Commonwealth of Australia

Radiocommunications Act 1992

Radiocommunications Spectrum Marketing Plan (500 MHz Band) 1996.

I, CHRISTINE MARY GOODE, Spectrum Manager, prepare on behalf of the Spectrum Management Agency the following Marketing Plan under section 39 of the *Radiocommunications Act 1992.*

Dated 6 November 1996.

CHRISTINE M. GOODE
Spectrum Manager

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Summary of marketing plan

Parts of the 500 MHz band have been designated under s.36 of the *Radiocommunications Act 1992* as being available for allocation by issuing spectrum licences. Existing apparatus licences in the band will be replaced by spectrum licences, as described in the Conversion Plan prepared by the SMA under s.38 of the Act. The SMA will issue licences in accordance with this Plan for vacant spectrum and spectrum not taken up by existing apparatus licensees, except for certain areas.

A summary of the overall process is as follows:

- The 500MHz band has been divided into lots that consist of a geographic area and a particular bandwidth. These lots will be allocated and become the subject of spectrum licences.
- Allocation will be by way of a simultaneous ascending bid multiple round auction, with other price based allocation systems in reserve for spectrum not sold by way of auction. (Details are in the Radiocommunications (Spectrum Licence Allocation - 500 MHz Band) Determination 1996, made under s.60 of the Act).
- The SMA will advertise details of the auction as soon as practicable after this Plan is published. This will be at least one month before the date of the auction. Interested parties must register to take part in the auction before the closing date specified in the advertisement.
- The successful applicant of a lot will be entitled to be issued a spectrum licence that includes that lot as soon as practicable after the SMA has received payment of the final bid price for the lot.
- A spectrum licence will contain core conditions and conditions relating to other aspects of spectrum use (ss.66-71). An example of a spectrum licence is attached.
- The licence will come into force on the day specified in the licence, and will be in force for the period set out in the licence (s.65). This period cannot be longer than 10 years. The SMA intends that all licences for a particular band be in force for approximately 10 years, and expire at the same time.
- The SMA will publish information regarding licences that are due to expire during the two years before the expiry date (s.78). Current licensees will also receive periodic reminders that their licence is due to expire.
- Re-allocation of licences will be by way of price based allocation (ss.80, 81). Only in special circumstances will the SMA re-issue spectrum licences to existing licensees without conducting a re-allocation (s.82).

Title

1. This Plan is called the Radiocommunications Spectrum Marketing Plan (500 MHz Band) 1996.

Commencement

2. This Plan commences on 6 November 1996.

Purpose

3. (1) This Plan sets out procedures and a timetable for issuing spectrum licences that authorise use of the radiofrequency spectrum in those parts of the 500MHz band designated by the Minister under section 36 of the Act that are described in Schedule 3 and are:

(a) unencumbered; or

(b) the subject of an apparatus licence whose holder has not accepted the SMA's offer to convert that apparatus licence to a spectrum licence.

[NOTES: 1. This Plan does not deal with any frequencies in Central Australia.

2. This Plan does not deal with certain frequencies in Cairns or Townsville. These frequencie are shown as struck through in Schedule 3 - see subclause 6(2).

3. Certain lots in Sydney and Newcastle will be allocated under the Radiocommunications Spectrum Conversion Plan (500MHz Band) 1996 to certain existing apparatus licensees - see subclause 6(2). These lots are shown as struck through in Schedule 3.

4. Conversion of apparatus licences to spectrum licences is dealt with in ss.52-59 of the Act and in the Radiocommunications Spectrum Conversion Plan (500 MHz Band) 1996. Copies of the Plan and the designation instrument are available from the SMA.]

(2) This Plan also sets out matters a licensee will need to take into account in operating devices under a licence.

Interpretation

4.(1) In this Plan, unless the contrary intention appears:

Act means the *Radiocommunications Act 1992*.

allocation determination means the determination under section 60 of the Act about the allocation of spectrum licences in the 500 MHz Band.

cell means a square with a side measured in degrees by reference to the Australian National Spheroid.

device boundary, in relation to a receiver or a group of receivers, means the device boundary established in accordance with Part 1 of Schedule 1.

effective antenna height means the effective height of an antenna, calculated in accordance with Schedule 2.

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

emission centre frequency, in relation to a transmitter, means the frequency midway between the lower and upper frequency limits of the transmitter's effective occupied bandwidth.

emission limits outside the area means the maximum permitted level of radio emission, outside the geographic area of a licence, that may be caused by the operation of a radiocommunications device under the licence.

emission limits outside the band means the maximum permitted level of radio emission, outside the frequency band of a licence, that may be caused by the operation of a radiocommunications device under the licence.

fixed receiver means a radiocommunications receiver located at a fixed point on land or sea and not established for use while in motion.

geographic area, in relation to a licence, means the area within which operation of a radiocommunications device is authorised under the licence.

group of receivers has the meaning given by clause 5.

horizontally radiated power, in relation to a radiocommunications device, means the radiated maximum true mean power within the frequency band of the licence, summed over all polarizations and measured in units of dBm EIRP, in a direction referenced from, and in the horizontal plane containing, the phase centre of the antenna used with the radiocommunications device.

in-band, in relation to a transmitter operated under a licence, means the frequencies within the frequency band of the spectrum to which the licence relates.

level of protection, in relation to a receiver operated under a licence, means the level of protection that:

(a) causes the device boundary of the receiver to be as near as possible to the boundary of the geographic area of the licence while remaining within that geographic area; and
(b) is never less than -139 dBm per 12.5 kHz.

licence means a spectrum licence.

LOP criterion (500 MHz) has the meaning given by Part 2 of Schedule 1.

lot means a lot listed in column 1 of Schedule 3 that:

(a) covers that part of the spectrum identified by the band number in column 3 opposite the number of the lot; and
(b) consists of the area identified by the area number in column 2 opposite the number of the lot; and
(c) has the lot rating shown in column 5 opposite the number of the lot.

lot rating means:

(a) the lot rating fixed by the SMA as the product of the population of the lot and the frequency band in MHz of the lot, divided by 100; and
(b) in relation to a particular lot, means the lot rating shown in column 5 of Schedule 3 opposite the number of that lot.

maximum true mean power means the true mean power measured in a 12.5 kHz 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 a 12.5 kHz rectangular bandwidth is normally established by taking measurements using either an adjacent channel power meter incorporating, for example, a standard 8.5 kHz filter as specified in AS4295/95 or a spectrum analayser with, for example, a 300 Hz resolution bandwidth. Measuring equipment accuracy, measurement procedure and any corrections to measurements necessary to take account of practical filter shape factors would normally be made in accordance with good engineering practice.]

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

mobile receiver means a radiocommunications receiver established for use while in motion or during halts at unspecified points on land or sea.

peak power means the average power during one radio frequency cycle at the crest of the signal envelope measured in a 12.5 kHz rectangular bandwidth that is located within a specified frequency band.

population, in relation to a lot, means the notional population of the lot, fixed by the SMA and set out in column 4 of Schedule 3 opposite the number of the lot.

roads mobile list means the list giving the names of major roads, latitude and longitude of the centre location, the effective radius and 2 sets of co-ordinates from which sections of the roads may be identified, published by the SMA, copies of which are available from the SMA.

spectrum map grid means the map grid developed by the SMA for Australia, showing cells the sides of which measure 3 degrees of arc, 1 degree of arc or 5 minutes of arc, published by the SMA, copies of which are available from the SMA.

spurious radio emission means any emission on a frequency whose level may be reduced without affecting the corresponding transmission of information:

(a) including harmonic, parasitic, intermodulation, frequency conversion products and products from instabilities introduced by the modulation process; and
(b) excluding products that are a necessary result of the modulation process and switching transients.

standard trading unit (STU) means a parcel of spectrum space that consists of:

(a) a frequency band having lower and upper frequency limits defined by:
  (i) 500.99375 + n x .0125 and (n+1) x .0125 respectively; or
  (ii) 510.99375 + n x .0125 and (n+1) x .0125 respectively;
  where n is any integer from 0 to 319 (inclusive); and
(b) a geographic area equal to a cell of the spectrum map grid.

towns mobile list means the list giving the names of towns, latitude and longitude of the centre location and the effective radius for each town, published by the SMA, copies of which are available from the SMA.

true mean power means:

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

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

unencumbered, in relation to the spectrum, means a part of the spectrum in which apparatus licences have not been issued.

500 MHz band means the following frequency bands:

(a) 500.99375 MHz - 504.99375 MHz (the ***500 MHz Lower band***);

(b) 510.99375 MHz - 514.99375 MHz (the ***500 MHz Upper band***).

[NOTES: 1. The following terms, used in this Plan, are defined in the *Radiocommunications Act 1992* and have the meanings given to them by that Act:

apparatus licence	public or community service
frequency band	SMA
licensee	spectrum licence.]

(2) In this Plan, the range of numbers that identifies a frequency band includes the higher, but not the lower, number.

Group of receivers

5. (1) For the purpose of this determination, two or more receivers are a group of receivers if:

(a) they have:

(i) the same intended polarisation for their antennas; and

(ii) for the intended polarisation of their antennas - the same forward gain, 3 dB beamwidth and front to back ratio; and

(b) they are operated for the purpose of receiving information from the same transmitter.

(2) A receiver may belong to more than one group.

Issue of spectrum licences

6. (1) The SMA will issue spectrum licences, in accordance with this Plan, for those parts of the spectrum in the 500 MHz Band designated by the Minister under section 36 of the Act that are described in Schedule 3 and are:

(a) unencumbered; or

(b) used by a licensee of an apparatus licence who has not accepted the SMA's offer to convert the apparatus licence to a spectrum licence.

[NOTES: 1. Under s.58 of the Act, the apparatus licence will cease to be in force once the spectrum licence is issued.

2. Conversion of apparatus licences to spectrum licences is dealt with in ss.52-59 of the Act and in the Radiocommunications Spectrum Conversion Plan (500MHz Band) 1996. Copies of the Plan are available from the SMA.]

(2) In spite of subclause (1):

(a) the SMA will not issue spectrum licences under this Plan for the lots in Cairns and Townsville that are shown as struck through in Schedule 3; and

(b) the SMA will issue spectrum licences under the Radiocommunications Spectrum Conversion Plan (500MHz Band) 1996 for the lots in Sydney and Newcastle that are shown as struck through in Schedule 3.

(3) The SMA does not propose to reserve any spectrum in the 500MHz Band for public or community services.

Identification of lots

7. (1) The SMA has divided the parts of the spectrum that have been designated by the Minister into lots. The lots for which the SMA will issue spectrum licences under this Plan are set out in Schedule 3.

[NOTE: The SMA will not issue licences under this Plan for lots that are shown as struck through - see subclause 6(2).]

(2) Each lot covers a geographic area. A description of the area of each lot is set out in Schedule 4.

[NOTE: Maps showing the area of each lot are available from thte SMA.]

(3) Each lot also covers a particular frequency band. The frequency bands are set out in Schedule 5.

Allocation of lots

8. These lots will be allocated and will then become the subject of spectrum licences. Under Part 3.2 of the Act, the SMA will issue spectrum licences to cover the lots that have been allocated in accordance with this Plan.

How licences will be allocated

9. (1) The first allocation will be by way of a simultaneous ascending bid multiple round auction, in accordance with the procedures set out in the Radiocommunications (Spectrum Licence Allocation - 500 MHz Band) Determination 1996 made under s.60 of the Act, copies of which are available from the SMA.

[NOTE: The determination sets out the procedures for allocating spectrum licences by a simultaneous ascending bid multiple round auction.]

(2) All the lots listed in the Schedule will be available for auction at the same time.

(3) The SMA may hold further allocations by a means to be determined by the SMA under section 60 of the Act.

(4) In spite of subclause (1), the SMA will not hold an auction if:

(a) for each area available for allocation, the total amount of bandwidth nominated for the area, in accordance with the allocation determination, by all applicants for the area is equal to or less than the bandwidth available for that area; and

(b) the SMA offers each applicant a licence for a bandwidth, in the area nominated by the applicant, at the starting bid price; and

(b) each applicant accepts the licence offered.

[Note: In this case, the SMA will allocate the licences for a pre-determined price - see Part 3 of the Radiocommunications (Spectrum Licence Allocation - 500 MHz Band) Determination 1996.]

Lot ratings

10. Each lot has a lot rating, as set out in Schedule 3. The lot rating is used as the basis of working out the eligiblity payment payable by an applicant, and the applicant's eligibility. Details of these are in clauses 2.5 and 2.6 of the allocation determination.

Advertising auction

11. The SMA will advertise details of the auction as soon as practicable after the day this Plan is published, and at least one month before the proposed auction date. The advertisement will:

(a) describe the part of the spectrum to be auctioned; and

(b) include a summary of the auction process.

Details of the advertisement are in clause 2.1 of the allocation determination.

