

COMMONWEALTH OF AUSTRALIA
AUSTRALIAN COMMUNICATIONS AND MEDIA AUTHORITY



Radiocommunications Act 1992

SPECTRUM LICENCE FOR THE 1800 MHz BAND

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:

1800 MHz band has the meaning given by the *Radiocommunications Spectrum Marketing Plan (1800 MHz unallocated lots band) 2017*.

Act means the *Radiocommunications Act 1992*.

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.

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 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: Copies of the ITU Radio Regulations can be obtained from the ITU: www.itu.int

peak power means the average power measured within a specified bandwidth during one radio frequency cycle at the crest of the signal envelope.

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.

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 (1800 MHz unallocated lots band) 2017* or the *Radiocommunications (Unacceptable Levels of Interference - 1800 MHz Band) Determination 2012*.
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

| <i>Item</i> | <i>Licensee Details</i> | |
|-------------|-------------------------------|---|
| 1 | <i>Name of licensee</i> | Telstra Corporation Limited |
| 2 | <i>Address of licensee</i> | Locked Bag 3501 (C/- R Preston) BRISBANE QLD 4001 |
| 3 | <i>Client number</i> | 1103275 |
| | <i>Licence Details</i> | |
| 4 | <i>Band release</i> | 1800 MHz Band |
| 5 | <i>Date of licence effect</i> | 18/05/2018 |
| 6 | <i>Date of licence expiry</i> | 17/06/2028 |
| 7 | <i>Licence number</i> | 10435053 |
| 8 | <i>Date of licence issue</i> | 29/06/2021 |

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.

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 | 1710 | 1745 | 1805 | 1840 |
| B | 2 | 1710 | 1730 | 1805 | 1825 |
| C | 3 | 1710 | 1745 | 1805 | 1840 |
| D | 4 | 1710 | 1750 | 1805 | 1845 |
| E | 5 | 1710 | 1730 | 1805 | 1825 |
| F | 6 | 1710 | 1730 | 1805 | 1825 |
| G | 7 | 1710 | 1730 | 1805 | 1825 |
| H | 8 | 1710 | 1725 | 1805 | 1820 |
| I | 9 | 1710 | 1725 | 1805 | 1820 |
| J | 10 | 1710 | 1745 | 1805 | 1840 |
| K | 11 | 1710 | 1750 | 1805 | 1845 |
| L | 12 | 1710 | 1750 | 1805 | 1845 |

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 | GO7C, GO7D, GO7G, GO7H, GO7K, GO7L, GO8A, GO8E, GO8I |
| 2 | MW5, MW6, MW8, MW9, MX3, MW10, MW1P, MW2H, MW2L, MW2M, MW2N, MW2O, MW2P, MW3A, MW3E, MW3I, MW3M, MW3N, MW4C, MW4D, MW4G, MW4H, MW4K, MW4L, MW4O, MW4P, MW7C, MW7D, MW7G, MW7H, MW7J, MW7K, MW7L, MW7P, MX2C, MX2D, MW1K7, MW1K8, MW1K9, MW1L7, MW1L8, MW1L9, MW2G8, MW2G9, MW2I7, MW2I8, MW2I9, MW2J7, MW2J8, MW2J9, MW2K2, MW2K3, MW2K5, MW2K6, MW2K7, MW2K8, MW2K9, MW3B1, MW3B4, MW3B7, MW3F1, MW3F4, MW3F7, MW3J1, MW3J4, MW3J5, MW3J6, MW3J7, MW3J8, MW3J9, MW3O4, MW3O5, MW3O6, MW3O7, MW3O8, MW3O9, MW3P4, MW3P5, MW3P6, MW3P7, MW3P8, MW3P9, MW7F3, MW7F6, MW7F9, MW7N1, MW7N2, MW7N3, MW7N6, MW7O1, MW7O2, MW7O3, MW7O4, MW7O5, MW7O6, MW7O9, MX1D1, MX1D2, MX1D3, MX1D6, MX2A1, MX2A2, MX2A3, MX2A4, MX2A5, MX2A6, MX2B1, MX2B2, MX2B3, MX2B4, MX2B5, MX2B6, MX2B8, MX2B9, MX2G1, MX2G2, MX2G3, MX2H1, MX2H2, MX2H3, MX2H4, MX2H5, MX2H6, NW1M4, NW1M5, NW1M7, NW1M8 |
| 3 | LY, KY2, KY3, KY6, LZ1, LZ2, LZ3, MY1, MY4, MY7, MZ1 |
| 4 | AU9, AV9, AW3, BU7, BU8, BU9, BV3, BV6, BV7, BV8, BV9, BW1, BW2, BW3, BW5, BW6, CV4, CV7, CW1, CW4, 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 |
| 5 | 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 |
| 6 | IW3J, IW3K, IW3L, IW3N, IW3O, IW3P, IW6B, IW6C, IW6D, IW6F, IW6G, IW6H, IW3E5, IW3E6, IW3E8, IW3E9, IW3F4, IW3F5, IW3F6, IW3F7, IW3F8, IW3F9, IW3G4, IW3G5, IW3G6, IW3G7, IW3G8, IW3G9, IW3H4, IW3H5, IW3H6, IW3H7, IW3H8, IW3H9, IW3I2, IW3I3, IW3I5, IW3I6, IW3I8, IW3I9, IW3M2, IW3M3, IW3M5, IW3M6, IW3M8, IW3M9, IW6A2, IW6A3, IW6A5, IW6A6, IW6A8, IW6A9, IW6E2, IW6E3, IW6E5, IW6E6, IW6E8, IW6E9, JW1E4, JW1E7, JW1I1, JW1I4, JW1I7, JW1M1, JW1M4 |

