COMMONWEALTH OF AUSTRALIA
AUSTRALIAN COMMUNICATIONS AND MEDIA AUTHORITY

Radiocommunications Act 1992

SPECTRUM LICENCE FOR THE 2.3 GHz BAND

This licence is issued under Part 3.2 of the *Radiocommunications Act 1992* ('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:

2.3 GHz band means the frequency band from 2300 MHz to 2400 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).

Note: 3GPP TS 36.11 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 mean the spectrum licences that authorise the operation of radiocommunications devices in the geographic areas adjacent to the geographic areas described in Part 2 of Licence Schedule 1 of this licence.

deep space Earth station receiver means an Earth station receiver operated in the 2290 MHz - 2300 MHz band.

frequency-adjacent spectrum licences mean the spectrum licences that authorise the operation of radiocommunications devices in the frequency bands adjacent to the frequency bands described in 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 in force from time to time.

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

Definitions (cont)

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 or ***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 37 means the Radiocommunications Assignment and Licensing Instruction No. MS 37, *Coordination of spectrum-licensed devices operating in the 2.3 GHz band with SRS earth stations in the 2290-2300 MHz band (SRS ES RALI)*, published by the ACMA, as existing from time to time and published on the ACMA's website at 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.

unwanted emission, in relation to the operation of a radiocommunications transmitter authorised by this licence, means an emission outside the lower and upper frequency limits of the frequency bands described in Table 1 of Part 2 of Licence Schedule 1 of this licence.

4. Unless the contrary intention appears, terms and expressions used in this licence have the meanings given to them by the *Radiocommunications (Unacceptable Levels of Interference - 2.3 GHz Band) Determination 2013* (as in force from time to time), or any instrument made under subsection 145(4) of the Act as a replacement of that determination (as in force from time to time).

Definitions (cont)

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 licence tax
- 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*	Optus Mobile Pty Limited
2	*Address of licensee*	PO Box 888 (Attn Steve Turner) NORTH RYDE NSW 1670
3	*Client number*	1103276
	Licence Details	
4	*Band release*	2.3 GHz Band
5	*Date of licence effect*	25/07/2015
6	*Date of licence expiry*	24/07/2030
7	*Licence number*	9460720
8	*Date of licence issue*	21/12/2023

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 bands consist of the bandwidth between the lower and upper frequencies, where the lower frequency limit is exclusive and 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.

Licence Schedule 1 Licence details, bands and areas (cont)

Table 1: Frequency bands and geographic areas of this licence

Identifier (column 1)	Geographic areas (column 2)	Frequency bands (column 3)			
		Lower band (MHz)		Upper band (MHz)	
		Lower limit	Upper limit	Lower limit	Upper limit
A	1	2309	2400		
B	2	2330	2400		
C	3	2302	2393		
D	4	2302	2386		

Licence Schedule 1 Licence details, bands and areas (cont)

Table 2: Description of the geographic areas of this licence

Geographic areas (column 1)	HCIS identifiers (column 2)
1	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
2	MW4H, MW4L, MW5A, MW5E, MW5I, MW4D7, MW4D8, MW4D9, MW4G1, MW4G2, MW4G3, MW4G5, MW4G6, MW4G8, MW4G9, MW4K2, MW4K3, MW4K5, MW4K6, MW4P3, MW4P6, MW5B4, MW5B7, MW5B8, MW5F1, MW5F2, MW5M1, MW5M2, MW5M4, MW5M5
3	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
4	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

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 . Copies are also available from offices of the ACMA.

Licence Schedule 2 Core Conditions

Frequency band 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 band

2. Core Conditions 3 to 13 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 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 13.

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 Condition 4 of Licence Schedule 3 do not exceed the unwanted emission limits in Core Conditions 6, 7, 8, 9, 11.

   (2) The licensee must ensure that radiocommunications transmitters operating 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 10 and 11.

   (3) The licensee must ensure that radiocommunications receivers operated under this licence do not exceed the unwanted emission limits described in Core Conditions 12 and 13.

6. The unwanted emission limits in Table 3 apply to all radiocommunications transmitters:

   (a) within the 2290-2300 MHz frequency band; and
   (b) offset from 2300 MHz;

   where:
   $\mathbf{f_{offset}}$ is the frequency offset from the 2300 MHz band edge. The -3dB point of the specified bandwidth is placed at $\mathbf{f_{offset}}$.