Registration

12. (1) The advertisement will invite people to apply to register to take part in the auction. The SMA will send interested people an Applicant Information Package that contains more detail about registration requirements and the auction process. Details of what is in the Package are in clause 2.2 of the allocation determination.

(2) People wishing to take part in the auction must register by the closing date in the advertisement. An application must have with it an eligiblity payment and an entry fee. Details of how to apply are in clauses 2.3 and 2.4 of the allocation determination.

Amount of eligiblity payment

13. Each person who applies to be registered must pay an eligiblity payment. The amount of eligiblity payment payable by a person is based on the lot rating and is worked out in accordance with clause 2.6 of the allocation determination.

Entitlement to licence

14. A successful applicant in relation to a lot is entitled to be issued a licence that includes that lot as soon as practicable after the final bid price is received by the SMA. Details of payment requirements are in Part 5 of the allocation determination.

Sample licence

15. A sample licence is set out in Schedule 6.

Core licence conditions

16. Section 66 of the Act requires a licence to contain core conditions that define the parts of the spectrum that can be used under the licence, in terms of:

(a) frequency band; and

(b) geographic area; and

(c) emission limits outside the area; and

(d) emission limits outside the band.

These conditions will be included in the licence.

Other licence conditions

17. The licence will also include conditions about:

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

(b) use by third parties (section 68); and

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

(d) other matters that the SMA may include in the licence (section 71).

Determination of core licence conditions

18. (1) The core conditions for the geographic area of a licence will be based on the area or the aggregation of areas described in Schedule 4 that cover the lots allocated to the licensee in the allocation under section 60 of the Act.

(2) The core conditions for frequency bands will be based on the band or bands described in Schedule 5 that cover the lots allocated to the licensee.

Emission limits

19. (1) The emission limits outside the area for all licences are worked out in accordance with Schedule 7.

(2) The emission limits outside the band for all licences are worked out in accordance with Schedule 8.

[NOTE: These core conditions may be varied with the licensee's agreement - see s.72 of the Act.]

Level of Protection

20. (**1**) The level of in-band emission from a transmitter operating under a licence, measured at a fixed receiver operating otherwise than under that licence, must be, for not more than 99% of the time in any one hour period, not greater than the level of protection for that receiver plus 20dB.

[NOTES: 1. The level of protection may be taken into account during interference settlement.

2. The level of protection relates to interference caused by in-band emissions from geographically adjacent spectrum licensees and does not relate to interference caused by, for example, intermodulation or services operated under apparatus licences.

3. The level of protection is applied only within an equivalent intermediate frequency bandwidth of the receiver that is based on the effective occupied bandwidth of the transmitter that communicates with the receiver.

4. The same level of protection is provided to a receiver regardless of the gain of the antenna used with the receiver or the bearing of the interfering transmitter.]

(2) The level of emission at the fixed receiver is the level of radio emission received by a notional antenna located as if its phase centre is located at the phase centre of the antenna used with the receiver and measured:

(a) as mean power in units of dBm at the terminals of the notional antenna; and

(b) in relation to 12.5 kHz rectangular bandwidths within the frequency band:

(i) whose upper limit is equal to the emission centre frequency plus half the effective occupied bandwidth of a transmitter that communicates with the receiver; and

(ii) whose lower limit is equal to the emission centre frequency minus half the effective occupied bandwidth of a transmitter that communicates with the receiver.

(3) In subclause (2), ***notional antenna*** means an antenna with a gain of 0 dBi in any direction.

(**4**) The level of protection for each of the following receivers is never less than -77 dBm per 12.5 kHz:

(a) a fixed receiver whose operation is authorised under a licence issued for the 500 MHz Lower band when its effective antenna height for segment “m”=1 is greater than 10 metres; or

(b) a fixed receiver whose operation is authorised under a licence issued for the 500 MHz Upper band when its effective antenna height for segment “m”=1 is less than 20 metres; or

(c) a mobile receiver.

(5) When it is not possible to establish whether a measured level of emission at a fixed receiver meets the requirements of subclause (1) because emission levels cannot be measured in accordance with subclause (2) with equipment of reasonable accuracy and reliability (for example, because of internally generated spurious signals or overload problems in the measuring equipment caused by other transmitters), the SMA will:

(a) estimate the level of emission from the transmitter, having regard to the measurements taken and the circumstances in which the measurements were taken; and

(b) discuss the estimated level with the relevant licensees; and

(c) take whatever action is necessary to resolve any interference that the SMA considers to be the result of the level of transmission. This action may include variation of licence conditions, for example to reduce the level of emission at the receiver.

[NOTES: 1. Measurement of levels of emission at receivers having the benchmark level of protection (down to -119 dBm/12.5 kHz) is often unreliable. In some cases, the interference mechanism is determined by a process of applying remedies to suspected causes rather than by direct measurement.

2. When emission levels can not be reliably measured, interference settlement may be effected by providing an acceptable protection ratio between the wanted and unwanted signals, taking account of necessary fading and operating conditions.

3. Operating problems in the absence of a wanted signal, that can be removed by fitting systems such as CTCSS, would not normally be considered to be interference.]

Guidelines

21. The guidelines made by the SMA under section 262 of the Act about co-ordinating the operation of transmitters may be taken into account in settling interference disputes under Part 4.3 of the Act.

[NOTES: 1. Paragraph 262(2)(d) of the Act authorises the making of guidelines about frequency co-ordination. Copies of the guidelines are available from the SMA.

2. The SMA does not intend to afford protection to receivers operating under spectrum licences from any interference they may incur from transmitters in Telstra's Radio Concentrator System that are operated in accordance with their apparatus licence. The SMA intends to afford protection, in accordance with the guidelines, to RCS receivers from transmitters operated under spectrum licences. Each case will be assessed on its merits.]

Duration of licences

22. (1) The licences issued under this Plan:

(a) will be for fixed terms as close as possible to, but not exceeding, 10 years; and

(b) will have a common expiry date.

[NOTE: Section 65 of the Act provides that the maximum duration of a spectrum licence is 10 years.]

(2) The expiry date will be the same as the expiry date of licences in the 500 MHz band issued to replace existing apparatus licences.

[NOTE: Conversion of apparatus licences to spectrum licences is dealt with in ss.52-59 of the Act and in the Radiocommunications Spectrum Conversion Plan (500MHz Band) 1996. Copies of the Conversion Plan are available from the SMA.]

Registration of licences

23. (1) The SMA will register licences, as required by section 144 of the Act.

[NOTE: Details about registration are in the Radiocommunications (Register of Radiocommunications Licences) Determination 1996, copies of which are available from the SMA.]

(2) Transmitters that are part of a group of transmitters may be registered individually or as a group.

(3) The SMA does not propose to register mobile transmitters that operate:
(a) outside the limits of a town on the towns mobile list; or
(b) on a road that is not on the roads mobile list; or
(c) at sea and only communicate with a mobile receiver at sea.

Trading in licences

24. (1) As permitted by Division 5 of Part 3.2 of the Act, a licensee may assign or otherwise deal with the whole or any part of his or her licence. The SMA will determine rules under section 88 of the Act governing trading in licences. The rules will not allow trading other than in whole standard trading units.

Licences that are about to expire

25. (1) As required by section 78 of the Act, the SMA will publish notices periodically in the *Gazette*:

(a) stating where information can be obtained about licences that are due to expire within the next 2 years; and
(b) inviting expressions of interest from people who want to have these licences issued to them.

This information will also be available through area offices of the SMA.

(2) The SMA will also send licensees regular reminders during the last 2 years of their licences that the licences are due to expire.

Re-issue of licences

26. (1) The SMA will re-issue licences, as required by sections 78-84 of the Act.

(2) As a general rule, licences will only be re-issued after the lots they cover are offered for re-allocation by auction, tender, or predetermined or negotiated price. In re-allocating the licences, the SMA will follow the procedures set out in the determinations as in force at the time under section 60 of the Act.

(3) However, as set out in section 82 of the Act, the SMA may re-issue a licence to the previous licensee without re-allocating the licence if it is in the public interest to do so. Licensees should not assume that they will be reallocated their existing licence.

Variation of this Plan

27. The SMA may vary this Plan at any time, as provided in section 42 of the Act. For example, the variations may deal with changes in how parts of the spectrum are to be apportioned between licences.

SCHEDULES

SCHEDULE 1

Clause 4(1)

PART 1

Device boundary of a fixed receiver or a group of fixed receivers

1. The device boundary of a fixed receiver or a group of fixed receivers is established as follows:

Step 1: Calculate the LOP-Criterion (500 MHz) for each increment (m·5) minutes in distance by reference to the Australian National Spheroid, where m is any integer beginning 1 to 30, along each of 36 radials. All increments m=1, begin at the common central point of the radials. The common central point is the centre location of the receiver. The 36 radials have bearings taken clockwise and given by the sequence ϕ_0, ϕ_1, ϕ_2,... ϕ_{33}, ϕ_{34}, ϕ_{35} (ϕ_n) according to the sequence rule $\phi_n = n \cdot 10$ degrees referenced to true north.

[NOTE: In the expression "m·5", and similar expressions, the symbol " · " represents the operation of multiplication.]

Step 2: Calculate an end point for each radial as the point corresponding to the sum of:

(a) the distance in kilometres along the radial equal to the length corresponding to the number of 5 minute increments from the centre location of the receiver that corresponds to the calculated value of the LOP-Criterion (500 MHz) being zero or negative when either all the previous values calculated for that radial are positive, or the number of the increment is equal to 1; and

(b) the effective radius of the centre location, calculated in accordance with Schedule 9.

[Notes: 1. The value of m for each increment is the same as the value of m for the segment referred to in paragraph 2(c) of Schedule 2.

2. The actual distance in kilometres for a 5 minute increment in distance varies according to the direction and location of the radial by reference to the Australian National Spheroid. Distances measured in minutes are accepted usage in mapping.]

Step 3: Identify the location of each end point by reference to the spectrum map grid.

Step 4: Connect the end point of each radial consecutively to draw a polygon in relation to the spectrum map grid cells.

Step 5: Aggregate the spectrum map grid cells that either fall within or are intersected by the polygon. The boundary of this aggregated area is the device boundary of the receiver.

2. If there is more than one centre location for a group of fixed receivers, a device boundary is to be calculated for each centre location.

SCHEDULE 1 - *continued*

PART 2

LOP-Criterion (500 MHz)

If:

(a) LOP is the level of protection of a fixed receiver; and

(b) $he_m(\phi_n)$ is the effective antenna height of the receiver (referred to in this Schedule as "he") and measured in metres for segment m (m being any integer from 1 to 30) for each bearing ϕ_n; and

(c) $d_m(\phi_n)$ is the distance m·5 minutes with reference to the Australian National Spheroid (referred to in this Schedule as "he") and calculated for segment m and measured in kilometres for each bearing ϕ_n ; and

(d) if he $<$ 1.5 then he $=$ 1.5, and if he $>$ 1600 then he $=$ 1600;

then:

(f) if the receiver is authorised to operate under a licence issued for frequency bands in the 500 MHz Lower Band, the LOP-Criterion (500 MHz) is either:

(i) the value, rounded to one decimal place, of the mathematical expression:

$LOP - 3.2 \cdot (\log_{10}(11.8 \cdot he))^2 + 30 \cdot \log_{10}(d) + 93$:

when:

$0.1 \text{ km} < d \leq 10 \text{ km}$; and

$1.5 \text{ m} \leq he \leq 10 \text{ m}$; or

(ii) the value, rounded to one decimal place, of the mathematical expression:

$LOP - 3.2 \cdot (\log_{10}(11.8 \cdot he))^2 + 60 \cdot \log_{10}(d) + 59$:

when:

$10 \text{ km} < d$; and

$1.5 \text{ m} \leq he \leq 10 \text{ m}$; or

(g) if the receiver is authorised to operate under a licence issued for frequency bands in the 500 MHz Upper Band, the LOP-Criterion (500 MHz) is either:

(i) the value, rounded to one decimal place, of the mathematical expression:

$LOP - (1.6 \cdot he)^{1/2} + 30 \cdot \log_{10}(d) + 90$:

when:

$0.1 \text{ km} < d \leq 10 \text{ km}$; and

$20 \text{ m} \leq he \leq 1600 \text{ m}$; or

(ii) the value, rounded to one decimal place, of the mathematical expression:

$LOP - (1.6 \cdot he)^{1/2} + 60 \cdot \log_{10}(d) + 55$:

when:

$10 \text{ km} < d$; and

$20 \text{ m} \leq he \leq 1600 \text{ m}$.

SCHEDULE 2

Clause 4(1)

Effective Antenna Height

1. The effective height of an antenna is determined in accordance with its receiver, as set out in this Schedule.

[Note: To simplify the calculation of mean ground height by persons accredited under s.263 of the Act to issue interference certificates under s.145(3) of the Act, the SMA provides lists of the average of the elevation attributes for the RadDEM cells within 5 minute segments of 2.5 degree sectors for any location in Australia.]

