

# 26 GHz band auction, April 2021

## Auction guide

DECEMBER 2020

**Canberra**

Red Building  
Benjamin Offices  
Chan Street  
Belconnen ACT

PO Box 78  
Belconnen ACT 2616

T +61 2 6219 5555  
F +61 2 6219 5353

**Melbourne**

Level 32  
Melbourne Central Tower  
360 Elizabeth Street  
Melbourne VIC

PO Box 13112  
Law Courts  
Melbourne VIC 8010

T +61 3 9963 6800  
F +61 3 9963 6899

**Sydney**

Level 5  
The Bay Centre  
65 Pirrama Road  
Pyrmont NSW

PO Box Q500  
Queen Victoria Building  
NSW 1230

T +61 2 9334 7700 or 1800 226 667  
F +61 2 9334 7799

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Written enquiries may be sent to:

Manager, Editorial Services  
PO Box 13112  
Law Courts  
Melbourne VIC 8010  
Email: [info@acma.gov.au](mailto:info@acma.gov.au)

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# Important notice and disclaimer

The Applicant information package (AIP) has been prepared by the Australian Communications and Media Authority (the ACMA) in connection with the allocation of spectrum licences in the 26 GHz band by auction. This auction is referred to as the '26 GHz band auction'. 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 included in the AIP is prepared in accordance with section 26 of the [Radiocommunications \(Spectrum Licence Allocation – 26 GHz Band\) Determination 2020](#) (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 39A, 60 and 294 of the Act. Any 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 \(Spectrum Licence Allocation – 26 GHz Band\) Determination 2020](#)
- > [Radiocommunications Spectrum Marketing Plan \(26 GHz Band\) 2020 \(the marketing plan\)](#).

These are collectively known as the allocation instruments. Interested persons should note that the allocation instruments have legal effect and are registered as legislative instruments on the Federal Register of Legislation. 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 prevail.

The material contained in the AIP, including the auction guide, is for information only and should not be used as a substitute for independent advice on participating in the auction and 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 allocation process or spectrum licence, or rights and obligations under the associated legislative instruments or applicable regulatory framework.

Auction participants should make themselves aware of the changes proposed by the [Radiocommunications Legislation Amendment \(Reform and Modernisation\) Bill 2020 \(the Bill\)](#). At the time of publication of the AIP, the Bill had been passed by parliament. The provisions of the Act and the transitional provisions in the Bill have been designed to enable the ACMA to continue an allocation process that is underway with minimal disruption. However, when it commences, the Bill may affect matters described in the marketing plan and set out in any spectrum licence issued.

Nothing in this auction guide should be taken to bind the ACMA to any course of action in the allocation of spectrum licences in the 26 GHz band auction. The ACMA may vary or revoke a legislative instrument at any time, as permitted by law.

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. It is the responsibility of each person reading the AIP to make their own independent investigation, review and assessment of:

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

Under clause 18 of the deed of acknowledgment to be 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 allocation process is excluded. Completion of the deed of acknowledgement is a requirement for anyone wishing to participate in the allocation process. Please refer to Chapter 3 of this 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 any interested person to, at their own cost, verify to their 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.

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, which may be subject to change.

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 process. 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](#) (Competition and Consumer Act), the [Broadcasting Services Act 1992](#) (Broadcasting Services Act) and the [Telecommunications Act 1997](#)

(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](#) (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 under that section by the minister administering that Act. The minister may have other powers that affect the allocation process or spectrum licences. 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 consider its own policies, which may change from time to time.

The accountable authority of the ACMA is also required under the [Public Governance, Performance and Accountability Act 2013](#) to govern the ACMA in a way that promotes the efficient, effective, economical and ethical use of public resources, and must act in accordance with any rules and 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 allocation process, including the processes that apply to the auction, or terminate the allocation 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 allocation process shall be at their sole risk, cost and expense.

### ***Applications may be used, disclosed 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 1982](#) (unless an exemption applies) or disclosed to other parties under Part 7A of 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***

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 allocation process. Applicants must comply with the requirements of the allocation determination concerning affiliates.

### ***Confidential information***

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 to be executed by applicants, related persons and contractors.

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

Applicants must, in accordance with the deed of acknowledgment to be executed by them, 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 allocation process pursuant to the deed of acknowledgment to be executed by applicants.

# At a glance – Auction Q&A

Table 1: Auction questions and more information

	Question	Answer	More information
1.	What frequency range is the 26 GHz band?	Spectrum licences are being allocated in the frequency range 25.1–27.5 GHz. This is referred to as the 26 GHz band.	Chapter 2
2.	What spectrum is available?	<ul style="list-style-type: none"> <li>&gt; 12 x 200 MHz lots across 24 areas. The lots in each area form a single product. The 24 products for these 24 areas are grouped in a single category; and</li> <li>&gt; 24 x 100 MHz lots across 3 areas (Greater Perth, Hobart and Margaret River). The lots in each area form 2 products, with separate lower (below 27 GHz) and upper (above 27 GHz) products. The 3 lower products form a single category, and the 3 upper products form a single category.</li> </ul> <p>There are 30 products in total. A list of products is available in Table 4.</p>	2.1, Table 4

	Question	Answer	More information
3.	How will the spectrum be licensed?	<p>Lots won at auction will be authorised for use by winning bidders by the issue of spectrum licences under section 62 of the Act.</p> <p>A spectrum licence authorises the 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. Spectrum licensees must comply with a series of licence conditions and the technical framework developed for each of the spectrum-licensed bands by the ACMA in consultation with industry.</p>	2.2.1, 2.2.2
4.	When will spectrum licences commence and expire?	<p>Spectrum licences for the 26 GHz band in all regions are for a duration of <b>up to 15 years</b>. The licences will commence 12 weeks after the auction manager publishes the results of the auction, or the day the licence is issued (whichever is later). The licences will expire 15 years and 12 weeks after the auction manager publishes the results of the auction.</p>	2.2.2

Question	Answer	More information
5.	I don't wish to use all the spectrum I purchase through the allocation process – what options are available?	A spectrum licensee can trade part, or all, of the spectrum space covered by their licence, once issued, in accordance with relevant legislation. They can also authorise third parties to use the licensed spectrum. Further information about <a href="#">trading</a> and <a href="#">third-party use</a> is available on the ACMA website.
6.	How will the auction work?	The auction will be conducted online using the Enhanced Simultaneous Multi-Round Ascending (ESMRA) format. Lots of all 30 products are offered in 3 sequential stages: <ol style="list-style-type: none"> <li>1. Primary stage – a clock auction offering frequency-generic lots of each product to determine the quantity of spectrum won by each bidder.</li> <li>2. Secondary stage – if required, for the sale of any single lot of a product which was unallocated in the primary stage.</li> <li>3. Assignment stage –specific contiguous frequencies for the lots of a product won in the primary and secondary stages are assigned.</li> </ol>

	Question	Answer	More information
7.	I want to participate in the auction – what do I need to do?	A step-by-step guide to participating in the auction is in Chapter 4. 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.	Chapters 3 and 4
8.	I want to participate in the auction – what amounts will I need to pay?	<p>To apply to be registered as a bidder in the auction, you will need to pay a non-refundable application fee of <b>A\$10,000</b>.</p> <p>To complete the bidder registration process, applicants will also need to pay an eligibility payment, or give a deed of financial security, or a combination of both (a deed of financial security is an alternative to an eligibility payment).</p> <p>No GST is payable on the application fee or the eligibility payment.</p>	Chapters 3 and 5

	Question	Answer	More information
9.	What spectrum allocation limits apply to the auction?	The allocation limit set by the minister restricts the amount of spectrum a single bidder may acquire in the auction. The allocation limit set by the minister is <b>1 GHz</b> in each designated area specified in the <a href="#">Radiocommunications (Spectrum Licence Limits – 26 GHz Band) Direction 2020</a> . In the Greater Perth, Hobart and Margaret River areas where there is a lower and upper product, the 2 products in each area are treated as a single product for applying the 1 GHz allocation limit.	3.4
10.	How will the Spectrum Review and the implementation of the new spectrum management framework in Australia affect spectrum licences during the transition to the new arrangements and beyond?	Auction participants should make themselves aware of the changes proposed by the Radiocommunications Legislation Amendment (Reform and Modernisation) Bill 2020 (the Bill). At the time of publication of the AIP, the Bill had been passed by parliament. When it commences, the Bill may affect matters described in the marketing plan and set out in any spectrum licence issued.	2.2.6

# Key dates

Table 2: Important events and dates

Event	Date
<p><b>Applications open</b> The ACMA advertises the auction, publishes the AIP and applications open.</p>	14 December 2020
<p><b>Application deadline</b> By this date and time, any person wishing to be an applicant will need to:</p> <ul style="list-style-type: none"> <li>&gt; give a completed application form</li> <li>&gt; give a completed deed of acknowledgement form</li> <li>&gt; give a completed deed of confidentiality form</li> <li>&gt; pay the application fee to the ACMA on behalf of the Commonwealth.</li> </ul>	2:00 pm, 21 January 2021
<p><b>Affiliations</b> 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.</p>	After the application deadline
<p><b>Eligibility deadline</b> By this date, applicants will need to:</p> <ul style="list-style-type: none"> <li>&gt; give a completed eligibility nomination form</li> <li>&gt; pay an eligibility payment, or give a deed of financial security, to the ACMA on behalf of the Commonwealth, or a combination of both.</li> </ul>	2:00 pm, 9 March 2021
<p><b>Bidder registration</b> The ACMA tells registered bidders that they have been registered and may participate in the auction and gives them information to enable their participation (e.g., information about how to access and use the online auction system).</p>	After the eligibility deadline
<p><b>Mock auctions</b> Mock auction(s) held to familiarise registered bidders with the auction system.</p>	Mid- to late-March 2021
<p><b>First- and second-round dates and time notifications</b> The ACMA notifies registered bidders about the start date and time of the pre-bidding phase, and the first and second clock rounds of the primary stage of the auction.</p>	At least 10 working days before the start of the auction
<p><b>Pre-bidding phase</b> Registered bidders may use the auction system to confirm or change the start demands and MSR selections in their eligibility nomination form.</p>	Within 48 hours of the first clock round
<p><b>Estimated auction commencement</b></p>	Mid-April 2021 (after Easter)

*Note: The above timetable is subject to change. Any changes made to the timetable will be announced through the sources listed in section 7.1. If the ACMA varies starting prices, revised application and eligibility deadlines will be set – refer to 3.5.*

# Part 1 – Understanding the auction process

# 1. What is the 26 GHz band auction?

**This chapter provides information about:**

- > **the purpose and structure of the auction guide**
- > **other elements of the Applicant information package**
- > **background information about the spectrum being auctioned**
- > **legislative instruments and the legal basis for the auction**
- > **how the instruments were developed.**

## 1.1 Overview

The ACMA is conducting an allocation process for spectrum licences in the 26 GHz band, referred to as the '26 GHz band auction'.

