

# **1800 MHz spectrum auction, November 2015**

## Auction guide

SEPTEMBER 2015

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# Important notice and disclaimer

The *Applicant information package* (AIP) has been prepared by the ACMA in connection with the proposed allocation by auction, of spectrum in the 1800 MHz band. The AIP comprises this Auction guide, legislative instruments, accompanying explanatory statements and other material provided as attachments to the Auction guide, as well as the *Auction forms booklet*. Material that must be included in the AIP is set out in section 4.5 of the *Radiocommunications (Spectrum Licence Allocation – 1800 MHz Band) Determination 2015* (the allocation determination).

The ACMA must perform its spectrum allocation and management functions in accordance with relevant legislation, in particular, the *Radiocommunications Act 1992* (the Act). An auction process will be conducted in accordance with the rules and procedures made by the ACMA, pursuant to powers under sections 39, 39A, 60 and 294 of the Act. The subsequent issue of spectrum licences will be made under section 62 of the Act.

The rules and procedures made by the ACMA for the auction process are set out in the:

- > *Radiocommunications (Spectrum Licence Allocation – 1800 MHz Band) Determination 2015*
- > *Radiocommunications Spectrum Marketing Plan (1800 MHz Band) 2015 (the marketing plan)*.

These are collectively known as the allocation instruments. Links to each instrument are included as attachments to this Auction guide. Interested persons should note that the allocation instruments have legal effect and are registered as legislative instruments on the Federal Register of Legislative Instruments (FRLI). In the event of any difference between the provisions of the allocation instruments and any other written or oral information made available, the allocation instruments are definitive.

The material contained in the AIP, including the Auction guide, is for information purposes only and should not be used as a substitute for independent advice on participating in the auction process, or the rights or regulatory responsibilities that attach to any spectrum licences that may be obtained. The AIP does not, and does not purport to, contain all the information that may be required to evaluate any auction process or spectrum licence, or rights and obligations under the associated legislative instruments or applicable regulatory framework.

Nothing in this Auction guide should be taken to bind the ACMA to any particular course of action in the allocation of spectrum licences in the 1800 MHz band. The ACMA may vary or revoke a legislative instrument at any time, as permitted by law. The auction manager has the power under the allocation determination to stop a round of the auction, cancel the result of a round of the auction, restart the auction or stop the entire auction if he or she is satisfied that the auction is affected by exceptional circumstances.

The AIP and its contents do not constitute or form part of any offer, contract, agreement or other legal obligation. The AIP is not intended to form any part of the basis of any investment decision or other evaluation by any person, and should not be considered as a recommendation by the ACMA to participate in the auction process. It is the responsibility of each person referencing the AIP to make their own independent investigation, review and assessment of:

- > the proposed allocation of spectrum licences and the auction process

- > rights and responsibilities under spectrum licences issued as a result of the auction
- > the potential cost and value of a licence
- > whether to participate in the auction process.

By virtue of clause 19 of the deed of acknowledgment form executed by applicants, the liability of the ACMA, the auction manager, the Commonwealth, and their officers, employees, agents, contractors, subcontractors, associates and delegates in connection with the auction process is excluded. Completion of the deed of acknowledgement is a requirement for anyone wishing to participate in the auction. Please refer to 3.2 and 4.2 of the Auction guide for further information about application and registration requirements.

The information contained in the AIP is presented in good faith and is believed to be accurate at the time of publication. However, all such information is subject to amendment. It is the responsibility of the recipient, at its own cost, to verify to its own satisfaction the accuracy, currency, reliability and completeness of any of the information contained in or any matter referred to in the AIP, and obtain independent advice from appropriate experts. The ACMA has not authorised any person to make any statements or representations on its behalf that are not expressly contained in or contemplated by the AIP.

Recipients and interested persons should not rely solely on any statement, opinion or information set out in the AIP, including any statements about the policies that may be followed by other authorities, nor about the effect of any legislation, but should take steps they consider necessary to inform themselves on those matters independently of the ACMA. The comments made in the AIP about the ACMA's functions and powers reflect the present policies of the ACMA.

Prospective applicants should, on their own responsibility, take whatever steps they consider necessary to obtain access to appropriate technical or other specialist advice independently of the ACMA concerning their application, the regulation and operation of radiocommunications devices and services, or any other matters relevant to the proposed spectrum licence allocation system. Applicants are also advised to seek advice independently of the ACMA on the treatment of spectrum licences and other investments under Australian taxation laws, and on the operation of foreign investment laws and policies on a proposed investment in communications in Australia.

Prospective applicants are urged to familiarise themselves with all the provisions of the Act, not just those pertaining to spectrum licensing, and should be aware that activities associated with radiocommunications may also be regulated by the *Competition and Consumer Act 2010* (the Competition and Consumer Act), the *Broadcasting Services Act 1992* (the Broadcasting Services Act) and the *Telecommunications Act 1997* (the Telecommunications Act). Depending on the activity undertaken when using spectrum under a licence, other Commonwealth, state and territory laws may apply.

The ACMA is a statutory authority established under the *Australian Communications and Media Authority Act 2005* (the ACMA Act) to administer the Act, among other things. The ACMA is also required by subsection 14(4) of the ACMA Act to perform its functions in a manner consistent with any directions given to the ACMA by the minister administering that Act. The policies of the government may change from time to time.

In exercising its powers and functions, including those conferred on the ACMA by the Act, the Broadcasting Services Act, the Telecommunications Act and the *Telecommunications (Consumer Protection and Service Standards) Act 1999*, the ACMA may also take into account its own policies, which may change from time-to-time.

The ACMA is also required under the *Public Governance, Performance and Accountability Act 2013* to manage its affairs in a way that promotes the efficient, effective, economical and ethical use of Commonwealth resources, and must act in accordance with any guidelines made under that Act.

Australia is a signatory to the International Telecommunication Union Constitution and Convention, and to other international instruments relating to communications. The administration of communications by the ACMA is undertaken having regard to these instruments.

### ***The ACMA may change its process***

The ACMA may in certain circumstances, under the Act and the allocation instruments, vary the processes that apply to the auction or terminate the auction process. The ACMA reserves the right, in its sole and absolute discretion, but without being under any obligation to do so, to add to, vary, amend, update or supplement the information, terms and procedures set out in the AIP and correct any inaccuracies.

### ***Other ACMA rights***

Subject to the Act and the allocation determination, the ACMA reserves the right, in its sole and absolute discretion, at any stage of the auction process to do all or any of the following:

- > require additional information from any applicant or bidder
- > change the structure and timing or any other element of the auction process as permitted from time-to-time.

The ACMA makes no representation as to the utility or otherwise of the spectrum.

The ACMA reserves the right to allocate further spectrum (that is, spectrum other than that on offer in the auction process) by issuing spectrum licences in the future.

### ***Applicants and bidders to meet own costs***

Each applicant's and bidder's participation in any stage of the auction process shall be at their sole risk, cost and expense.

### ***Applications may be used and retained by the Commonwealth***

All application documents submitted in connection with the auction process may be used and disclosed by the ACMA for the purposes of the allocation determination and in relation to spectrum licences issued, and may be retained by the ACMA for as long as necessary for the performance of the ACMA's functions and exercise of its powers under the allocation determination or the Act.

### ***Release of information and documents by the ACMA***

Information and documents obtained by the ACMA in the performance of its functions under the allocation determination may be released under the *Freedom of Information Act 1992* (unless an exemption applies) or disclosed to other parties under the ACMA Act. The ACMA may also release information and documents for other reasons including for the purpose of parliamentary processes or where otherwise required or authorised by law (for example, under a court subpoena). While the ACMA seeks to consult submitters of confidential information before that information is provided to another party, the ACMA cannot guarantee that confidential information will not be released through these or other legal means.

### ***Collusive bidding***

Registered applicants and their officers, employees, agents and advisers must not engage in any collusive bidding, anti-competitive conduct or any other similar conduct with any other registered applicants or any other person in breach of applicable laws

(including but not limited to the Competition and Consumer Act) when preparing or lodging applications or bidding instructions for a spectrum licence under the auction process. Applicants must not be affiliated (as described in the allocation determination) with another bidder during the auction process and must comply with the requirements of the allocation determination concerning affiliates.

***Confidential information***

Registered applicants and their officers, employees, agents and advisers must not take steps to obtain, or use, confidential information of the ACMA relating to its spectrum allocation functions or the auction process, other than in accordance with the confidentiality requirements of the allocation determination and the deed of confidentiality form executed by applicants and related persons.

***Return of information to the ACMA***

Registered applicants must, under the deed of acknowledgment form executed by applicants, at their sole expense, upon request by the ACMA in its absolute discretion, return to the ACMA any items or written information provided to the applicant (and copies of the information) at any stage.

***Application of laws***

The laws of the Australian Capital Territory and the Commonwealth of Australia apply to the auction process pursuant to the deed of acknowledgment form executed by applicants.

# At a glance—Auction Q&A

Table 1: Auction questions and more information

			More information
1.	<b>What spectrum is available?</b>	<p>The 1800 MHz spectrum auction is being held to allocate the following frequency ranges as spectrum licences:</p> <p><b>Regional 1800 MHz spectrum</b></p> <ul style="list-style-type: none"> <li>&gt; 1725–1785 MHz and 1820–1880 MHz in regional Australia</li> </ul> <p><b>Residual 1800 MHz spectrum<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>&gt; 1770–1775 MHz and 1865–1870 MHz in Adelaide</li> <li>&gt; 1710–1712.5 MHz and 1805–1807.5 MHz in regional South Australia</li> <li>&gt; 1710–1712.5 MHz and 1805–1807.5 MHz in Cairns/Townsville.</li> </ul>	2.1, 2.2
2.	<b>How will the spectrum be licensed?</b>	<p>Spectrum lots won at auction will be authorised for use by winning bidders as spectrum licences issued under section 62 of the Act.</p> <p>Spectrum licences authorise a licensee to operate radiocommunications devices for a fixed period, within a particular frequency range, within a particular geographic area. Spectrum licensing offers a technology-flexible, market-oriented approach to managing the radiofrequency spectrum.</p> <p>Spectrum licensees must comply with a series of licence conditions and a technical framework developed for the 1800 MHz band by the ACMA in consultation with industry.</p>	2.3 & Ch.5
3.	<b>When will spectrum licences commence?</b>	<p>1800 MHz spectrum licences for regional Australia will commence on 30 May 2017.</p> <p>Spectrum licences for the residual 1800 MHz lots will commence as soon as practicable after the auction following the payment of the relevant spectrum access charges and associated ACMA administrative processes.</p>	2.3.2
4.	<b>How long will the licences last?</b>	All spectrum licences issued as a result of the auction will expire on 17 June 2028.	2.3.3

<sup>1</sup> This spectrum remains unallocated from the ACMA's recently completed [expiring spectrum licences process](#) for the 1800 MHz band.

			More information
5.	<b>How can I be sure incumbent licensees will have vacated the regional 1800 MHz band by the time my spectrum licence commences?</b>	<p>The <a href="#">Radiocommunications (Spectrum Re-allocation-Regional 1800 MHz Band) Declaration 2015</a> has the effect of cancelling apparatus licences in the regional 1800 MHz band at the end of the reallocation period (that is, 29 May 2017).</p> <p>However, each spectrum licence issued as a result of the 1800 MHz spectrum auction will include a condition requiring spectrum licensees to observe interference management conditions in relation to specified apparatus licensed fixed services (specified fixed services), which may continue to operate in the 1800 MHz band after the reallocation period.</p> <p>Table 1 of Schedule 6 to the <i>Radiocommunications Spectrum Marketing Plan (1800 MHz Band) 2015</i> identifies the specified fixed services which Telstra has indicated it may not be able to clear from the regional 1800 MHz band by the end of the reallocation period. Telstra has indicated that it may apply to the ACMA for apparatus licences under the 'special circumstances' provisions of paragraph 153P(3)(d) of the Act in order to continue operating these fixed links for a period beyond the reallocation period. The ACMA will consider any such applications on a case-by-case basis. The issue of such apparatus licences may affect the ability of a winning bidder to fully deploy radiocommunications devices as planned under its spectrum licence.</p>	1.2, 2.3.5
6.	<b>When will I be able to access spectrum in the residual lots in Adelaide, regional South Australia and North Queensland (Cairns/ Townsville)</b>	Residual 1800 MHz spectrum is not currently in use. Spectrum licences for this spectrum can commence as soon as practicable after the auction, immediately following payment of the relevant spectrum access charge and in accordance with the start date of a licence issued by the ACMA.	2.3.2

			More information
7.	<b>Will I be able to access the regional 1800 MHz spectrum I win at the auction before spectrum licences commence in 2017 (early access)?</b>	Winning bidders for spectrum licences in the regional 1800 MHz band will be able to apply to the ACMA to be issued apparatus licences within the spectrum space they obtained at auction for the period until the spectrum licence commences. This is called 'early access'. Apparatus licences to authorise early access will only be able to be used in unencumbered spectrum. <sup>2</sup> It is expected that any new apparatus licence must coordinate and coexist with existing services. The ACMA expects that applications will generally be for public telecommunications service apparatus licences. However, fixed service licences may also be issued for existing links being relocated within the 1800 MHz band. Any applications will be considered on a case-by-case basis.	2.3.4
8.	<b>I only want to use spectrum in some parts of Australia—what options are available?</b>	<p>In the regional 1800 MHz band, spectrum lots are being offered in 12 separate geographic areas. In each area, 12 separate 10 MHz lots will be available in a paired configuration, each with 5 MHz in the lower part of the band (1725–1785 MHz) and 5 MHz in the upper part of the band (1820–1880 MHz).</p> <p>Residual 1800 MHz spectrum will be configured as follows:</p> <ul style="list-style-type: none"> <li>&gt; one 5 MHz lot in North Queensland (Cairns/Townsville), in a paired configuration, with 2.5 MHz in each of the lower and upper parts of the band</li> <li>&gt; one 5 MHz lot in regional South Australia in a paired configuration, with 2.5 MHz in each of the lower and upper parts of the band</li> <li>&gt; one 10 MHz lot in Adelaide in a paired configuration, with 5 MHz in each of the lower and upper parts of the band.</li> </ul> <p>Bidders in the auction will be able to bid on preferred spectrum lots having regard to:</p> <ul style="list-style-type: none"> <li>&gt; relevant allocation limits set for the auction—allocation limits have the effect of capping the total amount of spectrum that a single bidder can acquire through the auction</li> <li>&gt; eligibility points bidding cap—this cap is in place to ensure that a bidder cannot place a bid where the total of the lot ratings of the lots on which the bidder is bidding in any one round exceeds the bidder's eligibility points.</li> </ul>	2.2

<sup>2</sup> It is not necessary that all the spectrum in a lot, licence area, or spectrum licence, be unencumbered—or unused—for such an application to be considered. It is only necessary that sufficient spectrum be available in the area the applicant wishes to service to allow deployment of a service without causing unacceptable interference to existing licensees, or suffering unacceptable interference from existing licensees.

			More information
9.	<b>I don't wish to use all the spectrum I purchase in the auction—what options are available?</b>	Spectrum licence-holders can trade part or all of the spectrum space covered by their licence, once allocated, in accordance with relevant legislation. They can also authorise third parties to use the licensed spectrum by agreement.	5.6.2, 5.8.2
10.	<b>How will the auction work?</b>	<p>The auction will be conducted online using a simultaneous multi-round ascending (SMRA) auction format.</p> <p>In an SMRA auction, all lots on which auction participants can bid are offered at the same time—that is, simultaneously. Bidding occurs in a sequence of rounds, with the results (in particular, the amounts of the highest bids) of each round announced to the bidders before the start of the next round. The highest bid on each lot becomes the provisional winning price. All lots remain open for bidding until the end of the auction. The auction continues until there are two consecutive rounds in which there is no bid made and no waiver exercised for any lot. At the conclusion of the auction, bidders win the lots for which they have the standing high bids and pay the amount of their high bids.</p>	Ch.3
11.	<b>I want to participate in the auction—what amounts will I need to pay?</b>	<p>To apply to be registered as a bidder in the auction, you will need to pay a non-refundable application fee of \$10,000.</p> <p>To complete the bidder registration process, applicants will need to make an eligibility payment or give a deed of financial security—or both. (A deed of financial security is an alternative to an eligibility payment.)</p> <p>No GST is payable on these amounts.</p>	3.2.1, 5.6.1
12.	<b>I want to participate in the auction—what do I need to do?</b>	<p>Chapter 4 of this Auction guide provides a step-by-step guide to participating in the auction.</p> <p>It guides prospective bidders through auction-related activities, from the opening of applications to the issuing of licences—including an explanation of the forms, payments and deadlines associated with the bidder registration process. It also provides references to more detailed information and instructions, as appropriate.</p>	Ch.4



# Key dates

**Table 2: Important events and dates**

	Event	Date	Further info.
1.	The ACMA advertises auction, publishes the <i>Applicant information package</i> and applications open.	11 September 2015	
2.	Application deadline. By this date/time, applicants will need to: <ul style="list-style-type: none"> <li>&gt; submit a completed application form</li> <li>&gt; submit a completed deed of acknowledgement form</li> <li>&gt; submit a completed deed of confidentiality form</li> <li>&gt; pay the application fee.</li> </ul>	11.59 pm, 1 October 2015	4.2.1
3.	The ACMA gives each applicant details about the identity of all other applicants and their associates, and asks each applicant to make a statutory declaration about whether they are affiliated with another applicant.	After the application deadline	4.2.2
4.	Deadline for statutory declarations requested under event #3.	Not less than five working days after request	4.2.2
5.	Deadline for any new applications submitted by applicants whom the ACMA has notified that it is satisfied are affiliated.	Not more than eight working days after the notification	4.2.2
6.	Eligibility deadline. By this date, applicants will need to: <ul style="list-style-type: none"> <li>&gt; lodge a completed eligibility nomination form</li> <li>&gt; make an eligibility payment, provide a deed of financial security, or both.</li> </ul>	11.59 pm, 9 November 2015	4.2.3
7.	The ACMA tells registered bidders that they have been registered and may participate in the auction, and gives them information to enable their participation (for example, information about how to access and use the online auction system).	After eligibility deadline	4.2.4
8.	Mock auction to acquaint prospective bidders with the auction system.	To be announced	
9.	The ACMA notifies registered bidders about the start date and time of the auction.	Not less than 10 working days before the start of the auction	4.4.1
10.	Auction begins.	Late November 2015 (date to be announced)	

*Note: The above timetable is indicative and for guidance purposes only, and is subject to change. Any changes made to the timetable will be announced through the sources listed under heading 6.1.*

# **Part one— Understanding the auction process**

# 1. What is the 1800 MHz spectrum auction?

**This chapter provides information about the:**

- > **purpose and structure of the Auction guide, and the other elements of the *Applicant information package***
- > **background to the reallocation of the 1800 MHz spectrum to be auctioned**
- > **legislative processes for clearing incumbent licences from the 1800 MHz band**
- > **instruments that provide the legal basis for the auction**
- > **consultative processes by which the auction instruments were developed.**

## 1.1 Overview

The ACMA will allocate spectrum in the 1800 MHz band as spectrum licences through an auction that is planned to commence in late November 2015. The auction will be run online using a simultaneous multi-round ascending (SMRA) auction format and will offer for allocation:

- > spectrum in the frequency ranges 1725–1785 MHz and 1820–1880 MHz in regional Australia (referred to in this Auction guide as ‘the regional 1800 MHz band’); and
- > spectrum that remains unallocated and unencumbered from the recently completed expiring spectrum licence process for the 1800 MHz band (referred to in the Auction guide as ‘residual lots’):
  - > 1770–1775 MHz and 1865–1870 MHz in Adelaide
  - > 1710–1712.5 MHz and 1805–1807.5 MHz in regional South Australia
  - > 1710–1712.5 MHz and 1805–1807.5 MHz in North Queensland (Cairns/Townsville).