2. Effective Antenna Height of a Fixed Receiver (see Diagram 1 below)

If:

(a) *hg* is the vertical height in metres of the phase centre of the fixed receiver's antenna measured relative to the point:

(i) located on the line of intersection between the external surface of the structure supporting the antenna and the surface of the ground or sea;

(ii) and having the lowest elevation on that line; and

(b) *hs* is the sum of:

(i) the elevation attribute of the RadDEM cell containing the location of the phase centre of a fixed receivers antenna; and

(ii) *hg*; and

(c) $hag_m(\phi_n)$ is average ground height, as described below, for each of the segments 'm' of a sector of 10 degrees arc centred along each of the bearings ϕ_n, calculated by taking the average of the elevation attributes for all of the cells that have either half or more than half their area within each segment 'm'; and

(d) each sector is divided into 30 segments "m" (as illustrated in Diagram 2 below) with:

(i) any two consecutively numbered segments 1 to 30 being contiguous; and

(ii) each segment being a 5 minute increment in radial distance; and

(iii) segment 1 beginning at the centre location;

then:

(e) for fixed receivers operating in the 500 MHz Lower Band the effective antenna height:

(i) for segment "m" = 1, $he_1(\phi_n)$, is *hg* for that centre location except when $(hs - hg - hag_1(\phi_n))$ is > 48 in which case $he_1(\phi_n)$ is $(hs - hag_1(\phi_n))$ for that centre location; and

(ii) for segments "m" = 2 to 30, $he_m(\phi_n)$, is $(hs - hag_m(\phi_n))$ for that centre location except when $(hs - hag_m(\phi_n))$ is > 10 in which case $he_m(\phi_n)$ is 10 for that centre location; and

(f) for fixed receivers operating in the 500 MHz Upper Band the effective antenna height:

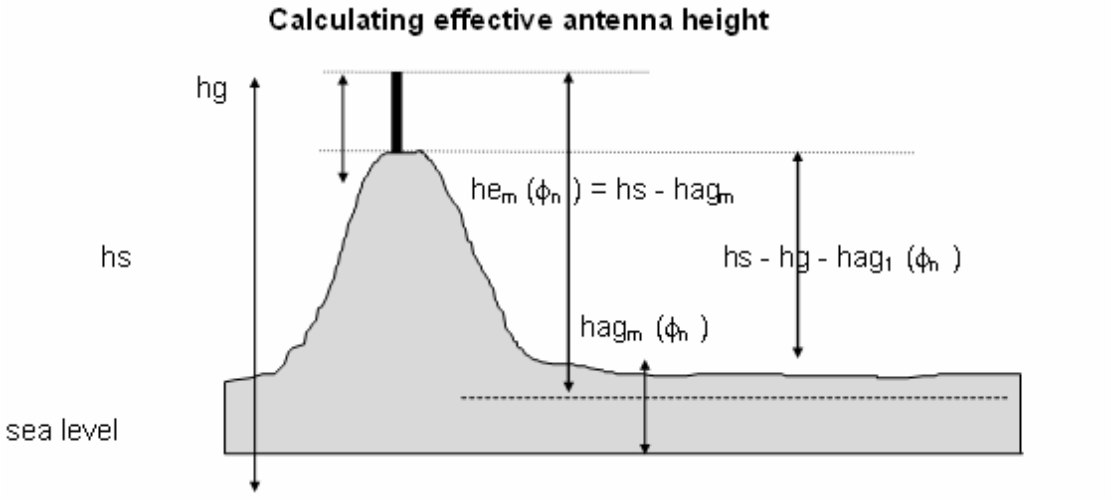
(i) for segment "m" =1, $he_1(\phi_n)$, is *hg* for that centre location except when $(hs - hg - hag_1(\phi_n))$ is > 0 in which case $he_1(\phi_n)$ is $(hs - hag_1(\phi_n))$ for that centre location; and

SCHEDULE 2 - *continued*

(ii) for segments "m" = 2 to 30, $he_m(\phi_n)$, is (hs - $hag_m(\phi_n)$) for that centre location except when (hs - $hag_m(\phi_n)$) is < 20 in which case $he_m(\phi_n)$ is 20 for that centre location.

[Note: A RadDEM cell is represented as raster data such that the western and southerly boundary of the cell is part of the cell but the northerly and easterly boundary are parts of the adjacent cells. This is an important consideration when a location falls on a cell boundary.]

Diagram 1

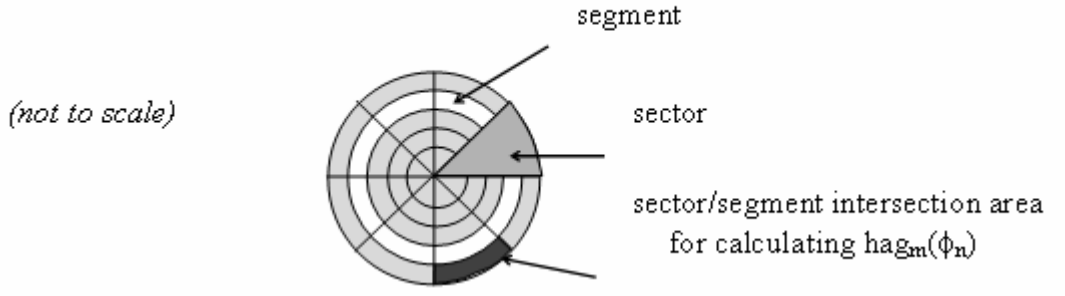


hg : antenna height above ground
hs : antenna height above sea level
$hag_m(\phi_n)$: average ground height above sea level in segment 'm' of sector 'n'
$he_m(\phi_n)$: effective antenna height for segment 'm' of sector 'n'

(note: for this case hs - hg - $hag_1(\phi_n) > 0$)

Diagram 2

Segments and sectors



SCHEDULE 2 – *continued*

3. Effective antenna height of a group of fixed receivers

For a group of fixed receivers, where hg_{max} is less than 10 metres, then:

(a) the group of receivers is to be treated as if it is a single fixed receiver; and

(b) the effective antenna height of the group $he_m(\phi_n)$, is hg_{max} for any segment "m"=1 to 30, and any bearing (ϕ_n), where hg_{max} is greater than any *hg* established for each receiver in the group calculated in accordance with clause 2(a).

SCHEDULE 3

Clause 7

Table of lots

In this Schedule:

(a) the area number shown in column 2 for a lot refers to the geographic area of that lot identified by that number in Schedule 2; and

(b) the band number shown in column 3 for a lot refers to the frequency band of that lot identified by that number in Schedule 3; and

(c) the population shown in column 4 for a lot is the notional population for that lot; and

(d) the figure shown in column 5 for a lot is the lot rating, as worked out by the SMA.

[NOTE: Lots shown as struck through are not dealt with in this Plan - see Clauses 3 and 6.]

CAIRNS **SCHEDULE 3**

Column 1	Column 2	Column 3	Column 4	Column 5
Lot Number	**Area**	**Band Number**	**Population**	**Lot Rating**
1	1	1	208900	26
2	1	2	208900	26
3	1	3	208900	52
4	1	4	208900	52
5	1	5	208900	52
6	1	6	208900	209
7	1	7	208900	209
8	1	8	208900	209
9	1	9	208900	209
10	1	10	208900	209
11	1	11	208900	1045
12	1	12	208900	2089
~~13~~	~~1~~	~~13~~	~~208900~~	~~2089~~
~~14~~	~~1~~	~~14~~	~~208900~~	~~1045~~
~~15~~	~~1~~	~~15~~	~~208900~~	~~209~~
~~16~~	~~1~~	~~16~~	~~208900~~	~~209~~
~~17~~	~~1~~	~~17~~	~~208900~~	~~52~~
~~18~~	~~1~~	~~18~~	~~208900~~	~~52~~
~~19~~	~~1~~	~~19~~	~~208900~~	~~52~~
~~20~~	~~1~~	~~20~~	~~208900~~	~~52~~
~~21~~	~~1~~	~~21~~	~~208900~~	~~52~~
~~22~~	~~1~~	~~22~~	~~208900~~	~~26~~
~~23~~	~~1~~	~~23~~	~~208900~~	~~26~~
~~24~~	~~1~~	~~24~~	~~208900~~	~~26~~
~~25~~	~~1~~	~~25~~	~~208900~~	~~26~~
~~26~~	~~1~~	~~26~~	~~208900~~	~~26~~
~~27~~	~~1~~	~~27~~	~~208900~~	~~26~~
28	1	28	208900	26
29	1	29	208900	26
30	1	30	208900	52
31	1	31	208900	52
32	1	32	208900	52
33	1	33	208900	209
34	1	34	208900	209
35	1	35	208900	209
36	1	36	208900	209
37	1	37	208900	209
38	1	38	208900	1045
39	1	39	208900	2089
~~40~~	~~1~~	~~40~~	~~208900~~	~~2089~~
~~41~~	~~1~~	~~41~~	~~208900~~	~~1045~~
~~42~~	~~1~~	~~42~~	~~208900~~	~~209~~
~~43~~	~~1~~	~~43~~	~~208900~~	~~209~~
~~44~~	~~1~~	~~44~~	~~208900~~	~~52~~
~~45~~	~~1~~	~~45~~	~~208900~~	~~52~~
~~46~~	~~1~~	~~46~~	~~208900~~	~~52~~
~~47~~	~~1~~	~~47~~	~~208900~~	~~52~~
~~48~~	~~1~~	~~48~~	~~208900~~	~~52~~
~~49~~	~~1~~	~~49~~	~~208900~~	~~26~~
~~50~~	~~1~~	~~50~~	~~208900~~	~~26~~
~~51~~	~~1~~	~~51~~	~~208900~~	~~26~~
~~52~~	~~1~~	~~52~~	~~208900~~	~~26~~
~~53~~	~~1~~	~~53~~	~~208900~~	~~26~~
~~54~~	~~1~~	~~54~~	~~208900~~	~~26~~

TOWNSVILLE **SCHEDULE 3**

Column 1	Column 2	Column 3	Column 4	Column 5
Lot Number	**Area**	**Band Number**	**Population**	**Lot Rating**
55	2	1	141600	18
56	2	2	141600	18
57	2	3	141600	35
58	2	4	141600	35
59	2	5	141600	35
60	2	6	141600	142
61	2	7	141600	142
62	2	8	141600	142
63	2	9	141600	142
64	2	10	141600	142
65	2	11	141600	708
66	2	12	141600	1416
~~67~~	~~2~~	~~13~~	~~141600~~	~~1416~~
~~68~~	~~2~~	~~14~~	~~141600~~	~~708~~
~~69~~	~~2~~	~~15~~	~~141600~~	~~142~~
~~70~~	~~2~~	~~16~~	~~141600~~	~~142~~
~~71~~	~~2~~	~~17~~	~~141600~~	~~35~~
~~72~~	~~2~~	~~18~~	~~141600~~	~~35~~
~~73~~	~~2~~	~~19~~	~~141600~~	~~35~~
~~74~~	~~2~~	~~20~~	~~141600~~	~~35~~
~~75~~	~~2~~	~~21~~	~~141600~~	~~35~~
~~76~~	~~2~~	~~22~~	~~141600~~	~~18~~
~~77~~	~~2~~	~~23~~	~~141600~~	~~18~~
~~78~~	~~2~~	~~24~~	~~141600~~	~~18~~
~~79~~	~~2~~	~~25~~	~~141600~~	~~18~~
~~80~~	~~2~~	~~26~~	~~141600~~	~~18~~
~~81~~	~~2~~	~~27~~	~~141600~~	~~18~~
82	2	28	141600	18
83	2	29	141600	18
84	2	30	141600	35
85	2	31	141600	35
86	2	32	141600	35
87	2	33	141600	142
88	2	34	141600	142
89	2	35	141600	142
90	2	36	141600	142
91	2	37	141600	142
92	2	38	141600	708
93	2	39	141600	1416
~~94~~	~~2~~	~~40~~	~~141600~~	~~1416~~
~~95~~	~~2~~	~~41~~	~~141600~~	~~708~~
~~96~~	~~2~~	~~42~~	~~141600~~	~~142~~
~~97~~	~~2~~	~~43~~	~~141600~~	~~142~~
~~98~~	~~2~~	~~44~~	~~141600~~	~~35~~
~~99~~	~~2~~	~~45~~	~~141600~~	~~35~~
~~100~~	~~2~~	~~46~~	~~141600~~	~~35~~
~~101~~	~~2~~	~~47~~	~~141600~~	~~35~~
~~102~~	~~2~~	~~48~~	~~141600~~	~~35~~
~~103~~	~~2~~	~~49~~	~~141600~~	~~18~~
~~104~~	~~2~~	~~50~~	~~141600~~	~~18~~
~~105~~	~~2~~	~~51~~	~~141600~~	~~18~~
~~106~~	~~2~~	~~52~~	~~141600~~	~~18~~
~~107~~	~~2~~	~~53~~	~~141600~~	~~18~~
~~108~~	~~2~~	~~54~~	~~141600~~	~~18~~

