) all affected licensees of frequency-adjacent spectrum licences and area-adjacent spectrum licences;
the licensee must comply with that specified maximum permitted level of radio emission.

(2) Where there is no written agreement for the purposes of this clause in force, the licensee must comply with clause 2.

2 Unwanted emission limits

(1) Subject to subclause (2), the licensee must ensure that radiocommunications transmitters operated under the licence do not exceed the unwanted emission limits in subclauses (6), (7), (9) (where that subclause applies because of paragraph (9)(b)) and (10).

(2) Subclause (1) does not apply to a radiocommunications transmitter if the licence condition to be included in the licence in accordance with subsection 21(2) of this instrument applies to the transmitter.

Note: Subclause (2) has the effect that the unwanted emission limits specified in subclause (1) only apply to radiocommunications transmitters that ***are*** required to registered in accordance with the requirements of Part 3.5 of the Act.

(3) Subject to subclause (4), the licensee must ensure the radiocommunications transmitters operated under the licence do not exceed the unwanted emission limits described in subclauses (8) and (9) (where that subclause applies because of paragraph (9)(a)).

(4) Subclause (3) does not apply to a radiocommunications transmitter if the licence condition to be included in the licence in accordance with subsection 21(2) of this instrument does not apply to the transmitter.

Note: Subclause (4) has the effect that the unwanted emission limits specified in subclause (3) only apply to radiocommunications transmitters which are exempt from the registration.

(5) The licensee must ensure that radiocommunications receivers operated under the licence do not exceed the unwanted emission limits in subclause (11).

(6) The unwanted emission limits in Table 1 apply to radiocommunications transmitters with non-AAS:

  (a) at frequencies outside the upper or lower frequency limits for the spectrum licence;
  (b) offset from the upper or lower frequency limits for the spectrum licence;

where:

f_{offset}: is the frequency offset from the upper or lower frequency limits for the spectrum licence. The closest -3dB point of the specified bandwidth closest to the upper and lower frequency limits for the spectrum licence is placed at $\mathbf{f_{offset}}$.

Table 1 Radiocommunications transmitter unwanted emission limits for registered devices

Frequency offset range	Total radiated power (dBm)	Specified bandwidth
0 kHz ≤ f_{offset} < 5 MHz	$-7 - (7/5) \times f_{offset}(MHz)$	100 kHz
5 MHz ≤ f_{offset} < 10 MHz	-14	100 kHz
f_{offset} ≥ 10 MHz	-15	1 MHz

(7) The unwanted emission limits in subclause (6) apply to radiocommunications transmitters with AAS with an additional 9 dB added to the total radiated power limits that apply under that subclause.

(8) The unwanted emissions limits in Table 2 apply:

(a) at frequencies outside the upper or lower frequency limits for the spectrum licence; and

(b) offset from the upper or lower frequency limits for the spectrum licence;

where:

f_{offset}: is the frequency offset from the upper or lower frequency limits for the spectrum licence. The closest -3dB point of the specified bandwidth closest to the upper or lower frequency limits for the spectrum licence is placed at f_{offset}.

Table 2 Radiocommunications transmitter unwanted emission limits for devices exempt from registration

Frequency offset range	Total radiated power (dBm)	Specified bandwidth
0 kHz ≤ f_{offset} < 1 MHz	-15	30 kHz
1 MHz ≤ f_{offset} < 5 MHz	-10	1 MHz
5 MHz ≤ f_{offset} < 100 MHz	-13	1 MHz
f_{offset} ≥ 100 MHz	-25	1 MHz

(9) The unwanted emission limits in Table 3 apply for:

(a) radiocommunications transmitters at frequencies outside the 3295 MHz to 3805 MHz frequency range; and

(b) radiocommunications transmitters with non-AAS at frequencies outside the 3360 MHz to 3740 MHz frequency range;

where measured over the specified bandwidth for the relevant frequency range.

(10) The unwanted emission limits in subclause (9) that apply to radiocommunications transmitters mentioned in paragraph (9)(b) apply to radiocommunications transmitters with AAS with an additional 9 dB added to the total radiated power limits that apply under that subclause.