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 26 GHz band auction?**  
Information about the background to the auction, the decisions to allocate the 26 GHz band via auction, and the instruments that provide the legal basis for the auction.
- > **Chapter 2: What is being offered in the auction?**  
Information about the spectrum available, how the spectrum is configured as auction lots, starting prices and lot ratings, and key issues that will affect how winning bidders can use the spectrum.
- > **Chapter 3: Pre-auction procedures and information**  
Information about what potential bidders should consider before registering to bid in the auction, how to register to become a bidder and general pre-auction information and procedures.
- > **Chapter 4: During the auction**  
A practical step-by-step guide to participating in the auction, from the pre-bidding stage, commencement of the first primary stage auction round, through to the closing of the final assignment round.
- > **Chapter 5: Post-auction procedures**  
Information for winning and unsuccessful bidders, including arrangements for payments, refunds and the treatment of any unsold auction lots.
- > **Chapter 6: Spectrum licensing and technical framework**  
Information about the spectrum licensing and technical frameworks applicable to the spectrum on offer.
- > **Chapter 7: Updates, queries, lodgements and payments**  
Information about how the ACMA will keep stakeholders informed about developments leading up to the auction, and how stakeholders can submit queries, give auction documents and make payments to the ACMA.

**Attachments** – include:

- > **Appendix A:**
  - > allocation instruments that provide the legal basis for the auction
  - > technical framework documents
  - > spectrum re-allocation declaration for the 26 GHz band in metropolitan and certain regional areas
  - > spectrum licence limits direction
  - > spectrum access charges direction.
- > **Appendix B:**
  - > forms that auction participants may be required to complete as part of their application to participate in the auction.

The **glossary** at the end of this guide may assist readers to understand particular terms used throughout the guide.

Together, the auction guide and its attachments form the AIP for the 26 GHz band auction.

### **1.1.1 COVID-safe considerations**

Conducting the 26 GHz band spectrum auction during the COVID-19 global pandemic introduces a range of challenges for bidders and the ACMA. These include:

- > ensuring applicants can complete and submit their application and eligibility nomination documents with appropriate authorisation and witnessing arrangements, in an environment where many staff may be working remotely
- > responding to illness of ACMA or bidder staff members prior to key deadlines or during the auction
- > ensuring COVID-safe practices for ACMA staff and registered bidders during the auction
- > responding to changed health directions from local authorities
- > obtaining governance approvals for updated bidding strategies or maximum budget amounts during the auction
- > fulfilling the confidentiality obligation if working outside office locations.

In responding to these challenges, where the ACMA has discretion to act, the ACMA will be guided by the principles of flexibility, safety, preparedness, fairness and consistency.

#### **1.1.1.1 Auction forms**

Where appropriate, forms in the *Auction forms* booklet are digitally-writeable PDFs.

Applicants should note that regulations governing the electronic execution of documents differ across types of documents, and state, territory and Commonwealth jurisdictions. The ACMA has introduced, where possible, arrangements that will permit electronic execution of some documents.

Applicants and bidders should seek their own legal and health and safety advice about the COVID-safe completion of documents.

#### ***Forms 1, 7 and 9***

In the case of the application form, the eligibility nomination form and the statement about affiliations for primary and secondary stage winners, applicants may choose to sign the form using an electronic signature.

Both the signatory and witness are able to electronically sign the form by:

- > pasting a copy of their signature into the form
- > signing using a stylus or a finger on a tablet, smartphone or laptop
- > using a cloud-based signature platform.

Where an in-person witness is not available or practical to obtain, the signature may be witnessed remotely. The witness must observe the signatory sign the form in real-time over audio-visual link. As soon as practicable after the signatory has signed the form, the witness must sign the form as evidence that they witnessed the signature.

The signatory and witness are not required to sign the same physical copy of the form. For example:

- > The signatory may electronically sign the form, witnessed via audio-visual link. The witness may then electronically sign the same digital copy of the form.
- > The signatory may electronically sign the form, witnessed via audio-visual link. The witness may then physically sign a printed copy of the signed form.
- > The signatory may choose to physically sign the form, witnessed via audio-visual link, and scan the form. The witness may then choose to either physically or electronically sign the scanned copy of the signed form.

The witness must be satisfied that the copy of the form they are signing is either the same document, or an identical copy of the form that the signatory signed. Note that both signatures must appear on the same form.

### **Forms 2 and 3**

In the case of the deed of acknowledgment and deed of confidentiality, the rules on electronically executing the form differ across jurisdictions.

Rules for bodies corporate governed by the [Corporations Act 2001](#) wishing to electronically sign a deed are outlined in the [Corporations \(Coronavirus Economic Response\) Determination \(No 3\) 2020](#).<sup>1</sup> Signatories acting on behalf of an applicant that is a body corporate must be an authorised representative of that body corporate.

States and territories have introduced different temporary arrangements authorising the electronic execution of deeds by all other signatories. The ACMA will accept deeds with digital signatures witnessed remotely, executed in accordance with state/territory-specific arrangements while they are in place. All applicants, and others executing deeds, must make their own inquiries about how to properly execute their forms. Applicants and others executing deeds must also declare that they have made themselves aware of the rules for electronically executing deeds in their jurisdiction and have complied with the rules accordingly.

### **Forms 6, 8 and 10**

Under the rules relating to the execution of statutory declarations, a physical signature must be applied in the presence of an appropriate in-person witness. Therefore, applicants will be required to arrange for physical execution and witnessing of the statutory declaration about affiliations.

Likewise, as the applicant is required to provide the ACMA with the original deed of financial security, physical execution of the deed is required for the completion of the deed of financial security. As outlined in subsection 28(6) of the allocation determination, if the applicant gives the ACMA a copy of the deed of financial security by email in the first instance, the original must be received by the ACMA no later than 3 working days after the eligibility deadline (or if the ACMA agrees to a later time, the agreed time).

If a winning bidder elects to pay by instalments in accordance with the procedures outlined at Schedule 4 to the allocation determination and section 15 of the marketing plan, the bank guarantee provided to the ACMA must also be executed physically rather than electronically.

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<sup>1</sup> At time of publication, the Corporations (Coronavirus Economic Response) Determination (No 3) 2020 is set to self-repeal on 21 March 2021. This means that the rules for electronic signatures will not apply beyond this date.

### 1.1.1.2 Auction arrangements

The ACMA encourages applicants to develop and test contingency plans that will ensure minimal disruption to their auction preparations and participation if key staff members fall ill. These plans ought to cover the application and eligibility deadlines, as well as the auction. In particular, we encourage applicants to consider the case where a staff member experiences COVID-19 symptoms, or contracts COVID-19, during the auction, which may require all co-located auction team members to self-isolate.

Applicants should note that the ACMA will not extend the application and eligibility deadlines, except for the case where starting prices are varied (see 3.5). In the case where a registered bidder is severely disadvantaged during the auction due to staff member illness, such that it jeopardises their participation in the auction, they may request an auction recess. The auction manager may request supporting evidence to consider the request. After receiving a request, the auction manager will assess whether there is a genuine case of hardship that could not have been addressed by appropriate contingency planning. Bidders should also note the actions the auction manager may undertake in exceptional circumstances during the auction, as outlined in section 55 of the allocation determination.

Bidders will have been aware of the COVID-19 environment for more than 12 months by the time bidding commences on the 26 GHz band auction. The ACMA therefore notes that, of itself, COVID-19 related illness is unlikely to be deemed to be an unforeseeable and unavoidable emergency.

The ACMA intends to operate 2 auction rooms in different states for the 26 GHz band auction. If an ACMA staff member falls ill in one state, requiring co-located auction room staff to self-isolate, then the other auction room will assume full responsibility for conducting the auction. The ACMA anticipates that this arrangement will ensure there is only a minimal delay in the auction if the ACMA needs to switch to the second auction room – for example, the commencement of the next round might be delayed until the following day. All ACMA auction room contact details would remain unchanged to minimise the effect on bid teams.

The ACMA encourages bidders to ensure their contingency plans can accommodate any governance approvals required during the auction.

### 1.1.1.3 Responding to public health directions

If local authorities introduce significant changes to pandemic-related health directions that make participation in the auction more difficult, then the affected bidder should contact the ACMA immediately and outline the circumstances.

However, the ACMA notes that bidders will have been aware of the COVID-19 environment for more than 12 months by the time bidding commences on the 26 GHz band auction. The ACMA therefore expects that bid teams will have made reasonable endeavours to ensure that COVID-19 related circumstances can be accommodated in their auction plans.