Licence Schedule 1 Licence details. bands and areas (cnt)

| Geographic areas (column 1) | HCIS identifiers (column 2) |
|--------------------------------|---|
| 7 | NT9, NT8C, NT8D, NT8G, NT8H, NT8K, NT8L, NT8O, NT8P, NU3A, NU3B, NU3C, NU3D, NU3F, NU3G, NU3H, NT5O4, NT5O5, NT5O6, NT5O7, NT5O8, NT5O9, NT5P4, NT5P5, NT5P6, NT5P7, NT5P8, NT5P9, NT6M4, NT6M5, NT6M6, NT6M7, NT6M8, NT6M9, NT6N4, NT6N5, NT6N6, NT6N7, NT6N8, NT6N9, NT6O4, NT6O5, NT6O6, NT6O7, NT6O8, NT6O9, NT6P4, NT6P5, NT6P6, NT6P7, NT6P8, NT6P9, NU2C1, NU2C2, NU2C3, NU2D1, NU2D2, NU2D3, NU2D5, NU2D6, NU2D8, NU2D9, NU2H2, NU2H3, NU3E1, NU3E2, NU3E3, NU3E5, NU3E6, NU3E8, NU3E9, NU3I2, NU3I3, NU3J1, NU3J2, NU3J3, NU3K1, NU3K2, NU3K3, NU3L1, NU3L2, NU3L3 |
| 8 | KX3J, KX3K, KX3L, KX3N, KX3O, KX3P, KX6B, KX6C, KX6D, KX6F, KX6G, KX6H, KX6J, KX6K, KX6L, LX1I, LX1M, LX1N, LX1O, LX4A, LX4B, LX4C, LX4E, LX4I, KX3F7, KX3F8, KX3F9, KX3G7, KX3G8, KX3G9, KX3H4, KX3H5, KX3H6, KX3H7, KX3H8, KX3H9, KX3M6, KX3M8, KX3M9, KX6A2, KX6A3, KX6A5, KX6A6, KX6A8, KX6A9, KX6E2, KX6E3, KX6E5, KX6E6, KX6E8, KX6E9, KX6I2, KX6I3, KX6I5, KX6I6, KX6I8, KX6I9, LX1E4, LX1E7, LX1E8, LX1E9, LX1J1, LX1J4, LX1J5, LX1J6, LX1J7, LX1J8, LX1J9, LX1K4, LX1K7, LX4F1, LX4F2, LX4F4, LX4F5, LX4F7, LX4F8, LX4J1, LX4J2, LX4J4, LX4J5, LX4J7, LX4J8 |
| 9 | MV9I, MV9J, MV9K, MV9L, MV9M, MV9N, MV9O, MV9P, MW3C, MW3D, MW3G, MW3H, MW3K, MW3L, NV4N, NV4O, NV4P, NV5M, NV5N, NV5O, NV5P, NV7B, NV7C, NV7D, NV7E, NV7F, NV7G, NV7H, NV7I, NV7J, NV7K, NV7L, NV7M, NV7N, NV7O, NV7P, NW1A, NW1B, NW1C, NW1D, NW1E, NW1F, NW1G, NW1H, NW1I, NW1J, NW1K, NW1L, MV9D6, MV9D9, MV9E4, MV9E5, MV9E6, MV9E7, MV9E8, MV9E9, MV9F4, MV9F5, MV9F6, MV9F7, MV9F8, MV9F9, MV9G4, MV9G5, MV9G6, MV9G7, MV9G8, MV9G9, MV9H3, MV9H4, MV9H5, MV9H6, MV9H7, MV9H8, MV9H9, MW3B2, MW3B3, MW3B5, MW3B6, MW3B8, MW3B9, MW3F2, MW3F3, MW3F5, MW3F6, MW3F8, MW3F9, MW3J2, MW3J3, MW3O1, MW3O2, MW3O3, MW3P1, MW3P2, MW3P3, NV4I5, NV4I6, NV4I8, NV4I9, NV4J4, NV4J5, NV4J6, NV4J7, NV4J8, NV4J9, NV4K4, NV4K5, NV4K6, NV4K7, NV4K8, NV4K9, NV4L4, NV4L5, NV4L6, NV4L7, NV4L8, NV4L9, NV4M2, NV4M3, NV4M5, NV4M6, NV4M8, NV4M9, NV5I4, NV5I5, NV5I6, NV5I7, NV5I8, NV5I9, NV5J4, NV5J5, NV5J6, NV5J7, NV5J8, NV5J9, NV5K4, NV5K5, NV5K6, NV5K7, NV5K8, NV5K9, NV5L4, NV5L5, NV5L6, NV5L7, NV5L8, NV5L9, NV7A2, NV7A3, NV7A4, NV7A5, NV7A6, NV7A7, NV7A8, NV7A9, NW1M1, NW1M2, NW1M3, NW1N1, NW1N2, NW1N3, NW1O1, NW1O2, NW1O3, NW1P1, NW1P2, NW1P3 |

Licence Schedule 1 Licence details. bands and areas (cnt)