Table 3 Radiocommunications transmitter unwanted emission limits for registered devices and devices exempt from registration

Frequency range	Total radiated power (dBm)	Specified bandwidth
9 kHz ≤ f < 150 kHz	-36	1 kHz
150 kHz ≤ f < 30 MHz	-36	10 kHz
30 MHz ≤ f < 1 GHz	-36	100 kHz
1 GHz ≤ f ≤ 19 GHz	-30	1 MHz

(11) The unwanted emission limits in Table 4 apply at:

(a) for radiocommunications receivers that are not registered on the Register, frequencies outside the 3295 MHz to 3805 MHz frequency range;
(b) for radiocommunications receivers that are registered on the Register, frequencies outside the 3360 MHz to 3740 MHz frequency range,

when measured over the specified bandwidth for the relevant frequency range.

Note: Although not mandatory, the registration of radiocommunications receivers to be operated under this licence is advised because one of the matters the ACMA will take into account in settling interference disputes is the time of registration of the receiver involved in the interference.

Table 4 Radiocommunications receiver unwanted emission limits

Frequency range (f)	Total radiated power (dBm)	Specified Bandwidth
30 MHz ≤ f < 1 GHz	-57	100 kHz
1 GHz ≤ f < 19 GHz	-47	1 MHz

Schedule 6—Sample spectrum licence

(section 22)

This Schedule sets out a sample spectrum licence, and the conditions that may be included in a spectrum licence, issued in the 3.6 GHz band, in accordance with this instrument.

COMMONWEALTH OF AUSTRALIA

AUSTRALIAN COMMUNICATIONS AND MEDIA AUTHORITY

Radiocommunications Act 1992

Sample Spectrum Licence for the 3.6 GHz band

Prepared under section 61 of the *Radiocommunications Act 1992* ('the Act') in accordance with the

Radiocommunications Spectrum Marketing Plan (3.6 GHz Band) 2018

This licence is issued under Part 3.2 of the Act to the person named at Item 1 of Part 1, Licence Schedule 1 of this licence.

1. The person named at Item 1 of Part 1, Licence Schedule 1 of this licence ('the licensee'), or a person authorised under subsection 68(1) of the Act, is authorised, under this licence, to operate radiocommunications devices in accordance with:
   (a) the Act;
   (b) the core conditions set out in Licence Schedule 2;
   (c) the statutory conditions set out in Licence Schedule 3; and
   (d) the other conditions set out in Licence Schedule 4.
2. This licence comes into force on the date shown at Item 5 of Part 1, Licence Schedule 1 and remains in force until the end of the date shown at Item 6 of Part 1, Licence Schedule 1.

Definitions

3. In this licence, unless the contrary intention appears:

3.4 GHz band means the following frequency bands:

(a) 3425 MHz to 3492.5 MHz; and

(b) 3542.5 MHz to 3700 MHz.

3.6 GHz band means the frequency range 3575 MHz to 3700 MHz.

3GPP TS 36.211 means the document entitled "LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); Physical channels and modulation (3GPP TS 36.211 version 14.6.0 Release 14)" published by the European Telecommunications Standards Institute (ETSI), as it existed at the time the *Australian Communications and Media Authority (Radiocommunications Licence Conditions – 3.4 GHz and 3.6 GHz Bands Interference Management) Direction 2018* was made.

Note: 3GPP TS 36.211 is available free of charge on the ETSI website at: www.etsi.org.

Act means the *Radiocommunications Act 1992*.

active antenna system or ***AAS*** refers to a base station antenna system where the amplitude and/or phase between antenna elements is continually adjusted, resulting in an antenna pattern that varies in response to short term changes in the radio environment.

area-adjacent spectrum licences means spectrum licences that authorise the operation of radiocommunications devices in the geographic areas adjacent to the geographic areas described in Tables 1 and 2 of Part 2 of Licence Schedule 1 of this licence.

earth station has the meaning given in Schedule 1 of the *Radiocommunications (Interpretation) Determination 2015* (as in force from time to time).

earth station protection zones has the meaning given by RALI MS 44.

frequency-adjacent spectrum licences means spectrum licences that authorise the operation of radiocommunications devices in the frequency bands adjacent to the frequency bands described in Table 1 of Part 2 of Licence Schedule 1 of this licence.

harmful interference has the same meaning as in the spectrum plan made under subsection 30(1) of the Act.