MACKAY **SCHEDULE 3**

Column 1	Column 2	Column 3	Column 4	Column 5
Lot Number	**Area**	**Band Number**	**Population**	**Lot Rating**
109	3	1	261100	33
110	3	2	261100	33
111	3	3	261100	65
112	3	4	261100	65
113	3	5	261100	65
114	3	6	261100	261
115	3	7	261100	261
116	3	8	261100	261
117	3	9	261100	261
118	3	10	261100	261
119	3	11	261100	1306
120	3	12	261100	2611
121	3	13	261100	2611
122	3	14	261100	1306
123	3	15	261100	261
124	3	16	261100	261
125	3	17	261100	65
126	3	18	261100	65
127	3	19	261100	65
128	3	20	261100	65
129	3	21	261100	65
130	3	22	261100	33
131	3	23	261100	33
132	3	24	261100	33
133	3	25	261100	33
134	3	26	261100	33
135	3	27	261100	33
136	3	28	261100	33
137	3	29	261100	33
138	3	30	261100	65
139	3	31	261100	65
140	3	32	261100	65
141	3	33	261100	261
142	3	34	261100	261
143	3	35	261100	261
144	3	36	261100	261
145	3	37	261100	261
146	3	38	261100	1306
147	3	39	261100	2611
148	3	40	261100	2611
149	3	41	261100	1306
150	3	42	261100	261
151	3	43	261100	261
152	3	44	261100	65
153	3	45	261100	65
154	3	46	261100	65
155	3	47	261100	65
156	3	48	261100	65
157	3	49	261100	33
158	3	50	261100	33
159	3	51	261100	33
160	3	52	261100	33
161	3	53	261100	33
162	3	54	261100	33

MARYBOROUGH **SCHEDULE 3**

Column 1	Column 2	Column 3	Column 4	Column 5
Lot Number	**Area**	**Band Number**	**Population**	**Lot Rating**
163	4	1	329600	41
164	4	2	329600	41
165	4	3	329600	82
166	4	4	329600	82
167	4	5	329600	82
168	4	6	329600	330
169	4	7	329600	330
170	4	8	329600	330
171	4	9	329600	330
172	4	10	329600	330
173	4	11	329600	1648
174	4	12	329600	3296
175	4	13	329600	3296
176	4	14	329600	1648
177	4	15	329600	330
178	4	16	329600	330
179	4	17	329600	82
180	4	18	329600	82
181	4	19	329600	82
182	4	20	329600	82
183	4	21	329600	82
184	4	22	329600	41
185	4	23	329600	41
186	4	24	329600	41
187	4	25	329600	41
188	4	26	329600	41
189	4	27	329600	41
190	4	28	329600	41
191	4	29	329600	41
192	4	30	329600	82
193	4	31	329600	82
194	4	32	329600	82
195	4	33	329600	330
196	4	34	329600	330
197	4	35	329600	330
198	4	36	329600	330
199	4	37	329600	330
200	4	38	329600	1648
201	4	39	329600	3296
202	4	40	329600	3296
203	4	41	329600	1648
204	4	42	329600	330
205	4	43	329600	330
206	4	44	329600	82
207	4	45	329600	82
208	4	46	329600	82
209	4	47	329600	82
210	4	48	329600	82
211	4	49	329600	41
212	4	50	329600	41
213	4	51	329600	41
214	4	52	329600	41
215	4	53	329600	41
216	4	54	329600	41

BRISBANE **SCHEDULE 3**

Column 1	Column 2	Column 3	Column 4	Column 5
Lot Number	**Area**	**Band Number**	**Population**	**Lot Rating**
217	5	1	1936300	242
218	5	2	1936300	242
219	5	3	1936300	484
220	5	4	1936300	484
221	5	5	1936300	484
222	5	6	1936300	1936
223	5	7	1936300	1936
224	5	8	1936300	1936
225	5	9	1936300	1936
226	5	10	1936300	1936
227	5	11	1936300	9682
228	5	12	1936300	19363
229	5	13	1936300	19363
230	5	14	1936300	9682
231	5	15	1936300	1936
232	5	16	1936300	1936
233	5	17	1936300	484
234	5	18	1936300	484
235	5	19	1936300	484
236	5	20	1936300	484
237	5	21	1936300	484
238	5	22	1936300	242
239	5	23	1936300	242
240	5	24	1936300	242
241	5	25	1936300	242
242	5	26	1936300	242
243	5	27	1936300	242
244	5	28	1936300	242
245	5	29	1936300	242
246	5	30	1936300	484
247	5	31	1936300	484
248	5	32	1936300	484
249	5	33	1936300	1936
250	5	34	1936300	1936
251	5	35	1936300	1936
252	5	36	1936300	1936
253	5	37	1936300	1936
254	5	38	1936300	9682
255	5	39	1936300	19363
256	5	40	1936300	19363
257	5	41	1936300	9682
258	5	42	1936300	1936
259	5	43	1936300	1936
260	5	44	1936300	484
261	5	45	1936300	484
262	5	46	1936300	484
263	5	47	1936300	484
264	5	48	1936300	484
265	5	49	1936300	242
266	5	50	1936300	242
267	5	51	1936300	242
268	5	52	1936300	242
269	5	53	1936300	242
270	5	54	1936300	242

NORTHERN RIVERS **SCHEDULE 3**

Column 1	Column 2	Column 3	Column 4	Column 5
Lot Number	**Area**	**Band Number**	**Population**	**Lot Rating**
271	6	1	419700	52
272	6	2	419700	52
273	6	3	419700	105
274	6	4	419700	105
275	6	5	419700	105
276	6	6	419700	420
277	6	7	419700	420
278	6	8	419700	420
279	6	9	419700	420
280	6	10	419700	420
281	6	11	419700	2099
282	6	12	419700	4197
283	6	13	419700	4197
284	6	14	419700	2099
285	6	15	419700	420
286	6	16	419700	420
287	6	17	419700	105
288	6	18	419700	105
289	6	19	419700	105
290	6	20	419700	105
291	6	21	419700	105
292	6	22	419700	52
293	6	23	419700	52
294	6	24	419700	52
295	6	25	419700	52
296	6	26	419700	52
297	6	27	419700	52
298	6	28	419700	52
299	6	29	419700	52
300	6	30	419700	105
301	6	31	419700	105
302	6	32	419700	105
303	6	33	419700	420
304	6	34	419700	420
305	6	35	419700	420
306	6	36	419700	420
307	6	37	419700	420
308	6	38	419700	2099
309	6	39	419700	4197
310	6	40	419700	4197
311	6	41	419700	2099
312	6	42	419700	420
313	6	43	419700	420
314	6	44	419700	105
315	6	45	419700	105
316	6	46	419700	105
317	6	47	419700	105
318	6	48	419700	105
319	6	49	419700	52
320	6	50	419700	52
321	6	51	419700	52
322	6	52	419700	52
323	6	53	419700	52
324	6	54	419700	52

NEWCASTLE **SCHEDULE 3**

Column 1	Column 2	Column 3	Column 4	Column 5
Lot Number	**Area**	**Band Number**	**Population**	**Lot Rating**
325	7	1	572900	72
326	7	2	572900	72
327	7	3	572900	143
328	7	4	572900	143
329	7	5	572900	143
330	7	6	572900	573
331	7	7	572900	573
332	7	8	572900	573
333	7	9	572900	573
334	7	10	572900	573
335	7	11	572900	2865
336	7	12	572900	5729
337	7	13	572900	5729
338	7	14	572900	2865
339	7	15	572900	573
340	7	16	572900	573
341	7	17	572900	143
342	7	18	572900	143
343	7	19	572900	143
344	7	20	572900	143
~~345~~	~~7~~	~~21~~	~~572900~~	~~143~~
~~346~~	~~7~~	~~22~~	~~572900~~	~~72~~
~~347~~	~~7~~	~~23~~	~~572900~~	~~72~~
~~348~~	~~7~~	~~24~~	~~572900~~	~~72~~
~~349~~	~~7~~	~~25~~	~~572900~~	~~72~~
350	7	26	572900	72
351	7	27	572900	72
352	7	28	572900	72
353	7	29	572900	72
354	7	30	572900	143
355	7	31	572900	143
356	7	32	572900	143
357	7	33	572900	573
358	7	34	572900	573
359	7	35	572900	573
360	7	36	572900	573
361	7	37	572900	573
362	7	38	572900	2865
363	7	39	572900	5729
364	7	40	572900	5729
365	7	41	572900	2865
366	7	42	572900	573
367	7	43	572900	573
368	7	44	572900	143
369	7	45	572900	143
370	7	46	572900	143
371	7	47	572900	143
~~372~~	~~7~~	~~48~~	~~572900~~	~~143~~
~~373~~	~~7~~	~~49~~	~~572900~~	~~72~~
~~374~~	~~7~~	~~50~~	~~572900~~	~~72~~
~~375~~	~~7~~	~~51~~	~~572900~~	~~72~~
~~376~~	~~7~~	~~52~~	~~572900~~	~~72~~
377	7	53	572900	72
378	7	54	572900	72

SYDNEY **SCHEDULE 3**

Column 1	Column 2	Column 3	Column 4	Column 5
Lot Number	**Area**	**Band Number**	**Population**	**Lot Rating**
379	8	1	3826200	478
380	8	2	3826200	478
381	8	3	3826200	957
382	8	4	3826200	957
383	8	5	3826200	957
384	8	6	3826200	3826
385	8	7	3826200	3826
386	8	8	3826200	3826
387	8	9	3826200	3826
388	8	10	3826200	3826
389	8	11	3826200	19131
390	8	12	3826200	38262
391	8	13	3826200	38262
392	8	14	3826200	19131
393	8	15	3826200	3826
394	8	16	3826200	3826
395	8	17	3826200	957
396	8	18	3826200	957
397	8	19	3826200	957
398	8	20	3826200	957
~~399~~	~~8~~	~~21~~	~~3826200~~	~~957~~
~~400~~	~~8~~	~~22~~	~~3826200~~	~~478~~
~~401~~	~~8~~	~~23~~	~~3826200~~	~~478~~
~~402~~	~~8~~	~~24~~	~~3826200~~	~~478~~
~~403~~	~~8~~	~~25~~	~~3826200~~	~~478~~
404	8	26	3826200	478
405	8	27	3826200	478
406	8	28	3826200	478
407	8	29	3826200	478
408	8	30	3826200	957
409	8	31	3826200	957
410	8	32	3826200	957
411	8	33	3826200	3826
412	8	34	3826200	3826
413	8	35	3826200	3826
414	8	36	3826200	3826
415	8	37	3826200	3826
416	8	38	3826200	19131
417	8	39	3826200	38262
418	8	40	3826200	38262
419	8	41	3826200	19131
420	8	42	3826200	3826
421	8	43	3826200	3826
422	8	44	3826200	957
423	8	45	3826200	957
424	8	46	3826200	957
425	8	47	3826200	957
~~426~~	~~8~~	~~48~~	~~3826200~~	~~957~~
~~427~~	~~8~~	~~49~~	~~3826200~~	~~478~~
~~428~~	~~8~~	~~50~~	~~3826200~~	~~478~~
~~429~~	~~8~~	~~51~~	~~3826200~~	~~478~~
~~430~~	~~8~~	~~52~~	~~3826200~~	~~478~~
431	8	53	3826200	478
432	8	54	3826200	478

CENTRAL WEST NSW **SCHEDULE 3**

Column 1	Column 2	Column 3	Column 4	Column 5
Lot Number	**Area**	**Band Number**	**Population**	**Lot Rating**
433	9	1	250900	31
434	9	2	250900	31
435	9	3	250900	63
436	9	4	250900	63
437	9	5	250900	63
438	9	6	250900	251
439	9	7	250900	251
440	9	8	250900	251
441	9	9	250900	251
442	9	10	250900	251
443	9	11	250900	1255
444	9	12	250900	2509
445	9	13	250900	2509
446	9	14	250900	1255
447	9	15	250900	251
448	9	16	250900	251
449	9	17	250900	63
450	9	18	250900	63
451	9	19	250900	63
452	9	20	250900	63
453	9	21	250900	63
454	9	22	250900	31
455	9	23	250900	31
456	9	24	250900	31
457	9	25	250900	31
458	9	26	250900	31
459	9	27	250900	31
460	9	28	250900	31
461	9	29	250900	31
462	9	30	250900	63
463	9	31	250900	63
464	9	32	250900	63
465	9	33	250900	251
466	9	34	250900	251
467	9	35	250900	251
468	9	36	250900	251
469	9	37	250900	251
470	9	38	250900	1255
471	9	39	250900	2509
472	9	40	250900	2509
473	9	41	250900	1255
474	9	42	250900	251
475	9	43	250900	251
476	9	44	250900	63
477	9	45	250900	63
478	9	46	250900	63
479	9	47	250900	63
480	9	48	250900	63
481	9	49	250900	31
482	9	50	250900	31
483	9	51	250900	31
484	9	52	250900	31
485	9	53	250900	31
486	9	54	250900	31