This spectrum will be auctioned simultaneously through a process referred to as the 1800 MHz spectrum auction. However, it may also be possible to allocate spectrum licences through a pre-determined price process set out in Part 5 of the allocation determination.

Currently the regional 1800 MHz band is predominantly used for apparatus licensed fixed point-to-point links. In recent years, there has been increasing demand for access to the regional 1800 MHz band from various industry sectors for the deployment of mobile telecommunications services using Long Term Evolution (LTE) technology, including 4G. The availability of LTE and Global System for Mobile Communications – Railway (GSM-R) equipment also offers opportunities for other industries that traditionally have not relied heavily on these technologies to deliver services. The kinds of services that would be able to use the 1800 MHz band include:

- > mobile phone and broadband services
- > smart networks, such as smart energy grids
- > automated systems, including transport and other infrastructure.

The ACMA has considered the processes for reallocation of the regional 1800 MHz band and allocation of residual lots in accordance with relevant objects set out in section 3 of the Act, as well as the ACMA’s [Principles for spectrum management](#) (the principles).

### Relevant objects of the Act:

- a. Maximise, by ensuring the efficient allocation and use of the spectrum, the overall public benefit derived from using the radiofrequency spectrum.
- c. Provide a responsive and flexible approach to meeting the needs of users of the spectrum.
- e. Provide an efficient, equitable and transparent system of charging for use of the spectrum, taking account of the value of both commercial and non-commercial use of spectrum.
- f. Support the communications policy objectives of the Commonwealth Government.

## Principles for spectrum management

- > Principle 1—Allocate spectrum to the highest value use or uses.
- > Principle 2—Enable and encourage spectrum to move to its highest value use or uses.
- > Principle 3—Use the least cost and least restrictive approach to achieving policy objectives.
- > Principle 4—To the extent possible, promote both certainty and flexibility.
- > Principle 5—Balance the cost of interference and the benefits of greater spectrum utilisation.

The reallocation and designation of the relevant parts of the band for the issue of spectrum licences are important prior steps taken as part of this auction process. The regulatory and technical frameworks underpinning spectrum licensing maximise the likelihood that, without the need for regulatory intervention by the ACMA, users and the market in general will ensure the band is deployed for its highest value use or uses, thus furthering the objects of the Act and the principles.

This Auction guide is designed to give prospective bidders information to help them decide whether to apply to take part in the auction—and, if they wish to take part, how to do so. The Auction guide is structured as follows:

**Chapter 1: What is the 1800 MHz spectrum auction?**—provides information about the background to the auction, the clearance of incumbent licences from the spectrum on offer, the decisions to reallocate regional 1800 MHz spectrum via auction, the decision to designate residual 1800 MHz spectrum for auction, and the instruments that provide the legal basis for the auction.

**Chapter 2: What is being offered in the auction?**—provides information about the spectrum available, how the spectrum is configured as auction lots and key issues that will affect how winning bidders can use the spectrum.

**Chapter 3: How will the auction be conducted?**—provides information about the auction format and procedures, the online auction system as well as support and training opportunities for prospective bidders.

**Chapter 4: How do I participate in the auction?**—provides a practical step-by-step guide to participating in the auction, from the opening of applications to the issuing of licences.

**Chapter 5: Spectrum licensing and technical framework**—provides information about the spectrum licensing and technical frameworks applicable to the spectrum on offer.

**Chapter 6: Updates, queries, lodgements and payments**—provides information about how the ACMA will keep stakeholders informed about developments leading up to the auction, and how stakeholders can submit queries, lodge auction documents and make payments to the ACMA.

**Attachments**—include:

- > the instruments that provide the legal basis for the auction
- > forms that auction participants may be required to complete.

Together, the Auction guide and its attachments form the *Applicant information package* for the 1800 MHz spectrum auction.

## 1.2 Allocation and reallocation of 1800 MHz spectrum

The regional 1800 MHz band and the residual lots are subject to different ministerial instruments and legislative process. The regional 1800 MHz band is subject to a spectrum reallocation declaration and the residual lots are subject to a spectrum designation notice.

### 1.2.1 Ministerial spectrum reallocation declaration

On 26 May 2015, the Minister for Communications, The Hon. Malcolm Turnbull MP (the minister), having considered a recommendation made by the ACMA, made the [\*Radiocommunications \(Spectrum Re-allocation-Regional 1800 MHz Band\) Declaration 2015\*](#) (the reallocation declaration).

The reallocation declaration provides that spectrum in regional Australia<sup>3</sup> in the frequency bands 1725 to 1785 MHz and 1820 to 1880 MHz should be reallocated for the issue of spectrum licences.

### 1.2.2 Effect of a reallocation declaration

The regional 1800 MHz band is currently subject to apparatus licensing arrangements, predominantly fixed point-to-point links. The spectrum reallocation declaration has the effect of cancelling these apparatus licences at the end of the 'reallocation period' specified in the declaration (that is, 29 May 2017).<sup>4</sup> If required, there may be alternative bands available to which these apparatus licensees can relocate, should they choose to continue to deploy services using radiofrequency spectrum.

Cancelling apparatus licences will leave declared regional 1800 MHz spectrum free for new spectrum licensees, subject to some matters which are discussed further in more detail in 1.2.5, 2.1, 2.3.4 and 2.3.5. Spectrum licences for the regional 1800 MHz band that are issued as a result of the auction will commence immediately following the reallocation period end date on 29 May 2017.

### 1.2.3 Ministerial spectrum designation

On 29 January 2014, the minister made the [\*Radiocommunications \(Spectrum Designation\) Notice No. 1 of 2014\*](#) (the designation). The designation provides that the following frequency ranges within the identified geographic areas of Australia (the designated spectrum) are to be allocated by issue of spectrum licences:

- > 1770–1775 MHz and 1865–1870 MHz in Adelaide
- > 1710–1712.5 MHz and 1805–1807.5 MHz in regional South Australia
- > 1710–1712.5 MHz and 1805–1807.5 MHz in North Queensland (Cairns/Townsville).

It should be noted that there is a typographical error in the designation notice in the description of regional South Australia. The region is defined by reference to a series of hierarchical cell identification scheme (HCIS) identifiers<sup>5</sup> in the Schedule to the designation notice. The first identifier listed for regional South Australia is 'V1', which is not a valid HCIS identifier. The ACMA has taken the view that the reference to V1 should be interpreted to mean 'GV1' as it is sequential with the other HCIS identifiers in the definition and falls within the regional South Australia area. For the avoidance of

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<sup>3</sup> Regional Australia is defined using the Hierarchical Cell Identification Scheme (HCIS) identifiers listed in clause 1 of Schedule 1 to the reallocation declaration. More information on HCIS is provided in Chapter 2.

<sup>4</sup> See subsection 153H(2) of the Act.

<sup>5</sup> HCIS identifiers are used to describe the relevant geographic area applicable to a licence.

doubt, Schedule 3 to the marketing plan and the reallocation declaration correctly specify the relevant HCIS identifier.

#### **1.2.4 Effect of a spectrum designation**

The ACMA recently completed the expiring spectrum licence process for the 1800 MHz band. At the conclusion of this process, the 1800 MHz frequencies in the areas cited in 1.2.3 above (the residual lots), remained unallocated. These 'residual lots' are currently unencumbered and the designation provides that this spectrum be allocated by the issue of spectrum licences.

Following the auction, winning bidders will be able to commence operating radiocommunications devices in the residual lots following payment of relevant spectrum access charges and associated ACMA administrative processes (such as receipt of monies, issue of spectrum licence/s, licence start dates).

#### **1.2.5 Licences to be cancelled to make way for spectrum licences**

##### ***Regional 1800 MHz band***

There are currently a number of apparatus licences issued under section 100 of the Act, primarily authorising the operation of fixed point-to-point links in the regional 1800 MHz band. In accordance with section 153H of the Act, these apparatus licences will be automatically cancelled at the end of the reallocation period as a result of the spectrum reallocation declaration.

The marketing plan (see Table 1 of Schedule 6) specifies a number of apparatus licensed fixed services (specified fixed services) that Telstra has indicated it may be unable to relocate before the end of the reallocation period. If this proves to be the case, then Telstra expects to apply to the ACMA for the issue of apparatus licences under the 'special circumstances' provisions of paragraph 153P(3)(d) of the Act. This provision enables the ACMA to consider applications and issue apparatus licences to cover periods after the end of the reallocation period, if it is satisfied that the special circumstances of the case justify the issuing of a licence.

No such applications have yet been received and the ACMA has therefore not undertaken an assessment of whether or not special circumstances for each of the licences listed in Table 1 of Schedule 6 to the marketing plan, in fact, exist or may exist. Rather, these licences are being listed in the marketing plan to alert potential bidders to the best current state of the ACMA's knowledge about the possibility that applications for apparatus licences under the special circumstances provisions of the Act may be made in the future. This does not, and cannot, preclude the possibility that applications may be made, in relation to other services not listed in Table 1 of Schedule 6 to the marketing plan.

The ACMA would consider any such applications under paragraph 153P(3)(d) of the Act at the time they were made, taking into account all relevant circumstances. However, based on the information provided by Telstra to date, the ACMA anticipates that such applications would be for licences of short duration (in most cases expected to be less than 12 months, beginning at the end of the reallocation period). However, in the case of the first 18 links in Table 1 of Schedule 6 to the marketing plan, this period may be longer, up to 24 months after the end of the reallocation period.

It is also important that winning bidders are provided with information on when they would be able to access spectrum affected by an existing fixed link, which cannot be relocated before the end of the reallocation period. With this in mind, the ACMA has sought assurances from Telstra that it will provide a number of pieces of key information about the timetable and process for clearing its fixed links. Telstra has informed the ACMA that it intends to provide such information after the auction. This

would provide an indication to winning bidders of when the unencumbered spectrum is likely to be available, similar to the digital dividend clearance process.

This information on timetables and process will include:

- > Immediately after the auction, a period during which winning bidders, if they wish to, will be able to advise Telstra of areas they seek access to as a matter of priority, with a view that Telstra would, where possible, adjust its clearance schedule.
- > Within three months of the auction concluding, a spreadsheet provided by Telstra to the ACMA and winning bidders, listing all specified fixed services sites to be cleared and the expected calendar quarter during which this is expected to occur.
- > Within six months of the auction concluding, an updated schedule provided by Telstra to the ACMA and winning bidders, detailing the date that each fixed service site is scheduled to clear the band. This information will also flag any sites where Telstra considers there is a risk of the timeline slipping and the reasons for potential slippage (this may include a factor which is outside of Telstra's control; for example, obtaining the necessary approvals to access sensitive or restricted sites). If such a risk is flagged in relation to a site, the ACMA will seek assurance from Telstra about mitigation strategies it has implemented to lessen the likelihood that higher risk sites experience clearance delays.
- > On a quarterly basis, information provided by Telstra to the ACMA and winning bidders about the progress of the clearance of fixed links.
- > 'Real time' information on when a link is cleared; i.e. as soon as the link is cleared Telstra would email relevant advice to the ACMA and winning bidders. The ACMA will also seek ongoing engagement with Telstra, including regular meetings, to achieve a best-case outcome for all parties.

The provision of this information would assist the ACMA and may be relevant for any future assessment for 'special circumstances' apparatus licensing after the reallocation period. However, it is important to note that any decision the ACMA may ultimately make as to the existence or non-existence of 'special circumstances' would be made on a site-by-site basis, following the receipt of an application.

### ***Residual lots***

The residual lots are currently unencumbered; there are no licences to be cleared from this spectrum. The ACMA notes, however, that any party could still apply for an apparatus licence in this spectrum under paragraph 153P(3)(d), if there are special circumstances, just as in any other band that is subject to spectrum licensing.

## **1.3 Legislative framework**

The Act provides the legislative framework for allocating spectrum licences by auction. Provided below is a brief overview of the legislative instruments associated with the allocation of spectrum licences.

### **1.3.1 Allocation determination**

Section 60 of the Act requires the ACMA to determine written procedures to apply to the allocation of spectrum licences by auction or for a pre-determined price. An allocation determination made under sections 60 and 294 of the Act essentially sets out the 'auction rules' and the process for issuing spectrum licences at a pre-determined price.

Section 294 of the Act fixes the spectrum access charges payable by licensees for issuing spectrum licences which are the winning prices in the auction or the pre-determined prices (if any licences are issued under that process).



For the 1800 MHz spectrum auction, the ACMA has made *the Radiocommunications (Spectrum Licence Allocation – 1800 MHz Band) Determination 2015*.

In summary, the allocation determination specifies:

- > that the auction will be conducted using the SMRA auction format, and the procedures for the auction
- > the allocation limits (also referred to as ‘competition limits’ or ‘spectrum caps’) on the amount of spectrum a person will be permitted to purchase in the auction—see 3.2.6
- > administrative matters such as the bidder registration process and the different payments auction participants may be required to make.

Further information about the procedures set out in the allocation determination is provided in Chapter 3.

### **1.3.2 Marketing plan**

Where a relevant reallocation declaration and spectrum designation have been made, sections 39 and 39A of the Act require the ACMA to prepare a marketing plan for issuing spectrum licences within the specified parts of the spectrum. A marketing plan made under sections 39 and 39A essentially sets out the product offering.

For the 1800 MHz spectrum auction, the ACMA has made *the Radiocommunications Spectrum Marketing Plan (1800 MHz Band) 2015*. The marketing plan specifies:

- > the spectrum products that will be available in each band
- > the method by which the spectrum products will be allocated and associated timeline
- > the conditions that may apply to the spectrum licences issued.

### **1.3.3 Technical framework**

Spectrum licences offer a technology-flexible, market-oriented approach to managing the radiofrequency spectrum through authorising the use of a parcel of spectrum space. Licensees are able to deploy devices within their spectrum space, as long as the operation of the device complies with all the conditions on the licence (including the core conditions) and the technical framework applicable to the spectrum-licensed band.

A spectrum licensing technical framework is the collection of technical conditions that apply to the use of devices within spectrum-licensed bands. The Act specifies the mandatory and optional statutory requirements for a spectrum licence technical framework. Under sections 66, 145 and 262 of the Act, the ACMA specifies the following for spectrum licensed bands:

- > core conditions of the licence including:
  - > a defined frequency and area for operation
  - > specified out-of-band and spurious emission limits and out-of-area limits
  - > a written determination made under section 145 of the Act, setting out what is considered to be an unacceptable level of interference
  - > advisory guidelines, made under section 262 of the Act, in relation to any aspect of radiocommunications or radio emissions including, for example, interference.

The ACMA has previously made the following technical instruments for the 1800 MHz band as part of the expiring spectrum licence process:

- > [\*Radiocommunications \(Unacceptable Levels of Interference – 1800 MHz Band\) Determination 2012\*](#)
- > [\*Radiocommunications Advisory Guidelines \(Additional Device Boundary Criteria – 1800 MHz Lower Band\) 2012\*](#)
- > [\*Radiocommunications Advisory Guidelines \(Managing Interference to Spectrum Licensed Receivers – 1800 MHz Band\) 2012\*](#)
- > [\*Radiocommunications Advisory Guidelines \(Managing Interference from Spectrum Licensed Transmitters – 1800 MHz Band\) 2012.\*](#)

In the period leading up to the 1800 MHz spectrum auction, a joint ACMA/industry working group known as a Technical Liaison Group (TLG) considered amendments to the abovementioned technical instruments to ensure that the technical framework for the regional 1800 MHz band could accommodate fixed-link operation into the future.

Based on recommendations coming out of the TLG and subsequent discussions with incumbent regional 1800 MHz apparatus licensees, the ACMA prepared a single draft variation instrument—the *Radiocommunications (Advisory Guidelines and Unacceptable Levels of Interference – 1800 MHz Band) Omnibus Variation Instrument 2015* which amended all four of the abovementioned technical instruments.

The purpose and effects of these technical instruments are discussed further in Chapter 5.

## **1.4 Stakeholder consultation**

The ACMA has been working with relevant stakeholders on how best to provide access to spectrum in the 1800 MHz band. This has included developing arrangements with appropriate regard to stakeholder views. Accordingly, the ACMA developed the allocation and technical instruments for the auction in consultation with stakeholders, particularly prospective participants and incumbent licensees.

A summary of the stakeholder consultation undertaken in preparation for the auction, including links to all relevant information and documents, is available on the [ACMA's website](#).

## 2. What is being offered in the auction?

**This chapter provides information about:**

- > **available 1800 MHz spectrum**
- > **how the spectrum will be configured as auction lots**
- > **key matters affecting how winning bidders can use the spectrum.**

## 2.1 Available spectrum

The 1800 MHz spectrum auction is being held to allocate the following frequency ranges as spectrum licences:

### ***Regional 1800 MHz band spectrum***

- > 1725–1785 MHz and 1820–1880 MHz in regional Australia.

### ***Residual 1800 MHz spectrum (residual lots)***

- > 1770–1775 MHz and 1865–1870 MHz in Adelaide
- > 1710–1712.5 MHz and 1805–1807.5 MHz in regional South Australia
- > 1710–1712.5 MHz and 1805–1807.5 MHz in North Queensland (Cairns/Townsville).

## 2.2 1800 MHz spectrum auction lots

The ACMA has configured the spectrum to be auctioned into small units, referred to as 'lots'. The auction lots are defined by frequency ranges and geographic region. Details of lots for the regional 1800 MHz band and the residual lots are provided below. A summary of the lots available is provided in Table 3 in 2.2.3 below.

### 2.2.1 Lot configuration

#### ***Regional 1800 MHz band spectrum***

Regional 1800 MHz spectrum lots are being offered in 12 separate geographic areas. In each area, 12 separate 10 MHz lots will be available in a paired configuration, each lot with 5 MHz in the lower part of the band (1725–1785 MHz) and 5 MHz in the upper part of the band (1820–1880 MHz).

#### ***Residual 1800 MHz spectrum (residual lots)***

Residual 1800 MHz spectrum lots are being offered as follows:

- > one 5 MHz lot in North Queensland (Cairns/Townsville), in a paired configuration, with 2.5 MHz in each of the lower and upper parts of the band
- > one 5 MHz lot in regional South Australia in a paired configuration, with 2.5 MHz in each of the lower and upper parts of the band
- > one 10 MHz lot in Adelaide in a paired configuration, with 5 MHz in each of the lower and upper parts of the band.

It should be noted that there is a typographical error in the designation notice in the description of regional South Australia. See 1.2.3 for further details.

### 2.2.2 Geographic boundaries

The geographic areas for both the regional and residual 1800 MHz spectrum are defined utilising a hierarchical cell identification scheme (HCIS).<sup>6</sup> The HCIS is a naming convention developed by the ACMA that applies unique labels to each five-minute arc square cell in the Australian Spectrum Map Grid<sup>7</sup>, derived from the cell's position in a hierarchically arranged group of cells. Schedule 3 to the marketing plan reflects these geographic boundaries.