HCIS identifier means an identifier used to describe a geographic area in the HCIS.

Hierarchical Cell Identification Scheme (HCIS) means the cell grouping hierarchy scheme used to describe geographic areas in the *Australian Spectrum Map Grid 2012* published by the ACMA, as existing from time to time.

Note: The *Australian Spectrum Map Grid 2012* is available on the ACMA website at: www.acma.gov.au.

ITU Radio Regulations means the Radio Regulations published by the International Telecommunication Union, as in force from time to time.

Note: The Radio Regulations are available on the ITU website at: www.itu.int.

Licence Schedule means a Schedule to this licence.

non-active antenna system (non-AAS) means a base station antenna system that is not an AAS.

occupied bandwidth, in relation to a radiocommunications transmitter, means the width of a frequency band having upper and lower limits that are necessary to contain 99% of the true mean power of the transmitter's emission at any time.

RALI MS 32 means the Radiocommunications Assignment and Licensing Instruction No. MS 32 Coordination of Apparatus Licensed Services within the Australian Radio Quiet Zone Western Australia, as in existence from time to time and published on the ACMA's website at https://www.acma.gov.au.

RALI MS 44 means the Radiocommunications Assignment and Licensing Instruction No. MS 44, as in existence from time to time and published on the ACMA's website at https://www.acma.gov.au.

total radiated power or ***TRP*** is defined as the integral of the power transmitted in different directions over the entire radiation sphere. It is measured considering the combination of all radiating elements on an antenna panel or individual device.

4. Unless the contrary intention appears, terms and expressions used in this licence have the meaning given to them by the *Radiocommunications Spectrum Marketing Plan (3.6 GHz Band) 2018* (as in force from time to time) or the *Radiocommunications (Unacceptable Levels of Interference — 3.4 GHz Band) Determination 2015* (as in force from time to time).

Note: A number of terms used in this licence are defined in the Act and have the meanings given to them by the Act, including:

- ACMA
- core condition
- frequency band
- radiocommunications device
- radiocommunications receiver
- radiocommunications transmitter
- radio emission
- Register
- spectrum licence
- spectrum plan.

5. Unless the contrary intention appears, in this licence:

(a) the value of a parameter in Licence Schedules 2 and 3 must be estimated with a level of confidence not less than 95% that the true value of the parameter will always remain below the requirement specified; and

(b) the range of numbers that identify a frequency band includes the higher but not the lower number.

Licence Schedule 1 Licence Details, Bands and Areas

Part 1 Licence details

Item	***Licensee Details***	
1	*Name of licensee*	
2	*Address of licensee*	
3	*Client number*	
	Licence Details	
4	*Band release*	3.6 GHz band
5	*Date of licence effect*	30/3/2020
6	*Date of licence expiry*	13/12/2030
7	*Licence number*	
8	*Date of licence issue*	dd/mm/yyyy

Part 2 Frequency bands and geographic areas

For Core Condition 1, this licence authorises the operation of radiocommunications devices in the frequency bands specified in column 3 and within the corresponding geographic areas specified in column 2 of Table 1.

The frequency band consists of the bandwidth between the lower and upper frequencies, where the lower frequency limit is exclusive and the upper frequency limit is inclusive. The geographic areas in column 2 of Table 1 are described by the sequence of HCIS identifiers in Table 2.

Table 1: Frequency bands and geographic areas of this licence

Identifier (column 1)	Geographic areas (column 2)	Frequency bands (column 3)	
		Lower limit	Upper limit
A	1	3625	3675

Table 2: Description of the geographic areas of this licence

Geographic areas (column 1)	HCIS identifiers (column 2)

Note: The HCIS is described in the Australian Spectrum Map Grid 2012. The Australian Spectrum Map Grid 2012 is available on the ACMA website at: www.acma.gov.au.

Licence Schedule 2 Core Conditions

Frequency bands and geographic areas

1. This licence authorises the operation of radiocommunications devices in the frequency bands and within the geographic areas set out in Part 2 of Licence Schedule 1.

Emission limits outside the frequency bands

2. Core Conditions 3 to 10 apply in relation to those frequencies that are outside the frequency bands set out in Part 2 of Licence Schedule 1.