| Geographic areas (column 1) | HCIS identifiers (column 2) |
|--|--|
| 10 | JW6, JW9, JX3, JX6, KW4, KW7, KX1, KX2, KX4, KX5, KX8, KX9, LX3, LX5, LX6, LX7, LX8, LX9, MX4, MX7, KW5I, KW5M, KW5N, KW8A, KW8B, KW8C, KW8E, KW8F, KW8G, KW8H, KW8I, KW8J, KW8K, KW8L, KW8M, KW8N, KW8O, KW8P, KW9E, KW9I, KW9J, KW9K, KW9M, KW9N, KW9O, KW9P, KX3A, KX3B, KX3C, KX3D, KX3E, KX3I, KX6M, KX6N, KX6O, KX6P, LW7M, LW7N, LW9P, LX1A, LX1B, LX1C, LX1D, LX1F, LX1G, LX1H, LX1L, LX1P, LX2D, LX2E, LX2F, LX2G, LX2H, LX2I, LX2J, LX2K, LX2L, LX2M, LX2N, LX2O, LX2P, LX4D, LX4G, LX4H, LX4K, LX4L, LX4M, LX4N, LX4O, LX4P, MW7M, MX1A, MX1B, MX1C, MX1E, MX1F, MX1G, MX1H, MX1I, MX1J, MX1K, MX1L, MX1M, MX1N, MX1O, MX1P, MX2E, MX2F, MX2I, MX2J, MX2K, MX2L, MX2M, MX2N, MX2O, MX2P, KW5E7, KW5E8, KW5E9, KW5F7, KW5J1, KW5J4, KW5J7, KW5O1, KW5O4, KW5O7, KW8D1, KW8D4, KW8D7, KW9F1, KW9F4, KW9F7, KW9L7, KW9L8, KW9L9, KX3F1, KX3F2, KX3F3, KX3F4, KX3F5, KX3F6, KX3G1, KX3G2, KX3G3, KX3G4, KX3G5, KX3G6, KX3H1, KX3H2, KX3H3, KX3M1, KX3M2, KX3M3, KX3M4, KX3M5, KX3M7, KX6A1, KX6A4, KX6A7, KX6E1, KX6E4, KX6E7, KX6I1, KX6I4, KX6I7, LW7I7, LW7I8, LW7I9, LW7J7, LW7J8, LW7J9, LW7K7, LW7K8, LW7O1, LW7O2, LW7O4, LW7O5, LW7O7, LW7O8, LW7O9, LW7P7, LW7P8, LW7P9, LW8M7, LW8M8, LW9N4, LW9N5, LW9N6, LW9N7, LW9N8, LW9N9, LW9O4, LW9O5, LW9O6, LW9O7, LW9O8, LW9O9, LX1E1, LX1E2, LX1E3, LX1E5, LX1E6, LX1J2, LX1J3, LX1K1, LX1K2, LX1K3, LX1K5, LX1K6, LX1K8, LX1K9, LX2A1, LX2A2, LX2A4, LX2A5, LX2A6, LX2A7, LX2A8, LX2A9, LX2B4, LX2B5, LX2B6, LX2B7, LX2B8, LX2B9, LX2C4, LX2C5, LX2C6, LX2C7, LX2C8, LX2C9, LX4F3, LX4F6, LX4F9, LX4J3, LX4J6, LX4J9, MW7N4, MW7N5, MW7N7, MW7N8, MW7N9, MW7O7, MW7O8, MX1D4, MX1D5, MX1D7, MX1D8, MX1D9, MX2A7, MX2A8, MX2A9, MX2B7, MX2G4, MX2G5, MX2G6, MX2G7, MX2G8, MX2G9, MX2H7, MX2H8, MX2H9 |
| 11 | GV1, GV2, GV3, GV6, HV1, HV2, HV4, HV5, HV6, HV8, HV9, HW3, HW6, IV4, IV5, IV6, IV7, IV8, IV9, IW1, IW2, IW4, IW5, IW7, IW8, IW9, JV4, JV5, JV7, JV8, JW2, JW4, JW5, JW7, JW8, JX1, JX2, JX5, IW3A, IW3B, IW3C, IW3D, IW6I, IW6J, IW6K, IW6L, IW6M, IW6N, IW6O, IW6P, JW1A, JW1B, JW1C, JW1D, JW1F, JW1G, JW1H, JW1J, JW1K, JW1L, JW1N, JW1O, JW1P, IW3E1, IW3E2, IW3E3, IW3E4, IW3E7, IW3F1, IW3F2, IW3F3, IW3G1, IW3G2, IW3G3, IW3H1, IW3H2, IW3H3, IW3I1, IW3I4, IW3I7, IW3M1, IW3M4, IW3M7, IW6A1, IW6A4, IW6A7, IW6E1, IW6E4, IW6E7, JW1E1, JW1E2, JW1E3, JW1E5, JW1E6, JW1E8, JW1E9, JW1I2, JW1I3, JW1I5, JW1I6, JW1I8, JW1I9, JW1M2, JW1M3, JW1M5, JW1M6, JW1M7, JW1M8, JW1M9 |