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<sup>6</sup> HCIS coordinates can be converted into a Placemark file (viewable in Google Earth or other GIS tools) through a facility on the ACMA website: [www.acma.gov.au/theACMA/convert-hcis-area-description-to-a-placemark](http://www.acma.gov.au/theACMA/convert-hcis-area-description-to-a-placemark)

<sup>7</sup> More information on the Australian Spectrum Map Grid can be found on the ACMA website [http://www.acma.gov.au/webwr/assets/main/lib410188/australian\\_spectrum\\_map\\_grid\\_28feb2012.pdf](http://www.acma.gov.au/webwr/assets/main/lib410188/australian_spectrum_map_grid_28feb2012.pdf).

### 2.2.3 Lot categories

The ACMA has categorised lots in the regional 1800 MHz band and the residual lots differently. This is considered necessary because:

- > competition limits only apply to the regional 1800 MHz band
- > two of the three residual spectrum lots have a smaller bandwidth than the other lots to be allocated (that is, two of the three residual spectrum lots are 2 x 2.5 MHz rather than 2 x 5 MHz)
- > the remaining residual lot is in a metropolitan area.

Therefore, the 1800 MHz band spectrum has been divided into three categories:

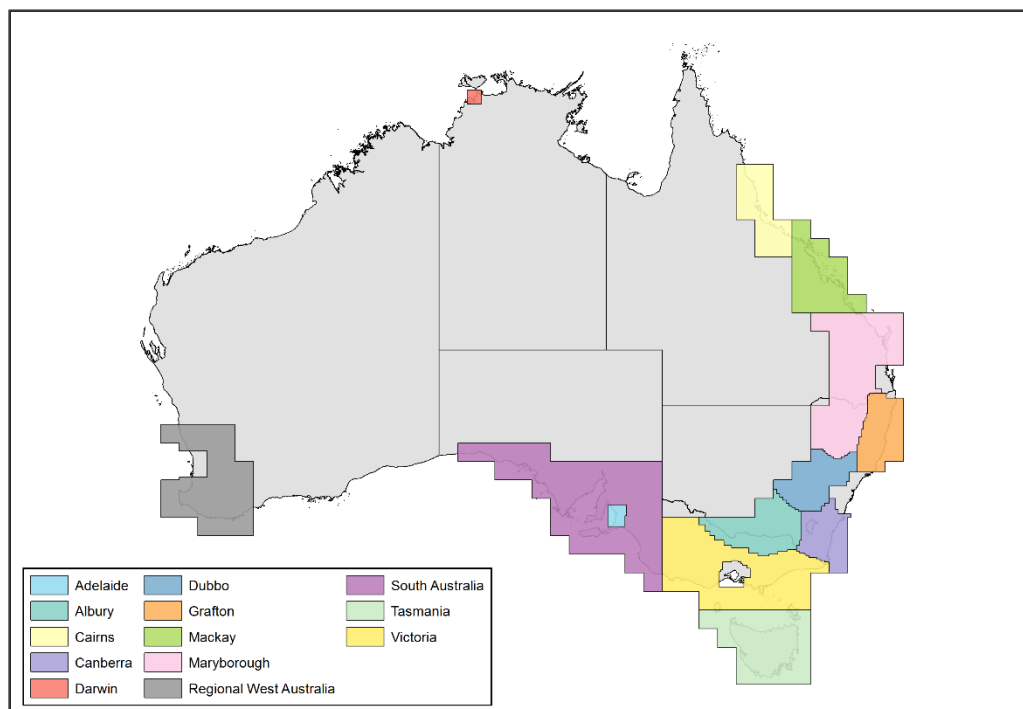
- > category 1—144 lots, all of which are in the regional 1800 MHz band
- > category 2—two residual lots with a bandwidth of 2 x 2.5 MHz, one in North Queensland (Cairns/Townsville) and one in regional South Australia
- > category 3—one residual lot with a bandwidth of 2 x 5 MHz in Adelaide.

Table 3 below sets out the categories of lots on offer and their geographic and frequency boundaries.

**Table 3: Available 1800 MHz band spectrum**

Category		Geographic boundaries	Frequency boundaries	
		Region	Bandwidth	No. of lots
1	Regional 1800 MHz band	Darwin	2 x 5 MHz	12
1	Regional 1800 MHz band	North Queensland (Cairns/Townsville)	2 x 5 MHz	12
1	Regional 1800 MHz band	Central Queensland (Mackay)	2 x 5 MHz	12
1	Regional 1800 MHz band	South Queensland (Maryborough)	2 x 5 MHz	12
1	Regional 1800 MHz band	Northern New South Wales (Grafton)	2 x 5 MHz	12
1	Regional 1800 MHz band	Western New South Wales (Dubbo)	2 x 5 MHz	12
1	Regional 1800 MHz band	Canberra (including south coast of New South Wales)	2 x 5 MHz	12
1	Regional 1800 MHz band	Southern New South Wales/Riverina (Albury)	2 x 5 MHz	12
1	Regional 1800 MHz band	Regional Victoria	2 x 5 MHz	12
1	Regional 1800 MHz band	Tasmania	2 x 5 MHz	12
1	Regional 1800 MHz band	Regional South Australia	2 x 5 MHz	12
1	Regional 1800 MHz band	Regional Western Australia	2 x 5 MHz	12
2	Residual 1800 MHz band	North Queensland (Cairns/Townsville)	2 x 2.5 MHz	1
2	Residual 1800 MHz band	Regional South Australia	2 x 2.5 MHz	1
3	Residual 1800 MHz spectrum	Adelaide	2 x 5 MHz	1

**Figure 1: Map of defined geographical areas**



*\*Not to scale*

Potential auction participants should obtain their own advice and make their own enquiries into pictorial representations of the regions. The geographic area of the regions can be determined by the aggregation of block areas referenced by the HCIS identifiers listed in Table 1 of Schedule 3 to the marketing plan.

## 2.3 Key issues affecting the use of the spectrum

### 2.3.1 Spectrum to be allocated as spectrum licences

Spectrum lots won at auction will be allocated to winning bidders as spectrum licences issued under section 62 of the Act.

Spectrum licences authorise licensees to operate radiocommunications devices for a fixed period, within a parcel of spectrum space—that is, within a particular frequency range and within a particular geographic area. Spectrum licensing offers a technology-flexible, market-oriented approach to managing the radiofrequency spectrum in that licensees may:

- > subdivide and trade their spectrum space
- > change their services over time in response to the changing market environment and new technologies.

Spectrum licensees must comply with:

- > the Act
- > a set of core licence conditions
- > statutory licence conditions
- > other licence conditions
- > a technical framework established for the relevant band by the ACMA in consultation with industry.

Detailed information about spectrum licensing and the technical frameworks applicable to the 1800 MHz band, and other important matters for spectrum licensees to be aware of, is provided in Chapter 5 of this Auction guide. Information specific to the spectrum licences to be issued for the lots on offer in the auction is available in Part 3 of the 1800 MHz band marketing plan. This includes, at Schedule 7 to the marketing plan, a sample licence containing the conditions that may be included in a spectrum licence to be allocated.

Following is information surrounding a number of key issues affecting use of the spectrum on offer that may be of particular interest to prospective auction participants.

### **2.3.2 Licence commencement**

#### ***Regional 1800 MHz band***

Spectrum licences for regional 1800 MHz spectrum lots will commence on 30 May 2017, aligning with the end of the reallocation period. The ability to deploy radiocommunications devices under spectrum licences allocated as a result of the 1800 MHz band spectrum auction may be subject to operation of a number of fixed links, outlined in Table 1 of Schedule 6 to the marketing plan, for which Telstra may seek apparatus licences to authorise operation beyond the end of the reallocation period. Further details are provided in 2.3.4 and 2.3.5 below.

#### ***Residual 1800 MHz spectrum (residual lots)***

In accordance with subsection 3.4(2) of the marketing plan, spectrum licences for residual 1800 MHz spectrum lots can commence as soon as practicable after the auction - that is, as soon as winning bidders pay associated spectrum access charges against the relevant invoice issued by the ACMA and the ACMA subsequently issues the licence. In order to maximise access to spectrum, the ACMA will look to issue invoices by registered mail to winning bidders for residual lots as soon as possible following confirmation of auction results.

### **2.3.3 Licence duration and expiry**

All spectrum licences issued as a result of the 1800 MHz spectrum auction will expire on 17 June 2028. This is in line with the expiry date of existing spectrum licences in the 1800 MHz band. The ACMA considers that a common expiry date is important to facilitate spectrum trading for licensees and ensure a smooth administrative process in the band upon expiry of spectrum licences.

Spectrum licences are issued with no automatic right of renewal. Rules for the reissuing of spectrum licences are set out in Division 4 of Part 3.2 of the Act.

### **2.3.4 Potential access to regional 1800 MHz spectrum prior to licence commencement (early access)**

Current apparatus licences in the regional 1800 MHz band will be cancelled automatically at the end of the reallocation period set in the reallocation declaration, thereby leaving the band free for use by new spectrum licensees from the licence commencement dates mentioned above, subject to the issue mentioned at 2.3.5.

Because some 1800 MHz spectrum may become unencumbered before spectrum licences commence in May 2017, the ACMA appreciates that winning bidders may wish to access spectrum they win in the auction from the earliest possible date. The regulatory arrangements underpinning access to spectrum prior to the commencement of spectrum licences are separate from the arrangements applicable to spectrum licences issued in the 1800 MHz band as a result of the auction.

Winning bidders may apply to the ACMA to be issued an apparatus licence in order to access unencumbered spectrum for a period until the spectrum licence commences.<sup>8</sup> The ACMA will consider applications on a case-by-case basis. This will include a consideration of the legislative requirement that the 'special circumstances' of the case justify issuing an apparatus licence in spectrum that is the subject of a spectrum reallocation declaration.<sup>9</sup> In general, the ACMA considers that it is desirable that unencumbered spectrum should be utilised where possible. In the case of the regional 1800 MHz band, the ACMA expects to adopt a similar approach to 'early access' employed after the recent digital dividend auction. In that case, the ACMA found that an application to use vacant spectrum by the future owner of the relevant spectrum licence was generally recognised to satisfy special circumstances criteria.

Any apparatus licence issued in such cases would be on an interim basis only, and would expire in alignment with the commencement of the winning bidder's spectrum licence at the end of the reallocation period.

Further details on managing interference with specified fixed links are provided in 2.3.5 below.

### **2.3.5 Managing interference with specified fixed links**

While noting that existing apparatus licences will be automatically cancelled as outlined above, potential auction participants should note that there are a number of apparatus licensed fixed links currently operating in the 1800 MHz band, which Telstra has indicated it may not be able to relocate from the band before the end of the reallocation period (specified fixed links).<sup>10</sup>

Telstra has indicated that it is likely to apply for apparatus licences under the 'special circumstances' provisions of paragraph 153P(3)(d) of the Act to continue operating the specified fixed links after the end of the reallocation period. The issue of these licences will be a matter for case-by-case consideration by the ACMA on receipt of application, which is expected to be later in the reallocation period. If such apparatus licences are issued, this may affect a winning bidder's ability to fully deploy services under the spectrum licence they won at auction.

Further, spectrum licences issued as a result of the 1800 MHz spectrum auction will include a condition requiring spectrum licensees to observe interference management requirements in relation to any specified apparatus licensed fixed services (a specified fixed service) which may continue to operate in the 1800 MHz band after the reallocation period pursuant to apparatus licences issued under the 'special circumstances' provisions of paragraph 153P(3)(d) of the Act. These specified fixed services are listed in Table 1 of Schedule 6 to the marketing plan.

A description of the licence condition appears in subsection 3.7(2) of the marketing plan. It is also included in the sample licence at Schedule 7 to the marketing plan.<sup>11</sup>

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<sup>8</sup> It is not necessary that all the spectrum in a lot, licence area, or spectrum licence, be unencumbered—or unused—for such an application to be lodged. It is only necessary that sufficient spectrum be available in the area the applicant wishes to service to allow deployment of a service without causing unacceptable interference to existing licensees, or suffering unacceptable interference from existing licensees.

<sup>9</sup> See section 153P of the Act. Paragraph 153P(2)(e) allows the ACMA to consider, on a case-by-case basis, whether there are special circumstances that justify the issuing of an apparatus licence notwithstanding the general prohibition under subsection 153P(2).

<sup>10</sup> See Table 1 of Schedule 6 to the marketing plan.

<sup>11</sup> See condition 8 in Licence Schedule 4 ('Other Conditions') in the draft sample licence at Schedule 7 to the marketing plan.



Each spectrum licence issued as a result of the auction will include a condition stating that where:

- > a service is provided using the same parameters as a fixed licence specified in Table 1 of Schedule 6 to the marketing plan; and
- > the specified fixed service uses frequencies wholly or partly within the 1800 MHz band; and
- > the specified fixed service is provided using a radiocommunications device operated under an apparatus licence

then the spectrum licensee:

- > must not operate radiocommunications transmitters under the spectrum licence in a manner not in accordance with Part 2 of the [Radiocommunications Advisory Guidelines \(Managing Interference from Spectrum Licensed Transmitters – 1800 MHz Band\) 2012](#). Part 2 specifies the out-of-band and in-band protection to be afforded to specified fixed services as outlined in [Radiocommunications Assignment and Licensing Instruction FX 3 Microwave Fixed Services Frequency Coordination](#); and
- > cannot claim protection from specified fixed services listed in Table 1 of Schedule 6 to the marketing plan.

The effect of the condition described in subsection 3.7(2) of the marketing plan, and to be included in each spectrum licence issued as a result of the 1800 MHz spectrum auction, is that spectrum licensees in the band will not be able to establish operation of, or use, any devices authorised by the spectrum licences in a manner that causes interference to the operation of any radiocommunications device authorised by the specified fixed apparatus licensed services. Also, devices operated under a spectrum licence cannot claim protection from interference caused by radiocommunications devices authorised by the specified fixed apparatus licensed services.

As highlighted in 1.2.5 and 2.3.4 above, Telstra has informed the ACMA that it intends to provide a number of pieces of key information about the timetable and process for clearing its fixed links. This information is directed at keeping the ACMA and winning bidders better informed, on a progressive basis, about when specified fixed services will be, and have been, cleared from the band.

The ACMA will provide information to winning bidders about the progress of the clearance of Telstra's specified fixed links. This will increase the information available to winning bidders about when they will be able to access spectrum won at auction.

This information on timetables and process will include:

- > immediately after the auction, a period during which winning bidders, if they wish to, will be able to advise Telstra of areas they seek access to as a matter of priority, with a view that Telstra would, where possible, adjust its clearance schedule
- > within three months of the auction concluding, a spreadsheet provided by Telstra to the ACMA and winning bidders, listing all specified fixed services sites to be cleared and the expected calendar quarter during which this is expected to occur
- > within six months of the auction concluding, an updated schedule provided by Telstra to the ACMA and winning bidders, detailing the date that each fixed service site is scheduled to clear the band. This information will also flag any sites where Telstra considers there is a risk of the timeline slipping and the reasons for potential slippage (this may include a factor which is outside of Telstra's control; for example, obtaining the necessary approvals to access sensitive or restricted sites). If such a risk is flagged in relation to a site, the ACMA will seek assurance from Telstra about mitigation strategies it has implemented to lessen the likelihood that higher risk sites experience clearance delays

- > on a quarterly basis, information provided by Telstra to the ACMA and winning bidders about the progress of the clearance of fixed links.
- > 'real time' information on when a link is cleared; that is, as soon as the link is cleared, Telstra would email relevant advice to the ACMA and winning bidders. The ACMA and Telstra will also undertake ongoing engagement, including regular meetings, to achieve a best-case outcome for all parties.

The provision of this information would assist the ACMA and may be relevant for any future assessment for 'special circumstances' apparatus licensing, after the reallocation period. However, it is important to note that any decision the ACMA may ultimately make as to the existence or non-existence of 'special circumstances' would be made on a site-by-site basis, following the receipt of an application.

## **Part two— Participating in the auction**

### 3. How will the auction be conducted?

**This chapter provides information about:**

- > **Simultaneous Multi-Round Ascending (SMRA) auction format**
- > **the SMRA procedures**
- > **other key auction procedures**
- > **the online auction system**
- > **mock auction and support for bidders.**

**Important warning:** The information in this chapter is intended to provide only a general overview of the procedures contained in the *Radiocommunications (Spectrum Licence Allocation — 1800 MHz Band) Determination 2015*. Potential applicants should *not* rely on this information, but should instead carefully review and understand the content of the allocation determination itself.

## 3.1 The simultaneous multi-round ascending (SMRA) auction format

The 1800 MHz spectrum auction will be conducted online using the SMRA format according to the procedures set out in the allocation determination. A practical step-by-step guide to registering as a bidder and participating in the auction is provided in Chapter 4.

This chapter provides general information about the auction system and information about how the auction process works. In this auction, bidders will compete for spectrum licences. Broadly speaking, instead of authorising the operation of a specific device or type of device, a spectrum licence authorises the use of ‘spectrum space’ within a geographic area and frequency band, provided that the device operating in that space complies with the technical framework for spectrum licensing in the band.

This chapter explains how the ACMA will use the SMRA auction format to allocate spectrum lots to winning bidders. Lots are like ‘building blocks’ of spectrum space. The auction process allocates lots to the applicants who value them most highly and bid accordingly to win those lots. Lots which are sold to the one bidder are combined after the auction by ACMA to form a spectrum licence.<sup>12</sup> The spectrum lots on offer in the auction are defined in the marketing plan.

In an SMRA auction, all bidders are able to bid on all of their preferred lots at the same time. That is, all of the lots on offer are on offer simultaneously in each round.

### 3.1.1 Eligibility points

Bidders can bid on any lot, or any combination of lots, up to their own pre-declared limit. This limit is expressed as ‘eligibility points’—a representation of the lots and their relative value that the bidder ultimately seeks to win. Bidders cannot bid on lots in such a way that their bidding activity would exceed their eligibility points. Partly to ensure that bidders nominate their initial eligibility points in a way that is a relatively accurate expression of their demand, applicants must make an ‘eligibility payment’ ahead of the auction. This is discussed in 4.2.3.

Bidding is conducted over multiple rounds (see ‘Auction stages and rounds’ subheading at 4.4.2). The auction closes only when it is in its final stage, two consecutive rounds elapse in which no new bids are placed on any lot, and no proactive waivers are applied

A key feature of the auction is the application of ‘activity rules’ that encourage active participation and ensure that the auction process does not stall. If a bidder fails to meet its activity target, the amount of spectrum that it is eligible to bid on (reflected in its eligibility points) reduces.

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<sup>12</sup> All spectrum licences will be issued in the single licence format. That is, for each licensee spectrum will be issued on one licence. If required, any new spectrum will be added to existing licences. This is the same process used for all bands for the re-issue of expiring spectrum licences.

### 3.1.2 Auction stages and rounds

The auction will take place in several stages, each of which comprises a number of rounds. The number of rounds in each stage is not fixed and bidding continues until the level of new bids decreases. Bidding is possible on all lots in all rounds subject to the bidder's eligibility points and allocation limit restrictions. The auction manager will decide when the auction should move from one stage to the next and notify bidders accordingly through the auction system. A move to the next stage will be based on the overall level of bidding activity. Past spectrum auctions run by the ACMA and its predecessors have included up to three stages.

Each stage of the auction will require bidders to make active bids in each round on a higher percentage of their eligibility points than in the previous stage. For example, in stage 1, bidders may need to bid to an activity target of 60 per cent of their eligibility points, while in stage 2 this activity target may increase to 85 per cent of their eligibility points. Applicants will be told the number of stages for the auction and the activity percentage applying to each stage before the auction commences.