3. Where a written agreement specifying the maximum permitted level of radio emission for frequencies described in Core Condition 2 exists between:

   (a) the licensee; and
   (b) all the affected licensees of frequency-adjacent spectrum licences and area-adjacent spectrum licences;

   the licensee must comply with that specified maximum permitted level of radio emission.

4. Where there is no written agreement for the purposes of Core Condition 3 in force, the licensee must comply with Core Conditions 5 to 10.

Unwanted emission limits

5. (1) The licensee must ensure that radiocommunications transmitters operated under this licence that are not exempt from the registration requirement under Statutory Licence Condition 4 of Licence Schedule 3 do not exceed the unwanted emission limits in Core Conditions 6, 7, 9(b) and 9(c).

   (2) The licensee must ensure that radiocommunications transmitters operated under this licence that are exempt from the registration requirement under Statutory Condition 4 of Licence Schedule 3 do not exceed the unwanted emission limits described in Core Conditions 8 and 9(a).

   (3) The licensee must ensure that radiocommunications receivers operated under this licence do not exceed the unwanted emission limits described in Core Condition 10.

6. The unwanted emission limits in Table 3 apply to radiocommunications transmitters with non-AAS:

   (a) at frequencies outside the upper or lower frequency limits set out in Part 2 of Licence Schedule 1; and
   (b) offset from the upper or lower frequency limits set out in Part 2 of Licence Schedule 1;

   where:

   f_{offset}: is the frequency offset from the upper or lower frequency limits set out in Part 2 of Licence Schedule 1. The closest -3dB point of the specified bandwidth to the upper or lower frequency limits of the licence is placed at f_{offset}.

Table 3: Radiocommunications transmitter unwanted emission limits for registered devices

Frequency offset range	Total radiated power (dBm)	Specified Bandwidth
0 kHz ≤ f_{offset} < 5 MHz	$-7-\left(\frac{7}{5}\right)f_{offset}(MHz)$	100 kHz
5 MHz ≤ f_{offset} < 10 MHz	-14	100 kHz
f_{offset} ≥ 10 MHz	-15	1 MHz

7. For radiocommunications transmitters with AAS the same limits as specified in Core Condition 6 apply but with an additional 9 dB added to the total radiated power limits that apply under that Core Condition.

8. The unwanted emissions limits in Table 4 apply:

   (a) at frequencies outside the upper or lower frequency limits set out in Part 2 of Licence Schedule 1; and

   (b) offset from the upper or lower frequency limits set out in Part 2 of Licence Schedule 1.

   where:

   f_{offset}: is the frequency offset from the upper or lower frequency limits set out in Part 2 of Licence Schedule 1. The closest -3dB point of the specified bandwidth to the upper or lower frequency limits of the licence is placed at f_{offset}.

Table 4: Radiocommunications transmitter unwanted emission limits for devices exempt from registration

Frequency range (f)	Total radiated power (dBm)	Specified Bandwidth
0 kHz ≤ f_{offset} < 1 Hz	-15	30 kHz
1 MHz ≤ f_{offset} < 5 MHz	-10	1 MHz
5 MHz ≤ f_{offset} < 100 MHz	-13	1 MHz
f_{offset} ≥ 100 MHz	-25	1 MHz

9. For radiocommunications transmitters operated under this licence:

   (a) which are devices that are exempt from registration requirements under statutory licence condition 4 of Licence Schedule 3 - the unwanted emission limits in Table 5 apply at frequencies outside the 3295 MHz to 3805 MHz frequency range; or

   (b) which are devices with non-AAS that are not exempt from the registration requirements under statutory licence condition 4 of Licence Schedule 3 – the unwanted emission limits in Table 5 apply at frequencies outside the 3360 MHz to 3740 MHz frequency range; or

   (c) which are devices with AAS that are not exempt from the registration requirements under statutory licence condition 4 of Licence Schedule 3 –- the same unwanted emission limits in Core Condition 9(b) apply at frequencies outside the 3360 MHz to 3740 MHz frequency range, but with an additional 9 dB added to the total radiated power limits that apply under that Core Condition;

   when measured over the specified bandwidth for the relevant frequency range.