Licence Schedule 1 Licence details. bands and areas (cnt)

| Geographic areas (column 1) | HCIS identifiers (column 2) |
|--------------------------------|---|
| 12 | KW6, LQ1, LQ2, LQ4, LQ5, LQ7, LQ8, LR2, LR3, LR5, LR6, LV9, LW2, LW3, LW4, LW5, LW6, MR1, MR4, MR5, MR7, MR8, MR9, MS1, MS2, MS3, MS4, MS5, MS6, MS8, MS9, MT3, MT6, MT9, MU3, MU5, MU6, MU8, MU9, MV2, MV3, MV4, MV5, MV6, MV7, MV8, NS4, NS7, NS8, NS9, NT1, NT2, NT3, NT4, NT7, NU1, NU4, NU5, NU6, NU7, NU8, NU9, NV1, NV2, NV3, KW5A, KW5B, KW5C, KW5D, KW5G, KW5H, KW5K, KW5L, KW5P, KW9A, KW9B, KW9C, KW9D, KW9G, KW9H, LW7A, LW7B, LW7C, LW7D, LW7E, LW7F, LW7G, LW7H, LW7L, LW8A, LW8B, LW8C, LW8D, LW8E, LW8F, LW8G, LW8H, LW8I, LW8J, LW8K, LW8L, LW8N, LW8O, LW8P, LW9A, LW9B, LW9C, LW9D, LW9E, LW9F, LW9G, LW9H, LW9I, LW9J, LW9K, LW9L, LW9M, MV9A, MV9B, MV9C, MW1A, MW1B, MW1C, MW1D, MW1E, MW1F, MW1G, MW1H, MW1I, MW1J, MW1M, MW1N, MW2A, MW2B, MW2C, MW2D, MW2E, MW2F, MW4A, MW4B, MW4E, MW4F, MW4I, MW4J, MW4M, MW4N, MW7A, MW7B, MW7E, MW7I, NT5A, NT5B, NT5C, NT5D, NT5E, NT5F, NT5G, NT5H, NT5I, NT5J, NT5K, NT5L, NT5M, NT5N, NT6A, NT6B, NT6C, NT6D, NT6E, NT6F, NT6G, NT6H, NT6I, NT6J, NT6K, NT6L, NT8A, NT8B, NT8E, NT8F, NT8I, NT8J, NT8M, NT8N, NU2A, NU2B, NU2E, NU2F, NU2G, NU2I, NU2J, NU2K, NU2L, NU2M, NU2N, NU2O, NU2P, NU3M, NU3N, NU3O, NU3P, NV4A, NV4B, NV4C, NV4D, NV4E, NV4F, NV4G, NV4H, NV5A, NV5B, NV5C, NV5D, NV5E, NV5F, NV5G, NV5H, KW5E1, KW5E2, KW5E3, KW5E4, KW5E5, KW5E6, KW5F1, KW5F2, KW5F3, KW5F4, KW5F5, KW5F6, KW5F8, KW5F9, KW5J2, KW5J3, KW5J5, KW5J6, KW5J8, KW5J9, KW5O2, KW5O3, KW5O5, KW5O6, KW5O8, KW5O9, KW8D2, KW8D3, KW8D5, KW8D6, KW8D8, KW8D9, KW9F2, KW9F3, KW9F5, KW9F6, KW9F8, KW9F9, KW9L1, KW9L2, KW9L3, KW9L4, KW9L5, KW9L6, LW7I1, LW7I2, LW7I3, LW7I4, LW7I5, LW7I6, LW7J1, LW7J2, LW7J3, LW7J4, LW7J5, LW7J6, LW7K1, LW7K2, LW7K3, LW7K4, LW7K5, LW7K6, LW7K9, LW7O3, LW7O6, LW7P1, LW7P2, LW7P3, LW7P4, LW7P5, LW7P6, LW8M1, LW8M2, LW8M3, LW8M4, LW8M5, LW8M6, LW8M9, LW9N1, LW9N2, LW9N3, LW9O1, LW9O2, LW9O3, LX2A3, LX2B1, LX2B2, LX2B3, LX2C1, LX2C2, LX2C3, MV9D1, MV9D2, MV9D3, MV9D4, MV9D5, MV9D7, MV9D8, MV9E1, MV9E2, MV9E3, MV9F1, MV9F2, MV9F3, MV9G1, MV9G2, MV9G3, MV9H1, MV9H2, MW1K1, MW1K2, MW1K3, MW1K4, MW1K5, MW1K6, MW1L1, MW1L2, MW1L3, MW1L4, MW1L5, MW1L6, MW2G1, MW2G2, MW2G3, MW2G4, MW2G5, MW2G6, MW2G7, MW2I1, MW2I2, MW2I3, MW2I4, MW2I5, MW2I6, MW2J1, MW2J2, MW2J3, MW2J4, MW2J5, MW2J6, MW2K1, MW2K4, MW7F1, MW7F2, MW7F4, MW7F5, MW7F7, MW7F8, NT5O1, NT5O2, NT5O3, NT5P1, NT5P2, NT5P3, NT6M1, NT6M2, NT6M3, NT6N1, NT6N2, NT6N3, NT6O1, NT6O2, NT6O3, NT6P1, NT6P2, NT6P3, NU2C4, NU2C5, NU2C6, NU2C7, NU2C8, NU2C9, NU2D4, NU2D7, NU2H1, NU2H4, NU2H5, NU2H6, NU2H7, NU2H8, NU2H9, NU3E4, NU3E7, NU3I1, NU3I4, NU3I5, NU3I6, NU3I7, NU3I8, NU3I9, NU3J4, NU3J5, NU3J6, NU3J7, NU3J8, NU3J9, NU3K4, NU3K5, NU3K6, NU3K7, NU3K8, NU3K9, NU3L4, NU3L5, NU3L6, NU3L7, NU3L8, NU3L9, NV4I1, NV4I2, NV4I3, NV4I4, NV4I7, NV4J1, NV4J2, NV4J3, NV4K1, NV4K2, NV4K3, NV4L1, NV4L2, NV4L3, NV4M1, NV4M4, NV4M7, NV5I1, NV5I2, NV5I3, NV5J1, NV5J2, NV5J3, NV5K1, NV5K2, NV5K3, NV5L1, NV5L2, NV5L3, NV7A1 |