Each round has two discrete components, and these follow a schedule, which is published in advance for every round. These are:

- > the bidding period, when bidders may lodge their bidding instructions
- > the results period, during which the auction manager works out the high bids on each lot offered, using the auction system, and then provides the results for the round to bidders, using the auction system.

After considering the results for one round, in the next round bidders may choose to bid again on the same lots, or bid on different lots. That is, bidders are not constrained to bid on the same set of lots throughout the course of the auction. Bidders should be aware, however, that they may be liable to a withdrawal penalty in accordance with clause 18 of Schedule 1 to the allocation determination depending upon how the auction progresses after the withdrawal of a bid. For further details, see the 'Bid withdrawal penalties' subheading at 4.4.2.

### 3.1.3 The end of the auction

The auction continues from round to round until such time as two consecutive rounds pass, in the final stage, in which there is no activity by any bidder. That is, no new bid is made on any lot in that round, and no bidder exercises a pro-active waiver.<sup>13</sup>

Once all bidding has stopped for two consecutive rounds in the final stage, the auction manager will declare the auction closed and will advise all registered applicants of the closure.

Alternatively, in accordance with Part 3 of Schedule 1 to the allocation determination, after 20 rounds of the auction, the auction manager has discretion to stop the auction at a specified round. The auction manager must advise all registered applicants of this before the proposed closure is implemented.

The bidder who has the highest bid on each lot at the end of the auction wins the lot at the price bid.

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<sup>13</sup> For further discussion on waivers, see 'Wavers' subheading at 4.4.2.

### **3.1.4 SMRA auction training and bidding strategies**

The ACMA will arrange, for registered bidders to be provided with an opportunity to trial the auction system. In addition, registered bidders would be provided with an instruction guide on the auction system.

Importantly, registered bidders should not rely solely on the instruction material provided by the ACMA on the auction system. Instructions will be concerned only with the 'mechanics' of bidding and how to operate the ACMA's online auction system. The ACMA will not provide instruction or advice on bidding strategies, or on all the possible effects of the actions of bidders during the auction process. Applicants should seek such legal and other advice as they consider necessary in relation to the auction system.

## **3.2 Key auction procedures**

The following information provides an overview of the main auction procedures. More detailed information on the bidding process and actions associated with this are provided in Chapter 4.

### **3.2.1 Application fee and eligibility payments**

Applicants must pay an entry fee to participate in the auction. The ACMA has set this fee at \$10,000. This fee is not refundable under any circumstances.

Applicants must also make an 'eligibility payment' or give a deed of financial security to the ACMA, or a combination of both, under section 4.16 of the allocation determination to register for the allocation process and to participate in the auction.

The dollar value of each initial eligibility point nominated by the applicant has been set by the ACMA as \$1,000 per eligibility point, and is used to calculate the amount to be paid or secured by the applicant. Applicants have the choice of paying this amount upfront in full, paying a portion of the amount upfront and giving the ACMA a deed of financial security for the remaining amount, or giving the ACMA a deed of financial security for the full amount. If the eligibility payment exceeds the amount of the winning high bids and any withdrawal penalties imposed at the conclusion of the auction, then the balance of the eligibility payment will be refunded to the bidder.

Lot ratings are a measure of the relative value of the lots (see 3.2.4). Total eligibility points for an applicant can be worked out as a sum of the eligibility points for each area in each category the applicant is interested in bidding for. Eligibility points in a particular category and area are calculated as a product of the lot rating for the lot in a particular category and area multiplied by the number of lots required for that category and area. The amount required to secure the desired number of initial eligibility points is determined by multiplying the applicant's initial eligibility points (nominated in its eligibility nomination form) by the amount in Australian dollars that each point is worth, as set by the ACMA under paragraph 4.6.(1)(b) of the allocation determination—\$1,000 per eligibility point. For example, the deposit for the highest rated lot in the 1800 MHz band auction—Adelaide (with a lot rating of 107)—would be \$107,000.

### **3.2.2 Bidder registration**

Parties wishing to participate in the auction will need to register as a bidder. The registration process is performed in three stages:

- A. Lodge an application
- B. Provide relevant details for assessment of affiliations
- C. Nominate and secure initial eligibility points.

Details about the procedures involved at each stage (including information about the relevant payments, forms and deadlines) are provided in step 2 in the step-by-step guide in Chapter 4.

Only parties who have fulfilled all requirements in each of the three stages (including the completion and lodgement of all relevant deeds and other forms) within the applicable deadlines will be entitled to participate in the auction.

Subject to the requirements of each stage being met, the ACMA will contact registered bidders after the eligibility deadline<sup>14</sup> (9 November 2015) to confirm their registration and provide them with relevant material (including information about how to access and use the online auction system) to enable them to participate in the auction. Bidders will be required to keep secure any material provided to them during the auction period and to notify the ACMA immediately of any relevant disclosure, loss or theft.<sup>15</sup> If the ACMA is satisfied that a bidder breached these requirements, and that the breach affected or may have affected the auction outcome, it may take action under the breach provisions discussed at 3.2.9.

### 3.2.3 Withdrawal from the auction

A person who has applied for registration as a bidder may only withdraw from the auction *before* the eligibility deadline by written notice given to the ACMA. An applicant may not withdraw after the eligibility deadline. An applicant who has withdrawn will not be readmitted to the auction.

Applicants who withdraw from the auction will remain subject to the confidentiality provisions in the allocation determination until after the end of the auction period (see 3.2.8). The ACMA will notify withdrawn applicants as soon as practicable after the end of the auction period that their confidentiality obligations have ended. As previously outlined, withdrawn applicants will not be refunded their application fee, but will be refunded any eligibility payment they have made to the ACMA (see 3.2.13).

### 3.2.4 Lot ratings

The ACMA will set a lot rating for the lots in each category and area on offer. The ACMA will publish the lot ratings in the eligibility nomination form, which will appear on the ACMA website and within the AIP. Lot ratings are also available in Table 4 at 4.4.2 of this Auction guide.

Lot ratings provide the basis for the eligibility and activity rules during rounds. Each lot is ascribed a lot rating, expressed in eligibility points.

In Stage C (nominate and secure initial eligibility points) of the bidder registration process, applicants are required to nominate their initial eligibility points by giving the ACMA a completed eligibility nomination form. As set out in that form, an applicant's initial eligibility points can be worked out by identifying which lots the applicant is interested in acquiring and summing up the total of the lot ratings ascribed to the lots. This determines:

- > a bidder's maximum eligibility points for bidding in the first round
- > the amount of the eligibility payment, deed of financial security or combination of the two, they must make or give to the ACMA (see 4.2.3 below).

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<sup>14</sup> 'Eligibility deadline' is the date and time before which completed eligibility nomination forms and eligibility payments or deeds of financial security must be given to the ACMA.

<sup>15</sup> 'Auction period' is defined in section 1.4 of the allocation determination, and means the period from the eligibility deadline to the close of the auction under clause 19 in Schedule 1 to the allocation determination.



Lot ratings are an important part of the efficiency of the auction because they reflect the *relative* value of the different lots on offer. Appropriate lot ratings assist bidders to compare different lots and, in each round, substitute different lots in response to changes in their relative price. For example, as bidders' preferences may change during the course of the auction, lot ratings provide a guide for bidders in comparing the value of different lots and, in turn, may increase the ease with which bidders can switch bids between lots in the areas being auctioned.

### 3.2.5 Starting prices

The ACMA has set starting prices, sometimes referred to as reserve prices, for the lots of each category and area on offer. The starting prices for each of the lots is based on the rate of 8 cents per MHz per population in all categories and areas.

The starting price for each lot is the price of that lot in the first round. The auction system will not accept a bid below the starting price for the lot. Each lot will remain at the starting price until a bid is placed on that lot. That is, if no bid is placed on a lot in the first round, the price for that lot *will not* increase in the second round.

For further information on starting prices, see 4.4.2.

### 3.2.6 Allocation limits

Allocation limits, also referred to as 'competition limits' or 'spectrum caps,' have the effect of capping the total amount of spectrum that a single bidder can acquire in the allocation process. Under subsection 60(5) of the Act, an allocation determination may impose limits on the aggregate amount of spectrum that can be acquired by a bidder. However, under subsection 60(9), such limits can only be imposed if the minister directs the ACMA to do so.

On 26 May 2015, the minister made the [Radiocommunications \(Spectrum Licence Limits—Regional 1800 MHz Band\) Direction 2015](#) imposing an allocation limit on the amount of spectrum that may be allocated to any one bidder and its associates in the regional 1800 MHz band (Category 1 lots). In the regional 1800 MHz band, bidders will be able to acquire a maximum of 5 lots, that is 25 MHz paired (50 MHz in total). The term 'paired' refers to the paired lot configuration of each band discussed at 2.2. Under this configuration, each frequency lot consists of 10 MHz of spectrum (2 x 5 MHz), comprising a block of 5 MHz in the *lower* part of the band and 5 MHz in the *upper* part of the band. There are no allocation limits on lots in Categories 2 and 3 (the residual lots).

Bidders cannot bid in a way that could place them in contravention of the allocation limits if their bid was successful. The auction system is designed to prevent bidders from bidding in a way that contravenes the allocation limits. It will not accept bids that contravene the allocation limits. That is, it is not possible for a bidder to accidentally lodge bids that exceed the allocation limits. The auction system will automatically advise the bidder that the limits have been exceeded and the bid must be amended before it can be accepted.

### 3.2.7 Affiliations

Applicants and bidders who are 'affiliated' will not be permitted to participate in the auction as separate bidding entities. The affiliated applicant rules in Part 2 of the allocation determination are in place to:

- > ensure compliance with the allocation limits
- > prevent (in conjunction with the confidentiality provisions discussed below) the disclosure of confidential information between bidders
- > deliver a fair and competitive auction.

Two applicants or bidders will be considered affiliated if one is an 'associate' of the other, or if they have an associate in common.<sup>16</sup> There are rules in place to identify and respond to affiliations formed before, during and after the auction.

At Stage A (Lodge an application) of the bidder registration process, applicants will be required to provide information about the identity of their associates. At Stage B (Provide relevant details for assessment of affiliations) of the bidder registration process, the ACMA will give each applicant details about the identity of all other applicants and their associates. Applicants will then be required to provide a statutory declaration stating whether they are affiliated with another applicant—and, if so, providing details of the affiliation. If an affiliation is identified at this stage, the affiliated applicants will have the option of withdrawing all of their applications and submitting a new application as a single applicant, or withdrawing all but one of their applications.

A bidder must not be affiliated with another bidder during the auction period. If during the auction period a bidder believes it may be affiliated with another bidder, the bidder must immediately report the matter to the ACMA. If the ACMA is satisfied that one bidder was affiliated with another during the auction period, and the affiliation affected or may have affected the auction outcome, it may take action under the breach provisions discussed at 3.2.9.

As soon as practicable after the end of the auction period, the ACMA will give each winning bidder details about the identity of all other winning bidders. Each winning bidder will then be required to provide to the ACMA a statement about whether they are affiliated with another winning bidder—and, if so, providing details of the affiliation. If an affiliation commences at this stage, the allocation limits will cap the amount of spectrum issued to the affiliated bidders. Regardless of whether the bidders are consequently issued licences for fewer lots than they won in the auction, each of them will remain liable to pay the full balance of the winning price for all of the lots they won.

### 3.2.8 Confidentiality

Applicants, bidders and 'related persons'<sup>17</sup> who have knowledge of an applicant's or bidder's confidential information will be prohibited from disclosing confidential information about the auction to any person, except in specified circumstances. The confidentiality rules, in conjunction with the affiliation provisions discussed above, are in place to protect the integrity of the auction process by prohibiting communications that could influence the auction outcome. The rules are intended to guard against anti-competitive behaviour in the auction and to complement the prohibition on cartel conduct contained in the *Competition and Consumer Act 2010*.

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<sup>16</sup> 'Associate' is defined in section 2.2 of the allocation determination.

<sup>17</sup> 'Related person' is defined in section 1.4 of the allocation determination.

The general prohibition on disclosing confidential information does not apply where the disclosure is made either:

- > to obtain advice on the auction from a person in their professional capacity
- > to obtain finance to purchase spectrum licences in the auction
- > to the ACMA
- > to another related person of that applicant or bidder
- > as authorised by the allocation determination or otherwise required by law
- > because the information is publicly available and was not made available because of a breach of the confidentiality rules.

Confidential information includes any information that, if disclosed, could be reasonably expected to affect another applicant's or bidder's behaviour in the auction, or the auction outcome. This includes information about an applicant's or a bidder's bids or proposed bids, bidding strategy or lot valuations.<sup>18</sup>

Applicants are required to complete a deed of confidentiality as part of Stage A of the bidder registration process. Each 'related person' who has knowledge of the applicant's or bidder's confidential information will (if they are an employee of the applicant or bidder, or of a related body corporate of the applicant or bidder that provides services to it) also be required to complete a deed of confidentiality. By completing the deed, applicants and their related persons will be agreeing not to disclose confidential information before their confidentiality obligations have ceased to apply. The precise point at which the rules cease to apply to an applicant, bidder or their related persons will depend on whether the applicant or bidder is a winning bidder, is not a winning bidder or withdraws from the auction (see 4.6).

Applicants, bidders and their 'related persons' are required to notify the ACMA in writing about any breach of the confidentiality rules of which they become aware. The notification must be made as soon as possible, and no later than two working days after they become aware the breach has occurred. If the auction manager is satisfied that the auction has been affected by a breach of the confidentiality rules, they may take steps to, among other options, stop the auction or wind the auction back to an earlier point (see 3.2.14). Applicants or bidders who breach the confidentiality rules will be subject to the breach provisions discussed at 3.2.9.

### **3.2.9 Breaches of the auction procedures**

Enforcement provisions set out in section 8.6 of the allocation determination will apply in cases where the ACMA is satisfied that an applicant or bidder (or, where applicable, a related person) has breached a provision of the allocation determination. Under the enforcement provisions:

- > the ACMA may retain an eligibility payment made, or enforce a deed of financial security given, by the applicant or bidder
- > a winning bidder may not, regardless of whether they have paid their winning price, be issued a licence for any spectrum they won in the auction.

For example, the ACMA may apply these sanctions if it is satisfied that an applicant or bidder (or one of their related persons) breached the confidentiality rules or was affiliated with another bidder, during the auction period in a way that affected the outcome of the auction. Sanctions may also be applied if, after the end of the auction period, a winning bidder (or one of their related persons) breaches the confidentiality rules before their confidentiality obligations come to an end, or fails to provide a

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<sup>18</sup> 'Confidential information' is defined in section 3.1 of the allocation determination.

statement about whether they are affiliated with another winning bidder. These examples do not limit the circumstances in which the ACMA may take enforcement action.

Section 8.9 of the allocation determination provides that, where the ACMA applies the sanctions, the affected applicant or bidder may, within a year of being notified by the ACMA about the breach, apply to the Federal Court for the return of all or part of any amount retained by the ACMA.

### **3.2.10 Allocation of spectrum licences without an auction (pre-determined price)**

On the eligibility nomination form there is provision for applicants to nominate the number of lots in each area they want to acquire in the 1800 MHz spectrum auction. If the ACMA considers that it may be able to allocate spectrum licences for lots without having to conduct an auction, the ACMA may offer to allocate spectrum licences based on:

- > the lots applicants have indicated they require in their eligibility nomination forms
- > other information about the lots they require as provided to the ACMA.

If every applicant accepts the spectrum licence offered to it, each applicant is entitled to be issued the spectrum licence offered to it upon payment of the balance of the pre-determined price (PDP).

If an applicant does not accept a spectrum licence offered to it, the ACMA may:

- > withdraw offers for spectrum licences for all lots covered by the licences offered and terminate the PDP allocation process; or
- > allocate all those lots by auction or otherwise under the allocation determination; or
- > allocate spectrum licences to those who accepted offers, and for those lots covered by licences that were not accepted, allocate them by auction or otherwise, or withdraw those lots from allocation and allocate those lots at a later date.

### **3.2.11 Publication of auction results**

Following completion of the post auction process of winning bidders making statements about affiliations, discussed at 3.2.6, and after the end of the auction period, the ACMA will announce or publish:

- > the names of the winning bidders
- > the spectrum allocated to each winning bidder
- > the highest final bid for each lot won by each winning bidder
- > the bid withdrawal penalties for each lot imposed on each winning bidder under clause 18 in Schedule 1 to the allocation determination
- > the total sum paid, or to be paid, by each winning bidder (being the total of the highest final bids for the lots won by the bidder and the total of the bid withdrawal penalties imposed on the bidder).

### **3.2.12 Payment of winning prices and issue of licences**

After the end of the allocation, the ACMA will apply the procedures set out in Part 7 of the allocation determination, including the calculation and payment of the balance of the winning price payable by each winning bidder. After paying the balance of their winning price, winning bidders will be entitled to be issued a spectrum licence for each part of the spectrum they won through the auction. A summary of the procedures for winning bidders after the auction is provided at 4.6.1. Provided below is a brief overview of the relative payment timings for the different categories and allocation methods (that is, auction or PDP).

***Regional 1800 MHz band (category 1 lots)***

As licences for the regional 1800 MHz band do not commence until 30 May 2017, the ACMA does not propose to officially notify winning bidders of the balance of winning price as required under section 7.8 of the allocation determination, until early 2017. This notice will be sent by registered mail to the nominated address on the application form and will restate the results of the auction and set out the amount owing; that is the total amount owing on the total of each lot for which it was successful, plus any bid withdrawal penalties, less the initial eligibility payment (this is called the 'balance of winning price' in the auction rules—see sections 5.5 and 7.6 to 7.8 of the allocation determination).

In the case of successful bidders at auction, those bidders will have 20 working days after the date of the notice, delivered by registered mail, to pay the 'balance of the winning price'. This is anticipated to be in the first quarter of 2017.

In the case of a PDP process, successful applicants will have 10 working days from the date of the notice, delivered by registered mail, in which to pay the 'full balance of the pre-determined price'—see section 5.5 of the allocation determination. This is anticipated to be in the first quarter of 2017.

***Residual lots (Category 2 and 3 lots)***

The residual lots are not subject to the reallocation declaration and the spectrum is unencumbered. Therefore winning bidders (or successful applicants in case of PDP process) will be able to be issued spectrum licences as soon as feasible after the auction (or PDP process).

Notices under section 7.8 or section 5.5 of the allocation determination for the residual lots will be issued as soon as practicable after the auction or PDP process is completed.

In the case of an auction, winning bidders will have 20 working days from the date of the notice to pay the 'balance of the winning price'.

In the case of a PDP process, successful applicants will have 10 working days from the date of the notice in which to pay the 'full balance of the pre-determined price'.

***Default***

If an applicant does not pay the balance of the winning price, or full balance of the pre-determined price, for a spectrum licence within the specified timeframe, the applicant will be in default. In the case of default, the applicant ceases to be entitled to be allocated the spectrum licence and the lots in the spectrum licence are taken to be unallocated spectrum under section 8.1 of the allocation determination.

The ACMA, on behalf of the Commonwealth, may retain an eligibility payment made by an applicant, or enforce a deed of financial security given by an applicant, in accordance with section 8.6 of the allocation determination.

***Unallocated lots***

Any unsold or defaulted lots may be later offered for allocation by a procedure to be determined by the ACMA in accordance with section 60 of the Act.