Table 5: Radiocommunications transmitter unwanted emission limits for registered devices and devices exempt from registration

Frequency range (f)	Total radiated power (dBm)	Specified Bandwidth
9 kHz ≤ f < 150 kHz	-36	1 kHz
150 kHz ≤ f < 30 MHz	-36	10 kHz
30 MHz ≤ f < 1 GHz	-36	100 kHz
1 GHz ≤ f < 19 GHz	-30	1 MHz

10. The unwanted emission limits in Table 6 apply:

    (a) for radiocommunications receivers that are not registered on the Register - at frequencies outside the 3295 MHz to 3805 MHz frequency range; and

    (b) for radiocommunications receivers that are registered on the Register - at frequencies outside the 3360 MHz to 3740 MHz frequency range,

    when measured over the specified bandwidth for the relevant frequency range.

    Note: Although not mandatory, the registration of radiocommunications receivers to be operated under this licence is advised because one of the matters the ACMA will take into account in settling interference disputes is the time of registration of the receiver involved in the interference.

Table 6: Radiocommunications receiver unwanted emission limits

Frequency range (f)	Total radiated power (dBm)	Specified Bandwidth
30 MHz ≤ f < 1 GHz	-57	100 kHz
1 GHz ≤ f < 19 GHz	-47	1 MHz

Emission limits outside the geographic areas

11. Core Conditions 12 to 15 apply in relation to those areas that are outside the geographic areas set out in Part 2 of Licence Schedule 1.

12. Where a written agreement specifying the maximum permitted level of radio emission for areas described in Core Condition 11 exists between:

    (a) the licensee; and
    (b) all the affected licensees of frequency-adjacent spectrum licences and area-adjacent spectrum licences;

    the licensee must comply with that specified maximum permitted level of radio emission.

13. Where there is no written agreement for the purposes of Core Condition 12 in force, the licensee must comply with Core Condition 14.

14. The licensee must ensure that the maximum permitted level of radio emission for an area outside the area described in Core Condition 11 caused by the operation of radiocommunications transmitters under this licence does not exceed a total radiated power of 48 dBm/5MHz.

15. The licensee complies with condition 14 by ensuring that the maximum permitted level of radio emissions caused by the operation of radiocommunications transmitters under this licence does not exceed a total radiated power of 48 dB/m/5MHz.

Licence Schedule 3 Statutory Conditions

Liability to pay charges

1. The licensee must comply with all its obligations to pay:

   (a) charges fixed by determinations made under section 60 of the *Australian Communications and Media Authority Act 2005*;

   (b) spectrum access charges fixed by determinations made under section 294 of the Act; and

   (c) amounts of spectrum licence tax.

Third party use

2. (1) The licensee must notify any person whom the licensee authorises, under section 68 of the Act, to operate radiocommunications devices under this licence of that person's obligations under the Act, in particular:

   (a) the registration requirements under Part 3.5 of the Act for operation of radiocommunications devices under this licence (if applicable); and

   (b) any rules made by the ACMA under subsection 68(3) of the Act.

   (2) Any person other than the licensee who operates a radiocommunications device under this licence must comply with rules made by the ACMA under subsection 68(3) of the Act.

Radiocommunications transmitter registration requirements

3. The licensee must not operate a radiocommunications transmitter under this licence unless:

   (a) the transmitter has been exempted from the registration requirements under Statutory Condition 4 below; or

   (b) both:

   (i) the requirements under Part 3.5 of the Act relating to registration of the transmitter have been met; and

   (ii) the transmitter complies with the details about it that have been entered in the Register.

Exemption from registration requirements

4. Transmitters that operate in the 3.6 GHz band with a maximum total radiated power of less than or equal to 28 dBm per occupied bandwidth are exempt from the registration requirement in Statutory Condition 3.

Residency

5. (1) The licensee must not derive any income, profits or gains from operating radiocommunications devices under this licence, or from authorising an authorised person to do so, unless:

   (a) the licensee is an Australian resident; or

   (b) the income, profits or gains are attributable to a permanent establishment in Australia through which the licensee carries on business.

(2) An authorised person must not derive income, profits or gains from operating radiocommunications devices under this licence, or from allowing third parties to operate radiocommunications devices under this licence, unless:

(a) the authorised person is an Australian resident; or

(b) the income, profits or gains are attributable to a permanent establishment in Australia through which the authorised person carries on business.