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 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 bands

2. Core conditions 3 to 11 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 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 11.

Non-spurious emission limits

5. (1) Subject to sub-condition (2), the licensee must ensure that radiocommunications transmitters operated under this licence do not exceed the non spurious emission limits in core conditions 6 and 7.
 - (2) For any frequency where an emission limit described in core condition 8 is less than an emission limit described in core condition 6 or 7, the emission limit in core condition 8 applies instead of the emission limits in core condition 6 or 7.

6. The non-spurious emission limits in Table 3 apply:

- (a) at frequencies outside the 1710-1785 MHz and 1805-1880 MHz frequency bands; and
- (b) offset from 1785 MHz, 1805 MHz and 1880 MHz;

where:

f_{offset} : is the frequency offset from the 1785 MHz, 1805 MHz and 1880 MHz band edges. The -3dB point of the specified bandwidth closest to the band edge being frequency offset from, is placed at f_{offset} .

Table 3: Radiated maximum true mean power non-spurious emission limits

| Frequency offset range (f_{offset}) | Radiated maximum true mean power (dBm EIRP) | Specified Bandwidth |
|--|---|------------------------|
| $0 \text{ Hz} \leq f_{\text{offset}} < 200 \text{ kHz}$ | 2 | 30 kHz |
| $200 \text{ kHz} \leq f_{\text{offset}} < 900 \text{ kHz}$ | $2 - 15 \times (f_{\text{offset}} \text{ (MHz)} - 0.2)$ | 30 kHz |
| $900 \text{ kHz} \leq f_{\text{offset}} < 5.6 \text{ MHz}$ | -8.5 | 30 kHz |
| $f_{\text{offset}} \geq 5.6 \text{ MHz}$ | -18.5 | 30 kHz |

7. The non-spurious emission limits in Table 4a and 4b apply:

- (a) at frequencies outside the 1710-1785 MHz frequency band; and
- (b) offset from 1710 MHz;

where:

f_{offset} : is the frequency offset from the 1710 MHz band edge. The -3dB point of the specified bandwidth closest to the band edge being frequency offset from, is placed at f_{offset} .