**3.2.13 Refunds of payments and cancellation of deeds of financial security**

An application fee paid at Stage A of the bidder registration process will not be refunded in any circumstances, including if an applicant or bidder withdraws before the auction or is excluded from the auction.

All or part of an eligibility payment paid at Stage C of the bidder registration process will be refunded:

- > to applicants who withdraw from the auction before the eligibility deadline
- > to bidders who do not win any spectrum in the auction
- > to winning bidders whose eligibility payment exceeds the total of the winning price for the lots they won in the auction. In this case, the amount of the eligibility payment, less the total of any withdrawal penalties, will be refunded.

A deed of financial security provided to the ACMA under section 4.16 of the allocation determination will be cancelled, according to the terms of the deed, either:

- > upon receipt of the balance of the payment of the winning price or full balance of the pre-determined price; or
- > if the promisor receives written notice from the Chair of the ACMA.

### **3.2.14 Auction manager**

Pursuant to section 4.1 of the allocation determination, the ACMA has appointed the Manager of the Spectrum Licensing Policy Section of the ACMA as the auction manager for the 1800 MHz spectrum auction.

The auction manager has a number of specific responsibilities and discretionary powers under the allocation determination. These include:

- > notifying bidders of the start date and time of the first round
- > scheduling the rounds and stages of the auction
- > setting the prices that will apply to the lots in each round
- > announcing the conclusion of the rounds
- > determining the highest bids from the rounds, and at the end of the auction, the winning bids.

The auction manager's discretionary powers under sections 6.8 and 6.9 of the allocation determination include:

- > permitting a bidder to submit a bid by a method other than the auction system, if he or she is satisfied that the bidder is unable to submit a bid using the auction system
- > permitting a bidder to submit a bid for a round after the end of the bidding period (but not after information about the outcome of the round has been given to bidders), if he or she is satisfied that the bidder could not submit the bid during the bidding period because of technical or communication problems
- > taking any of the following actions if he or she is satisfied that the auction is affected by exceptional circumstances (for example, a significant technical difficulty with the auction system or a breach of the confidentiality rules):
  - > make corrections to:
    - > the results of the current round of the auction; and
    - > information received by a bidder during the results period for the round; or
  - > stop the current round of the auction and restart the round when the circumstances are resolved
  - > cancel the results of one or more rounds and restart the auction from the point before those rounds
  - > restart the auction from the first round
  - > stop the auction.

The auction manager may delegate any of his or her powers and functions under the allocation determination to another person.

### **3.2.15 Communicating with the auction manager**

Prior to the start of the auction period (that is, prior to the eligibility deadline), all contact with the auction manager should in the first instance occur using the contact details/methods provided at 6.2.

During the auction period, contact with the auction manager would preferably occur through the electronic messaging facility within the auction system. Alternatively, if this is not appropriate to the particular query or situation, contact should occur through the email address, telephone number or fax number set out in 6.2. The ACMA considers that the electronic messaging facility within the auction system would be the primary and default form of contact with the auction manager. Other forms would only be used in those circumstances where the auction system was unable to be utilised (for example, if there was an electrical blackout).

## **3.3 Online auction system**

The auction will be conducted over the internet (online) using auction system software developed for the ACMA by [Power Auctions LLC](#). Subject to the user system requirements discussed below, the online auction system is designed to allow bidders to participate in the auction from their normal office locations, or any other location of their choosing.

Bidders will use the auction system to bid in all rounds of the auction. As previously noted, the auction system will also be the primary mode of communication between the ACMA and bidders during the auction period (see the introduction to Chapter 4).

The ACMA will endeavour to provide emergency backup bidding and communication arrangements will be in place in the event that technical or other problems prevent use of the auction system for a period.

Procedures conducted before the beginning of the auction period will be performed independently of the auction system, in accordance with the processes set out in Chapter 4.

### **3.3.1 Accessing and using the auction system**

Bidders will use the auction system from their own computers connected to the internet, by accessing the auction system internet site. The system has been designed to minimise the requirements on bidders' equipment and to make the bid submission process as straightforward as possible. The auction system internet site will use secure sockets layer (SSL) technology to ensure all transmissions are secure.

The auction system will employ two-factor authentication, using Time-based One-Time Password Algorithm (TOTP). To access the auction system, in addition to entering their username and password, users will need to enter a validation code generated using the smartphone app and the TOTP algorithm. This additional method of verifying the user's identity will add an extra layer of security to the conduct of the auction.

After the eligibility deadline, the ACMA will give registered bidders further information to explain how they can participate in the auction. This will include the following material about how to access and use the auction system:

- > The Auction System Bidders' User Guide (User Guide)—providing instructions about how to access and log-in to the auction system internet site; how to place

bids; view round schedules and results; and communicate with the auction manager using the auction system.

- > Each of the 'authorised persons' identified on the bidder's application form as requiring access to the auction system will separately receive a username and password to login to the auction system as well as the information necessary to set-up TOTP apps on their smartphones to generate verification codes for two-factor authentication.
- > Instructions about how to use the emergency backup bidding arrangements that will apply in the event that a bidder is unable to submit a bid using the auction system.

Bidders may access and use the auction system only in accordance with the applicable rules in the allocation determination. They must not attempt to interfere with the auction system or use it in an unlawful way. Bidders will also be required to keep the items mentioned in the previous paragraph secure during the auction period, and to notify the ACMA immediately of any unauthorised disclosure, loss or theft. If the ACMA is satisfied that a bidder has breached these requirements, and that the breach affected or may have affected the auction outcome, the ACMA may take action under the breach provisions discussed at 3.2.9.

### 3.3.2 User system requirements

The auction system will be accessible using a standard, internet-connected personal computer (PC) with an internet browser with a minimum of TLS 1.1 security, such as Internet Explorer 10 or above or Google Chrome. The User Guide will contain details of the recommended configuration for user equipment.

The auction system may run on PC configurations other than the one recommended in the User Guide. However, it is the bidder's responsibility to check they can use the system on another configuration—preferably by testing the other configuration during the mock auction discussed at 3.4. It is recommended that bidders use the same configuration for the mock auction as they intend to use for the live auction. Bidders are encouraged to install the latest updates for their operating system and browser to maximise protection against potential security vulnerabilities.

Bidders are discouraged from using web browsers containing third-party modifications such as search bars, tool bars or other third-party browser extensions. Third-party browser extensions may cause problems for users of interactive websites—such as the auction system—and in principle may render bidders' computers more vulnerable to hacker attacks. If in doubt, bidders should seek their own expert advice to disable third-party browser extensions or, if necessary, obtain clean installations of a recommended web browser.

Bidders are encouraged to establish a backup means of connecting to the internet for use during the auction in the event that their primary internet connection fails. For example, bidders could arrange to have a mobile internet service available for use if their normal cable or ADSL broadband service is disrupted; or a backup bid team, with its own power and communications services and authorisation to access the auction system, at a separate location from the primary bid team.

## 3.4 Bidder support and the mock auction

In addition to this Auction guide, and the instruments and explanatory statements attached, the ACMA will make available further information in the lead-up to the auction. This will include:

- > **Auction System Bidders' User Guide**—to be made available to registered bidders after the eligibility deadline (see 3.3.1).



- > **Mock auction**— Following the registration process (see 4.2), the ACMA will provide details to registered bidders about the date of the proposed mock (trial) auction and provide any relevant material and information required to participate. It is expected the mock auction will be held in November 2015. The mock auction will give prospective bidders the opportunity to practise using the auction system, from their own location, in a simulated auction environment. The mock auction will use fictitious lot ratings and starting prices, and bidders will be free to bid as they wish. However, the ACMA may (for example, as a clearly identified participating bidder) intervene as appropriate to ensure the mock auction progresses in a timely and comprehensive manner. It is expected that the mock auction will span a full day.

Announcements about the release of this and other relevant information, including the final date for the mock auction, will be made during the lead-up to the auction through the sources listed at 6.1. It is the responsibility of applicants and registered bidders to ensure that they review those sources regularly in order to receive all such information for the purposes of preparing for the auction.

## 4. How do I participate in the auction?

**On the basis of the auction procedures discussed in Chapter 3, this chapter provides practical information to guide participants through the auction process. It includes information about:**

- > steps that should be taken before applying to register as a bidder**
- > the bidder registration process – including relevant forms, payments and deadlines**
- > material the ACMA will provide to registered bidders after the eligibility deadline to help them access and use the auction system**
- > the announcement of round schedules and results during the auction**
- > post-auction processes.**

**Important warning:** The information in this chapter is intended to provide a guide only to the steps required to participate in the auction process in accordance with the procedures contained in the *Radiocommunications (Spectrum Licence Allocation — 1800 MHz Band) Determination 2015*.

**A potential applicant should *not* rely on this information, but should instead carefully review and understand the content of the allocation determination itself.**

This chapter provides practical information to guide participants through the key steps in the auction process. Several of these steps require auction participants to lodge forms with the ACMA. All forms are available in the *Auction forms* booklet.

Where an auction participant is required to lodge a form with, or make a payment to, the ACMA, they must do so in accordance with the relevant procedures in the allocation determination.<sup>19</sup> A summary of the lodgement and payment procedures is provided at 6.3 and 6.4, respectively, and in the *Auction forms* booklet.

Several of the steps require the ACMA to provide auction participants with information or material.

Prior to the start of the auction period, and after the end of the auction period, the ACMA will direct all such communication to the 'contact person' nominated by the auction participant in Part 2 of their application form, using the nominated contact details.

During the auction period, the ACMA will, where practicable, direct communications to the 'authorised persons' nominated by the auction participant in Part 3 of their application form, using the electronic messaging facility in the auction system. Where an alternative mode of communication is required (for example, during the period before the authorised persons have access to the auction system, or if the ACMA is unable to communicate reliably using the auction system), the ACMA will direct communications to the contact person nominated by the auction participant in their application form, using the nominated contact details.

In addition to the information and material the ACMA will provide to auction participants under the steps below, updates about auction developments and events will be released by the ACMA from time to time through the sources listed at 6.1. It is the responsibility of prospective applicants, applicants and registered bidders to ensure that they review the sources listed at 6.1 in order to receive all updated information.

## **4.1 Step 1—Consider the AIP and monitor developments**

Before applying to participate in the auction, prospective bidders should read and understand all of the material in the AIP, including this Auction guide and the instruments and explanatory statements at attachments A to J. Applicants should also seek their own expert advice on regulatory and other matters.

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<sup>19</sup> Procedures for 'lodgement of documents' and 'payment of amounts' are set out in sections 1.6 and 1.7 of the allocation determination, respectively.

During the lead-up to the auction, prospective bidders should also regularly monitor the sources listed at 6.1 to remain informed about auction-related developments and events.

## 4.2 Step 2—Register as a bidder

As highlighted in 3.2.2, people wishing to participate in the auction are required to register as a bidder. The registration process involves three stages:

- A. Lodge an application
- B. Provide relevant details for assessment of affiliations
- C. Nominate and secure initial eligibility points.

Only parties who have fulfilled all requirements in each of the three stages (including the completion and lodgement of all relevant deeds and other forms) within the applicable deadlines will be entitled to participate in the auction.

### 4.2.1 Stage A—Lodge an application (deadline of 1 October 2015)

Prospective bidders will need to lodge an application by:

- > Paying the non-refundable application fee of \$10,000.<sup>20</sup>
- > Lodging a completed application form (Form 1)—providing information about:
  - > the applicant and any associates (information about the applicant's associates is required for the purposes of the 'affiliation' rules discussed at 3.2.7)
  - > up to three 'authorised persons' (for example, individual staff of the applicant) who require login details for the auction system.<sup>21</sup>
- > Lodging a completed deed of acknowledgement form (Form 2)—containing, among other things, provisions to the effect that:
  - > the applicant understands and agrees to be bound by the provisions of the allocation determination
  - > the applicant agrees to indemnify the ACMA and the Commonwealth against any liability, damages, losses, costs or expenses arising from the actions of the applicant or its associates in relation to the auction, or from any breach by the applicant of the allocation determination or deed of acknowledgement.
- > Lodging a completed deed of confidentiality form (Form 3)—containing provisions to the effect that:
  - > the applicant agrees not to disclose confidential information before their confidentiality obligations cease to apply (see 'confidentiality rules' discussed at 3.2.8).

Applications must be lodged by the application deadline of **1 October 2015**.

Under the confidentiality rules, a 'related person' of an applicant or bidder who has knowledge of the applicant's or bidder's 'confidential information' must also lodge a

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<sup>20</sup> Section 4.2 of the allocation determination provides that before the ACMA publishes a notice inviting applications for the auction, it must set the amount of the application fee. GST is not payable on the application fee.

<sup>21</sup> In the interests of operational efficiency and security, applicants are encouraged to nominate no more than three authorised persons. However, applicants can nominate an additional two authorised persons (that is, a total of up to five persons) if they wish. Instructions for nominating authorised persons are provided in the application form. Applicants are also encouraged to nominate at least one authorised person who is in a different physical location to his or her colleagues. This will reduce the risk of complete bidder system failure—for example, because of a power outage—during the auction.

completed deed of confidentiality form (see 3.2.8). Where the related person receives knowledge of the applicant's confidential information *before* the application deadline, the person must lodge a completed deed before the application deadline. Otherwise, they must lodge a completed deed as soon as reasonably practicable after receiving knowledge of an applicant's or bidder's confidential information.

The ACMA will contact applicants as soon as practicable after receiving the material above to confirm receipt and, if necessary and possible, resolve cases where an element of the application is missing, incomplete or unclear. Prospective applicants are encouraged to lodge their applications as early as possible. This will enable the ACMA to resolve such cases, and applicants to update their application if they wish, *before* the application deadline.

#### **4.2.2 Stage B—Provide statutory declaration about affiliations with other applicants**

After the application deadline, the ACMA will:

- > give each applicant details about the identity of all other applicants, and the persons identified (by each applicant in their application form) as the associates of other applicants
- > ask each applicant to make a statutory declaration for the purposes of section 4.9 of the allocation determination (Form 4) stating whether the applicant is affiliated with another applicant and, if so, identifying the other applicant and giving details of the affiliation.

Statutory declarations made for the purposes of section 4.9 of the allocation determination must be lodged by the deadline stated in the ACMA's request. The deadline will be at least five working days after the date of the request.

If an applicant does not give the ACMA a statutory declaration as requested, they will be taken to have withdrawn their application. The implications of this are discussed at 3.2.3.

If the ACMA is satisfied that two or more applicants are affiliated, it will, in writing:

- > notify the applicants and tell them the basis on which it is satisfied they are affiliated
- > notify the affiliated applicants that to participate in the auction they must either:
  - (a) withdraw all of their applications and submit a new application as a single applicant
  - (b) withdraw all but one of their applications.

Within eight working days of being notified about the affiliation, the affiliated applicants must notify the ACMA in writing about which of the two options they wish to take. If they do not do so, they will be taken to have withdrawn their applications. If some of the affiliated applicants withdraw their applications, but more than one of them does not, *all* of the affiliated applicants will be taken to have withdrawn their applications. Where an applicant is taken to have withdrawn its application in such circumstances, the ACMA will tell it in writing that this is the case.

A new application submitted under option (a) above, must comply with the procedures set out in section 4.12 of the allocation determination. Among other things, section 4.12 requires that the new applicant must:

- > be a body corporate whose only members are one or more of the affiliated applicants

- > within eight working days of being notified about the affiliation, lodge a completed application form (Form 1) and pay the application fee of \$10,000
- > within three working days of the ACMA providing updated details about the identity of all other applicants and their associates—including any new applicants arising from option (a)—lodge:
  - > a completed deed of acknowledgement form (Form 2)
  - > a completed deed of confidentiality form (Form 3)
  - > a statutory declaration for the purposes of subsection 4.12(5) of the allocation determination that the new applicant is not affiliated with any other applicant in the updated list (Form 5).

The ACMA will not accept a new application under section 4.12 unless it is satisfied that the new applicant is not affiliated with any applicant who has not withdrawn, including another new applicant.

#### **4.2.3 Stage C—Nominate and secure initial eligibility points**

To complete the registration process, applicants will need to:

- > lodge a completed eligibility nomination form (Form 8)—nominating their initial eligibility points, which will determine their maximum eligibility points to bid in the first round
- > secure their initial eligibility points by making an eligibility payment to the ACMA, giving the ACMA a deed of financial security (Form 6), or a combination of both, for an amount to secure their initial eligibility points.

The eligibility nomination form is included in the *Auction forms* booklet provided in this AIP. The form, among other things, contains:

- > a guide to calculating initial eligibility points
- > a guide to calculating the amount required to secure the nominated initial eligibility points (the guide will explain that the amount is calculated by multiplying the nominated number of points by the dollar value of initial eligibility points set by the ACMA).

GST is not payable on an amount required to secure initial eligibility points.

The completed eligibility nomination form, and eligibility payment and/or deed of financial security, must be given to the ACMA by the eligibility deadline of **9 November 2015**.

#### **4.2.4 ACMA confirms registration and provides information**

Subject to the requirements of the registration process having been met, the ACMA will contact registered bidders after the eligibility deadline to confirm that they have been registered to participate in the auction, and provide them with the following:

- > a copy of the information about the bidder recorded on the register of bidders maintained by the ACMA under section 6.1 of the allocation determination
- > the ACMA's email address and telephone and fax numbers available for registered bidders to use
- > as discussed at 3.3.1, information about accessing and using the auction system—for example, a user manual for the auction system; the URL for accessing the auction system internet site; and login credentials for each of the 'authorised persons' nominated in the bidder's application form at Stage A
- > information about how to bid by alternative means if the bidder is unable to submit a bid using the auction system.

The ACMA will give a set of this material to each authorised person nominated in the bidder's application form.

### **4.3 Step 3—Accessing mock auction and bidder support**

Registered bidders will be encouraged to take part in a mock auction that will be held prior to commencement of the auction. During the lead-up to the auction, announcements about the mock auction and bidder support will be made through the sources listed at 6.1.

### **4.4 Step 4—Bid in the auction**

This section of the Auction guide outlines how the auction rounds will be scheduled, and how the schedules and other relevant information (for example, round results and the conclusion of the rounds) will be announced to bidders during the auction period.

Unless the ACMA has offered and bidders have accepted spectrum licence in a PDP process, the auction will be conducted over the internet using auction system software (see 3.3). Information about how to access and use the auction system, including the User Guide, will be provided to registered bidders after the eligibility deadline of 9 November 2015. That information will be supplemented by the opportunity for applicants to participate in a mock auction (see 4.3).

During the auction period, bidders and their 'related persons' should remain aware of their reporting obligations under the allocation determination. Under these obligations:

- > if at any time during the auction period, a bidder believes they may be an affiliate of another bidder, they must immediately tell the ACMA in writing the identity of the other bidder and give details of the affiliation (see 3.2.7)
- > a bidder, or a related person of a bidder, who discloses confidential information, or who receives the confidential information of another applicant or bidder must report the matter to the ACMA in writing as soon as possible, but no later than two working days after becoming aware the disclosure or receipt has occurred (see 3.2.8)<sup>22</sup>
- > if any item provided by the ACMA to a bidder for the purpose of accessing the auction system is lost or stolen during the auction period, the bidder must notify the ACMA immediately (see 3.3.1).

#### **4.4.1 Auction rounds—Scheduling**

The first round of the auction is scheduled to commence in late November 2015. The ACMA will contact registered bidders after the eligibility deadline, and at least 10 working days before the day of the first round, to confirm the starting date and time for the first and second rounds. To provide bidders with time to adjust to the live auction environment, it is expected that the number of rounds on the first day of the auction will be limited to no more than four.