(3) In this condition:

Australian resident has the same meaning as in the *Income Tax Assessment Act 1997*.

authorised person means a person authorised under section 68 of the Act by the licensee to operate radiocommunications devices under this licence.

permanent establishment has the same meaning as in:

(a) if the licensee or authorised person (as appropriate) is a resident of a country or other jurisdiction with which Australia has an agreement within the meaning of the *International Tax Agreements Act 1953*—that agreement; or

(b) in any other case—the *Income Tax Assessment Act 1997*.

Licence Schedule 4 Other Conditions

Definitions

1. In this Licence Schedule 4:

communal site has the same meaning as in the *Radiocommunications (Interpretation) Determination 2015* as in force from time to time.

managing interference includes, but is not limited to:

(a) investigating the possible causes of the interference;

(b) taking all steps reasonably necessary to resolve disputes about interference;

(c) taking steps (or requiring persons authorised to operate devices under this licence to take steps) reasonably likely to reduce interference to acceptable levels; and

(d) negotiating with other persons to reduce interference to acceptable levels.

relevant area has the meaning given by subsection 4(1) of the *Australian Communications and Media Authority (Radiocommunications Licence Conditions – 3.4 and 3.6 GHz Bands Interference Management) Direction 2018.*

relevant band means the part of the spectrum from 3400 to 3700 MHz.

PTS transmitter licence means a transmitter licence of the PTS type.

special subframe configuration 6 means a special subframe configuration, as referred to in clause 4.2 of 3GPP TS 36.211, that is consistent with special subframe configuration 6, as referred to in Table 4.2-1 of 3GPP TS 36.211.

uplink-downlink configuration 2 means an uplink-downlink configuration, as referred to in clause 4.2 of 3GPP TS 36.211, that is consistent with uplink-downlink configuration, as referred to in Table 4.2-2 of 3GPP TS 36.211.

Responsibility to manage interference

2. The licensee must manage interference between:

(a) radiocommunications devices operated under this licence; and

(b) radiocommunications devices operated under this licence and under each other spectrum licence held by the licensee.

Co-sited devices

3. If:

(a) interference occurs between a radiocommunications device:

(i) operated under this licence; and

(ii) operated under another licence (the ***other licence***);

when the measured separation between the phase centre of the antenna used with each device is less than 500 metres; and

(b) that interference is not the result of operation of a radiocommunications device in a manner that does not comply with the conditions of the relevant licence; and

(c) either the licensee or the holder (or authorised third party) of the other licence wishes to resolve the interference;

the licensee must manage interference with:

(d) the holder of the other licence; or

(e) if a site manager is responsible for managing interference at that location, that site manager.

Information for Register

4. The licensee must give the ACMA all information as required by the ACMA from time to time for inclusion in the Register.

Note: Licensees should assist the ACMA in keeping the Register accurate and up to date by informing the ACMA of changes to device registration details as soon as possible.

International coordination

5. The licensee must ensure that operation of a radiocommunications transmitter under this licence does not cause harmful interference to a radiocommunications receiver that operates in accordance with the ITU Radio Regulations and is located in a country other than Australia.

Electromagnetic energy (EME) requirements

6. The licensee must comply with Parts 2, 3 and 4 of the *Radiocommunications Licence Conditions (Apparatus Licence) Determination 2015*, as in force from time to time. For the purpose of compliance with this condition, the definition of licence in subsection 4(1) of the *Radiocommunications Licence Conditions (Apparatus Licence) Determination 2015* is to be read as if it referred to a spectrum licence.

Record keeping - transmitters located at communal sites

7. (1) If the licensee operates a radiocommunications transmitter under this licence, and the transmitter:

(a) is located at a communal site; and

(b) is not exempt under Statutory Condition 4 of Licence Schedule 3;

the licensee must comply with sub-conditions 7(2) and 7(3).

(2) In relation to each transmitter, the licensee must keep a record which includes the following information:

(a) the transmitter's device registration number as specified in the Register;

(b) the licence number of this licence;

(c) the transmitter's geographic location;

(d) if the licensee owns the transmitter, the licensee's name and address;

(e) if the licensee does not own the transmitter, the owner's name and address;

(f) the transmitter's centre frequency;

(g) the transmitter's emission designator;

(h) details of the transmitter's antenna including the manufacturer, model, type, gain, polarisation, azimuth and average ground height;

(i) the transmitter's maximum true mean power; and

(j) the transmitter's maximum EIRP.