CANBERRA / SOUTH COAST SCHEDULE 3

Column 1	Column 2	Column 3	Column 4	Column 5
Lot Number	**Area**	**Band Number**	**Population**	**Lot Rating**
487	10	1	434600	54
488	10	2	434600	54
489	10	3	434600	109
490	10	4	434600	109
491	10	5	434600	109
492	10	6	434600	435
493	10	7	434600	435
494	10	8	434600	435
495	10	9	434600	435
496	10	10	434600	435
497	10	11	434600	2173
498	10	12	434600	4346
499	10	13	434600	4346
500	10	14	434600	2173
501	10	15	434600	435
502	10	16	434600	435
503	10	17	434600	109
504	10	18	434600	109
505	10	19	434600	109
506	10	20	434600	109
507	10	21	434600	109
508	10	22	434600	54
509	10	23	434600	54
510	10	24	434600	54
511	10	25	434600	54
512	10	26	434600	54
513	10	27	434600	54
514	10	28	434600	54
515	10	29	434600	54
516	10	30	434600	109
517	10	31	434600	109
518	10	32	434600	109
519	10	33	434600	435
520	10	34	434600	435
521	10	35	434600	435
522	10	36	434600	435
523	10	37	434600	435
524	10	38	434600	2173
525	10	39	434600	4346
526	10	40	434600	4346
527	10	41	434600	2173
528	10	42	434600	435
529	10	43	434600	435
530	10	44	434600	109
531	10	45	434600	109
532	10	46	434600	109
533	10	47	434600	109
534	10	48	434600	109
535	10	49	434600	54
536	10	50	434600	54
537	10	51	434600	54
538	10	52	434600	54
539	10	53	434600	54
540	10	54	434600	54

REGIONAL VICTORIA **SCHEDULE 3**

Column 1	Column 2	Column 3	Column 4	Column 5
Lot Number	**Area**	**Band Number**	**Population**	**Lot Rating**
541	11	1	869900	109
542	11	2	869900	109
543	11	3	869900	217
544	11	4	869900	217
545	11	5	869900	217
546	11	6	869900	870
547	11	7	869900	870
548	11	8	869900	870
549	11	9	869900	870
550	11	10	869900	870
551	11	11	869900	4350
552	11	12	869900	8699
553	11	13	869900	8699
554	11	14	869900	4350
555	11	15	869900	870
556	11	16	869900	870
557	11	17	869900	217
558	11	18	869900	217
559	11	19	869900	217
560	11	20	869900	217
561	11	21	869900	217
562	11	22	869900	109
563	11	23	869900	109
564	11	24	869900	109
565	11	25	869900	109
566	11	26	869900	109
567	11	27	869900	109
568	11	28	869900	109
569	11	29	869900	109
570	11	30	869900	217
571	11	31	869900	217
572	11	32	869900	217
573	11	33	869900	870
574	11	34	869900	870
575	11	35	869900	870
576	11	36	869900	870
577	11	37	869900	870
578	11	38	869900	4350
579	11	39	869900	8699
580	11	40	869900	8699
581	11	41	869900	4350
582	11	42	869900	870
583	11	43	869900	870
584	11	44	869900	217
585	11	45	869900	217
586	11	46	869900	217
587	11	47	869900	217
588	11	48	869900	217
589	11	49	869900	109
590	11	50	869900	109
591	11	51	869900	109
592	11	52	869900	109
593	11	53	869900	109
594	11	54	869900	109

MELBOURNE **SCHEDULE 3**

Column 1	Column 2	Column 3	Column 4	Column 5
Lot Number	**Area**	**Band Number**	**Population**	**Lot Rating**
595	12	1	3411800	426
596	12	2	3411800	426
597	12	3	3411800	853
598	12	4	3411800	853
599	12	5	3411800	853
600	12	6	3411800	3412
601	12	7	3411800	3412
602	12	8	3411800	3412
603	12	9	3411800	3412
604	12	10	3411800	3412
605	12	11	3411800	17059
606	12	12	3411800	34118
607	12	13	3411800	34118
608	12	14	3411800	17059
609	12	15	3411800	3412
610	12	16	3411800	3412
611	12	17	3411800	853
612	12	18	3411800	853
613	12	19	3411800	853
614	12	20	3411800	853
615	12	21	3411800	853
616	12	22	3411800	426
617	12	23	3411800	426
618	12	24	3411800	426
619	12	25	3411800	426
620	12	26	3411800	426
621	12	27	3411800	426
622	12	28	3411800	426
623	12	29	3411800	426
624	12	30	3411800	853
625	12	31	3411800	853
626	12	32	3411800	853
627	12	33	3411800	3412
628	12	34	3411800	3412
629	12	35	3411800	3412
630	12	36	3411800	3412
631	12	37	3411800	3412
632	12	38	3411800	17059
633	12	39	3411800	34118
634	12	40	3411800	34118
635	12	41	3411800	17059
636	12	42	3411800	3412
637	12	43	3411800	3412
638	12	44	3411800	853
639	12	45	3411800	853
640	12	46	3411800	853
641	12	47	3411800	853
642	12	48	3411800	853
643	12	49	3411800	426
644	12	50	3411800	426
645	12	51	3411800	426
646	12	52	3411800	426
647	12	53	3411800	426
648	12	54	3411800	426

TASMANIA **SCHEDULE 3**

Column 1	Column 2	Column 3	Column 4	Column 5
Lot Number	**Area**	**Band Number**	**Population**	**Lot Rating**
649	13	1	485400	61
650	13	2	485400	61
651	13	3	485400	121
652	13	4	485400	121
653	13	5	485400	121
654	13	6	485400	485
655	13	7	485400	485
656	13	8	485400	485
657	13	9	485400	485
658	13	10	485400	485
659	13	11	485400	2427
660	13	12	485400	4854
661	13	13	485400	4854
662	13	14	485400	2427
663	13	15	485400	485
664	13	16	485400	485
665	13	17	485400	121
666	13	18	485400	121
667	13	19	485400	121
668	13	20	485400	121
669	13	21	485400	121
670	13	22	485400	61
671	13	23	485400	61
672	13	24	485400	61
673	13	25	485400	61
674	13	26	485400	61
675	13	27	485400	61
676	13	28	485400	61
677	13	29	485400	61
678	13	30	485400	121
679	13	31	485400	121
680	13	32	485400	121
681	13	33	485400	485
682	13	34	485400	485
683	13	35	485400	485
684	13	36	485400	485
685	13	37	485400	485
686	13	38	485400	2427
687	13	39	485400	4854
688	13	40	485400	4854
689	13	41	485400	2427
690	13	42	485400	485
691	13	43	485400	485
692	13	44	485400	121
693	13	45	485400	121
694	13	46	485400	121
695	13	47	485400	121
696	13	48	485400	121
697	13	49	485400	61
698	13	50	485400	61
699	13	51	485400	61
700	13	52	485400	61
701	13	53	485400	61
702	13	54	485400	61

ADELAIDE **SCHEDULE 3**

Column 1	Column 2	Column 3	Column 4	Column 5
Lot Number	**Area**	**Band Number**	**Population**	**Lot Rating**
703	14	1	1334200	168
704	14	2	1334200	168
705	14	3	1334200	334
706	14	4	1334200	334
707	14	5	1334200	334
708	14	6	1334200	1334
709	14	7	1334200	1334
710	14	8	1334200	1334
711	14	9	1334200	1334
712	14	10	1334200	1334
713	14	11	1334200	6671
714	14	12	1334200	13342
715	14	13	1334200	13342
716	14	14	1334200	6671
717	14	15	1334200	1334
718	14	16	1334200	1334
719	14	17	1334200	334
720	14	18	1334200	334
721	14	19	1334200	334
722	14	20	1334200	334
723	14	21	1334200	334
724	14	22	1334200	168
725	14	23	1334200	168
726	14	24	1334200	168
727	14	25	1334200	168
728	14	26	1334200	168
729	14	27	1334200	168
730	14	28	1334200	168
731	14	29	1334200	168
732	14	30	1334200	334
733	14	31	1334200	334
734	14	32	1334200	334
735	14	33	1334200	1334
736	14	34	1334200	1334
737	14	35	1334200	1334
738	14	36	1334200	1334
739	14	37	1334200	1334
740	14	38	1334200	6671
741	14	39	1334200	13340
742	14	40	1334200	13340
743	14	41	1334200	6671
744	14	42	1334200	1334
745	14	43	1334200	1334
746	14	44	1334200	334
747	14	45	1334200	334
748	14	46	1334200	334
749	14	47	1334200	334
750	14	48	1334200	334
751	14	49	1334200	168
752	14	50	1334200	168
753	14	51	1334200	168
754	14	52	1334200	168
755	14	53	1334200	168
756	14	54	1334200	168

SOUTH WEST WA **SCHEDULE 3**

Column 1	Column 2	Column 3	Column 4	Column 5
Lot Number	**Area**	**Band Number**	**Population**	**Lot Rating**
757	15	1	1472600	184
758	15	2	1472600	184
759	15	3	1472600	368
760	15	4	1472600	368
761	15	5	1472600	368
762	15	6	1472600	1473
763	15	7	1472600	1473
764	15	8	1472600	1473
765	15	9	1472600	1473
766	15	10	1472600	1473
767	15	11	1472600	7363
768	15	12	1472600	14726
769	15	13	1472600	14726
770	15	14	1472600	7363
771	15	15	1472600	1473
772	15	16	1472600	1473
773	15	17	1472600	368
774	15	18	1472600	368
775	15	19	1472600	368
776	15	20	1472600	368
777	15	21	1472600	368
778	15	22	1472600	184
779	15	23	1472600	184
780	15	24	1472600	184
781	15	25	1472600	184
782	15	26	1472600	184
783	15	27	1472600	184
784	15	28	1472600	184
785	15	29	1472600	184
786	15	30	1472600	368
787	15	31	1472600	368
788	15	32	1472600	368
789	15	33	1472600	1473
790	15	34	1472600	1473
791	15	35	1472600	1473
792	15	36	1472600	1473
793	15	37	1472600	1473
794	15	38	1472600	7363
795	15	39	1472600	14726
796	15	40	1472600	14726
797	15	41	1472600	7363
798	15	42	1472600	1473
799	15	43	1472600	1473
800	15	44	1472600	368
801	15	45	1472600	368
802	15	46	1472600	368
803	15	47	1472600	368
804	15	48	1472600	368
805	15	49	1472600	184
806	15	50	1472600	184
807	15	51	1472600	184
808	15	52	1472600	184
809	15	53	1472600	184
810	15	54	1472600	184

PILBARA **SCHEDULE 3**

Column 1	Column 2	Column 3	Column 4	Column 5
Lot Number	**Area**	**Band Number**	**Population**	**Lot Rating**
811	16	1	71800	9
812	16	2	71800	9
813	16	3	71800	18
814	16	4	71800	18
815	16	5	71800	18
816	16	6	71800	72
817	16	7	71800	72
818	16	8	71800	72
819	16	9	71800	72
820	16	10	71800	72
821	16	11	71800	359
822	16	12	71800	718
823	16	13	71800	718
824	16	14	71800	359
825	16	15	71800	72
826	16	16	71800	72
827	16	17	71800	18
828	16	18	71800	18
829	16	19	71800	18
830	16	20	71800	18
831	16	21	71800	18
832	16	22	71800	9
833	16	23	71800	9
834	16	24	71800	9
835	16	25	71800	9
836	16	26	71800	9
837	16	27	71800	9
838	16	28	71800	9
839	16	29	71800	9
840	16	30	71800	18
841	16	31	71800	18
842	16	32	71800	18
843	16	33	71800	72
844	16	34	71800	72
845	16	35	71800	72
846	16	36	71800	72
847	16	37	71800	72
848	16	38	71800	359
849	16	39	71800	718
850	16	40	71800	718
851	16	41	71800	359
852	16	42	71800	72
853	16	43	71800	72
854	16	44	71800	18
855	16	45	71800	18
856	16	46	71800	18
857	16	47	71800	18
858	16	48	71800	18
859	16	49	71800	9
860	16	50	71800	9
861	16	51	71800	9
862	16	52	71800	9
863	16	53	71800	9
864	16	54	71800	9

DARWIN **SCHEDULE 3**

Column 1	Column 2	Column 3	Column 4	Column 5
Lot Number	**Area**	**Band Number**	**Population**	**Lot Rating**
865	17	1	107500	13
866	17	2	107500	13
867	17	3	107500	27
868	17	4	107500	27
869	17	5	107500	27
870	17	6	107500	108
871	17	7	107500	108
872	17	8	107500	108
873	17	9	107500	108
874	17	10	107500	108
875	17	11	107500	538
876	17	12	107500	1075
877	17	13	107500	1075
878	17	14	107500	538
879	17	15	107500	108
880	17	16	107500	108
881	17	17	107500	27
882	17	18	107500	27
883	17	19	107500	27
884	17	20	107500	27
885	17	21	107500	27
886	17	22	107500	13
887	17	23	107500	13
888	17	24	107500	13
889	17	25	107500	13
890	17	26	107500	13
891	17	27	107500	13
892	17	28	107500	13
893	17	29	107500	13
894	17	30	107500	27
895	17	31	107500	27
896	17	32	107500	27
897	17	33	107500	108
898	17	34	107500	108
899	17	35	107500	108
900	17	36	107500	108
901	17	37	107500	108
902	17	38	107500	538
903	17	39	107500	1075
904	17	40	107500	1075
905	17	41	107500	538
906	17	42	107500	108
907	17	43	107500	108
908	17	44	107500	27
909	17	45	107500	27
910	17	46	107500	27
911	17	47	107500	27
912	17	48	107500	27
913	17	49	107500	13
914	17	50	107500	13
915	17	51	107500	13
916	17	52	107500	13
917	17	53	107500	13
918	17	54	107500	13

SCHEDULE 4

Clause 7

Description of lot geographic areas

Description: The geographic area of a lot is the area of land described in a table below, bounded by a line starting at the intersection of the first co-ordinates listed in the table in relation to the area and then bounded by a line passing sequentially through the intersections of each set of co-ordinates shown in the table to the point of commencement.