## 1.2 Background to the allocation of the 26 GHz band lots

On 18 October 2019, the Minister for Communications, Cyber Safety and the Arts (the minister) made the [Radiocommunications \(Spectrum Re-allocation – 26GHz Band\) Declaration 2019](#) (the re-allocation declaration), declaring that spectrum in the frequency range 25.1–27.5 GHz in metropolitan and certain regional areas (the 26 GHz band) is to be re-allocated by issuing spectrum licences. The ACMA is preparing to allocate spectrum in the 26 GHz band in April 2021.

In April 2019, the ACMA released its planning decisions and preliminary views on the future use of the band following industry [consultation on options for the wider 26 GHz band](#). The 26 GHz band decisions paper identified a suite of possible class, apparatus and spectrum licensing measures to facilitate a broad range of wireless broadband use cases, underpinning the government's policy objective to support technological innovation.

At the 2019 World Radiocommunication Conference (WRC-19), the radiocommunications sector of the International Telecommunication Union examined bands above 24.25 GHz for wireless broadband 5G services. The frequency range 24.25–27.5 GHz (the wider 26 GHz band) was identified for International Mobile Telecommunications (IMT) services and is a pioneer mmWave (millimetre wave) band for 5G services internationally. The wider 26 GHz band is being standardised and harmonised for 5G to provide short-range, high-capacity services to complement lower coverage bands (like the 3.6 GHz band) currently being used for 5G services in Australia and internationally.

## 1.3 Legislative framework

The Act provides the legislative framework for allocating spectrum licences. A brief overview of the legislative instruments associated with the allocation of spectrum licences is provided below.

### 1.3.1 Re-allocation declaration

On 18 October 2019, the minister made the re-allocation declaration for metropolitan and certain regional areas. The re-allocation declaration provides that the 26 GHz band is to be allocated by issuing spectrum licences. The terms of the re-allocation declaration are summarised below in Table 3.

**Table 3: Summary of 26 GHz re-allocation declaration**

Elements of the re-allocation declaration	Description
Licence type	Spectrum licences
Parts of the spectrum	25.1–27.5 GHz in metropolitan and certain regional areas of Australia
Re-allocation period	3 years commencing 15 November 2019
Re-allocation deadline	14 November 2021

### 1.3.2 Allocation determination

Section 60 of the Act requires the ACMA to determine, in writing, procedures to be applied in allocating spectrum licences by auction, by tender or by allocation for a pre-determined or negotiated price. Such a determination is a legislative instrument for the purposes of the [Legislation Act 2003](#). However, such a determination is not disallowable under that Act.

Section 294 of the Act allows the ACMA, by written instrument, to make determinations fixing the spectrum access charges payable by licensees for issuing spectrum licences and specifying the times when the charges are payable. Such a determination is a disallowable legislative instrument for the purposes of the Legislation Act.

A determination made under both sections 60 and 294 of the Act sets out the allocation rules for allocation by auction. These rules include procedures for

determining the spectrum access charges payable, based on the winning bids made in the auction.

For the 26 GHz band auction, the ACMA has made the [Radiocommunications \(Spectrum Licence Allocation – 26 GHz Band\) Determination 2020](#), which sets out:

- > how the auction will be conducted using the Enhanced Simultaneous Multi-Round Ascending (ESMRA) format, and the procedures for the auction
- > allocation limits (also referred to as ‘competition limits’ or ‘spectrum caps’) as directed by the minister in the [Radiocommunications \(Spectrum Licence Limits – 26 GHz Band\) Direction 2020](#) (spectrum licence limits direction)
- > administrative processes for the auction
- > payments auction participants may be required to make, including arrangements to allow for instalment payments as permitted in accordance with the [Radiocommunications \(Spectrum Access Charges—26 GHz Band\) Direction 2020](#) (spectrum access charges direction).

Chapters 3 to 5 provide more information about the procedures set out in the allocation determination.

### 1.3.3 Marketing plan

The [Radiocommunications Spectrum Marketing Plan \(26 GHz band\) 2020](#) (the marketing plan) has been made under section 39A of the Act. Section 39A of the Act requires the ACMA to prepare a marketing plan for issuing spectrum licences within a part of the spectrum where a spectrum re-allocation declaration has been made.

A marketing plan made under section 39A of the Act essentially sets out the product offering and may specify matters including:

- > the procedures to be followed for issuing spectrum licences
- > how the spectrum is to be apportioned among the spectrum licences to be issued
- > the conditions, or types of conditions, that may be included in spectrum licences to be issued.

A marketing plan can also specify other matters. Key aspects of the marketing plan are discussed in chapters 2 and 6.

### 1.3.4 Technical framework

The technical framework for a spectrum-licensed band is a set of technical conditions and instruments prepared by the ACMA for operation within that band.

Under the Act, the framework consists of 3 interlocking regulatory elements:

- > conditions on the licence (including core licence conditions)
- > a determination of unacceptable levels of interference, for device registration purposes
- > radiocommunications advisory guidelines.

The instruments that, in conjunction with licence conditions, constitute the technical framework of the spectrum licences are made under subsection 145(4) and section 262 of the Act. Subsection 145(4) provides that the ACMA may determine what constitutes an ‘unacceptable level of interference’ caused by devices operated under a spectrum licence. The ACMA may refuse to include details of a radiocommunications transmitter on the Register of Radiocommunications Licences (RRL) if it is satisfied that operation of the transmitter could cause an unacceptable level of interference to the operation of another radiocommunications device. If the

transmitter is not included on the RRL and is not exempt from the registration requirements, the licensee must not operate the transmitter under the licence.<sup>2</sup> A determination under subsection 145(4) effectively, therefore, sets out the circumstances where the ACMA may refuse to register a radiocommunications transmitter under the spectrum licence. Generally, in such an instrument, these circumstances include:

- > if any part of the 'device boundary' of a radiocommunications transmitter falls outside the geographic area of the spectrum licence
- > if the operation of the transmitter would breach a core condition of the spectrum licence
- > if the transmitter would exceed any specified deployment constraints.

Section 262 of the Act provides that the ACMA may make advisory guidelines about any aspect of radiocommunications or radio emissions. Generally, the radiocommunications advisory guidelines include provisions to assist in the assessment of the risk of interference between spectrum-licensed devices and services operating under apparatus or class licences.

The technical framework for the 26 GHz band includes the following:

1. [Radiocommunications \(Unacceptable Levels of Interference – 26 GHz Band\) Determination 2020](#) (the unacceptable interference determination).
2. [Radiocommunications Advisory Guidelines \(Managing Interference from Spectrum Licensed Transmitters – 26 GHz Band\) 2020](#) (the RAG Tx).
3. [Radiocommunications Advisory Guidelines \(Managing Interference to Spectrum Licensed Receivers – 26 GHz Band\) 2020](#) (the RAG Rx).

The conditions likely to be included on a spectrum licence in the 26 GHz band are included in the sample licence included in the marketing plan. Chapter 6 of this guide provides more information about the development of the 26 GHz band technical frameworks.

### 1.3.5 Trading rules

Part of the technical framework includes the rules for trading spectrum licences. Section 88 of the Act permits the ACMA to determine the rules for trading spectrum licences and these are set out in the [Radiocommunications \(Trading Rules for Spectrum Licences\) Determination 2012](#) (trading rules determination). The trading rules determination divides the spectrum in spectrum-licensed bands into standard trading units (STUs) and specifies the minimum contiguous bandwidth for the purpose of trading spectrum licences. The ACMA has amended the trading rules to include the 26 GHz band by making the [Radiocommunications \(Trading Rules for Spectrum Licences\) Amendment Determination 2020 \(No. 1\)](#).

### 1.3.6 Tax determination

On 11 October each year, spectrum licence tax is payable in accordance with the [Radiocommunications \(Spectrum Licence Tax\) Act 1997](#). The amount of tax payable is worked out under the [Radiocommunications \(Spectrum Licence Tax\) Determination 2014](#) (spectrum tax determination). The ACMA sets this tax rate to recover the indirect costs of spectrum management activities such as international coordination, domestic planning, interference investigation and policy development, and to contribute to the

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<sup>2</sup> Section 69 of the Act provides that spectrum licences must include a licence condition that radiocommunications transmitters are not operated under the licence unless the requirements of the ACMA under Part 3.5 for registration of the transmitter have been met. The licence conditions may exempt particular kinds of radiocommunications transmitters from meeting those requirements.

costs of the electromagnetic energy program.<sup>3</sup> It is our intention to incorporate the 26 GHz band spectrum licences into the spectrum tax determination. We expect to consult in Q2 or Q3 2021 on changes to the spectrum licence tax arrangements to include the 26 GHz band and other related changes in the spectrum tax determination. This would allow the spectrum tax determination to be amended in Q3 2021 prior to 11 October.

## 1.4 Stakeholder consultation

The ACMA has been working with stakeholders on issues associated with the allocation of the 26 GHz band spectrum during the development of the allocation and technical instruments. A summary of various stakeholder consultation undertaken in preparation for the auction, including links to relevant information and documents, is available on the [ACMA's website](#).

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<sup>3</sup> More information about the implications for spectrum licence taxes can be found on the ACMA's website at <http://www.acma.gov.au/spectrum-licence-taxes>.

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

**This chapter provides information about:**

- > **available lots in the 26 GHz band auction**
- > **how the spectrum will be configured as auction lots**
- > **lot starting prices and ratings**
- > **key matters affecting how winning bidders can use the spectrum**
- > **the auction manager roles and responsibilities.**

## 2.1 Available spectrum

The 26 GHz band auction will allocate the lots shown in Table 4.