Table 4a: Radiated maximum true mean power non-spurious emission limits

| Frequency offset range (f_{offset}) | Radiated maximum true mean power (dBm EIRP) | Specified Bandwidth |
|---|--|------------------------|
| $0 \text{ Hz} \leq f_{\text{offset}} < 500 \text{ kHz}$ | -8.5 | 30 kHz |
| $f_{\text{offset}} \geq 500 \text{ kHz}$ | -33.5 | 30 kHz |

Table 4b: Radiated peak power non-spurious emission limits

| Frequency offset range (f_{offset}) | Radiated peak power (dBm EIRP) | Specified Bandwidth |
|---|-----------------------------------|------------------------|
| $0 \text{ Hz} \leq f_{\text{offset}} < 300 \text{ kHz}$ | 10 | 300 kHz |

Licence Schedule 2

Core Conditions (cont)

8. The non-spurious emission limits in Table 5 apply:
- (a) at frequencies outside the upper or lower frequency limits as 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 -3dB point of the specified bandwidth closest to the band edge being frequency offset from, is placed at f_{offset} .

Table 5: Radiated maximum true mean power non-spurious emission limits

| Frequency offset range (f_{offset}) | Radiated maximum true mean power (dBm EIRP) | Specified Bandwidth |
|--|---|------------------------|
| $0 \text{ Hz} \leq f_{\text{offset}} < 200 \text{ kHz}$ | 21.5 | 30 kHz |
| $200 \text{ kHz} \leq f_{\text{offset}} < 1 \text{ MHz}$ | $2 - 13.125 \times (f_{\text{offset}} \text{ (MHz)} - 0.2)$ | 30 kHz |
| $1 \text{ MHz} \leq f_{\text{offset}} < 5.8 \text{ MHz}$ | -8.5 | 30 kHz |
| $f_{\text{offset}} \geq 5.8 \text{ MHz}$ | -13 | 30 kHz |

Spurious emission limits

9. The licensee must ensure that radiocommunications devices operated under this licence do not exceed the spurious emission limits in core conditions 10 and 11.
10. For radiocommunications transmitters operated under this licence, the spurious emission limits in Table 6 apply at frequencies outside the 1710-1785 MHz and 1805-1880 MHz frequency bands, measured over the specified bandwidth for the relevant frequency range.

Table 6: Radiocommunications transmitter spurious emission limits

| Frequency range (f) | Radiated mean power (dBm EIRP) | Specified Bandwidth |
|--|-----------------------------------|------------------------|
| $9 \text{ kHz} \leq f < 150 \text{ kHz}$ | -36 | 1 kHz |
| $150 \text{ kHz} \leq f < 30 \text{ MHz}$ | -36 | 10 kHz |
| $30 \text{ MHz} \leq f < 1 \text{ GHz}$ | -36 | 100 kHz |
| $1 \text{ GHz} \leq f < 3.5 \text{ GHz}$ | -2 | 1 MHz |
| $3.5 \text{ GHz} \leq f < 12.75 \text{ GHz}$ | -30 | 1 MHz |

11. For radiocommunications receivers operated under this licence, the spurious emission limits in Table 7 apply at frequencies outside the 1710-1785 MHz and 1805-1880 MHz frequency bands, measured over the specified bandwidth for the relevant frequency range.

Table 7: Radiocommunications receiver spurious emission limits

| Frequency range (f) | Radiated mean power (dBm EIRP) | Specified Bandwidth |
|--------------------------------|---|--------------------------------|
| 9 kHz \leq f < 1 GHz | -57 | 100 kHz |
| 1 GHz \leq f < 3.5 GHz | -19 | 1 MHz |
| 3.5 GHz \leq f < 12.75 GHz | -47 | 1 MHz |

Emission limits outside the geographic area

12. Core conditions 13 to 15 apply in relation to those areas that are outside the geographic areas set out in Part 2 of Licence Schedule 1.
13. Where a written agreement specifying the maximum permitted level of radio emission for areas described in core condition 12 exists between:
- the licensee; and
 - all the affected licensees of frequency-adjacent licences and area-adjacent licences;
- the licensee must comply with that specified maximum permitted level of radio emission.
14. Where there is no written agreement for the purposes of core condition 13 in force, the licensee must comply with core condition 15.
15. (1) The licensee must ensure that the maximum permitted level of radio emission for an area described in core condition 12 caused by operation of radiocommunications devices under this licence does not exceed a radiated maximum true mean power of 54.5 dBm EIRP per 30 kHz.
- (2) The licensee complies with sub-condition (1) by ensuring that no radiocommunications device is operated under this licence in excess of a radiated maximum true mean power of 54.5 dBm EIRP per 30 kHz.