The allocation determination provides that rounds of the auction must start between 9.00 am and 5.00 pm (time in Canberra, ACT) on working days.<sup>23</sup> To assist bidders, the auction manager may choose not to commence rounds before 10.00 am.

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<sup>22</sup> As well as applying to bidders and their related persons during the auction period, this obligation also applies to applicants, bidders, and the related persons of applicants and bidders, *before and after* the auction period (see 3.2.8).

<sup>23</sup> Working days are defined in the allocation determination as a day which is not a Saturday, a Sunday or a public holiday in the Australian Capital Territory, New South Wales or Victoria.

However, prospective applicants should note that the scheduling of rounds is at the discretion of the auction manager in accordance with Part 1 of Schedule 1 to the allocation determination. As such, the auction manager will consider relevant circumstances when scheduling rounds for any given day and bidders are strongly advised to always be prepared for the prospect of a round commencing at 9.00 am, in accordance with the provision of the allocation determination.

The allocation determination provides that at least one hour before the start time of the first round of the day, the auction system will indicate the schedule of rounds for that day. However, where practical and possible to do so, the auction manager will endeavour before 5.00 pm each day to post the schedule of rounds for the following day. It is the responsibility of bidders to ensure that they monitor the auction system as necessary to ensure they are aware of all announcements.

The auction manager may vary the schedule of rounds at any time, as required. Any variations to the schedule will be announced to bidders via the auction system as soon as practicable.<sup>24</sup>

Before the start of each round, the auction manager will indicate to each bidder via the auction system:

- > the start and end time for the bidding period
- > the start and end time for the results period.

#### **4.4.2 Bidding in the auction**

##### ***Starting prices***

Lots in each area are subject to a starting or 'reserve' price. The starting price for each lot offered in the auction has been determined based on a rate of 8 cents per MHz per head of population in all categories of lots (for regional 1800 MHz band and residual spectrum) and is rounded to the nearest thousand dollars.

The starting price for each lot is the price of that lot in the first round. The auction system will not accept a bid below the starting price for the lot. Each lot will remain at the starting price until a bid is placed on that lot. That is, if no bid is placed on a lot in the first round, the price for that lot *will not* increase in the second round.

Starting prices and related information for lots in each area are outlined in Table 4 below:

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<sup>24</sup> If the auction continues to run into the Christmas/ New Year period, the auction manager may declare recess days under Part 1 of Schedule 1 to the allocation determination. It is anticipated that the dates for any such recess would likely to be from 16 December 2015 to 8 January 2016 inclusive. Bidders will be provided with the opportunity to comment on such a recess before the auction manager sets the recess in the auction round schedule.



**Table 4: Starting price and lots**

<b>Cate- gory</b>	<b>Region</b>	<b>Census population August 2011</b>	<b>Lot ratings</b>	<b>ACMA estimated population as at September 2015</b>	<b>Starting prices (at \$0.08/MHz/ pop)</b>	<b>Starting prices (to the nearest thousand)</b>
1	Darwin	119,511	10	132,955	\$106,364	\$106,000
1	North Queensland (Cairns/Townsville)	448,208	38	498,627	\$398,902	\$399,000
1	Central Queensland (Mackay)	342,179	29	380,671	\$304,537	\$305,000
1	South Queensland (Maryborough)	1,029,847	86	1,145,695	\$916,556	\$917,000
1	Northern New South Wales (Grafton)	472,918	40	526,117	\$420,894	\$421,000
1	Western New South Wales (Dubbo)	298,753	25	332,360	\$265,888	\$266,000
1	Canberra (including south coast of New South Wales)	634,702	53	706,100	\$564,880	\$565,000
1	Southern New South Wales/Riverina (Albury)	511,518	43	569,059	\$455,247	\$455,000
1	Regional Victoria	792,396	66	881,533	\$705,226	\$705,000
1	Tasmania	492,564	41	547,973	\$438,378	\$438,000
1	Regional South Australia	307,399	26	341,979	\$273,583	\$274,000
1	Regional Western Australia	266,569	22	296,556	\$237,245	\$237,000
2	North Queensland (Cairns/Townsville)	448,208	19	498,627	\$199,451	\$199,000
2	Regional South Australia	307,399	13	341,979	\$136,792	\$137,000
3	Adelaide	1,274,200	107	1,417,536	\$1,134,029	\$1,134,000

**Minimum bids**

After the starting bid has been made on a lot, new bids on that lot will be subject to a minimum bid in the next round. This is the amount that a person wishing to bid on that lot must bid in order to make a higher valid bid in the round than the current valid high

bid in the previous round. This amount is calculated by adding an increment to the current high bid. The minimum bid value is updated for every lot and every round, based on a formula.

The formula for calculating the minimum bid on a lot in the next round takes the current high bid and adds the higher of:

- > the increment of percentage of the current high bid; or
- > the increment of price per lot rating

rounded up to the next thousand.

The auction manager will set these two amounts after the application closing date for the auction. During the auction, the auction manager can vary these amounts after consulting with bidders. In the early stages of the auction, larger increments are likely to be set, but as the auction matures, smaller and more conservative increments might be chosen to allow for more marginal adjustments to pricing. Adjusting the level of the minimum bid increment may also be used to influence the speed at which the auction progresses.

### ***Jump bids***

The auction system will nominate the minimum bid for the next round plus up to eight jump bids for each lot. Bidders can only bid at these amounts for the next round for that lot.

Jump bids are based upon the increment percentage of the minimum price. This increment percentage for jump bids may be different from the increment percentage for calculating minimum bids mentioned above. The increments between various jump bids are calculated by the auction system, which generates the first jump bid based on the increment percentage of the minimum price, rounds that price to the nearest thousand, and uses the computed difference to generate the additional jump bids.

The example below outlines how jump bids would operate:

- (a) If the high bid for a lot is \$90,000
- (b) The increment percentage for calculating minimum bids is 10 per cent
- (c) The minimum bid for that lot in the next round is \$99,000
- (d) The increment percentage for calculating jump bids is 5 per cent
- (e) Then the minimum bid and eight jump bids for that lot in the next round are:
  - \$99,000
  - \$104,000 (minimum bid plus 5 per cent, then rounded to the nearest thousand)
  - \$109,000 (difference between \$104,000 and \$99,000)
  - \$114,000
  - \$119,000
  - \$124,000
  - \$129,000
  - \$134,000
  - \$139,000.

Bidders however only need to bid at the minimum bid (\$99,000) in the next round to maintain eligibility on that lot.

A bidder may withdraw their standing high bid on a lot. If such a withdrawal occurs, and if no-one else bids on that lot in the same round in which the withdrawal occurred, then in the results period the ACMA will be shown as the high bidder on that lot. The

bid price at which the ACMA is shown holding the lot is the next *highest bid* of another bidder. The minimum bid for the next round is equal to the ACMA's bid so held or, if there is no other bid, the starting bid for the lot.

### ***Eligibility points bidding cap***

A bidder may bid on any lot or any combination of lots, provided that the total of the lot ratings of the lots on which the bidder is active does not exceed its eligibility points. Bidders are not restricted to bidding on the particular lots that they chose when nominating their initial eligibility points. The ACMA's web-based auction interface provides information to bidders during the auction to assist them to manage their bidding within this limit.

### ***Auction stages and rounds***

The auction will be conducted over several stages with each stage having an unspecified number of rounds. Each successive stage requires a higher level of bidder activity (see below). The auction manager will move the auction from one stage to the next (and so a higher level of activity) when a decline in bidding activity indicates that an equilibrium is near.

The level of bidder activity required in each stage is expressed as a percentage of the applicant's eligibility. For example, the auction manager could set activity targets as follows:

- > 60 per cent of eligibility in the first stage
- > 85 per cent of eligibility in the second stage
- > 95 per cent of eligibility in the third stage
- > 100 per cent eligibility in the final stage.

The ACMA emphasises that these are only examples of possible activity targets. For the auction, these amounts will not be set until after applications close, when the likely competitive environment can be considered. The ACMA also emphasises that there is no requirement for any particular number of stages in the auction; there could, for example, be only two.

### ***Activity***

A bidder is active on a lot in a round if:

(a) the bidder makes a bid, where appropriate, that either equals or exceeds:

- i. the starting price or;
- ii. the minimum bid on the lot; or

(b) the bidder holds the high bid on the lot from the previous round and does not withdraw that high bid in the current round.

### ***Activity targets***

To ensure efficient running of the auction, bidders must be active on lots with a total lot rating that is equal to or exceeds the relevant activity target set by the auction manager for the auction stage in which they are bidding. To be 'active' means a bidder must either:

- > be recorded as the highest bidder on a lot in the previous round's results and not withdraw that bid in the current round (that is, they must be holding the lot); or
- > make a new valid bid on a lot in the current round.

For new bids made in a round, any valid bid will count towards achieving the required activity target, not just those bids that are the highest for the round.

Failure to meet or exceed the required activity target will result in a reduction in eligibility points unless a waiver is applied—see further discussion under *Eligibility points reductions* subheading below.

When the number of new bids at one level of activity declines, the auction manager may decide to move to the next stage of the auction with a higher activity level (see below). The auction manager will seek the views of all applicants, and take those views into account, before taking a decision to make the stage transition. When the new bid activity level declines at this higher activity level, the ACMA may again raise the activity target to the next level, following the same process. Once the activity target is set at the final level, it will remain at that level until the auction closes.

### ***Eligibility points reductions***

Bidders who do not comply with the relevant activity target will have their eligibility points reduced unless they use a waiver (see below). This reduction in eligibility points is automatically applied by the auction system. Bidders who lose eligibility points for under-activity will, in future rounds, only be able to bid in accordance with their reduced eligibility points. **Once lost, eligibility points cannot be recovered.** For more information, please see clauses 14, 15 and 17 of Schedule 1 to the allocation determination

The ACMA's web-based auction interface incorporates a facility to give bidders a running total of their activity during the auction. The system provides a warning notification if a bidding instruction does not contain enough activity to meet the bidder's current activity target. This is intended to ensure that bidders do not accidentally bid in such a way that they reduce their eligibility points. Further information on the auction system interface will be provided to registered bidders in the User Guide.

### ***High bids***

Applicants do not have to raise their own high bids in a subsequent round but they may do so if they wish. If they do, the act of raising the bid will not add to their activity. They will already be regarded as being active on the lot by having been the high bidder from the previous round. That is, there is no requirement to raise a standing high bid in order to meet an activity target.

If two or more bidders make identical bids on the same lot and the bids are the high bids for the round, the bid selected by pseudorandom selection will be taken to be the high bid on that lot for the round.

### ***Waivers***

The ACMA recognises that there may be times when a bidder needs to take 'time out' from the auction, perhaps to consider an alternative bidding strategy. All bidders, therefore, will have a limited number of waivers, which exempt them from the reduction in eligibility points described above. The number of waivers is set by the auction manager.

Applicants can either:

- > nominate to exercise a waiver in a round (a 'pro-active waiver'); or
- > if they do not exercise one, the auction manager will, via the auction system, automatically apply one of their waivers (an 'automatic waiver') rather than reduce eligibility points; **unless**
- > the applicant directs the auction manager, via the auction system, **not** to do this (an 'automatic waiver override').

A pro-active waiver and an automatic waiver have the same effect in terms of preserving the bidder's eligibility points.

However, an automatic waiver does not constitute activity for the purpose of keeping the auction open. That is, a bidder can use a pro-active waiver to keep the auction open for one more round if there are no new bids made. If, however, the auction manager applies an automatic waiver, this will not keep the auction open.

The auction manager will set the number of waivers after applications close, and registered applicants will be informed as to how many waivers they will have. All bidders will have the same number of waivers at the beginning of the auction.

### ***Bid withdrawal***

The rules of the auction allow bidders to change their bidding strategies and the lots they hope to win. In order to support such a change in strategy, the auction system allows bidders to withdraw their standing high bids on lots, if they choose to do so.

When a standing high bid is withdrawn, and if no other bidder bids on the lot during the round, then the lot will be shown in the next results period at the second highest price that has been bid by another bidder during the auction, but with that price being attributed to the ACMA, rather than that bidder. This is because the second highest bidder, acting on the knowledge that it is no longer the highest bidder on that lot, may have already decided to deploy its eligibility points elsewhere. In that case attributing the lot to that bidder may cause them to exceed their eligibility points.

### ***High bid following a bid withdrawal***

The second highest bid price is attributed in the results to the 'default bidder', which is the ACMA. In this situation, the auction system will not apply a minimum bid increment to the amount in the next round. Instead, the minimum bid on the lot will be set *equal* to the bid attributed to ACMA.

This means that if the bidder who made the second highest bid is still interested in the lot, it may bid on the lot and confirm its interest without incurring further financial commitment. If no other bid has been made on the lot in previous rounds, the minimum bid will be the initial starting price for the lot.

If a bidder withdraws a high bid, the lot rating of that lot will be deducted from the bidder's activity in the round. The bidder will need to consider whether, by withdrawing a bid on a lot, it fails to meet the activity target for that round.

For this auction, bidders will be restricted in the number of rounds in which they can withdraw their high bids. The number of rounds in which bidders can withdraw bids in this auction is four.

### ***Bid withdrawal penalties***

To discourage bidders making frivolous bids and then withdrawing them, each bid withdrawal may be subject to a bid withdrawal penalty. The penalty is applied because a 'bid' is like an undertaking of a certain amount of money for the lot. If the bid is withdrawn, and the lot is ultimately sold for less, or remains unsold, the undertaking is not honoured.

If a bidder withdraws a standing high bid on a lot (withdrawn bid), there are three possible scenarios of what could happen to that lot over the course of the auction:

- (a) a bid is subsequently made on that lot for an amount equal to or greater than the withdrawn bid; or
- (b) the highest subsequent bid made on that lot is for an amount less than the withdrawn bid; or
- (c) no subsequent bid is made on that lot.

The penalty (if any) imposed at the end of the auction on a bidder who withdrew a standing high bid differs in each case.

In case (a) above, if there is a subsequent bid made on the lot by any bidder for an amount equal to or greater than the withdrawn bid, then there will be no withdrawal penalty for that withdrawal.

In case (b) above, if the highest subsequent bid made on the lot by a bidder is for an amount less than the withdrawn bid, then the withdrawal penalty imposed for the withdrawal is the difference between the withdrawn bid and the highest subsequent bid.

In case (c) above, if there is no subsequent bid made on the lot, then the withdrawal penalty imposed is 10 per cent of the withdrawn bid.

It is possible that a single bidder could withdraw more than once on the same lot as the auction progresses. In that case, the penalty is calculated for each of the withdrawals, and a different case could apply to each such withdrawal.

Applicants who have incurred a withdrawal penalty in a round will be informed of their provisional bid withdrawal penalty at the end of that round, and in subsequent rounds if the penalty remains. It should be noted that the provisional withdrawal penalty amount for a particular lot may change from round to round based on subsequent bids placed on that lot. At the end of the auction, bidders will be informed of their final withdrawal penalty obligations. For more information, please see clauses 16-18 of Schedule 1 to the allocation determination.

Potentially there are many different bidding scenarios where withdrawal penalties do, or do not, apply. Accordingly, the ACMA will endeavour to provide prospective applicants and registered bidders with sufficient information so they have an understanding of how withdrawal penalties operate.

### ***Emergency bidding***

The auction manager may exercise discretion to permit a bidder to submit a bidding instruction by a method other than the auction system where the auction manager is satisfied that the bidder is not able to submit a bidding instruction using the auction system. The method by which an emergency bidding instruction (fax, email etc.) will be permitted is at the auction manager's discretion.

The auction manager may permit an emergency bidding instruction in a specified round after the end of the bidding period for that round if the auction manager is satisfied that the bidder was unable to make the bid during the bidding period due to a technical or communications problem. Any such bidding instruction is taken to have been made during the bidding period for the round. However, the auction manager will not permit bidding instructions from a bidder after results for the relevant round have been provided to bidders.

If emergency bidding instructions are permitted by the auction manager, bidders should take care not to place bidding instructions where the total of the lot ratings of the lots bid on, exceeds the bidder's eligibility points at the time of the bid. To prevent this from occurring, the ACMA will process bids in the following manner:

- > bids will be processed in order of lot number, starting with the lowest number
- > bids will be processed so that the total of the lot ratings for bidding instructions does not exceed the bidders eligibility points

- > if the lot ratings for a bid will result in the bidders eligibility points being exceeded, the ACMA will not process that or any other bids and will treat such bids as not having been made.

Further information on the specifics of emergency bidding will be provided to bidders following bidder registration.

### **Round results**

At the end of each bidding period, there is a results period during which all bidders receive information, via the auction system, on the outcome of the previous bidding period. During this results period, bidders also receive necessary information, via the auction system, for the next round, for example minimum acceptable bids. This information assists bidders in considering appropriate bidding strategies for the next bidding period.

In the results period, the following information will be given to all bidders:

- (a) the amount of the high bid on each lot that was made in the bidding period
- (b) if the bidder with the high bid for the most recent bidding period is the same bidder with the high bid from the previous round, an indicator to that effect
- (c) the number of bids made on a lot in the bidding period
- (d) the minimum bid on each lot for the next round
- (e) a list of specified bids that may be made on each lot for the next round
- (f) any other information necessary for the smooth running of the auction.

In the results period, each individual bidder will also receive, using the auction system, information about:

- (a) the bidding instructions made by that bidder during the bidding period for the round
- (b) the amount of any high bid held on a lot by that bidder
- (c) the total amount of high bids held by the bidder
- (d) the bid withdrawal penalty for each lot for which a bidder is liable
- (e) the bidder's eligibility points at the beginning of the next round
- (f) the number of waivers remaining for the bidder at the beginning of the next round
- (g) any other details necessary for the smooth running of the auction.

### **Close of auction**

The auction will be closed when two consecutive rounds pass in the final stage with no new bids being made, and no 'pro-active waivers' being exercised. It is also possible for the auction manager to bring the auction to a close on two rounds notice, if bidding is continuing after 20 rounds. The auction manager must advise all registered bidders of the close of auction.

## **4.5 Step 5—Publication of auction results**

Before announcing or publishing the results of the auction, or issuing invoices to winning bidders, the ACMA will ask winning bidders to make a statement about affiliations according to section 7.3 of the allocation determination.

Following completion of the affiliation process, and after the end of the auction period, the ACMA will announce or publish:

- > the names of winning bidders
- > the spectrum allocated to each winning bidder

- > the highest final bid for each lot won by each winning bidder
- > the bid withdrawal penalties for each lot imposed on each winning bidder
- > the total sum paid, or to be paid, by each winning bidder (being the total of the highest final bids for the lots won by the bidder and the total of the bid withdrawal penalties imposed on the bidder).

## 4.6 Step 6—Post-auction procedures

The steps to be followed after the end of the auction period will be different for:

- > bidders who won lots in the auction
- > bidders who did not win lots in the auction
- > applicants who withdrew from the auction before the eligibility deadline.

### 4.6.1 Winning bidders

After the auction results have been published (see 4.5), the ACMA will:

- > give each winning bidder details about the identity of all other winning bidders
- > ask the bidder to make a statement for the purposes of section 7.3 of the allocation determination (Form 7), stating whether the bidder is an affiliate of another winning bidder and, if so, identifying the other bidder and giving details of the affiliation.