**Table 4: Spectrum lots**

	Product	Product name	Lot bandwidth (MHz)	No. of lots	Frequency range (GHz)	Est. pop (December 2020)	Starting price \$/MHz/pop	Starting price per lot	Lot rating (points/lot)
1	ADEL01	Adelaide	200	12	25.1–27.5	1,453,731	\$0.004	\$1,163,000	2,400
2	CANB01	Canberra	200	12	25.1–27.5	468,702	\$0.004	\$375,000	800
3	DARW01	Darwin	200	12	25.1–27.5	144,016	\$0.004	\$115,000	240
4	GBRL01	Greater Brisbane / Lismore	200	12	25.1–27.5	3,805,157	\$0.004	\$3,044,000	6,000
5	MELB01	Melbourne / Ballarat	200	12	25.1–27.5	5,161,084	\$0.004	\$4,129,000	9,000
6	SYBA01	Sydney / Bathurst	200	12	25.1–27.5	6,210,959	\$0.004	\$4,969,000	10,000
7	ALAN01	Albany	200	12	25.1–27.5	35,163	\$0.004	\$28,000	60
8	ALUR01	Albury	200	12	25.1–27.5	99,309	\$0.004	\$79,000	180
9	ARMI01	Armidale	200	12	25.1–27.5	24,466	\$0.004	\$20,000	40
10	BEND01	Bendigo	200	12	25.1–27.5	109,242	\$0.004	\$87,000	180
11	BNHB01	Bundaberg / Hervey Bay	200	12	25.1–27.5	154,056	\$0.004	\$123,000	240
12	CAIR01	Cairns	200	12	25.1–27.5	171,057	\$0.004	\$137,000	300
13	COFF01	Coffs Harbour	200	12	25.1–27.5	80,241	\$0.004	\$64,000	140
14	FRTC01	Forster / Tuncurry	200	12	25.1–27.5	23,733	\$0.004	\$19,000	40
15	LAUN01	Launceston	200	12	25.1–27.5	106,332	\$0.004	\$85,000	180
16	MACK01	Mackay	200	12	25.1–27.5	91,827	\$0.004	\$73,000	140
17	MILD01	Mildura	200	12	25.1–27.5	56,578	\$0.004	\$45,000	100
18	PTMC01	Port Macquarie	200	12	25.1–27.5	57,578	\$0.004	\$46,000	100
19	ROCK01	Rockhampton	200	12	25.1–27.5	88,496	\$0.004	\$71,000	140
20	SHMO01	Shepparton / Mooroopna	200	12	25.1–27.5	56,860	\$0.004	\$45,000	100
21	TOWN01	Townsville	200	12	25.1–27.5	195,024	\$0.004	\$156,000	300
22	TRMO01	Traralgon / Morwell	200	12	25.1–27.5	78,942	\$0.004	\$63,000	140
23	WAGA01	Wagga Wagga	200	12	25.1–27.5	61,073	\$0.004	\$49,000	100
24	WARR01	Warrnambool	200	12	25.1–27.5	40,438	\$0.004	\$32,000	60
25	GPER01	Greater Perth Lower	100	19	25.1–27.0	2,172,376	\$0.004	\$869,000	1,800
26	GPER02	Greater Perth Upper	100	5	27.0–27.5	2,172,376	\$0.003	\$652,000	1,800
27	HOBA01	Hobart Lower	100	19	25.1–27.0	229,551	\$0.004	\$92,000	180
28	HOBA02	Hobart Upper	100	5	27.0–27.5	229,551	\$0.003	\$69,000	180
29	MARG01	Margaret River Lower	100	19	25.1–27.0	11,943	\$0.004	\$5,000	10
30	MARG02	Margaret River Upper	100	5	27.0–27.5	11,943	\$0.003	\$4,000	10

*Note 1: The population data in this table is based on 2016 census data of the population in the HCIS identifiers of products in the marketing plan and uses Australian Bureau of Statistics and Federal Budget estimates for forward projections to December 2020.*

*Note 2: The allocation determination provides the ACMA with the flexibility to vary the starting prices and lot ratings up until 5 working days before the eligibility deadline – refer to 3.5 in this guide for more information.*

### 2.1.1 Spectrum lots

To be allocated efficiently, spectrum needs to be appropriately configured before it is offered to market. This is referred to as lot configuration. Where appropriate, spectrum is packaged into units, referred to as spectrum lots. There are 2 dimensions to lot configuration – bandwidth and geography. In deciding lot configuration for any allocation, the ACMA considers a range of factors, including the source of demand and the technical characteristics of the spectrum. The technical frameworks for the spectrum on offer in the 26 GHz band have been optimised to provide mmWave high-capacity services that can complement lower coverage bands (like the 3.6 GHz band) currently being used for 5G services in Australia.

### 2.1.2 Geographic areas and maps

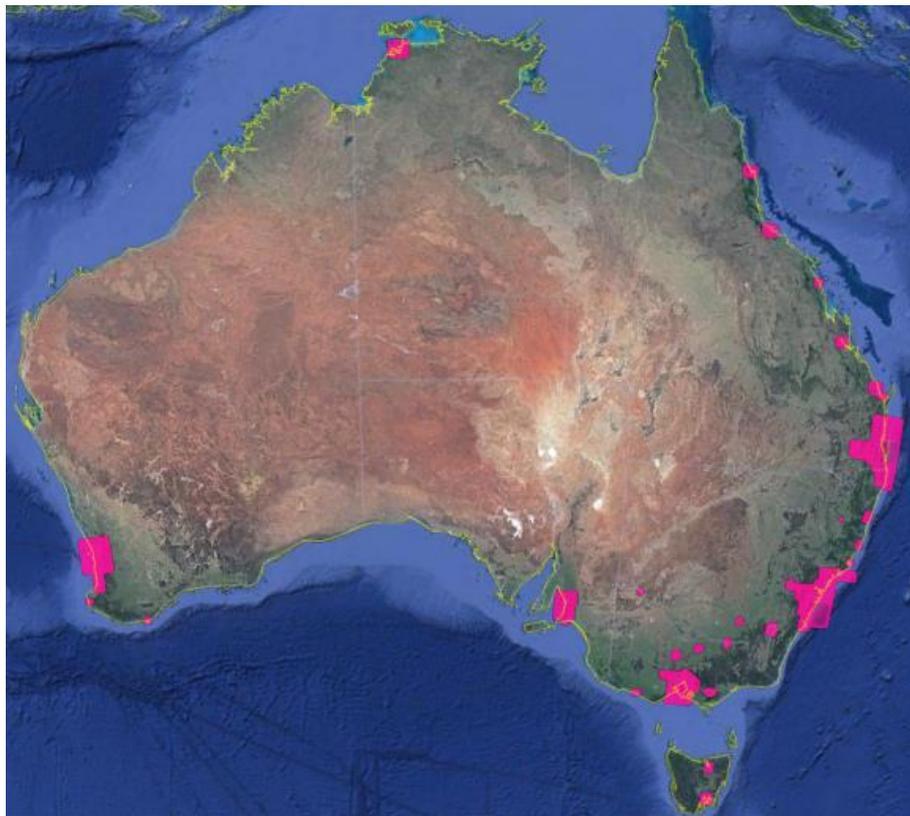
The metropolitan and regional areas declared for re-allocation by spectrum licence in the [re-allocation declaration](#) have been geographically configured into products for the auction.

Table 4 of this guide describes the products that will be available at auction. The products are worked out by reference to schedules 2 and 3 to the marketing plan. Each product is associated with a region, which is defined in Schedule 3 by reference to a list of hierarchical cell identification scheme (HCIS) identifiers. The HCIS is a naming convention developed by the ACMA that applies unique labels to each square cell in the [Australian Spectrum Map Grid](#), derived from the cell's position in a hierarchically-arranged group of cells.

Applicants can view the geographic areas in Google Earth by using a [HCIS convertor tool](#) on the ACMA website. To use this tool, applicants need to copy and paste the HCIS identifiers for an area from the marketing plan into the convertor tool section labelled 'HCIS description (primary)'.

The pink areas in the map in Figure 1 show where each of the metropolitan and regional areas for the 26 GHz auction are located. The map is an indicative pictorial representation of each region and interested persons should satisfy themselves of the geographic boundaries of each area.

**Figure 1: Indicative map of the geographic areas**



### 2.1.3 Frequency bandwidth

The auction will offer generic lots for each product listed in Table 4 in the primary and secondary stages. The assignment stage of the auction will assign frequencies to those generic lots of each product.

The ACMA has included each product into one of 3 categories. Products in all regions (except Greater Perth, Hobart and Margaret River) are in a single category (category 1). Regions where NBN fixed satellite service uplinks are present (Greater Perth, Hobart and Margaret River) have been configured into lower (category 2) and upper (category 3) categories. A description of the product categories is in Table 5 below.

**Table 5: Categories**

Category	Description	Lower frequency	Upper frequency	Lot bandwidth
1	26 GHz (excluding Greater Perth, Hobart, Margaret River)	25.1 GHz	27.5 GHz	200 MHz
2	26 GHz Greater Perth Lower, Hobart Lower, Margaret River Lower	25.1 GHz	27.0 GHz	100 MHz
3	26 GHz Greater Perth Upper, Hobart Upper, Margaret River Upper	27.0 GHz	27.5 GHz	100 MHz

**Category 1** products are in lot bandwidths of 200 MHz in the 25.1–27.5 GHz frequency range. The frequency lot configuration for each category 1 product is set out in Table 6.