Cairns (Area 1)

° ′ ″ East	° ′ ″ South
145 30 0	16 00 0
147 00 0	16 00 0
147 00 0	18 45 0
146 55 0	18 45 0
146 55 0	18 50 0
146 45 0	18 50 0
146 40 0	18 55 0
146 35 0	18 55 0
146 35 0	19 00 0
146 20 0	19 00 0
146 20 0	19 05 0
146 15 0	19 05 0

° ′ ″ East	° ′ ″ South
146 15 0	19 10 0
146 10 0	19 10 0
146 10 0	19 00 0
146 00 0	19 00 0
146 00 0	18 55 0
145 55 0	18 55 0
145 55 0	18 50 0
145 50 0	18 50 0
145 50 0	18 45 0
145 45 0	18 45 0
145 45 0	18 10 0
145 40 0	18 10 0

° ′ ″ East	° ′ ″ South
145 40 0	17 45 0
145 20 0	17 45 0
145 20 0	17 40 0
145 15 0	17 40 0
145 15 0	16 55 0
145 10 0	16 55 0
145 10 0	16 20 0
145 05 0	16 20 0
145 05 0	16 05 0
145 30 0	16 05 0
145 30 0	16 00 0

SCHEDULE 4 - *continued*

Townsville (Area 2)

° ′ ″ East	° ′ ″ South
146 55 0	18 45 0
147 00 0	18 45 0
147 00 0	19 00 0
148 00 0	19 00 0
148 00 0	20 00 0
147 55 0	20 00 0
147 55 0	20 05 0
147 50 0	20 05 0
147 50 0	20 10 0
146 50 0	20 10 0
146 50 0	19 55 0

° ′ ″ East	° ′ ″ South
146 45 0	19 55 0
146 45 0	19 40 0
146 40 0	19 40 0
146 40 0	19 35 0
146 35 0	19 35 0
146 35 0	19 30 0
146 30 0	19 30 0
146 30 0	19 25 0
146 25 0	19 25 0
146 25 0	19 20 0
146 20 0	19 20 0

° ′ ″ East	° ′ ″ South
146 20 0	19 15 0
146 15 0	19 15 0
146 15 0	19 05 0
146 20 0	19 05 0
146 20 0	19 00 0
146 35 0	19 00 0
146 35 0	18 55 0
146 45 0	18 55 0
146 45 0	18 50 0
146 55 0	18 50 0
146 55 0	18 45 0

SCHEDULE 4 - *continued*

Mackay (Area 3)

° ′ ″ East	° ′ ″ South
148 00 0	19 00 0
149 00 0	19 00 0
149 00 0	20 00 0
150 00 0	20 00 0
150 00 0	21 00 0
151 00 0	21 00 0
151 00 0	23 00 0
152 00 0	23 00 0
152 00 0	23 50 0
151 25 0	23 50 0
151 25 0	23 55 0
151 15 0	23 55 0
151 15 0	24 00 0
151 10 0	24 00 0
151 10 0	24 05 0
151 00 0	24 05 0
151 00 0	24 10 0
150 45 0	24 10 0
150 45 0	24 05 0
150 40 0	24 05 0
150 40 0	23 55 0
150 35 0	23 55 0
150 35 0	23 50 0
150 25 0	23 50 0
150 25 0	23 45 0
150 15 0	23 45 0
150 15 0	23 40 0
150 10 0	23 40 0
150 10 0	23 30 0

° ′ ″ East	° ′ ″ South
150 05 0	23 30 0
150 05 0	23 25 0
150 00 0	23 25 0
150 00 0	23 20 0
149 55 0	23 20 0
149 55 0	23 15 0
149 50 0	23 15 0
149 50 0	23 10 0
149 45 0	23 10 0
149 45 0	23 05 0
149 40 0	23 05 0
149 40 0	23 00 0
149 35 0	23 00 0
149 35 0	22 55 0
149 30 0	22 55 0
149 30 0	22 50 0
149 25 0	22 50 0
149 25 0	22 40 0
149 20 0	22 40 0
149 20 0	22 30 0
149 15 0	22 30 0
149 15 0	22 00 0
149 10 0	22 00 0
149 10 0	21 45 0
149 00 0	21 45 0
149 00 0	21 35 0
148 45 0	21 35 0
148 45 0	21 30 0
148 40 0	21 30 0

° ′ ″ East	° ′ ″ South
148 40 0	21 25 0
148 35 0	21 25 0
148 35 0	21 05 0
148 25 0	21 05 0
148 25 0	20 45 0
148 20 0	20 45 0
148 20 0	20 40 0
148 15 0	20 40 0
148 15 0	20 35 0
148 10 0	20 35 0
148 10 0	20 30 0
148 05 0	20 30 0
148 05 0	20 25 0
148 00 0	20 25 0
148 00 0	20 20 0
147 55 0	20 20 0
147 55 0	20 15 0
147 50 0	20 15 0
147 50 0	20 05 0
147 55 0	20 05 0
147 55 0	20 00 0
148 00 0	20 00 0
148 00 0	19 00 0

SCHEDULE 4 - *continued*

Maryborough (Area 4)

° ′ ″ East	° ′ ″ South
151 40 0	23 50 0
151 45 0	23 50 0
152 00 0	23 50 0
152 00 0	24 00 0
154 00 0	24 00 0
154 00 0	26 00 0
152 10 0	26 00 0
152 10 0	27 35 0
152 20 0	27 35 0
152 20 0	28 00 0
152 25 0	28 00 0
152 25 0	28 20 0
152 15 0	28 20 0
152 15 0	28 25 0
152 05 0	28 25 0
152 05 0	28 55 0
151 55 0	28 55 0
151 55 0	29 00 0
151 35 0	29 00 0
151 35 0	29 10 0
151 25 0	29 10 0
151 25 0	28 40 0
151 20 0	28 40 0
151 20 0	28 35 0
151 15 0	28 35 0
151 15 0	28 25 0

° ′ ″ East	° ′ ″ South
151 10 0	28 25 0
151 10 0	28 20 0
151 05 0	28 20 0
151 05 0	28 10 0
151 00 0	28 10 0
151 00 0	27 50 0
150 55 0	27 50 0
150 55 0	27 00 0
151 00 0	27 00 0
151 00 0	26 50 0
151 05 0	26 50 0
151 05 0	26 40 0
151 10 0	26 40 0
151 10 0	26 30 0
151 15 0	26 30 0
151 15 0	26 25 0
151 20 0	26 25 0
151 20 0	26 20 0
151 25 0	26 20 0
151 25 0	26 15 0
151 30 0	26 15 0
151 30 0	26 10 0
151 35 0	26 10 0
151 35 0	26 05 0
151 40 0	26 05 0

° ′ ″ East	° ′ ″ South
151 40 0	26 00 0
151 50 0	26 00 0
151 50 0	25 55 0
151 55 0	25 55 0
151 55 0	25 50 0
152 00 0	25 50 0
152 00 0	25 25 0
151 50 0	25 25 0
151 50 0	25 20 0
151 45 0	25 20 0
151 45 0	25 15 0
151 40 0	25 15 0
151 40 0	25 10 0
151 35 0	25 10 0
151 35 0	25 00 0
151 40 0	25 00 0
151 40 0	24 50 0
151 45 0	24 50 0
151 45 0	24 35 0
151 40 0	24 35 0
151 40 0	23 50 0

SCHEDULE 4 - *continued*

Brisbane (Area 5)

° ′ ″ East	° ′ ″ South
152 10 0	26 00 0
154 00 0	26 00 0
154 00 0	28 30 0
153 00 0	28 30 0

° ′ ″ East	° ′ ″ South
153 00 0	28 20 0
152 25 0	28 20 0
152 25 0	28 00 0
152 20 0	28 00 0

152 20 0	27 35 0
° ′ ″ East	**° ′ ″ South**
152 10 0	27 35 0
152 10 0	26 00 0

Northern Rivers (Area 6)

° ′ ″ East	° ′ ″ South
152 15 0	28 20 0
153 00 0	28 20 0
153 00 0	28 30 0
154 00 0	28 30 0
154 00 0	32 00 0
150 20 0	32 00 0
150 20 0	31 45 0
150 45 0	31 45 0
150 45 0	31 35 0

° ′ ″ East	° ′ ″ South
151 00 0	31 35 0
151 00 0	31 30 0
151 10 0	31 30 0
151 10 0	31 25 0
151 15 0	31 25 0
151 15 0	31 20 0
151 20 0	31 20 0
151 20 0	31 15 0
151 25 0	31 15 0

° ′ ″ East	° ′ ″ South
151 25 0	29 10 0
151 35 0	29 10 0
151 35 0	29 00 0
151 55 0	29 00 0
151 55 0	28 55 0
152 05 0	28 55 0
152 05 0	28 25 0
152 15 0	28 25 0
152 15 0	28 20 0

Newcastle (Area 7)

° ′ ″ East	° ′ ″ South
150 30 0	32 00 0
153 00 0	32 00 0
153 00 0	33 00 0

° ′ ″ East	° ′ ″ South
152 00 0	33 00 0
152 00 0	33 20 0
151 15 0	33 20 0

° ′ ″ East	° ′ ″ South
151 15 0	33 05 0
150 30 0	33 05 0
150 30 0	32 00 0

Sydney / Wollongong (Area 8)

° ′ ″ East	° ′ ″ South
150 10 0	33 05 0
151 15 0	33 05 0
151 15 0	33 20 0
152 00 0	33 20 0

° ′ ″ East	° ′ ″ South
152 00 0	35 00 0
151 00 0	35 00 0
151 00 0	35 35 0
149 55 0	35 35 0

° ′ ″ East	° ′ ″ South
149 55 0	34 05 0
150 10 0	34 05 0
150 10 0	33 05 0

SCHEDULE 4 - *continued*

Central West NSW (Area 9)

° ′ ″ East	° ′ ″ South
150 20 0	32 00 0
150 30 0	32 00 0
150 30 0	33 05 0
150 10 0	33 05 0
150 10 0	34 05 0
149 55 0	34 05 0
149 55 0	34 40 0
149 00 0	34 40 0
149 00 0	34 35 0
148 35 0	34 35 0
148 35 0	35 45 0
146 35 0	35 45 0
146 35 0	35 40 0
146 55 0	35 40 0
146 55 0	34 45 0
147 00 0	34 45 0
147 00 0	34 35 0
147 05 0	34 35 0
147 05 0	34 25 0
147 10 0	34 25 0
147 10 0	34 15 0
147 15 0	34 15 0
147 15 0	34 10 0
147 20 0	34 10 0

° ′ ″ East	° ′ ″ South
147 20 0	34 05 0
147 25 0	34 05 0
147 25 0	34 00 0
147 30 0	34 00 0
147 30 0	33 55 0
147 40 0	33 55 0
147 40 0	33 50 0
147 45 0	33 50 0
147 45 0	33 45 0
147 55 0	33 45 0
147 55 0	33 40 0
148 05 0	33 40 0
148 05 0	33 35 0
148 15 0	33 35 0
148 15 0	33 30 0
148 40 0	33 30 0
148 40 0	33 25 0
148 50 0	33 25 0
148 50 0	33 15 0
148 55 0	33 15 0
148 55 0	33 05 0
149 10 0	33 05 0
149 10 0	33 00 0
149 15 0	33 00 0