(3) If the ACMA requests a copy of a record kept under sub-condition 7(2), the licensee must comply with the request as soon as practicable.

Coordination with the Mid-West Radio Quiet Zone

8. Before seeking to register a radiocommunications transmitter for use in or around the RQZ, as defined by the *Radiocommunications (Mid-West Radio Quiet Zone) Frequency Band Plan 2011* (as in force from time to time), the licensee must follow the procedures set out in Radiocommunications Assignment and Licensing Instruction (RALI) MS 32, as existing from time to time, as if the radiocommunications transmitter it is seeking to register were an apparatus licensed transmitter.

   Note: RALI MS 32 Coordination of Apparatus Licensed Services within The Australian Radio Quiet Zone Western Australia is available on the ACMA website at: www.acma.gov.au.

Harmful Interference

9. The licensee must ensure that operation of a radiocommunications transmitter that is exempt from registration under Statutory Condition 4 of Licence Schedule 3 does not cause harmful interference to other radiocommunications devices operated under a different spectrum or apparatus licence.

Coordination with earth station protection zones

10. Before seeking to register or operate a radiocommunications transmitter, the licensee must follow the procedures set out in the RALI MS 44 for coordination with, and protection of, any earth stations operating in the 3.6 GHz band in earth station protection zones.

Synchronisation requirement

11. If:

   (a) interference occurs between:

      (i) a radiocommunications device (the ***first device***) operated under this licence; and

      (ii) a radiocommunications device (the ***other device***) operated under another spectrum licence or PTS transmitter licence in the relevant band and within the relevant area (the ***other licence***);

   (b) the level of interference to the first device or to any other devices exceeds the compatibility requirement set out in the *Radiocommunications Advisory Guidelines (Managing Interference to Spectrum Licensed Receivers — 3.4 GHz Band) 2015* as in force from time to time;

   (c) either the licensee or the holder (or authorised third party) of the other licence wishes to resolve the interference; and

   (d) no agreement between the licensee and each person operating one or more other devices can be reached on how to manage the interference;

   then the licensee is required to manage the interference by:

   (e) either:

      (i) operating the first device with a frame structure that uses both uplink-downlink configuration 2 and special subframe configuration 6; or

      (ii) operating the first device using a sequence and duration of radio emissions that is consistent with those configurations (disregarding any time at which the device is not making a radio emission); and

   (f) synchronising the timing of the frame structure or other sequence of radio emissions of the first device with the timing of the frame structure or other sequence of radio emissions of

each of the other devices (disregarding any device at a time at which the device is not making a radio emission).

Note 1: A licensee may act in accordance with sub-condition 11(e)(ii) by operating a transmitter in a manner that complies with the specification made by 3rd Generation Partnership Project numbered 3GPP TS 38.211 and published at www.3gpp.org

Note 2: The synchronisation requirement only applies when an interference issue occurs and where there is no other measure agreed to between the licensees to resolve the interference. This means synchronisation can be done on a site/cell specific basis. During any period in which the licensee and other licensee are taking steps to resolve the interference issue or synchronise, the ACMA will generally give priority to the device registered first in time in any interference dispute, meaning that device or devices registered later-in-time will generally be required to accept any interference or cease causing interference during this time.

Managing interference caused by unwanted emissions

12. If:

(a) interference occurs between a radiocommunications device:

(i) operated under this licence; and

(ii) operated under another licence (***the other licence***);

and the interference is due to unwanted emissions at frequencies below 3360 MHz and above 3740 MHz from a radiocommunications device operating under this licence; and

(b) that interference is not the result of operation of a radiocommunications device in a manner that does not comply with the conditions of the relevant licence; and

(c) either the licensee or the holder (or authorised third party) of the other licence wishes to resolve the interference;

the licensee must manage interference with:

(d) the holder of the other licence; or

(e) if a site manager is responsible for managing interference at that location, that site manager.

Managing interference to incumbent apparatus licences

13. The licensee must provide protection to any radiocommunications devices operating in a re-allocation zone in the 3.6 GHz band in accordance with an apparatus licence in the manner set out in Part 3, Part 4 and Part 5 of the *Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters — 3.4 GHz Band) 2015,* as in force from time to time, until the end of the re-allocation period for the relevant re-allocation zone.