Statements for the purposes of section 7.3 of the allocation determination must be lodged by the deadline stated in the ACMA's request. The deadline will be at least eight working days after the date of the request. A winning bidder's confidentiality obligations (see 3.2.7) will end when they give the statement to the ACMA. Winning bidders who fail to give the ACMA a statement as requested will be subject to the breach provisions discussed at 3.2.9.

### **Affiliations**

Where the ACMA is satisfied that two or more winning bidders have become affiliated after, but were not affiliated *during*, the auction period, it will notify bidders in writing and tell them the reasons why it is satisfied that this is so. If the issue of spectrum licences to the affiliated bidders for all the lots of a product the bidders won at auction would exceed the allocation limits (see 3.2.5), the bidders may give the ACMA a direction specifying how the spectrum is to be allocated between them up to the allocation limits. Any such direction must be given jointly by the bidders within five working days of receiving the notification from the ACMA.

If the ACMA does not receive a direction within five working days, it may, for any part of the spectrum where the lots won by the bidders exceed the allocation limits, choose at its discretion how to allocate spectrum to each bidder up to the allocation limits. In such cases, a frequency range can be assigned to a bidder from any of the frequency ranges assigned to the lots won at auction by any of the affiliated bidders. Regardless of whether the affiliated bidders are consequently issued licences for fewer lots than they won in the auction, each of them will remain liable to pay the full balance of the winning price for all of the lots they won.

### **Payments by winning bidders**

Following Step 5 above, the ACMA will notify each winning bidder, via an invoice delivered by registered mail, of the amount payable for the lots they won. The balance of the price payable by a winning bidder will be the balance of the winning price for lots they won plus any withdrawal penalties, *less* any eligibility payment they made at Stage B of the bidder registration process

Where the balance of the winning price for a bidder is an amount **greater than zero**, the ACMA will notify the bidder by registered mail of the balance—which must be paid



by the winning bidder to the ACMA on behalf of the Commonwealth no later than 20 working days after the date of the notice. Once the balance has been paid, the bidder is entitled to be issued a spectrum licence for each part of the spectrum allocated to the bidder.

The ACMA proposes to issue formal payment notices by registered mail to winning bidders for the:

- > regional 1800 MHz band—in the first quarter of 2017
- > residual lots—as soon as practicable after the conclusion of the auction.

Where the balance of the winning price for a bidder is an amount **less than or equal to zero**, the amount of any excess eligibility payment will be refunded to the winning bidder—and the bidder will be entitled to be issued a spectrum licence for each of the lots they won in the auction without further payment.

#### **4.6.2 Unsuccessful bidders**

As soon as practicable after the end of the auction period, the ACMA will notify each bidder that did not win lots in the auction that:

- > the bidder was unsuccessful in the auction
- > the bidder's confidentiality obligations (see 3.2.8) have ended.

Subject to any decision by the ACMA to retain the bidder's eligibility payment (see 3.2.9), the unsuccessful bidder will be refunded any eligibility payment they made at Stage B of the bidder registration process (see 4.2.2).

#### **4.6.3 Withdrawn applicants**

As soon as practicable after the end of the auction period, the ACMA will notify each withdrawn applicant that their confidentiality obligations (see 3.2.8) have ended.

Subject to any decision by the ACMA to retain the applicant's eligibility payment (see 3.2.9), the withdrawn applicant will be refunded any eligibility payment they made at Stage B of the bidder registration process (see 4.2.2).

# **Part three— Understanding spectrum licences**

## 5. Spectrum licensing and technical framework

**This chapter provides information about:**

- > **spectrum licensing**
- > **the technical framework applicable to spectrum licences for the 1800 MHz band**
- > **other important issues affecting spectrum licences.**

**Important notice:** The information in this chapter is intended to provide a general overview of, and does not purport to contain all information regarding, rights and obligations in respect of spectrum licences issued under the Act and associated legislative instruments. Potential applicants should *not* rely on this information, but should instead make their own investigation and take their own advice.

This chapter provides a brief introduction to spectrum licensing and the technical framework applicable to the spectrum licences to be allocated in 1800 MHz band. It provides:

- > an overview of spectrum licensing—more detailed information about the key obligations placed on spectrum licensees is available in the ACMA publication [Know your obligations—Spectrum licensees](#)
- > an explanation of the technical framework underpinning spectrum licensing in the 1800 MHz band—more detailed information on the development of the technical framework for the band can be found on the [spectrum licence technical liaison groups](#) page on the ACMA website
- > other important information.

Copies of the legislative instruments referred to in this chapter are available as attachments B to G to this Auction guide.

## 5.1 Spectrum licensing

A spectrum licence authorises the operation of radiocommunications devices for a fixed period of up to 15 years, within a specified frequency band, and within a particular geographic area. Licensees are able to choose how they deploy devices within their spectrum space, the nature of the services they wish to deliver and the technology they use—as long as the operation of devices is within the parameters of the conditions of the spectrum licence.

A licensee's use of spectrum allocated to it under a spectrum licence is subject to several constraints, including:

- > compliance with the Act
- > compliance with a set of core licence conditions required under subsection 66(1) of the Act
- > compliance with statutory licence conditions made under sections 67, 68, 69 and 69A of the Act
- > compliance with other conditions that the ACMA may include under section 71 of the Act
- > management of interference issues with reference to technical instruments established for the band under subsection 145(4) and section 262 of the Act.

Licensees are also permitted to make agreements with affected spectrum licensees to change emission limits within the parameters of the technical framework. The agreed limit cannot exceed any absolute limit specified in the technical framework, for limits outside the designated spectrum space or at the boundary of other licensees not subject to the agreement.

Spectrum licensing is a technology-flexible, market-oriented approach to managing the radiofrequency spectrum. The spectrum space may be subdivided and traded in standard trading units (STUs) subject to a Minimum Contiguous Bandwidth (MCB). The ability to trade and the flexibility of the technology that may be used in line with the technical framework allows licensees to change their service over time in response

to commercial realities, and respond to technological innovation within the flexibility of the framework.

Information specific to the 1800 MHz band is available in Part 3 of the marketing plan. This includes, at Schedule 7 to the marketing plan, a sample licence containing the conditions that may be included in a spectrum licence for the band.

## 5.2 The technical framework

The technical framework for a spectrum-licensed band is the set of technical rules made by the ACMA, in consultation with industry, that apply to the operation of radiocommunications devices within the given band. The primary purpose of the technical framework is to specify the relevant technical conditions that licensees should comply with to effectively manage interference between users of the spectrum.

The technical framework is crafted using three interlocking regulatory elements:

- > the conditions (including core conditions) of the licence
- > a determination of unacceptable levels of interference for the purposes of device registration, made under subsection 145(4) of the Act (the subsection 145(4) determination)
- > radiocommunications advisory guidelines, made under section 262 of the Act.

Information on each of the regulatory elements and how a technical framework is developed is provided in [Know your obligations](#).

The interference mechanisms that the technical framework for the 1800 MHz band seeks to manage are those caused by:

- > unwanted in-band emissions
- > emissions falling outside the frequency band of the licence
- > transient emissions such as those caused by switching a transmitter on and off
- > intermodulation effects.

All four of these mechanisms are dealt with by a combination of the core conditions of the licence relating to outside-the-area and outside-the-band emissions, and the parts of the registration process that give effect to those conditions at the point of registering radiocommunications devices before their operation. The device registration process is discussed at 5.4.3. The 1800 MHz band technical framework was developed in consultation with industry through the TLG for the band.

The 1800 MHz spectrum licence technical framework was reviewed by the TLG in 2012 as part of the expiring spectrum licence process. As a result of this process, the ACMA made the following technical instruments to underpin the technical framework for the 1800 MHz band:

- > [Radiocommunications \(Unacceptable Levels of Interference – 1800 MHz Band\) Determination 2012;](#)
- > [Radiocommunications Advisory Guidelines \(Additional Device Boundary Criteria - 1800 MHz Lower Band\) 2012;](#)
- > [Radiocommunications Advisory Guidelines \(Managing Interference to Spectrum Licensed Receivers - 1800 MHz Band\) 2012;](#)
- > [Radiocommunications Advisory Guidelines \(Managing Interference from Spectrum Licensed Transmitters - 1800 MHz Band\) 2012.](#)

### 5.2.1 Specified fixed links

There are numerous fixed links currently operating in regional 1800 MHz spectrum lots to be allocated through this auction process. In March 2015, the ACMA established a TLG specifically for the regional 1800 MHz band. The TLG considered amendments to the technical framework to support the operation of fixed services under an 1800 MHz band spectrum licence in regional areas while managing interference and the potential for spectrum denial.

Subsequent to the TLG process, during public consultation processes additional consideration was given to amendment's defining protection requirements for apparatus licensed fixed services that may continue to operate in the 1800 MHz band after the reallocation period.

Those amendments were made to the above technical instruments through the *Radiocommunications (Advisory Guidelines and Unacceptable Levels of Interference – 1800 MHz Band) Omnibus Variation Instrument 2015*. The amendments are aimed at improving coexistence between fixed and mobile services under spectrum licensing arrangements in the band across regional areas.

## 5.3 Core conditions

The core conditions of a spectrum licence are mandatory technical requirements that form the basis of the licence as required under section 66 of the Act. The core conditions of a spectrum licence are:

- > the area of operation
- > the frequency bandwidth of operation
- > the permissible outside-the-area emission limits
- > the permissible outside-the-band emission limits.

Further information and explanation on each of these core conditions is available in [Know your obligations](#) on the ACMA website. The following information refers specifically to how each of the core conditions is applied in the context of the 1800 MHz band.

### 5.3.1 Area of operation

The geographic areas subject to allocation via the issue of a spectrum licence in the 1800 MHz band are described in Schedule 3 to the marketing plan.

The geographic area or aggregate of areas within which the operation of radiocommunications devices is authorised by a spectrum licence will be as described in Part 2 of Licence Schedule 1 in the sample licence available in Schedule 7 to the marketing plan. Geographic areas are described in the form of HCIS identifiers.

### 5.3.2 Frequency band of operation

Spectrum in the 1800 MHz band is being offered in the auction on a paired basis to support Frequency Division Duplex (FDD) operation. The frequency band segments available for operation of radiocommunications devices in each geographic area are described in Schedule 2 to the marketing plan.

The paired frequency bands within the 1800 MHz band that are licensed in a particular geographical area will be as described in Part 2 of Licence Schedule 1 in the sample licence which appears in Schedule 7 to the marketing plan.

### 5.3.3 Outside-the-area emission limits

This limit is listed in Schedule 4 to the marketing plan, and will be as described in Licence Schedule 2 in the sample licence provided in Schedule 7 to the marketing plan. This limit may be varied through negotiated agreement with affected adjacent licensees.

The definition of the core condition outside-the-area limit for terrestrial transmitters effectively places a cap on the radiated power of transmitters anywhere in the area of the licence.<sup>25</sup>

An additional layer of outside-the-area emission management is imposed at the point of registration of radiocommunications devices by the *Radiocommunications (Unacceptable Levels of Interference – 1800 MHz Band) Determination 2012* (subsection 145(4) determination). This point is discussed in detail at 5.4.

### 5.3.4 Outside-the-band emission limits

The outside-the-band emission limits, sometimes referred to as emission masks, for the 1800 MHz band are listed in Schedule 5 to the marketing plan.

Outside-the-band emission limits have been expressed in the form of absolute radiated power levels, rather than levels relative to the transmitter output power, to allow licensees to operate transmitters with an optimised balance between transmit power and outside-the-band emission suppression. The emission limits for 1800 MHz spectrum licences will be as described in Licence Schedule 2 in the sample licence provided at Schedule 7 to the marketing plan. These levels may be varied through negotiated agreement with affected adjacent licensees.

## 5.4 The unacceptable levels of interference determination (subsection 145(4))

Before a transmitter can be operated under a spectrum licence, its details must be recorded in the Register (known as the Register of Radiocommunications Licences, or RRL), unless it is exempted from registration. Section 145 of the Act gives the ACMA the power to refuse to register a radiocommunications device that could cause an unacceptable level of interference to the operation of other radiocommunications devices when operated. The ACMA has determined under subsection 145(4) of the Act what constitutes unacceptable interference in the 1800 MHz band.

The subsection 145(4) determination that defines what will be taken to be unacceptable levels of interference for spectrum licences in the 1800 MHz band is the *Radiocommunications (Unacceptable Levels of Interference – 1800 MHz Band) Determination 2012* (Attachment C).

The subsection 145(4) determination sets out the following basic requirements to manage unacceptable levels of interference for the 1800 MHz band:

- > that the core conditions of the licence are met (see 5.3)
- > that specified device boundary criteria are met (see 5.4.1)
- > that deployment constraints applicable to the band are adhered to (see 5.4.2)
- > that full details of the transmitter are provided for inclusion in the RRL (see 5.4.3).

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<sup>25</sup> Horizontal radiated power is the power limit radiated from an antenna in the horizontal plane. A full description can be found in the sample licence provided at Schedule 7 to the marketing plan.

More information about device registration options and procedures is available on the [ACMA website](#).

#### **5.4.1 Device boundary criteria**

The device boundary criteria are designed to set an upper limit to the level of emissions leaving a licence area from a single device. Calculating a device boundary involves mathematical calculations to determine whether the device boundary is contained within the geographic boundary of the spectrum licence.

If the device boundary falls outside the geographic area of the relevant spectrum licence, the ACMA will generally refuse to register the device because the levels of emission outside the licence area that it would cause will be 'unacceptable interference' within the meaning of the subsection 145(4) determination. An exception can be made where there is an agreement of the type discussed in section 5.4.5.

#### **5.4.2 Deployment constraints**

Deployment constraints in the subsection 145(4) determination limit transmitter antenna heights in the lower band. There are similar constraints on receiver antenna heights in the radiocommunications advisory guidelines dealing with the notional receiver developed as part of the technical framework. The advisory guidelines are discussed in 5.5 below.

#### **5.4.3 Registration of devices**

It is a condition of all spectrum licences issued in the 1800 MHz band that licensees must not operate radiocommunications transmitters under those licences unless they are registered by the ACMA or are exempt from the registration requirements.

Although the ACMA will generally refuse to register a device where the requirements of the subsection 145(4) determination cannot be met, registration may still occur if:

- > there is sufficient internal spectrum guard space; or
- > the accredited person is satisfied that all licensees who, in the opinion of the accredited person, may be affected by the interference have given consent in writing to interference from the transmitter; or
- > there is a core condition agreement for emissions outside the area.

The consequence of this is that spectrum licensees must expect that certain levels of emission will legitimately cross their geographic (and spectrum) boundaries from points within other spectrum-licensed areas. These emissions may radiate power into the spectrum licensee's area at any level up to that allowed under the subsection 145(4) determination, or levels otherwise negotiated with the relevant spectrum licensees.

Additional information on the registration of radiocommunications devices under a spectrum licence is available in the ACMA publication [Registration of radiocommunications devices under spectrum licences](#).

#### **5.4.4 Interference impact certificates**

Before a radiocommunications device will be registered for use under a licence, the ACMA will need to be satisfied that its use has been properly planned and that it will not cause unacceptable interference to other spectrum users. The registration requirements may include a requirement that the licensee present an interference



impact certificate (IIC) issued under subsection 145(3) of the Act by an accredited person.<sup>26</sup>

The ACMA has made a determination pursuant to section 266A of the Act, which states the conditions that must be satisfied under a licence before an accredited person may issue a certificate under subsection 145(3). This is the *Radiocommunications (section 145(3) Certificates) Determination 2012*.

Further information on issuing an IIC and the role of accredited persons is provided on the [Know your obligations](#) page on the ACMA's website.

#### **5.4.5 Core condition agreements**

Spectrum licensees can agree to accept emissions that would, in the absence of an agreement, exceed the core conditions of their spectrum licence(s) provided all affected licensees are in agreement.

#### **5.4.6 Registering groups of transmitters and receivers**

Unless exempted, radiocommunications transmitters must always be registered as either an individual transmitter or as part of a group of transmitters. If two or more transmitters are operated for the purpose of communicating with the same receiver or same group of receivers and they have identical emission characteristics, then they may be treated as a group in order to simplify the registration process.

The subsection 145(4) determination for the 1800 MHz band sets out the definition of a 'group of radiocommunications transmitters' and a 'group of radiocommunications receivers' for the purpose of simplifying registration of those devices.

#### **5.4.7 Registration exemptions**

Licence Schedule 3 of the sample licence at Schedule 7 to the marketing plan sets out the kinds of radiocommunications transmitters that are exempt from device registration requirements. The conditions these transmitters need to meet to be exempt from registration will be specified in the spectrum licences issued as a result of the auction.

#### **5.4.8 Labelling requirements for transmitters**

Licensees should affix identification labels containing the name and address of the licensee on all fixed transmitters operated under the licence. An example of an identification label would be one containing the following statement:

'This device is the property of [name]'.

### **5.5 Radiocommunications advisory guidelines**

Further guidance on device deployment and coordination is provided in radiocommunications advisory guidelines made by the ACMA under section 262 of the Act (the advisory guidelines).

While the use and compliance methods set out in the advisory guidelines are not in themselves mandatory, they set out the ACMA's policy approach and in certain instances will reflect requirements made mandatory by licence conditions or other

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<sup>26</sup> The [Radiocommunications \(subsection 145\(3\) Certificates\) Determination 2012](#) sets out the conditions that apply to accredited persons when issuing IICs. Contact details for all current accredited persons who have consented to the release of those details are on the ACMA [website](#).

instruments under the Act. This is the case for spectrum licences to be issued for the 1800 MHz band.

The advisory guidelines include provisions to assist interference assessments between spectrum-licensed devices and services operating under apparatus or other licences. The ACMA will consider the advisory guidelines when settling interference disputes.

There are three 1800 MHz band-specific advisory guidelines made under section 262 of the Act:

- > [\*Radiocommunications Advisory Guidelines \(Additional Device Boundary Criteria – 1800 MHz Lower Band\) 2012\*](#)
- > [\*Radiocommunications Advisory Guidelines \(Managing Interference to Spectrum Licensed Receivers – 1800 MHz Band\) 2012\*](#)
- > [\*Radiocommunications Advisory Guidelines \(Managing Interference from Spectrum Licensed Transmitters – 1800 MHz Band\) 2012.\*](#)

In March 2015, the ACMA established a TLG specifically for the regional 1800 MHz band. The TLG considered amendments to the technical framework to support the operation of fixed services under an 1800 MHz band spectrum licence in regional areas while managing interference and the potential for spectrum denial.

Subsequent to the TLG process, after discussions with incumbent regional 1800 MHz apparatus licensees, additional consideration was given to amendments defining protection requirements for apparatus licensed fixed services that may continue to operate in the band after the reallocation period.

Those amendments were made to the technical instruments through the *Radiocommunications (Advisory Guidelines and Unacceptable Levels of Interference – 1800 MHz Band) Omnibus Variation Instrument 2015*, at Attachment G. The amendments are aimed at improving coexistence between fixed and mobile services under spectrum licensing arrangements in the band across regional areas.

Further information on the radiocommunications advisory guidelines is available on the [\*Know your obligations\*](#) page on the ACMA's website.

#### **5.5.1 Managing interference to spectrum-licensed receivers**

The advisory guidelines set out a minimum performance level for radiocommunications receivers operating under a spectrum licence in the 1800 MHz band. These criteria provide a basis from which licensees are able to develop procedures for managing interference between receivers and transmitters in adjacent frequency bands. When planning services and resolving interference cases, licensees (and accredited persons) should follow the advisory guidelines. The guidelines only apply to registered fixed receivers—they do not apply to mobile or nomadic receivers operated under a spectrum licence.