° ′ ″ East	° ′ ″ South
149 15 0	32 55 0
149 20 0	32 55 0
149 20 0	32 45 0
149 25 0	32 45 0
149 25 0	32 40 0
149 30 0	32 40 0
149 30 0	32 35 0
149 40 0	32 35 0
149 40 0	32 30 0
149 45 0	32 30 0
149 45 0	32 25 0
149 55 0	32 25 0
149 55 0	32 20 0
150 00 0	32 20 0
150 00 0	32 15 0
150 10 0	32 15 0
150 10 0	32 10 0
150 15 0	32 10 0
150 15 0	32 05 0
150 20 0	32 05 0
150 20 0	32 00 0

SCHEDULE 4 - *continued*

Canberra / South Coast (Area 10)

° ′ ″ East	° ′ ″ South
148 35 0	34 35 0
149 00 0	34 35 0
149 00 0	34 40 0
149 55 0	34 40 0
149 55 0	35 35 0
151 00 0	35 35 0
151 00 0	38 00 0
150 00 0	38 00 0
150 00 0	37 30 0
149 50 0	37 30 0
149 50 0	37 25 0
149 35 0	37 25 0

° ′ ″ East	° ′ ″ South
149 35 0	37 20 0
149 20 0	37 20 0
149 20 0	37 15 0
149 05 0	37 15 0
149 05 0	37 10 0
148 55 0	37 10 0
148 55 0	37 05 0
148 40 0	37 05 0
148 40 0	37 00 0
148 30 0	37 00 0
148 30 0	36 55 0
148 20 0	36 55 0

° ′ ″ East	° ′ ″ South
148 20 0	36 50 0
148 10 0	36 50 0
148 10 0	36 40 0
148 15 0	36 40 0
148 15 0	36 25 0
148 20 0	36 25 0
148 20 0	36 15 0
148 25 0	36 15 0
148 25 0	35 45 0
148 35 0	35 45 0
148 35 0	34 35 0

SCHEDULE 4 - *continued*

Regional Victoria (Area 11)

° ′ ″ East	° ′ ″ South
141 00 0	34 00 0
143 00 0	34 00 0
143 00 0	36 25 0
143 30 0	36 25 0
143 30 0	36 20 0
143 40 0	36 20 0
143 40 0	36 15 0
143 50 0	36 15 0
143 50 0	36 10 0
144 00 0	36 10 0
144 00 0	36 05 0
144 20 0	36 05 0
144 20 0	36 00 0
144 45 0	36 00 0
144 45 0	35 55 0
145 15 0	35 55 0
145 15 0	35 50 0
146 30 0	35 50 0
146 30 0	35 45 0
148 25 0	35 45 0
148 25 0	36 15 0
148 20 0	36 15 0
148 20 0	36 25 0

° ′ ″ East	° ′ ″ South
148 15 0	36 25 0
148 15 0	36 40 0
148 10 0	36 40 0
148 10 0	36 50 0
148 20 0	36 50 0
148 20 0	36 55 0
148 30 0	36 55 0
148 30 0	37 00 0
148 40 0	37 00 0
148 40 0	37 05 0
148 55 0	37 05 0
148 55 0	37 10 0
149 05 0	37 10 0
149 05 0	37 15 0
149 20 0	37 15 0
149 20 0	37 20 0
149 35 0	37 20 0
149 35 0	37 25 0
149 50 0	37 25 0
149 50 0	37 30 0
150 00 0	37 30 0
150 00 0	38 00 0
148 00 0	38 00 0

° ′ ″ East	° ′ ″ South
148 00 0	39 00 0
146 30 0	39 00 0
146 30 0	37 35 0
145 55 0	37 35 0
145 55 0	36 55 0
144 50 0	36 55 0
144 50 0	37 05 0
144 35 0	37 05 0
144 35 0	37 25 0
144 05 0	37 25 0
144 05 0	38 05 0
144 00 0	38 05 0
144 00 0	40 00 0
143 00 0	40 00 0
143 00 0	39 00 0
141 00 0	39 00 0
141 00 0	35 00 0
141 00 0	34 00 0

SCHEDULE 4 - *continued*

Melbourne (Area 12)

° ′ ″ East	° ′ ″ South
144 50 0	36 55 0
145 55 0	36 55 0
145 55 0	37 35 0
146 30 0	37 35 0
146 30 0	39 00 0
147 00 0	39 00 0

° ′ ″ East	° ′ ″ South
147 00 0	40 00 0
144 00 0	40 00 0
144 00 0	39 00 0
144 00 0	38 05 0
144 05 0	38 05 0
144 05 0	37 25 0

° ′ ″ East	° ′ ″ South
144 35 0	37 25 0
144 35 0	37 05 0
144 50 0	37 05 0
144 50 0	36 55 0

Tasmania (Area 13)

° ′ ″ East	° ′ ″ South
147 00 0	39 00 0
149 00 0	39 00 0
149 00 0	44 00 0
145 00 0	44 00 0

° ′ ″ East	° ′ ″ South
145 00 0	42 00 0
144 00 0	42 00 0
144 00 0	41 00 0
143 00 0	41 00 0

° ′ ″ East	° ′ ″ South
143 00 0	40 00 0
147 00 0	40 00 0
147 00 0	39 00 0

Adelaide (Area 14)

° ′ ″ East	° ′ ″ South
137 55 0	33 05 0
139 00 0	33 05 0
139 00 0	34 00 0
141 00 0	34 00 0
141 00 0	39 00 0
140 00 0	39 00 0
140 00 0	38 00 0
139 00 0	38 00 0
139 00 0	37 00 0
136 00 0	37 00 0
136 00 0	36 00 0
135 00 0	36 00 0
135 00 0	34 15 0
135 55 0	34 15 0

° ′ ″ East	° ′ ″ South
135 55 0	34 10 0
136 00 0	34 10 0
136 00 0	34 05 0
136 05 0	34 05 0
136 05 0	34 00 0
136 10 0	34 00 0
136 10 0	33 55 0
136 15 0	33 55 0
136 15 0	33 50 0
136 25 0	33 50 0
136 25 0	33 45 0
136 30 0	33 45 0
136 30 0	33 40 0
136 35 0	33 40 0

° ′ ″ East	° ′ ″ South
136 35 0	33 35 0
136 40 0	33 35 0
136 40 0	33 25 0
137 05 0	33 25 0
137 05 0	33 20 0
137 25 0	33 20 0
137 25 0	33 15 0
137 40 0	33 15 0
137 40 0	33 10 0
137 55 0	33 10 0
137 55 0	33 05 0

SCHEDULE 4 - *continued*

South West WA (Area 15)

° ′ ″ East	° ′ ″ South
113 00 0	26 00 0
115 00 0	26 00 0
115 00 0	29 00 0
117 00 0	29 00 0
117 00 0	30 00 0
118 00 0	30 00 0
118 00 0	31 00 0
120 00 0	31 00 0
120 00 0	32 00 0
123 00 0	32 00 0
123 00 0	31 00 0

° ′ ″ East	° ′ ″ South
133 00 0	31 00 0
133 00 0	33 00 0
132 00 0	33 00 0
132 00 0	32 00 0
129 00 0	32 00 0
129 00 0	33 00 0
125 00 0	33 00 0
125 00 0	34 00 0
124 00 0	34 00 0
124 00 0	35 00 0
119 00 0	35 00 0

° ′ ″ East	° ′ ″ South
119 00 0	36 00 0
116 00 0	36 00 0
116 00 0	35 00 0
114 00 0	35 00 0
114 00 0	33 00 0
115 00 0	33 00 0
115 00 0	31 00 0
114 00 0	31 00 0
114 00 0	29 00 0
113 00 0	29 00 0
113 00 0	26 00 0

Pilbara (Area 16)

° ′ ″ East	° ′ ″ South
115 00 0	19 00 0
124 00 0	19 00 0
124 00 0	22 00 0

° ′ ″ East	° ′ ″ South
115 00 0	22 00 0
115 00 0	24 00 0
113 00 0	24 00 0

° ′ ″ East	° ′ ″ South
113 00 0	21 00 0
115 00 0	21 00 0
115 00 0	19 00 0

Darwin (Area 17)

° ′ ″ East	° ′ ″ South
132 00 0	10 00 0
133 00 0	10 00 0
133 00 0	14 00 0

° ′ ″ East	° ′ ″ South
130 00 0	14 00 0
130 00 0	11 00 0
132 00 0	11 00 0

° ′ ″ East	° ′ ″ South
132 00 0	10 00 0

SCHEDULE 5

Clause 7

Description of lot frequency bands

In this Schedule, the frequency band identified by a number in column 1 has:

(a) the lower frequency limit shown in column 2; and

(b) the upper frequency limit shown in column 3; and

(c) the bandwidth shown in column 4.

Column 1	Column 2	Column 3	Column 4
Band Number	**Lower Frequency**	**Upper Frequency**	**Band Width (kHz)**
1	500.99375	501.00625	12.5
2	501.00625	501.01875	12.5
3	501.01875	501.04375	25
4	501.04375	501.06875	25
5	501.06875	501.09375	25
6	501.09375	501.19375	100
7	501.19375	501.29375	100
8	501.29375	501.39375	100
9	501.39375	501.49375	100
10	501.49375	501.59375	100
11	501.59375	502.09375	500
12	502.09375	503.09375	1000
13	503.09375	504.09375	1000
14	504.09375	504.59375	500
15	504.59375	504.69375	100
16	504.69375	504.79375	100
17	504.79375	504.81875	25
18	504.81875	504.84375	25
19	504.84375	504.86875	25
20	504.86875	504.89375	25
21	504.89375	504.91875	25
22	504.91875	504.93125	12.5
23	504.93125	504.94375	12.5
24	504.94375	504.95625	12.5
25	504.95625	504.96875	12.5
26	504.96875	504.98125	12.5
27	504.98125	504.99375	12.5

SCHEDULE 5 *continued*

Column 1	Column 2	Column 3	Column
Band Number	**Lower Frequency**	**Upper Frequency**	**Band Width (kHz)**
28	510.99375	511.00625	12.5
29	511.00625	511.01875	12.5
30	511.01875	511.04375	25
31	511.04375	511.06875	25
32	511.06875	511.09375	25
33	511.09375	511.19375	100
34	511.19375	511.29375	100
35	511.29375	511.39375	100
36	511.39375	511.49375	100
37	511.49375	511.59375	100
38	511.59375	512.09375	500
39	512.09375	513.09375	1000
40	513.09375	514.09375	1000
41	514.09375	514.59375	500
42	514.59375	514.69375	100
43	514.69375	514.79375	100
44	514.79375	514.81875	25
45	514.81875	514.84375	25
46	514.84375	514.86875	25
47	514.86875	514.89375	25
48	514.89375	514.91875	25
49	514.91875	514.93125	12.5
50	514.93125	514.94375	12.5
51	514.94375	514.95625	12.5
52	514.95625	514.96875	12.5
53	514.96875	514.98125	12.5
54	514.98125	514.99375	12.5

SCHEDULE 6

Clause 15

Sample Spectrum Licence

COMMONWEALTH OF AUSTRALIA

SPECTRUM MANAGEMENT AGENCY

Radiocommunications Act 1992

Spectrum Licence

This licence is issued under section 64 of the *Radiocommunications Act 1992* ('the Act') by the person named at Item 8 of Schedule 1 of this licence.

1. The person named at Item 1 of Schedule 1 of this licence('the licensee') is authorised to operate radiocommunications devices subject to:
   (a) the Act; and
   (b) the core conditions set out in Schedule 2 of this licence; and
   (c) the statutory conditions set out in Schedule 3 of this licence; and
   (d) the other conditions (if any) included in this licence by the SMA and set out in Schedule 4 of this licence.

2. This licence comes into force on the date shown at Item 4 of Schedule 1 of this licence and remains in force until the end of the day shown at Item 5 of Schedule 1 of this licence.

3. Terms and expressions used in this licence have the meaning given to them by the Radiocommunications Spectrum Marketing Plan (500 MHz Band) 1996.