**Table 6: Category 1 product frequency configuration**

Lot	Frequency range	Bandwidth
1	25.1–25.3 GHz	200 MHz
2	25.3–25.5 GHz	200 MHz
3	25.5–25.7 GHz	200 MHz
4	25.7–25.9 GHz	200 MHz
5	25.9–26.1 GHz	200 MHz
6	26.1–26.3 GHz	200 MHz
7	26.3–26.5 GHz	200 MHz
8	26.5–26.7 GHz	200 MHz
9	26.7–26.9 GHz	200 MHz
10	26.9–27.1 GHz	200 MHz
11	27.1–27.3 GHz	200 MHz
12	27.3–27.5 GHz	200 MHz
<b>Total of 12 lots</b>	<b>25.1–27.5 GHz</b>	<b>2400 MHz</b>

**Category 2** products are in lot bandwidths of 100 MHz in the 25.1–27.0 GHz frequency range. The frequency lot configuration for each category 2 product is set out in Table 7.

**Table 7: Category 2 product frequency configuration**

Lot	Frequency range	Bandwidth
1	25.1–25.2 GHz	100 MHz
2	25.2–25.3 GHz	100 MHz
3	25.3–25.4 GHz	100 MHz
4	25.4–25.5 GHz	100 MHz
5	25.5–25.6 GHz	100 MHz
6	25.6–25.7 GHz	100 MHz
7	25.7–25.8 GHz	100 MHz
8	25.8–25.9 GHz	100 MHz
9	25.9–26.0 GHz	100 MHz
10	26.0–26.1 GHz	100 MHz
11	26.1–26.2 GHz	100 MHz
12	26.2–26.3 GHz	100 MHz
13	26.3–26.4 GHz	100 MHz
14	26.4–26.5 GHz	100 MHz
15	26.5–26.6 GHz	100 MHz
16	26.6–26.7 GHz	100 MHz
17	26.7–26.8 GHz	100 MHz
18	26.8–26.9 GHz	100 MHz
19	26.9–27.0 GHz	100 MHz
<b>Total of 19 lots</b>	<b>25.1–27.0 GHz</b>	<b>1900 MHz</b>

**Category 3** products are in lot bandwidths of 100 MHz in the 27.0–27.5 GHz frequency range. The frequency lot configuration for each category 3 product is set out in Table 8.

**Table 8: Category 3 product frequency configuration**

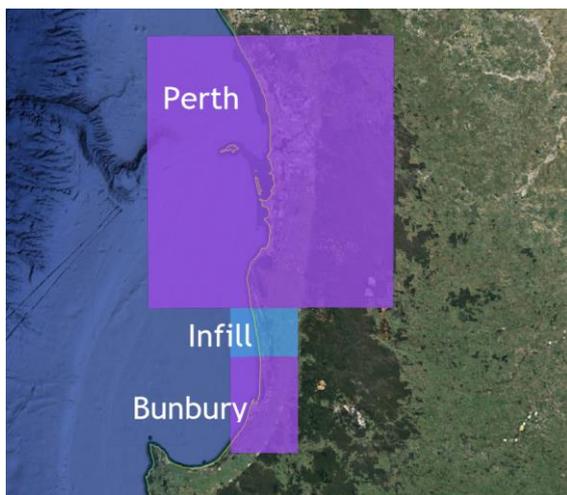
Lot	Frequency range	Bandwidth
1	27.0–27.1 GHz	100 MHz
2	27.1–27.2 GHz	100 MHz
3	27.2–27.3 GHz	100 MHz
4	27.3–27.4 GHz	100 MHz
5	27.4–27.5 GHz	100 MHz
<b>Total of 5 lots</b>	<b>27.0–27.5 GHz</b>	<b>500 MHz</b>

#### 2.1.4 The Greater Perth area

Most of the areas declared for spectrum licensing by the minister are being offered as separate products. The declared areas for Perth and Bunbury are being combined into a single region called Greater Perth Upper. The declared area for Perth/Bunbury is a single region called Greater Perth Lower. In this guide, ‘Greater Perth area’ refers to the area covered by the Greater Perth Lower region.

As depicted in Figure 2 and Figure 3, the category 2 product of Greater Perth Lower (25.1–27.0 GHz) covers the entire Greater Perth area. The category 3 product of Greater Perth Upper (27.0–27.5 GHz) covers the Greater Perth area except for a small area between Perth and Bunbury that is not declared for re-allocation. This small area represents only 0.2% of the combined Greater Perth area population.

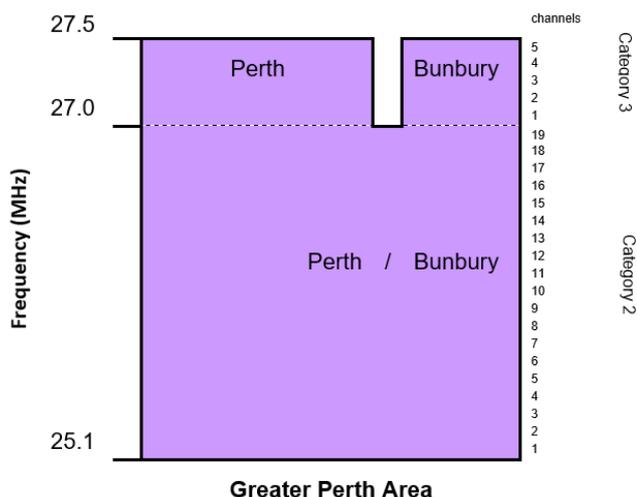
**Figure 2: Greater Perth area**



**Key:**

- > *Greater Perth Lower - The Perth/Bunbury named area in the re-allocation declaration (Perth, Bunbury, and the blue infill area) in frequency range 25.1–27.0 GHz: category 2.*
- > *Greater Perth Upper - The Perth and Bunbury named areas in the re-allocation declaration in frequency range 27.0–27.5 GHz: category 3.*

**Figure 3: Greater Perth configuration**



### 2.1.5 Reserve prices and lot ratings

The ACMA has determined the lot ratings and reserve prices (starting prices) for each product, in accordance with section 27 of the allocation determination and as shown above in Table 4. The lot ratings used in the auction are an estimation of the relative value of the different lots on offer. The starting prices are the opening prices used in the first round of the auction (refer to 2.1.5 for more information on product prices). The auction system will not accept bids below the starting price for a product. The starting prices for each product are based on the following normalised prices, rounded to the nearest \$1,000:

- > \$0.004/MHz/pop for products in Category 1 and Category 2
- > \$0.003/MHz/pop for products in Category 3.

Section 37 of the allocation determination provides the ACMA with the flexibility to vary starting prices and lot ratings up until 5 working days before the eligibility deadline. We expect that this would only occur in unusual or necessary circumstances, such as where there is a significant change in the market after the ACMA sets the starting prices. If the ACMA makes changes to starting prices and lot ratings, it will also set a new application deadline, extend the eligibility deadline and make an updated eligibility nomination form available. The ACMA will provide written notice to applicants setting out what they must and may do in accordance with section 38 of the allocation determination (refer to 3.5 for more information) The new prices, lot ratings, deadlines and forms will be published on the ACMA website as soon as possible after any changes are made. Interested parties are encouraged to check the 26 GHz band webpage ([www.acma.gov.au/26-ghz-spectrum-auction](http://www.acma.gov.au/26-ghz-spectrum-auction)) throughout the application and eligibility nomination period for any updates.

More information about start demands, starting prices, eligibility points and lot ratings is available in chapters 3 and 4 of this guide and in Form 7 – Eligibility nomination form.

## 2.2 Key issues affecting the use of the spectrum

### 2.2.1 Spectrum to be allocated as spectrum licences

Spectrum lots won at auction will be allocated 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:

- > subject to some limits, trade all or part of their spectrum licences
- > 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.

Detailed information about spectrum licensing and the technical frameworks applicable to the 26 GHz band, and other important matters for spectrum licensees to be aware of, is provided in Chapter 6. Information specific to the spectrum licences to be issued for the lots on offer in the 26 GHz band auction is available in the marketing plan, which includes a sample licence containing the conditions that may be included in the spectrum licences to be allocated.

### **2.2.2 Licence duration commencement and expiry**

A spectrum licence in the 26 GHz band will be issued for a period of up to 15 years. A spectrum licence will come into force 12 weeks after all bidders are notified of the results of the auction, in accordance with subsection 66(2) of the allocation determination, or the day the licence is issued (whichever is later).<sup>4</sup> A common expiry date will apply to all spectrum licences, being 15 years and 12 weeks after all winning bidders are notified of the results of the auction, in accordance with section 66(2) of the allocation determination.

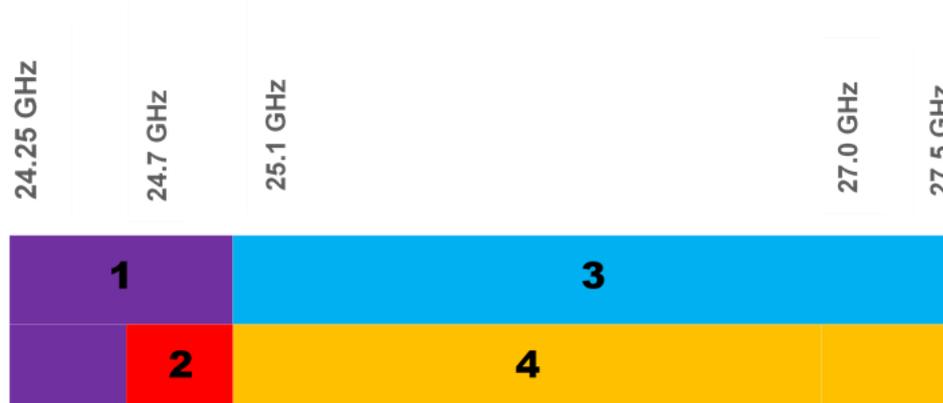
### **2.2.3 The broader 26 GHz band**

The spectrum being allocated in the 26 GHz band auction is shown in context within the wider 26 GHz band as the blue box labelled '3' in Figure 4 below. The frequency allocation for spectrum licensing provides for 1.1 GHz of separation between the dense 5G networks expected to be deployed under spectrum licences and the passive earth exploration satellite services (EESS) operating in the 23.6–24 GHz frequency range. This is expected to be sufficient to safeguard coexistence with the EESS. The ACMA considers that, with the application of relevant conditions, wireless broadband services can operate below 25.1 GHz under a class licence in the frequency range 24.25–25.1 GHz and area-wide apparatus licences can operate down to 24.7 GHz.