While the receiver requirements in the guidelines are not mandatory, the guidelines will be taken into consideration by the ACMA when settling interference disputes. To be afforded protection from interference in accordance with the advisory guidelines, the radiocommunications receiver must meet the minimum level of receiver performance and the details of the receiver must be recorded in the RRL.

### **5.5.2 Managing interference from spectrum-licensed transmitters to other services**

The advisory guidelines contain information for spectrum licensees about protection to be provided to radiocommunications receivers of services operating in or adjacent to the 1800 MHz band. The guidelines identify those apparatus-licensed services potentially affected by radiocommunications transmitters deployed in spectrum-licensed space in the 1800 MHz band and reference the protection criteria and coordination arrangements that apply to these services contained in Radiocommunications Assignment and Licensing Instructions (RALIs), international standards and the ACMA's technical studies.

## **5.6 Statutory licence conditions**

Along with the core conditions of a licence, there are other conditions that the ACMA must include in a spectrum licence in accordance with the requirements of the Act. These conditions are referred to as 'statutory conditions' and a brief summary of the requirements of each is outlined below. Further information on each of the statutory conditions is available on the [Know your obligations](#) page on the ACMA's website.

### **5.6.1 Payment of charges**

Under section 67 of the Act, the ACMA must include a condition that the spectrum licensee meets all obligations to pay:

- > charges fixed by the ACMA under section 60 of the ACMA Act
- > any spectrum access charges fixed by a determination made under section 294 of the Act
- > amounts of spectrum licence tax.

### **5.6.2 Authorisation of third parties**

Spectrum licence holders may authorise third parties to use the licensed spectrum by negotiating a private agreement that allows a 'third-party user' to operate a radiocommunications device under the licensee's licence.

Under section 68 of the Act, the ACMA must include a condition about third-party use of the spectrum licence. This condition states that the operation of devices by persons other than the licensee must comply with any rules made by the ACMA about third-party use under paragraph 68(2)(a) of the Act. The licensee must notify any third-party user of their obligations under the Act.

### **5.6.3 Registration of radiocommunications transmitters**

Under section 69 of the Act, the ACMA must include a condition that radiocommunications transmitters must (unless exempt from registration, see 5.4.7) not be operated under the licence unless the relevant requirements under Part 3.5 of the Act for registration of transmitters are met (see 5.4.3).

### **5.6.4 Residency**

Under section 69A of the Act, the ACMA must include a condition that at all times when the licensee derives income, profits or gains from operating a radiocommunications device under the spectrum licence (or from authorising others to do so), the licensee must be an Australian resident for income tax purposes or the income, profits or gains are to be attributable to a permanent business establishment in Australia.

## 5.7 Licence conditions included by the ACMA

Under section 71 of the Act, the ACMA may include other licence conditions on spectrum licences. The ACMA has included further licence conditions in Licence Schedule 4 of the sample licence provided at Schedule 7 to the marketing plan. These conditions are sample conditions only and the conditions contained in actual spectrum licences issued by the ACMA may vary.

### 5.7.1 Information for the RRL

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

### 5.7.2 International coordination

A licensee must ensure that operation of a radiocommunications device under the licence does not cause harmful interference to a radiocommunications receiver that operates in accordance with the International Telecommunication Union Radio Regulations and that is located in a country other than Australia.

### 5.7.3 Electromagnetic energy requirements

A licensee is subject to section 4 of Part 1 and Parts 2, 3 and 4 of the *Radiocommunications Licence Conditions (Apparatus Licence) Determination 2015* as in force from time to time.

## 5.8 Other information

There are other important matters affecting spectrum licensees. This section outlines these matters for prospective auction participants. Further information about each issue is available on the [Know your obligations](#) page on the ACMA's website.

### 5.8.1 Technical flexibility of a spectrum licence

The inherent flexibility of the spectrum licence technical framework allows licensees to choose how they deploy services in the spectrum they win, the nature of the services they deliver and the technology they employ. However, these decisions should be based on a careful technical and commercial assessment taking into account the technical framework for the band, as well as the amount of purchased and available spectrum.

### 5.8.2 Spectrum trading

Current and prospective spectrum licensees are permitted to negotiate purchases of spectrum subject to rules determined by the ACMA. The rules allow spectrum licensees to subdivide and sell part of their licences to prospective licensees—or alternatively, to acquire additional spectrum to increase the size of the geographic space covered by a licence.

Pursuant to section 86 of the Act, where trading of licences takes place after the auction and new boundaries are formed, both parties to the trade must notify and provide relevant information to the ACMA as soon as practicable after the trade has been agreed, so the ACMA can amend the RRL and vary, issue or cancel licences as appropriate to give effect to the trade.

The spectrum-licensed bands also have a recommended Minimum Contiguous Bandwidth (MCB) to minimise fragmentation of the band during spectrum trading. The MCB is the minimum bandwidth holding in a geographic area for issue of a licence. However, the ACMA will consider allowing licensees to hold smaller bandwidths where good reasons can be shown to exist in a particular case for holding the smaller bandwidth.

### **5.8.3 Suspension and cancellation of spectrum licences**

Division 3 of Part 3.2 of the Act provides that the ACMA may, by written notice giving the reasons, suspend or cancel a spectrum licence if it is satisfied that a licensee or authorised third party has:

- > contravened a licence condition or in any other way contravened the Act; or
- > operated a radiocommunications device under the licence, or purportedly under the licence, either:
  - > 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.

### **5.8.4 Interference that the technical framework does not prevent**

No matter how rigorous the engineering analysis, there is always a possibility of actual interference when devices are deployed in the field. This is because the technical framework is designed according to certain levels of acceptable interference probability. Under the framework described in this chapter, assuming compliance with licence conditions and relevant obligations, it is anticipated that the risk of interference between spectrum-licensed devices is low. Such interference may be caused by emissions at frequencies either inside or outside the licensees' spectrum space.

Before making an interference complaint, licensees are strongly advised to check the RRL in an attempt to locate the source of any interference. This may reveal the cause of the interference and it may be possible to settle the problem without the ACMA's intervention. If the ACMA becomes involved, licensees may be charged for any work undertaken by or on behalf of the ACMA.

### **5.8.5 International coordination**

Potential spectrum licensees should note that the ACMA will impose such additional licence conditions on spectrum licences as may be necessary to meet its international obligations in accordance with the International Telecommunication Union Radio Regulations.

### **5.8.6 Health and safety**

There are some regulatory arrangements relevant to occupational health and safety, electromagnetic exposure and supply of equipment under a spectrum licence. Prospective bidders should ensure that they inform themselves about, and are familiar with, any relevant regulations.

### **5.8.7 Environmental and other considerations**

Antenna siting, height and construction may be regulated by state, territory or local government legislation. Prospective bidders should ensure that they inform themselves about, and are familiar with, any relevant regulations.

### **5.8.8 Obtaining a permit to operate non-standard devices**

Division 4 of Part 4.1 of the Act provides that a licensee who wishes to operate a non-standard device under a spectrum licence is required to seek permission from the ACMA.<sup>27</sup>

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<sup>27</sup> 'Non-standard device' is defined in section 5 of the Act.

## **Part four— Communicating with the ACMA**

## 6. Updates, queries, lodgements and payments

**This chapter provides information about how:**

- > the ACMA will release updates and announcements about the auction**
- > to submit queries about the auction to the ACMA**
- > to lodge auction documents with the ACMA**
- > to make auction payments to the ACMA.**

## 6.1 Updates and announcements

The ACMA will post updates and announcements about the auction on the ACMA's [dedicated 1800 MHz webpage](#). Potential applicants, applicants and registered bidders are responsible for monitoring the webpage for all current information on the auction and associated matters.

If need be, the ACMA will contact applicants and registered bidders directly on the contact details provided on the application form.

## 6.2 Queries

Queries about the auction process may be directed to the auction manager, by:

**Email:** [1800MHzauctionmanager@acma.gov.au](mailto:1800MHzauctionmanager@acma.gov.au)

**Telephone:** (02) 6219 5151

**Fax:** (02) 6219 5353

**Post:** Auction manager  
Spectrum Licensing Section  
Australian Communications and Media Authority  
Red Building, Benjamin Offices, Chan St  
Belconnen ACT 2617

## 6.3 Lodging documents

Auction documents (for example, application forms, deeds, statutory declarations, statements) may be given to the ACMA by:

**Email:** [1800MHzauctionmanager@acma.gov.au](mailto:1800MHzauctionmanager@acma.gov.au)

**Fax:** (02) 6219 5353

**Delivery to:** The 1800 MHz Auction Manager  
Spectrum Licensing Policy Section  
Australian Communications and Media Authority  
Red Building, Benjamin Offices, Chan St  
Belconnen ACT 2617

Subsection 1.6 of the allocation determination sets out procedures for lodging documents by email, fax or via delivery of documents to the physical address listed above.

If a document is **emailed**:

- > the document must be included as an attachment; and
- > the document must be:
  - > if a statutory declaration, statement under section 7.3 of the allocation determination or a deed—in PDF format or another format approved by the auction manager; or
  - > if not a statutory declaration, statement under section 7.3 or a deed—in Word, RTF or PDF format or another format approved by the auction manager.



If a document is **faxed**, it must be accompanied by a cover sheet that states:

- > the sender's name, postal address, telephone number and fax number
- > the number of pages transmitted, including the cover sheet.

If a faxed document is a completed application form, a completed eligibility nomination form, a statutory declaration, a statement under section 7.3 or a deed, the cover sheet must also state the type/s of document/s.

Subsections 4.7(3), 4.12(6), 4.15 (4) and 4.16(6) of the allocation determination set out additional requirements for certain documents lodged by email or fax as follows:

- > If a completed application, deed of acknowledgment or deed of confidentiality form is given to the ACMA by fax or email, the original document must be received by the ACMA no later than three working days after the application deadline (or if the ACMA agrees to a later time, the agreed time).
- > If affiliated applicants notified by the ACMA under subsection 4.11(1) of the allocation determination decide to submit a new application and submit a completed application, deed of acknowledgement or deed of confidentiality form by fax or email, the original document must be submitted to the ACMA by the applicable deadline (or if the ACMA agrees to a later time, the agreed time).
- > If an eligibility nomination form is given to the ACMA by fax or email, the original form must be received by the ACMA no more than three working days after the eligibility deadline (or if the ACMA agrees to a later time, the agreed time).
- > If a deed of financial security is given to the ACMA by fax or email, the original deed must be given to the ACMA no later than three working days after the eligibility deadline (or if the ACMA agrees to a later time, the agreed time).

## 6.4 Making payments

All amounts payable to the ACMA for the auction (for example, application fees, eligibility payments and winning bid payments or pre-determined price payments) must be paid in Australian currency by one of the two following methods:

### 1) *EFT*

Bank:	ANZ Bank
Branch:	Belconnen
BSB:	012-951
Account no.:	8379 24272
Account name:	ACMA Official Administered Receipts
Transfers should be labelled:	'1800/purpose of payment/name applicant'. Note: Because transfer labels are limited to 15 characters, abbreviations must be used. For example: <ul style="list-style-type: none"><li>&gt; '1800/appfee/XCo'</li><li>&gt; '1800/elig/XCo'</li><li>&gt; '1800/win/XCo'</li><li>&gt; '1800/pdp/XCo'.</li></ul>

Evidence of the electronic transfer (for example, a transfer receipt) should be emailed to [1800MHzauctionmanager@acma.gov.au](mailto:1800MHzauctionmanager@acma.gov.au) as soon as practicable after the transfer is made.

## **2) Bank cheque (crossed 'not negotiable')**

Made payable to: Australian Communications and Media Authority

Delivered to: The 1800 MHz Band Auction Manager  
Spectrum Licensing Policy Section  
Australian Communications and Media Authority  
Red Building, Benjamin Offices, Chan St  
Belconnen ACT 2617

Subsection 1.7(4) of the allocation determination sets out rules about when an amount is taken to have been paid by a relevant deadline. Under these rules, an amount is taken to have been paid by a deadline if:

- > the ACMA receives a bank cheque for the full amount on or before the deadline; or
- > the ACMA receives evidence that an electronic transfer of the full amount was made on or before the deadline (for example, a transfer receipt) and the amount is received in the ACMA's bank account no later than three working days after the deadline; or
- > the ACMA receives other evidence that satisfies it that the person making the payment has taken all reasonable steps to pay the amount before the deadline.

An amount due under the allocation determination is not paid in full if bank charges or government duties imposed on a payment reduce the net payment to less than the amount due. An applicant or bidder must add the value of any bank charge or government duty to the amount of the payment.

GST is not payable on the application fee, an amount required to secure initial eligibility points or the ACMA's spectrum access charges.

# Auction documents— Attachments A to J

*Click to download*

## Allocation determination

Attachment A—[Radiocommunications \(Spectrum Licence Allocation – 1800 MHz Band\) Determination 2015](#)

## Marketing plan and technical framework instruments

Attachment B—[Radiocommunications Spectrum Marketing Plan \(1800 MHz Band\) 2015](#)

Attachment C—[Radiocommunications \(Unacceptable Levels of Interference – 1800 MHz Band\) Determination 2012](#)

Attachment D—[Radiocommunications Advisory Guidelines \(Additional Device Boundary Criteria – 1800 MHz Lower Band\) 2012](#)

Attachment E—[Radiocommunications Advisory Guidelines \(Managing Interference to Spectrum Licensed Receivers – 1800 MHz Band\) 2012](#)

Attachment F—[Radiocommunications Advisory Guidelines \(Managing Interference from Spectrum Licensed Transmitters – 1800 MHz Band\) 2012](#)

Attachment G—[Radiocommunications \(Advisory Guidelines and Unacceptable Levels of Interference – 1800 MHz Band\) Omnibus Variation Instrument 2015](#)

## Spectrum reallocation declaration

Attachment H—[Radiocommunications \(Spectrum Re-allocation-Regional 1800 MHz Band\) Declaration 2015](#)

## Spectrum designation

Attachment I—[Radiocommunications \(Spectrum Designation\) Notice No. 1 of 2014](#)

## Allocation limits direction

Attachment J—[Radiocommunications \(Spectrum Licence Limits-Regional 1800 MHz Band\) Direction 2015](#)

# Auction forms

There are eight forms for the 1800 MHz spectrum auction:

- > Form 1—Application form
- > Form 2—Deed of acknowledgement form
- > Form 3—Deed of confidentiality form
- > Form 4—Statutory declaration form for the purposes of section 4.9 of the allocation determination
- > Form 5—Statutory declaration form for the purposes of section 4.12 of the allocation determination
- > Form 6—Deed of financial security form
- > Form 7—Statement form for the purposes of section 7.3 of the allocation determination
- > Form 8—Eligibility nomination form.

Instructions on who needs to complete the forms, and when to do so, are provided in the step-by-step guide in Chapter 4 and at the start of each form.

Forms 1–8 are available in the *Auction forms* booklet, which is available on the [ACMA website](#).

# Glossary

Word/phrase	Definition
ACMA	Australian Communications and Media Authority
ACMA Act	<a href="#"><i>Australian Communications and Media Authority Act 2005</i></a>
Act	<a href="#"><i>Radiocommunications Act 1992</i></a>
AIP	Application information package
allocation determination	<a href="#"><i>Radiocommunications (Spectrum Licence Allocation – 1800 MHz Band) Determination 2015</i></a>
allocation instruments	<a href="#"><i>Radiocommunications (Spectrum Licence Allocation – 1800 MHz Band) Determination 2015</i></a> and <a href="#"><i>Radiocommunications Spectrum Marketing Plan (1800 MHz Band) 2015</i></a>
allocation limits	Limits on the aggregate amount of spectrum that can be used by a bidder. The allocation limits have the effect of capping the total amount of spectrum that a single bidder can acquire in the auction (see 3.2.5).
auction period	Defined in subsection 1.4(1) of the allocation determination as: the period from the eligibility deadline to the close of the auction under clause 19 in Schedule 1 to the allocation determination.
Broadcasting Services Act	<a href="#"><i>Broadcasting Services Act 1992</i></a>
Competition and Consumer Act	<a href="#"><i>Competition and Consumer Act 2010</i></a>
FDD	Frequency Division Duplex
HCIS	Hierarchical cell identification scheme (see 2.2.1 and 2.2.2)
lot	Defined in subsection 1.5(1) of the allocation determination as: a part of the spectrum identified as a lot in the marketing plan, characterised by frequency ranges and a geographic area.
LTE	Long Term Evolution technology
marketing plan	<a href="#"><i>Radiocommunications Spectrum Marketing Plan (1800 MHz Band) 2015</i></a>
PDP	Pre-determined price
spectrum designation	Designation notice made by the minister under s.36 of the Act, which requires the ACMA to allocate spectrum by issuing spectrum licences.
radiocommunications advisory guidelines (RAGs)	Radiocommunications advisory guidelines made under section 262 of the Act can refer to any aspect of radiocommunications or radio emissions. Generally, RAGs include provisions to assist interference assessments between spectrum-licensed devices and services operating under spectrum, apparatus or class licences. Potentially affected adjacent band

Word/phrase	Definition
	services are identified in the guidelines, which enables licensees to assess the risk of interference between the services and to make arrangements to mitigate this risk.
reallocation declaration	A declaration made by the minister under section 153B of the Act that requires the ACMA to re-allocate spectrum under Part 3.6 of the Act.
Reallocation period	Sets the time frame during which the reallocation process is to be completed. Under subsection 153B(4) of the Act, the reallocation period must begin within 28 days of the spectrum reallocation declaration being made and must run for at least two years (see 1.2.2).
regional 1800 MHz band	The frequency ranges 1725–1785 MHz and 1820–1880 MHz in regional Australia.
residual lots	The frequency ranges: <ul style="list-style-type: none"> <li>&gt; 1770–1775 MHz and 1865–1870 MHz in Adelaide</li> <li>&gt; 1710–1712.5 MHz and 1805–1807.5 MHz in regional South Australia</li> <li>&gt; 1710–1712.5 MHz and 1805–1807.5 MHz in North Queensland (Cairns/Townsville)</li> </ul>
SMRA	Simultaneous Multi-Round Ascending auction—the auction format being employed for the 1800 MHz spectrum auction (see 3.1).
spectrum designation	Designation notice made by the minister under section 36 of the Act that requires the ACMA to allocate spectrum by issuing spectrum licences.
subsection 145(4) determination	<a href="#"><i>Radiocommunications (Unacceptable Levels of Interference – 1800 MHz Band) Determination 2012</i></a>
technical instruments	<ul style="list-style-type: none"> <li>&gt; <a href="#"><i>Radiocommunications Advisory Guidelines (Additional Device Boundary Criteria - 1800 MHz Lower Band) 2012</i></a></li> <li>&gt; <a href="#"><i>Radiocommunications Advisory Guidelines (Managing Interference to Spectrum Licensed Receivers - 1800 MHz Band) 2012</i></a></li> <li>&gt; <a href="#"><i>Radiocommunications (Unacceptable Levels of Interference – 1800 MHz Band) Determination 2012</i></a></li> <li>&gt; <a href="#"><i>Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters - 1800 MHz Band) 2012.</i></a></li> </ul>
Telecommunications Act	<a href="#"><i>Telecommunications Act 1997</i></a>
TLG	Technical Liaison Group for the 1800 MHz band



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