SCHEDULE 6 *continued*

LICENCE SCHEDULE 1

LICENCE AND TECHNICAL DETAILS

Part 1 - Licence Details

Item	
1	*Name of Licensee* *Address of Licensee*
2	*Client Number*
3	*Band Release*
4	*Date of Licence Effect*
5	*Date of Licence Expiry*
6	*Licence Number*
7	*Date of Licence Issue*
8	*Issuing Officer*

Part 2 - Technical Details

Item	
9	*Upper limit of frequency band*
10	*Lower limit of frequency band*
11	*Offsets for purposes of core condition 3(a)*
12	*Offsets for purposes of core condition 3(b)*
13	*Power conversion function* k1(d) *for the purposes of core condition 3*
14	*Power conversion function* k2(d) *for the purposes of core condition 3*
15	*Peak power for the purposes of core condition 4(a)*
16	*Maximum true mean power for the purposes of core condition 4(b)*
17	*Maximum true mean power for the purposes of core condition 4(c)*
18	*Mean power for the purposes of core condition 5*
19	*Mean power for the purposes of core condition 6*
20	*Section 145 Determination for registration of transmitters*

Part 3 - Geographic Area

For the purposes of core condition 2, the area within which operation of radiocommunications devices is authorised by this licence is as follows:

[*Description of area*]

SCHEDULE 6 *continued*

LICENCE SCHEDULE 2

CORE CONDITIONS

Frequency Band

1. The frequency band in which operation of radiocommunication devices is authorised by this licence is the contiguous range of frequencies that are between the upper and lower frequency limits at Items 9 and 10 of Part 2 of Schedule 1 of this licence, respectively.

Geographic Area

2. The area within which operation of radiocommunications devices is authorised by this licence is the geographic area set out at Part 3 of Schedule 1 of this licence.

Emission Limits Outside the Area

3. The emission limits outside the area are:
   (a) for frequency bands only containing frequencies that are removed from the upper and lower frequency limits of the licence by the offsets set out at Item 11 of Part 2 of Schedule 1 of this licence - a horizontally radiated power of P1 dBm EIRP; and
   (b) for frequency bands only containing frequencies that are removed from the upper and lower frequency limits of the licence by the offsets set out at Item 12 of Part 2 of Schedule 1 of this licence - a horizontally radiated power of P2 dBm EIRP;

where:

P1 = 49.2 - k1(d); and
P2 = 70 - k2(d); and

where:
d is the distance in kilometres of the device from the boundary of the geographic area and k1(d) and k2(d) are the power conversion functions set out at Items 13 and 14 of Part 2 of Schedule 1 of this licence, respectively.

Emission Limits Outside the Band

4. For radio emission that is caused by transmitters and is not spurious radio emission, the emission limits outside the band are:
   (a) for frequency bands containing frequencies that are removed from the upper and lower frequency limits of the licence by offsets within the range

SCHEDULE 6 *continued*

LICENCE SCHEDULE 2 *continued*

1.25 kHz to 13.75 kHz - the peak power set out at Item 15 of Part 2 of Schedule 1 of this licence; and

(b) for frequency bands only containing frequencies that are removed from the upper and lower frequency limits of the licence by offsets within the range 13.75 kHz to 300 kHz - the maximum true mean power set out at Item 16 of Part 2 of Schedule 1 of this licence; and

(c) for frequency bands only containing frequencies that are removed from the lower and upper frequency limits of the licence by offsets within the range 300 kHz to 1.5 MHz - the maximum true mean power set out at Item 17 of Part 2 of Schedule 1 of this licence.

5. For radio emission that is spurious radio emission and caused by transmitters, the emission limits outside the band are the mean power set out at Item 18 of Part 2 of Schedule 1 of this licence measured at frequencies from 100 kHz to 2.9 GHz.

6. For radio emission caused by receivers, the emission limits outside the band are the mean power set out at Item 19 of Part 2 of Schedule 1 of this licence measured at frequencies from 100 kHz to 2.9 GHz.

[NOTE: The procedure for calculating the device boundary of a transmitter has a consequence that receivers also operating under a spectrum licence are afforded lower levels of protection as they move closer to the geographic boundary of the licence. The procedure for calculating the device boundary of a receiver according to a specified level of protection is set out in the Schedules of the Radiocommunications Spectrum Marketing Plan (500 MHz Band) 1996.]

SCHEDULE 6 *continued*

LICENCE SCHEDULE 3

STATUTORY CONDITIONS

Liability to pay charges

1 The licensee must meet all obligations to pay charges fixed by determinations made under s293 and s294 of the Act.

Third Party Use

2 (1) The licensee must notify any person authorised to operate radiocommunications devices under the licence of that person's obligations under the Act, in particular of any registration requirements under Part 3.5 of the Act for operation of radiocommunications devices under the licence, and any rules made under s68(3) of the Act.

2 (2) Any operation of a radiocommunications device under the licence by a person other than the licensee must comply with any rules made by the SMA under subsection 68(3) of the Act.

Transmitter registration requirements

3 The licensee must not operate a transmitter under this licence unless the transmitter has been exempted from the registration requirements under the following condition, or:

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

(b) the transmitter complies with the details about it that have been entered in the register.

Exemption from registration requirements

4. The following kinds of transmitters do not have to be registered:

(a) a mobile transmitter that only operates:

(i) outside the limits of a town that is on the towns mobile list; or

(ii) on a road that is not on the roads mobile list;

(b) a mobile transmitter that only transmits at sea and only communicates with a mobile receiver at sea.

[NOTE: The Determination that sets out the unacceptable levels of interference for the purpose of registering transmitters to be operated under this licence, and which is to be used for the issue of certificates by accredited people under s145(3) of the Act is set out at Item 20 of Part 2 of Schedule 1 of this licence.]

SCHEDULE 6 *continued*

LICENCE SCHEDULE 4

CONDITIONS INCLUDED BY THE SMA

Interference Management

1.1 In this licence:

"Level of Protection" has the meaning it is given in the *Radiocommunications Spectrum Marketing Plan (500 MHz Band)* 1996.

"manage interference" includes investigation of the possible causes of the interference, taking all steps reasonably necessary to resolve disputes concerning interference where more than one person is involved, taking steps (or requiring persons authorised to operate devices under this licence to take steps) reasonably likely to reduce interference to acceptable levels, and negotiating with other persons for the purpose of reducing interference to acceptable levels.

Responsibility to Manage Interference

2.1 The licensee must manage interference between radiocommunications devices operated under this licence, and interference between radiocommunications devices operated under this licence and operated under any other spectrum licence held by the licensee.

Responsibility for Interference - Receivers

3.1 The licensee must accept interference to a receiver operated under this licence that is caused by emissions outside the frequency band of this licence where the receiver has:

(a) an adjacent channel selectivity performance; or
(b) an intermodulation immunity performance; or
(c) blocking immunity performance; or
(d) spurious response immunity performance ;

that is less than the level of performance set out in Australian Standard AS 4295 - 1995 as in force on 1 November 1996.

3.2 For the purposes of subparagraph 3.2, the level of performance set out in Australian Standard AS 4295 - 1995 is taken to be a notional level of performance, irrespective of whether that Australian Standard applies to the receiver.

3.3 The licensee must accept levels of emission measured at a receiver operated under this licence that are below the receiver's Level of Protection plus 20dB for up to and including 99% of the time in any one hour period.

SCHEDULE 6 *continued*

LICENCE SCHEDULE 4 *continued*

3.4 Nothing in clause 3.1 or 3.3 is to be taken to imply that the licensee is prevented from negotiating with other licensees for additional protection from interference.

Responsibility for Interference - Transmitters

4.1 The licensee must not operate a transmitter under this licence in such a manner that the level of in-band emission from that transmitter, measured at a fixed receiver operating under another spectrum licence, exceeds the level of protection for that receiver plus 20dB for more than 1% of the time in any one hour period.

Co-sited devices

5. Where:

(a) interference occurs between a radiocommunications device operated under this licence and a radiocommunications device operated under another licence that is located within 200 metres of the first device; and

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

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

the licensee must take reasonable steps to negotiate arrangements reasonably likely to reduce the interference to acceptable levels 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

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

SCHEDULE 6 *continued*

LICENCE NOTES

Variation to licence conditions

The SMA may, with the written agreement of the licensee of a spectrum licence, 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.

The SMA may, by written notice given to the licensee, vary a licence by including one or more further conditions or revoking or varying any non core conditions of the licence provided that the licence as varied complies with the requirements of Subdivision C of Division 1 of Part 3.2 of the Act.

Guidelines

The SMA has issued written advisory guidelines under s.262 of the Act about co-ordinating the operation of transmitters, in relation to receivers operated in Telstra's Radio Concentrator System. The guidelines should be read in conjunction with the relevant Determination made under s145(3) of the Act setting out the unacceptable levels of interference for the purpose of the registration of transmitters to be operated under this licence. The guidelines should be followed by licensees (and accredited persons) before operating transmitters.

The SMA does not intend to afford protection to receivers operated under spectrum licences from any interference they may incur from RCS transmitters operated in accordance with their apparatus licence. The SMA also intends to afford protection, in accordance with the guidelines, to RCS receivers from transmitters operated under this spectrum licence. Copies of the guidelines, the Radiocommunications Advisory Guidelines (Co-ordinating the operation of transmitters in the 500 MHz Bands) 1996, are available from the SMA.

The suspension and cancellation of spectrum licences

The SMA may by written notice given to a licensee suspend, cancel or revoke a spectrum licence where the SMA is satisfied that the licensee, or a person authorised by the licensee to operate a radiocommunications device under the licence, has contravened a condition of the licence, or in any other way contravened the Act, or operated a radiocommunications device under the licence, or purportedly under the licence in contravention of any other law (whether written or unwritten) of the Commonwealth, a State or a Territory or in the course of contravening such a law.

Re issue

A spectrum licence may not be reissued to the same licensee without a price based allocation procedure except where:

the SMA is satisfied under s.82(1) 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

the licensee provides a service of a kind determined by the Minister under s.82(3) of the Act for which reissuing licences to the same licensees would be in the public interest.

Trading

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 SMA under s.88 of the Act.

An assignment under s.85 of the whole or any part of a licence that involves any change to a licence does not take effect until the SMA has been advised of the changes and the Register of Spectrum Licences has been altered accordingly.

Appeals

An application may be made to the SMA for re-consideration of decisions listed under s.285 of the Act and a person affected by and dissatisfied with the decision may seek a re-consideration of the decision by the SMA under s.288(1) of the Act. This decision can be subject to further re-consideration by the Administrative Appeals Tribunal, subject to the provisions of the Administrative Appeals Tribunal Act 1975.

SCHEDULE 7

Clause 19

Emission limits outside the area

The emission limits outside the area, for frequency bands only containing in-band frequencies, are a horizontally radiated power of:

P dBm EIRP;

where:
P = 49.2 - k1(d);

where:
d is the distance in kilometres of the device from the boundary of the geographic area and k1(d) is the power conversion function:
k1(d) = 0 for $d \geq 0$.

SCHEDULE 8

Clause 19

Emission limits outside the band

[Note: Emission limits outside the band manage levels of:

(a) modulation products and switching transient emissions (carrier rise times) outside the frequency band of the licence;
(b) sideband noise (vco phase noise);
(c) transmitter broadband noise;
(d) any transmitter spurious signals from frequency combining processes, including multicoupling of transmitters into an antenna; and
(e) any receiver emissions.]

For radio emission that is caused by transmitters and is not spurious radio emission, the emission limits outside the band are:

(a) for frequency bands containing frequencies that are removed from the upper and lower frequency limits of the licence by offsets within the range 1.25 kHz to 13.75 kHz - a peak power of -1 dBm EIRP; and
(b) for frequency bands only containing frequencies that are removed from the upper and lower frequency limits of the licence by offsets within the range 13.75 kHz to 300 kHz - a maximum true mean power of -11 dBm EIRP; and
(c) for frequency bands only containing frequencies that are removed from the lower and upper frequency limits of the licence by offsets within the range 300 kHz to 1.5 MHz - a maximum true mean power of -46 dBm EIRP.

For radio emission that is caused by transmitters and is spurious radio emission, the emission limits outside the band are a mean power of -30 dBm EIRP measured at frequencies from 100 kHz to 2.9 GHz.

For radio emission caused by receivers, the emission limits outside the band under all operating conditions are a mean power of -57 dBm EIRP measured at frequencies from 100 kHz to 2.9 GHz.

SCHEDULE 9

Schedule 1

Centre location and effective radius of a fixed receiver

[NOTE: 1. A model for the location of a receiver (the effective location) is the circumference of the circle defined by the centre location and the effective radius.
2. The level of protection for a mobile receiver is -77dBm per 12.5 kHz - see clause 20.]

1. The centre location of a receiver is the centre of a circle l_c with an effective radius r_e. This Schedule sets out the l_c and r_e of particular receivers.

2. Centre location and effective radius of a fixed receiver

For a fixed receiver, l_c is the location (by latitude and longitude) of the phase centre of the receiver's antenna and r_e is zero.

3. Centre location and effective radius of a group of fixed receivers

For a group of fixed receivers operating within the limits of a town specified in the towns mobile list, l_c and r_e are taken to be those specified in the towns mobile list for that town.

If a group of fixed receivers:

(a) all operate outside a town that is on the towns mobile list; or

(b) includes receivers that operate outside the limits of a town that is on the towns mobile list**;**

each member of the group that is outside the town is to be treated as a single fixed receiver.