Table 3: Radiocommunications transmitter unwanted emission limits for all registered devices

Frequency offset range (f_{offset})	Total radiated power (dBm) per cell/sector	Specified Bandwidth
0 Hz ≤ f_{offset} < 5 MHz	-7 - (7/5) f_{offset} (MHz)	100 kHz
5 MHz ≤ f_{offset} < 10 MHz	-6 - (17/5) f_{offset} (MHz)	100 kHz

7. The unwanted emission limits in Table 4 apply to all radiocommunications transmitters:

   (a) within the 2400-2410 MHz frequency band; and
   (b) offset from 2400 MHz;

   where:
   $\mathbf{f_{offset}}$ is the frequency offset from the 2400 MHz band edge. The -3dB point of the specified bandwidth is placed at $\mathbf{f_{offset}}$.

Table 4: Radiocommunications transmitter unwanted emission limits for all registered devices

Frequency offset range (f_{offset})	Total radiated power (dBm) per cell/sector	Specified Bandwidth
0 Hz ≤ f_{offset} < 5 MHz	-7 - (7/5) f_{offset} (MHz)	100 kHz
5 MHz ≤ f_{offset} < 10 MHz	-14	100 kHz

8. The unwanted emission limits in Table 5 apply to all radiocommunications transmitters with non-AAS:

   (a) within the 2300-2400 MHz frequency band;
   (b) at frequencies outside the upper or lower frequency limits set out in Part 2 of Licence Schedule 1; and
   (c) 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 5: Radiocommunications transmitter unwanted emission limits for registered non-AAS devices

Frequency offset range (f_{offset})	Mean power (dBm) per transmitter in a cell/sector	Specified Bandwidth
0 Hz $\leq f_{offset} <$ 5 MHz	-7 - (7/5) f_{offset} (MHz)	100 kHz
5 MHz $\leq f_{offset} <$ 10 MHz	-14	100 kHz
$f_{offset} \geq$ 10 MHz	-15	1 MHz

9. The unwanted emission limits in Table 6 apply to all radiocommunications transmitters with AAS:

   (a) within the 2300-2400 MHz frequency band;
   (b) at frequencies outside the upper or lower frequency limits set out in Part 2 of Licence Schedule 1; and
   (c) 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 6: Radiocommunications transmitter unwanted emission limits for registered AAS devices

Frequency offset range (f_{offset})	Total radiated power (dBm) per cell/sector	Specified Bandwidth
0 Hz $\leq f_{offset} <$ 5 MHz	2 - (7/5) f_{offset} (MHz)	100 kHz
5 MHz $\leq f_{offset} <$ 10 MHz	-5	100 kHz
$f_{offset} \geq$ 10 MHz	-6	1 MHz

10. The unwanted emission limits in Table 7 apply to all radiocommunications transmitters exempt from registration:

    (a) within the 2290-2410 MHz frequency band;
    (b) at frequencies outside the upper or lower frequency limits set out in Part 2 of Licence Schedule 1; and
    (c) offset from the upper or lower frequency limits set out in Part 2 of Licence Schedule 1;

    where:
    $\mathbf{f_{offset}}$ 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 $\mathbf{f_{offset}}$.

Table 7: Radiocommunications transmitter unwanted emission limits for devices exempt from registration

Frequency offset range (f_{offset})	Radiated maximum true mean power (dBm EIRP)	Specified Bandwidth
$0\ Hz \leq f_{offset} < 1\ MHz$	-18	30 kHz
$1\ MHz \leq f_{offset} < 5\ MHz$	-10	1 MHz
$5\ MHz \leq f_{offset} < 10\ MHz$	-13	1 MHz
$f_{offset} \geq 10\ MHz$	-25	1 MHz

11. For radiocommunications transmitters operated under this licence the unwanted emission limits in Table 8 apply at frequencies outside the 2290-2410 MHz frequency range.

Table 8: Radiocommunications transmitter unwanted emission limits for all registered devices and devices exempt from registration

Frequency range (f)	Total radiated power (dBm) per cell/sector	Specified Bandwidth
$9\ kHz \leq f < 150\ kHz$	-36	1 kHz
$150\ kHz \leq f < 30\ MHz$	-36	10 kHz
$30\ MHz \leq f < 1\ GHz$	-36	100 kHz
$1\ GHz \leq f < 12.75\ GHz$	-30	1 MHz

12. The unwanted emission limits in Table 9 apply for radiocommunications receivers with non-AAS that are outside the 2290 to 2410 MHz frequency range.

Note: The unwanted emission limits in Core Condition 12 only apply during periods an associated radiocommunications transmitter in the device is not operating.

Table 9: Radiocommunications receiver with non-AAS unwanted emission limits

Frequency range (f)	Mean power (dBm) measured from each receiver	Specified Bandwidth
30 MHz ≤ f < 1 GHz	-57	100 kHz
1 GHz ≤ f < 12.75 GHz	-47	1 MHz

13. The unwanted emission limits in Table 10 apply for radiocommunications receivers with AAS that are outside the 2260 to 2440 MHz frequency range.