Licence Schedule 5 Licence Notes

WARNING: These notes provide guidance on how the current Act and instruments made under that Act may impact upon the rights of a licensee. Potential applicants should note that new spectrum legislation is proposed that, if made, would replace the Act and affect licences issued under this instrument. Further information about the proposed legislation can be found at www.communications.gov.au/what-we-do/spectrum/spectrum-reform.

Variation to licence conditions

1. The ACMA may, with the written agreement of the licensee, vary this licence by including one or more further conditions, or by revoking or varying any conditions of this licence, provided that the conditions, as varied, still comply with the requirements of Subdivision C of Division 1 of Part 3.2 of the Act.

2. The ACMA may, by written notice given to the licensee, vary this licence by including one or more further conditions (other than core conditions), or by revoking or varying any conditions (other than core conditions) of the licence, provided that the conditions as varied still comply with the requirements of Subdivision C of Division 1 of Part 3.2 of the Act.

Determination of unacceptable interference

3. The ACMA has made the *Radiocommunications (Unacceptable Levels of Interference – 3.4 GHz Band) Determination 2015* that sets out the unacceptable levels of interference for the purpose of registering radiocommunications transmitters to be operated under this licence, and which is to be used for the issuing of certificates by accredited persons under subsection 145(3) of the Act.

   Note: Although not mandatory, the registration of radiocommunications receivers to be operated under this licence is advised because one of the matters the ACMA will take into account in settling interference disputes is the time of registration of the receiver involved in the interference.

Guidelines

4. The ACMA has issued written Radiocommunications Advisory Guidelines (the ***guidelines***) under section 262 of the Act about:

   (a) co-ordinating the operation of radiocommunications transmitters under this licence with radiocommunications receivers operated under other licences:

   - *Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters – 3.4 GHz Band) 2015*;

   (b) co-ordinating the operation of radiocommunications receivers operated under this licence with radiocommunications transmitters operated under other licences:

   - *Radiocommunications Advisory Guidelines (Managing Interference to Spectrum Licensed Receivers – 3.4 GHz Band) 2015.*

5. The guidelines should be read in conjunction with the *Radiocommunications (Unacceptable Levels of Interference – 3.4 GHz Band) Determination 2015* (see Licence Note 3). This determination sets out the unacceptable levels of interference for the purpose of registration of transmitters to be operated under this licence. The guidelines should be followed by licensees (and accredited persons) in the planning of services and the resolution of interference cases. The ACMA will consider these guidelines during the settlement of interference disputes. Each case will be assessed on its merits. Copies of the guidelines are available from www.legislation.gov.au and the ACMA.

Suspension and cancellation of spectrum licences

6. The ACMA may by written notice given to a licensee, suspend or cancel a spectrum licence in accordance with Division 3 of Part 3.2 of the Act.

Re-issue

7. A spectrum licence will not be re-issued to the same licensee without a price based allocation procedure unless:

   (a) the licence was used to provide a service of a kind determined by the Minister under subsection 82(3) of the Act for which re-issuing licences to the same licensee would be in the public interest; or

   (b) the ACMA is satisfied under paragraph 82(1)(b) of the Act that special circumstances exist as a result of which it would be in the public interest for that licensee to continue to hold that licence.

Trading

8. (1) A licensee may assign or otherwise deal with the whole or any part of a spectrum licence provided that it is done in accordance with any rules determined by the ACMA under section 88 of the Act.

   (2) An assignment under section 85 of the Act of the whole or any part of a licence that involves any change to a licence does not take effect until the Register has been amended under Part 3.5 of the Act, to take it into account.

Appeals

9. An application may be made to the ACMA for reconsideration of a decision of a kind listed in section 285 of the Act. A person affected by and dissatisfied with an ACMA decision may seek a reconsideration of the decision by the ACMA under subsection 288(1) of the Act. This decision can be subject to further review by the Administrative Appeals Tribunal, subject to the provisions of the *Administrative Appeals Tribunal Act 1975*.

Labelling of transmitters

10. Licensees should affix identification labels containing the name and address of the licensee on all fixed transmitters operated under this licence.

    Note: An example of an identification label would be one containing the following statement: “This device is the property of ‘name’”.