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<sup>4</sup> In accordance with section 65 of the Act, a spectrum licence may not come into force before the day it is issued.

**Figure 4: Proposed spectrum licences authorising wireless broadband services in the 26 GHz band**



**Key:**

1. Class licensed wireless broadband Australia-wide in 24.25-25.1 GHz
2. Proposed area wide apparatus licences (AWL) Australia-wide in 24.7-25.1 GHz (not shown in Fig. 4 is AWL proposed in 27.5-29.5 GHz) available after Q4 2020
3. **Spectrum licensing**, in declared areas in 25.1-27.5.
4. Proposed AWL outside major population centres (available shortly after spectrum licence auction) in 25.1-27.5 GHz

**Class licensing**

A [draft variation](#) to the [Radiocommunications \(Low Interference Potential Devices\) Class Licence 2015](#) was released for consultation in September 2020, which, with other changes, proposed new arrangements for wireless broadband services in the range 24.25–25.1 GHz. Consultation information about licensing arrangements in the 26 GHz band is available on the [ACMA website](#).

**Apparatus licensing**

On 26 August 2020, the ACMA made its final decisions on the [allocation process and technical framework](#) for the allocation of area-wide apparatus licences (AWLs) in both the wider 26 GHz band and the adjacent 28 GHz band. The first allocation round for AWLs (24.7–25.1 GHz and 27.5–30 GHz, Australia-wide) opened for applications on 4 November 2020.

AWLs share some of the features of spectrum licences, including being geographically limited and providing for flexible and scalable deployments. The features that differ from spectrum licences are the certainty of tenure and relative exclusivity.

**2.2.4 Incumbent apparatus licences**

There are very few apparatus licensees in the 26 GHz band areas re-allocated for spectrum licensing. The majority of these apparatus licences will end before the 26 GHz band auction commences. The ACMA generally does not intend to renew these licences, though all applications for renewal will be considered on their merits.

Bidders should note that all spectrum licences issued in the 26 GHz band will have a condition to protect incumbent services during the re-allocation period. At the end of

the re-allocation period, any incumbent apparatus licences will be cancelled automatically (see 2.2.4).

Consequently, there may be restrictions on deploying services in some locations and frequencies. Bidders should make their own assessment regarding the effect incumbent services may have on the utility of the different lots on offer.

### **2.2.5 Re-allocation period**

On 18 October 2019, the minister made the re-allocation declaration. A spectrum re-allocation declaration has the effect of cancelling apparatus licences in the spectrum to be re-allocated, at the end of the re-allocation period. The re-allocation declaration provides a re-allocation period of 3 years commencing on 15 November 2019. Any existing apparatus licences remaining in the 26 GHz band spectrum-licensed areas on the end date of 14 November 2022 will be automatically cancelled.

### **2.2.6 Re-allocation deadline**

The re-allocation declaration set the re-allocation deadline as the end of the day before the second anniversary of the start of the re-allocation period, which is 14 November 2021.

### **2.2.7 Spectrum reform**

On the day this guide was published, [the Radiocommunications Legislation Amendment \(Reform and Modernisation\) Bill 2020](#) (the Bill) had been passed by parliament. The provisions of the Act and the transitional provisions of the Bill have been designed to enable the ACMA to continue an allocation process that is underway with minimal disruption. If the ACMA identifies any impact on the matters described by the marketing plan, the ACMA will provide advice to prospective bidders on these matters.

Prospective bidders should also consider whether to obtain advice or other information on the changes proposed by the Bill, and how they may affect spectrum licences.

Although the Bill proposes to increase the maximum duration of spectrum licences to 20 years, the ACMA has decided that spectrum licences in the 26 GHz band will continue to have a duration of up to 15 years, even if the relevant provisions of the Bill commence before the auction.

The transitional provisions in the Bill preserve the re-allocation declaration made by the minister, including the re-allocation period and re-allocation deadline. When the Bill commences, the ACMA will become the decision-maker on any variations to the re-allocation declaration, subject to the limits set out in the Act. At this stage, the ACMA does not envisage making any changes to the arrangements that the minister has set out in the re-allocation declaration that would affect the interests of the incumbent licensees in the 26 GHz band. Interested parties should consider whether to obtain advice or other information on the changes proposed by the Bill, and how they may affect apparatus licences in the 26 GHz band.

Further information on spectrum reform is available by visiting the Department of Infrastructure, Transport, Regional Development and Communications at [www.communications.gov.au](http://www.communications.gov.au) or by emailing [spectrumreform@communications.gov.au](mailto:spectrumreform@communications.gov.au).

## 2.3 Auction manager

The ACMA has appointed an auction manager in accordance with section 22 of the allocation determination. The Manager of the Major Spectrum Allocations section of the ACMA has been appointed the auction manager for the 26 GHz band auction.

If, due to reasons associated with COVID-19 or other reasons, the appointed auction manager is unable to perform this role, arrangements have been developed so that the auction manager functions are able to be performed by another person with minimal disruption.

### 2.3.1 Responsibilities of the auction manager

The auction manager has several specific responsibilities for each stage of the auction.

#### ***Before the auction commences:***

- > setting and notifying bidders of the start date and time of the pre-bidding phase, and the first and second rounds of the primary stage
- > setting and notifying bidders of the bid increment percentage that will apply to the products in the first clock round of the primary stage
- > setting and notifying bidders of the eligibility requirement percentage to be applied in calculating the activity target during the first clock round of the primary stage
- > entering the allocation limits, provisional start demands and provisional MSR selections for each bidder, as recorded in the register of bidders in the auction system
- > correcting any errors in the applications or register of bidders
- > opening the auction system for the pre-bidding phase to allow bidders to confirm or change their start demands.

#### ***Primary stage:***

- > scheduling and notifying bidders of further rounds of the primary stage
- > providing information to bidders at the start and conclusion of each round, as listed in clause 8 of Schedule 1 to the allocation determination (for example, clock price, eligibility points, posted demand)
- > announcing the conclusion of bidding rounds
- > providing to each primary winner:
  - > the total number of lots allocated to them
  - > the total posted price for the allocated lots and the primary price to be paid by the primary winner for all allocated lots
- > providing to all bidders:
  - > the total number of primary winners
  - > the total number of lots of each product allocated to primary winners (for example, '6 lots were allocated to 3 winning bidders', not individual allocations per bidder)
- > announcing the conclusion of the primary stage.

#### ***Secondary stage:***

- > announcing which residual lots will be offered in the secondary stage (if any)
- > scheduling rounds of the secondary stage
- > setting and notifying bidders of the bid increment percentage that will apply to the residual lots in the first round of the secondary stage

- > providing bidders with information at the start and conclusion of each round as listed in clause 5 of Schedule 2 to the allocation determination (for example, the starting price, the total number of bidders)
- > announcing the conclusion of bidding rounds
- > provide each secondary winner:
  - > the total number of lots allocated to the secondary winner
  - > the residual price for the allocated lot of each product and the secondary price to be paid by the winner for the allocated lots
- > providing all bidders:
  - > the total number of secondary winners
  - > whether a lot of a product has been allocated to secondary winners
- > providing to each winning bidder in the primary and secondary stages, the sum of the primary and secondary prices of the lots won by that bidder
- > announcing the conclusion of the secondary stage.

**Assignment stage:**

- > announcing the anticipated start time and end time of each assignment round
- > announcing the product or products that will be the subject of each assignment round
- > determining a set of frequency range options available to successful bidders from the primary or secondary stages, in accordance with the rules outlined in clause 4 of Schedule 3 to the allocation determination
- > determining the winning assignment bids and prices for each product
- > providing to each winning assignment round bidder:
  - > the frequency ranges assigned to the bidder
  - > any assignment price for the frequency ranges assigned
- > announcing the conclusion of the auction.

**After the auction:**

- > notifying each winning bidder in writing that:
  - > the ACMA will announce or publish the names of winning bidders, the spectrum allocated to each winning bidder and the winning price for each bidder
  - > bidders' confidentiality obligation under the allocation determination continues until the ACMA announces or publishes the information
- > announcing to each winning bidder
  - > the number of lots of each product allocated to the winning bidder
  - > the frequency ranges assigned to the lots allocated to the winning bidder
  - > the winning price to be paid by the winning bidder
- > announcing to all bidders:
  - > the names of all winning bidders in the auction
  - > the frequency ranges for each product in relation to the lots allocated in the auction to each winning bidder
  - > the winning price to be paid by each winning bidder.