Note: The unwanted emission limits in Core Condition 13 only apply during periods an associated radiocommunications transmitter in the device is not operating.

Table 10: Radiocommunications receiver with AAS unwanted emission limits

Frequency range (f)	Total radiated power (dBm) per cell/sector	Specified Bandwidth
30 MHz ≤ f < 1 GHz	-36	100 kHz
1 GHz ≤ f < 12.75 GHz	-30	1 MHz

Emission limits outside the geographic areas

14. Core Conditions 15 to 18 apply in relation to those areas that are outside the geographic areas set out in Part 2 of Licence Schedule 1.

15. Where a written agreement specifying the maximum permitted level of radio emission for areas described in Core Condition 14 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.

16. Where there is no written agreement for the purposes of Core Condition 15 in force, the licensee must comply with Core Condition 17.

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

18. The licensee complies with Core Condition 17 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 dBm/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) the 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.

Licence Schedule 3 Statutory Conditions (cont)

Exemption from registration requirements

4. Radiocommunications transmitters that operate in the 2.3 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 in relation to this licence.

   permanent establishment has the same meaning as:
   (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, or any instrument made under section 64 of the *Australian Communications and Media Authority Act 2005* as a replacement of that determination, 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 band means the part of the spectrum from 2300 to 2400 MHz.

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 2, 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 spectrum 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 200 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 the 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, or any instrument made under section 110A of the Act as a replacement of that determination, 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* or the definition of licence in that other instrument, 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 the 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).

7. (2) In relation to each radiocommunications 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 the 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 (RQZ)

8. Before seeking to register a radiocommunications transmitter for use in or around the RQZ and supplementary RQZ, as defined by the *Radiocommunications (Mid-West Radio Quiet Zone) Frequency Band Plan 2011* (as in force from time to time), or any instrument made under section 32 of the Act as a replacement of that Plan (as in force from time to time), the licensee must follow the procedures set out in 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.

Protection of Earth stations

9. If the licensee operates a radiocommunications device under this licence, the licensee must comply with the requirements specified in Annex 7 of Appendix 7 of the ITU Radio Regulations relating to the levels of interference protection to be afforded to Earth station receivers, if the receiver:

(a) is licensed under the Act;
(b) was registered in the Register prior to the date on which the device operated under this spectrum licence is registered.

Note: Recommendation ITU-R SF. 1006 provides guidance on the procedure to use.

Licence Schedule 4 Other Conditions (cont)

Protection of deep space Earth station receivers

10. If the licensee operates a radiocommunications device under this licence, the licensee must comply with the requirements specified in RALI MS 37 relating to the protection to be afforded to deep space Earth station receivers, if the receiver:

    (a) is licensed under the Act;
    (b) was registered in the Register prior to the date on which the device operated under this spectrum licence is registered.

    Note: RALI MS 37 is available on the ACMA website at www.acma.gov.au.

Harmful Interference

11. 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 operating under a different spectrum or apparatus licence.

Synchronisation Requirement

12. 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 (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 - 2.3 GHz Band) 2013*, as in force from time to time, or any instrument made under section 262 of the Act as a replacement of that Plan (as in force from time to time); and
    (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 12(e)(ii) by operating a radiocommunications 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.

Licence Schedule 5 Licence Notes

WARNING: The licensee should consider the changes made to the Act and other legislation by the *Radiocommunications Legislation Amendment (Reform and Modernisation) Act 2020*. That Act can be obtained from the Federal Register of Legislation at www.legislation.gov.au.

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 revoking or varying any 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.

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 - 2.3 GHz Band) Determination 2013,* as in force from time to time, 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 1: Although not mandatory, the registration of radiocommunications receivers to be operated under the 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.

   Note 2: The Radiocommunications (Unacceptable Levels of Interference - 2.3 GHz Band) Determination 2013 may be replaced as a result of the sunsetting provisions in the Legislation Act 2003 or for other reasons.

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 - 2.3 GHz Band) 2013*, as in force from time to time; and

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

- *Radiocommunications Advisory Guidelines (Managing Interference to Spectrum Licensed Receivers - 2.3 GHz Band) 2013*, as in force from time to time.

5. The guidelines should be read in conjunction with the *Radiocommunications (Unacceptable Levels of Interference - 2.3 GHz Band) Determination 2013*, as in force from time to time (see Licence Note 3). This determination sets out the unacceptable levels of interference for the purpose of registration of radiocommunications 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 ACMA is satisfied under subsection 82 (1)(b) of the Act that special circumstances exist as a result of which it would in the public interest for that licensee to continue to hold that licence, or
   (b) 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 licensees would be in the public interest.

Trading

8. (1) A licensee may assign or otherwise deal with the whole or any part of a spectrum licence provided that this 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.

Licence Schedule 5 Licence Notes (cont)

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'".