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 the 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.

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. The following kinds of radiocommunications transmitters are exempt from the registration requirement in statutory condition 3:
 - (a) a mobile transmitter that operates in the 1800 MHz band with a radiated power of less than or equal to 39 dBm EIRP per occupied bandwidth; or
 - (b) a fixed transmitter that operates in the 1800 MHz band with a radiated power always less than or equal to 33 dBm EIRP per occupied bandwidth.

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*.

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 radiocommunications 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.

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:
 - (i) a radiocommunications device operated under this spectrum licence; and
 - (ii) a radiocommunications device operated under another licence;when the measured separation between the phase centre of the antenna used with each radiocommunications 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 radiocommunications device registration details as soon as possible.

International coordination

5. A 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 Requirements (EME)

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).

Licence Schedule 4

Other Conditions (cont)

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 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.

Interference with specified fixed services

8. If:
- (a) a service is provided using the same parameters as a fixed licence listed in Table 1 of Schedule 5 to the *Radiocommunications Spectrum Marketing Plan (1800 MHz unallocated lots band) 2017* (a **specified fixed service**); and
 - (b) the specified fixed service uses frequencies wholly or partly within the 1800 MHz band; and
 - (c) the specified fixed service is provided using a radiocommunications device operated under an apparatus licence;
- the licensee:
- (d) must not operate any radiocommunications transmitters authorised under this licence in a manner that would be inconsistent with the protections afforded to that specified fixed services by Part 2 of the *Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters - 1800 MHz Band) 2012*. (Part 2 specifies the level of out-of-band and in-band protection to be afforded to such specified fixed services); and

Licence Schedule 4

Other Conditions (cont)

8. (e) cannot claim protection from interference caused by such specified fixed service.

Note: By operation of section 153H of the Act all fixed licences authorising the operation of the radiocommunications devices listed in table 1 of Schedule 6 to the *Radiocommunications Spectrum Marketing Plan (1800 MHz Band) 2015* were cancelled at the end of the re-allocation period (30 May 2017). The ACMA, under subsection 153P (3) of the Act, subsequently issued apparatus licences that authorise the operation of some of the same services that were provided under the fixed licences after the end of the re-allocation period on the basis it was satisfied that special circumstances of the particular case justified the issuing of the licence. In particular, the ACMA has issued licences in relation to the specified fixed services listed in Schedule 5 of the *Radiocommunications Spectrum Marketing Plan (1800 MHz unallocated lots band) 2017*. A spectrum licensee will not be able to establish the operation or use of any radiocommunications device authorised by the spectrum licence in a manner that would cause interference to the operation of radiocommunications devices authorised by those fixed licences providing services using the same parameters.

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 this licence, provided that the conditions, as varied, still comply with the requirements of Division 2 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 Division 2 of Part 3.2 of the Act.

Determination of unacceptable Interference

3. The ACMA has made the *Radiocommunications (Unacceptable Levels of Interference - 1800 MHz Band) Determination 2012* under subsection 145 (4) of the Act 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 - 1800 MHz Band) 2012*;
 - (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 - 1800 MHz Band) 2012*;
 - (c) co-ordinating the operation of high sited radiocommunications transmitters operated under this licence with radiocommunications receivers in the 1800 MHz lower band (1710 MHz - 1785 MHz) operated under other licences:
 - *Radiocommunications Advisory Guidelines (Additional Device Boundary Criteria - 1800 MHz Lower Band) 2012*.

Licence Schedule 5

Licence Notes (cont)

5. The guidelines should be read in conjunction with the *Radiocommunications (Unacceptable Levels of Interference - 1800 MHz Band) Determination 2012* (see Licence Note 3). The determination sets out the unacceptable levels of interference for the purpose of registration of transmitters to be operated under 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 be 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 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 in respect of spectrum licences 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 re-consideration 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’”.