### 2.3.2 Discretionary powers

The auction manager's discretionary powers under section 54 and section 55 of the allocation determination include:

- > permitting a bidder to make an entry in the pre-bidding phase of the primary stage, or a bid in the primary, secondary or assignment stage by a method other than the auction system, if the auction manager is satisfied that the bidder is unable to make an entry or a bid using the auction system
- > permitting a bidder to make an entry in the pre-bidding phase of the primary stage, or a bid for a round in the primary, secondary or assignment stage, after the end time of the pre-bidding phase or round (but not after information about the outcome of the pre-bidding phase or round has been given to bidders) if the auction manager is satisfied that the bidder could not submit the bid during the round because of technical or communication problems
- > taking any of the following actions if the auction manager 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 after that round; or
  - > stop the current round of the auction and restart the round (for example, when the exceptional circumstances are resolved)
  - > cancel the results of one or more rounds and restart the auction from the point before those rounds
  - > cancel the results of all rounds of a stage and restart the auction from the first round of that stage
  - > stop the auction.

The auction manager may delegate any of the auction manager's powers and functions under the allocation determination to another person who is a member of the ACMA or a member of ACMA staff at Executive Level 1 or above.

If, due to reasons associated with COVID-19 or other reasons, the primary auction room is unable to be used, the ACMA will have an alternative auction room in another location with a full alternative auction team available at that location.

### 2.3.3 Communicating with the auction manager

Before the start of the auction, all contact with the auction manager should, in the first instance, occur using the contact details/methods set out in 7.2 in this guide.

During the auction, contact with the auction manager should occur through the electronic messaging facility within the auction system. Alternatively, if this is not appropriate to the query or situation, contact should occur through the email address or telephone number provided to registered bidders. The ACMA considers that the electronic messaging facility within the auction system should be the primary and default form of contact with the auction manager. Other forms should only be used in circumstances where the auction system was unable to be utilised (for example, if there was an internet or power failure).

# Part 2 – Participating in the auction

# 3. Pre-auction procedures and information

**This chapter provides an overview of various matters that should be considered prior to the auction, including:**

- > **registering to become a bidder in the auction including information about relevant forms, payments and deadlines**
- > **ACMA support for bidders**
- > **mock auctions for registered bidders**
- > **breaches of auction procedures**
- > **allocation limits**
- > **starting prices**

**Important warning: The information in this chapter is intended as a guide only. A potential applicant should not rely on this information alone but should carefully review and understand the content of the allocation determination in conjunction with reading this chapter.**

## 3.1 Review the AIP and monitor developments

Before applying to participate in the auction, prospective bidders should read and understand all the material in the AIP, including this auction guide, and the relevant legislative instruments and explanatory statements provided as attachments to this guide. Applicants should also seek their own expert advice on regulatory information and other matters.

In the lead-up to the auction, the ACMA will provide updates about auction developments and events using the methods outlined in Chapter 7. It is the responsibility of prospective applicants, applicants and registered bidders to ensure that they review these sources to receive all updated information and auction-related developments and events.

### 3.1.1 Confidentiality

Confidential information is defined in section 16 of the allocation determination. 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 provisional or proposed provisional start demands, start demands, bids or proposed bids, bidding strategy or lot valuations.

Applicants, bidders, 'related persons' and contractors who have knowledge of an applicant's or bidder's confidential information will be prohibited from disclosing confidential information about the allocation process to any person, except in specified circumstances. The confidentiality rules are in place to protect the integrity of the allocation process by prohibiting communications that could influence the allocation outcome. The rules are intended to guard against anti-competitive behaviour in the auction or other allocation processes and to complement the prohibition on cartel conduct contained in the Competition and Consumer Act.

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

- > to announce or publish that the bidder is participating in the auction
- > 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 the applicant or bidder, or a related person of that applicant or bidder
- > as authorised by the allocation determination or otherwise required by law.

The ACCC may request certain information from the ACMA regarding the auction, as specified in section 74 of the allocation determination. This includes information about application forms, associates of applicants and bidding during the auction. In these circumstances, the ACMA must provide the requested information to the ACCC, if it has that information.

Disclosure of confidential information is not prohibited if the information is publicly available and was not made available because of a breach of the confidentiality rules.

Applicants are required to complete a deed of confidentiality as part of the bidder registration process. Each 'related person' of an applicant or bidder 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 the applicant or bidder) also be required to complete a deed of confidentiality. A contractor of an applicant or bidder who has knowledge of

the applicant's or bidder's confidential information must also give the ACMA a deed of confidentiality (subject to some exceptions).

By completing the deed, applicants, their 'related persons', and contractors will be agreeing not to disclose confidential information before their confidentiality obligation has ceased to apply. The precise point at which the rules cease to apply to an applicant, bidder, their 'related persons' and contractors will depend on whether the applicant or bidder is a winning bidder, is not a winning bidder, or withdraws from the auction.

Applicants, bidders, their 'related persons' and contractors 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 2 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. Applicants or bidders who breach the confidentiality rules may be subject to the provisions in section 75 of the allocation determination.

**A registered bidder's participation in the auction is not, of itself, confidential information.** This means that registered bidders may publicly state that they are participating in the auction (see also paragraph 17(2)(g) of the allocation determination).

### 3.1.2 Register to bid in the auction

Parties wishing to participate in the auction will need to be registered as a bidder. The ACMA will only register an applicant as a bidder if the application and eligibility nomination requirements are fulfilled within the applicable deadlines. An applicant will be entitled to participate in the auction if:

**before the application deadline on 2:00 pm, 21 January 2021**, they:

- > give the ACMA a completed application form (Form 1)
- > give the ACMA a deed of acknowledgement executed by the applicant (Form 2)
- > give the ACMA a deed of confidentiality executed by the applicant (Form 3)
- > pay the application fee (\$10,000); and

**before the eligibility deadline on 2:00 pm, 9 March 2021**, they:

- > give the ACMA a completed eligibility nomination form (Form 7)
- > pay an eligibility payment, or give a deed of financial security, to the ACMA on behalf of the Commonwealth, or a combination of both.

Within their eligibility nomination form, applicants need to specify:

- > their provisional start demand (in lots) for each product
- > their provisional MSR selection (Y/N) for each product
- > their maximum eligibility points based on their provisional start demands.

When completing the eligibility nomination form, applicants must ensure their provisional start demands do not exceed:

- > the allocation limits for each product or any of the combined products
- > supply for each product.

An applicant secures their maximum eligibility points by making an eligibility payment to the ACMA, giving the ACMA a deed of financial security (**Form 8**), or a combination of both, for an amount calculated in the manner described in subsection 36(2) of the allocation determination. If a deed of financial security is given to the ACMA by email, the original deed must be received by the ACMA no later than 3 working days after the eligibility deadline (or if the ACMA agrees to a later time, the agreed time).

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 maximum eligibility points
- > a guide to calculating the eligibility payment required to secure the nominated maximum eligibility points. It is calculated based on 10% of the value of the nominated lots at the starting prices. GST is not payable on an eligibility payment.

If an applicant provides an eligibility payment or deed of financial security for an amount less than the amount required to secure their maximum eligibility points, subsection 36(3) of the allocation determination allows the applicant an opportunity to 'top up' its eligibility payment or deed of financial security. If the applicant does not take that opportunity, its provisional start demands and maximum eligibility points may be reduced, or it may be taken to have withdrawn its application.

Subject to the application requirements being met by applicants, the ACMA will contact registered bidders after the eligibility deadline on **2:00 pm, 9 March 2021** 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.

If necessary and possible, the ACMA will 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.

### **3.1.3 Affiliations**

To ensure the auction is conducted in a competitive and fair manner that complies with any allocation limits that may be imposed by the minister, applicants who are affiliated will not be permitted to participate in the auction as separate bidding entities. Two bidders will be affiliated if one is an 'associate' of the other, within the definition set out in the allocation determination, or if they have an associate in common (for example, a director in common).

Applicants are required to complete an associates form as part of their application form (**Form 1**). If the applicant is a body corporate, they must complete the Associates form – body corporate (**Form 4**); and if the applicant is an individual, they must complete the Associates form – individuals (**Form 5**).

When completing the relevant associates form, if there is insufficient space to provide information in a particular category the applicant can supply the additional information as a list annexed to the required form. The annexure should clearly specify:

- > the applicant's name
- > the name of the form being completed
- > the part/s of the associates form being addressed
- > all the required information for that specific part/s.

Alternatively, an applicant may provide the information in a different format than specified in the form. For example, if their associates' information can be obtained from a database or similar program, they may provide the information according to the database's format. However, applicants should ensure that:

- > all of the required information is provided
- > their associates' information is provided in a searchable format – that is, an electronic format rather than a scan of a physical copy.

After the application deadline, the ACMA will give each applicant details about the identity of all other applicants and persons identified as the associates of other applicants. The ACMA will ask for each applicant to make a statutory declaration (**Form 6**) stating whether the applicant is or is not affiliated with another applicant, and if so, identifying the other applicant and giving details of the affiliation.

The applicant's statutory declaration must be given to the ACMA by a stated date at least 10 working days after being notified about affiliations (subsection 31(2) of the allocation determination). If the ACMA does not receive the applicant's statutory declaration by the deadline, then the applicant is taken to have withdrawn its application (section 32 of the allocation determination).

If the ACMA is satisfied that 2 or more applicants are affiliated, the ACMA must notify the applicant in writing and tell them on what basis the ACMA is satisfied the applicants are affiliated. The ACMA will give the affiliated applicants the opportunity to withdraw their application/s in accordance with subsection 33(1) of the allocation determination and submit a new application in accordance with section 34 of the allocation determination.

#### Reporting affiliations during the auction period

There is a regulatory requirement to report affiliations during the auction period. Sections 57 to 62 of the allocation determination set out the procedures for reporting affiliations to the ACMA during the auction period. If a bidder believes that it may be an affiliate of another bidder, the bidder must immediately tell the ACMA in writing the identity of the other bidder and give details of the potential affiliation.

If the ACMA has reason to believe that 2 or more bidders are affiliated before the end of the secondary stage (or the primary stage if there is no secondary stage), the ACMA will give each primary and secondary winner details of all other primary and secondary winners and ask them to make a statement about whether they are an affiliate of another primary or secondary winner and, if so, give details of the affiliation. The ACMA must state a deadline, at least 10 working days after the date of the request, before which the statement must be received by the ACMA.

If the ACMA does not have reason to believe that 2 or more bidders are affiliated before the end of the secondary stage (or the primary stage if there is no secondary stage), the auction proceeds directly to the assignment stage without an affiliates check.

### 3.1.4 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.<sup>5</sup> An applicant that has withdrawn will not be re-admitted to the auction. In some circumstances, the allocation determination provides that an applicant may be taken to have withdrawn its application.

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. The ACMA will notify withdrawn applicants that their confidentiality obligation has ended as soon as practicable after the end of the auction period. As previously outlined, withdrawn applicants will not be refunded their application fee.<sup>6</sup>

### 3.1.5 ACMA confirms bidder registration

If the requirements of the registration process have 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 44 of the allocation determination
- > the ACMA's email address and telephone number available for registered bidders to use
- > information about accessing and using the auction system – for example, bidders are given a user guide 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
- > information about the emergency backup bidding arrangements 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.

## 3.2 Bidder support and mock auctions

In addition to this auction guide and the allocation instruments attached, the ACMA will also provide bidders with the following support for using the auction system:

- > **Auction System Bidders' User Guide** – to be made available to registered bidders after the eligibility deadline.
- > **Mock auctions** – following the registration process, the ACMA will provide details to registered bidders about scheduling mock (trial) auctions and provide any relevant material and information required to participate. It is expected at least one mock auction per bidder will be held from mid- to late-March 2021. Registered bidders will be required to assemble their own bidding teams. ACMA staff will only participate in mock auctions as the auction manager, not as a bidder or in bid teams.

This will give each bidder the opportunity to practice using the auction system from their own locations, in a simulated auction environment. The mock auctions will use the same lot configuration and starting prices as the live auction, and bidders will be free to bid as they wish. Bidders will also be able to test the pre-bidding phase.

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<sup>5</sup> If the ACMA vary starting prices in accordance with section 37 of the allocation determination, the eligibility deadline will be varied (see 3.5 in this guide).

<sup>6</sup> An application fee may be refundable if the applicant has withdrawn after the ACMA has varied starting prices (as described in 3.5)

### 3.3 Breaches of auction procedures

Section 75 of the allocation determination will apply in cases where the ACMA is satisfied that an applicant or bidder (or where a related person or contractor of an applicant or bidder) has breached a provision of the allocation determination. If the ACMA makes such a decision:

- > the ACMA may retain an eligibility payment paid, or enforce a deed of financial security given by the applicant or bidder
- > in accordance with section 76, the applicant or winning bidder must not be issued a licence for any spectrum they won in the auction.

For example, the ACMA may make such a decision if it is satisfied that an applicant or bidder (or one of an applicant's related persons or contractors) breached the confidentiality rules during the auction period in a way that affected the outcome of the auction. The ACMA may also make such a decision if, after the end of the auction period, a winning bidder (or one of their related persons or contractors) breaches the confidentiality rules before their confidentiality obligation comes to an end. These examples do not limit the circumstances in which the ACMA may take enforcement action.

Section 77 of the allocation determination provides that where the ACMA acts under section 75, the affected applicant or bidder may, within a year of being notified by the ACMA about the decision, apply to the Federal Court for the return of all or part of any amount retained by the ACMA.

### 3.4 Allocation limits

Allocation limits (also referred to as spectrum caps or competition limits) have the effect of capping the total amount of spectrum that a single bidder can acquire as a result of the allocation of spectrum licences by any allocation process under section 60 of the Act. The [spectrum licence limits direction](#) sets the limits imposed on the allocation of spectrum licences in the 26 GHz band.

The spectrum licence limits direction specifies that no person or specified group of persons may as a result of the allocation of a spectrum licence use more than an aggregate of 1 GHz of the 26 GHz band in each designated area, as defined in the spectrum licence limits direction. Accordingly, bidders may only acquire up to 1 GHz in each designated area. In Greater Perth, Hobart and Margaret River, the lower and upper products are treated as a single product only for the purposes of applying the allocation limit of 1 GHz. Bidders may not exceed the 1 GHz allocation limit across both the lower and upper products. For all other products, bidders may not exceed the 1 GHz allocation limit for each single product.

Allocation limits continue to apply in the secondary stage of the auction. Bidders will not be eligible to make an increase bid on lots where they have already reached their allocation limit for that product in the primary stage.

### 3.5 Varying starting prices

The allocation determination provides the ACMA with the flexibility to vary the starting prices up until 5 working days before the eligibility deadline. We expect that this would only occur in unusual or necessary circumstances, such as where there is a significant change in the market after we set the starting prices. We appreciate that this introduces uncertainty for potential applicants when deciding whether to participate in the auction and developing their bidding strategies. Therefore, if starting prices are varied, the allocation determination allows for:

- > existing applicants to withdraw their applications and be refunded their application fee, or to update their applications
- > new persons to apply to participate in the auction.

If starting prices are varied, lot ratings may also be varied to reflect any changes to the relative value of lots.

If we vary starting prices, then we will undertake the following steps as outlined in section 37 of the allocation determination:

- > set a new application deadline of 20 working days after the date of the variation
- > set an 'extended eligibility deadline' of at least 20 working days after the previously set eligibility deadline
- > publish on our website the varied starting prices (and varied lot ratings if applicable), the new application deadline, the extended eligibility deadline and an updated eligibility nomination form, which includes the updated starting prices and, if applicable, varied lot ratings.

For **existing applicants**, we will notify them in writing that:

- > they may update their application form before the new application deadline
- > they must give the ACMA an updated eligibility nomination form before the extended eligibility deadline. Bidders who do not provide an updated eligibility nomination form are taken to have withdrawn their application
- > if they increase the maximum eligibility points on their updated eligibility nomination form, they must make an additional eligibility payment or update their deed of financial security to secure the additional maximum eligibility points. Failing to provide an additional eligibility payment or updated deed of financial security will mean that the bidder may have their provisional start demands reduced according to subsection 36(4) of the allocation determination.

If we vary starting prices, we must also publish a notice on our website inviting **new applicants** to the auction. A person may apply to become a registered bidder by:

- > before the new application deadline, giving a completed application form, deed of acknowledgement and deed of confidentiality, and paying the application fee to the ACMA
- > before the extended eligibility deadline, giving a completed updated eligibility nomination form and paying the necessary eligibility payment, or providing a deed of financial security (or a combination of both) to the ACMA.

If any new persons apply, the ACMA will undertake the affiliates check process similar to that described in 3.1.6 for the purposes of enforcing the allocation limits.

## 4. During the auction

**This chapter relates to the auction itself; that is, from the start of the pre-bidding phase through to the close of the auction at the end of the final assignment round.**

**This includes information about:**

- > **the auction system including system requirements**
- > **the ESMRA auction format.**

## 4.1 Auction system

### 4.1.1 Accessing and using the auction system

Bidders will use the auction system from their own computers 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 transport layer security (TLS) technology to ensure all transmissions are secure.

The auction system will employ 2-factor authentication, using Time-based One-Time Password (TOTP) algorithm. To access the auction system, users will enter their username and password, as well as a validation code generated using a smartphone app and the TOTP algorithm. This additional method of verifying the user's identity adds an extra layer of security to the conduct of the auction.

After the eligibility deadline, the ACMA will give registered bidders further information about 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) – instructions about how to access and log-in to the auction system internet site, place bids, view schedules and results of rounds, download bidder files, 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 must set up a password to login to the auction system. They will receive the information necessary to set-up TOTP apps on their smartphones to generate verification codes for 2-factor authentication.
- > Instructions about how to use the emergency back-up bidding arrangements if a bidder is unable to submit a bid using the auction system.

Bidders must access and use the auction system 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. The information provided to registered bidders for accessing the auction system is confidential information within the meaning of the allocation determination. Bidders are also required by sections 17 and 48 of the allocation determination to keep the items mentioned above 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 section 75 of the allocation determination.

### 4.1.2 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 1.2 security. The supported browsers include recent versions of Google Chrome or Microsoft Edge. The User Guide will contain details of the recommended configuration for user equipment.

The auction system may run on PC configurations other than the ones 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. 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 cyber-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 during the auction if their primary internet connection fails. For example, bidders could arrange to have a mobile internet service available for use if their normal fixed internet 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.

## 4.2 ESMRA auction format

The Enhanced Simultaneous Multi-Round Ascending (ESMRA) auction will be conducted over the internet using secure auction system software. The ESMRA format being used for the 26 GHz band auction is a 3-stage auction. This chapter explains how each of the 3 stages of the ESMRA format will be used to allocate spectrum lots to winning bidders.

Lots are like the 'building blocks' of spectrum space. The auction process allocates lots to the bidders that value them most highly and bid accordingly to win those lots. Lots that are sold to a bidder may be combined after the auction by the ACMA to form a spectrum licence.<sup>7</sup> The spectrum lots on offer in the auction are defined in the marketing plan.

The ESMRA auction format consists of 3 stages:

1. Primary stage – a clock auction offering frequency-generic lots to determine the quantity of spectrum won by each bidder. The primary stage includes a pre-bidding phase where bidders may confirm or, subject to some limits<sup>8</sup>, change their provisional start demands and MSR selections as nominated on their eligibility nomination form.
2. Secondary stage – if required, for the sale of any single lot of a product that was unallocated in the primary stage.
3. Assignment stage – for assignment of specific frequencies to lots allocated in the primary and secondary stages.

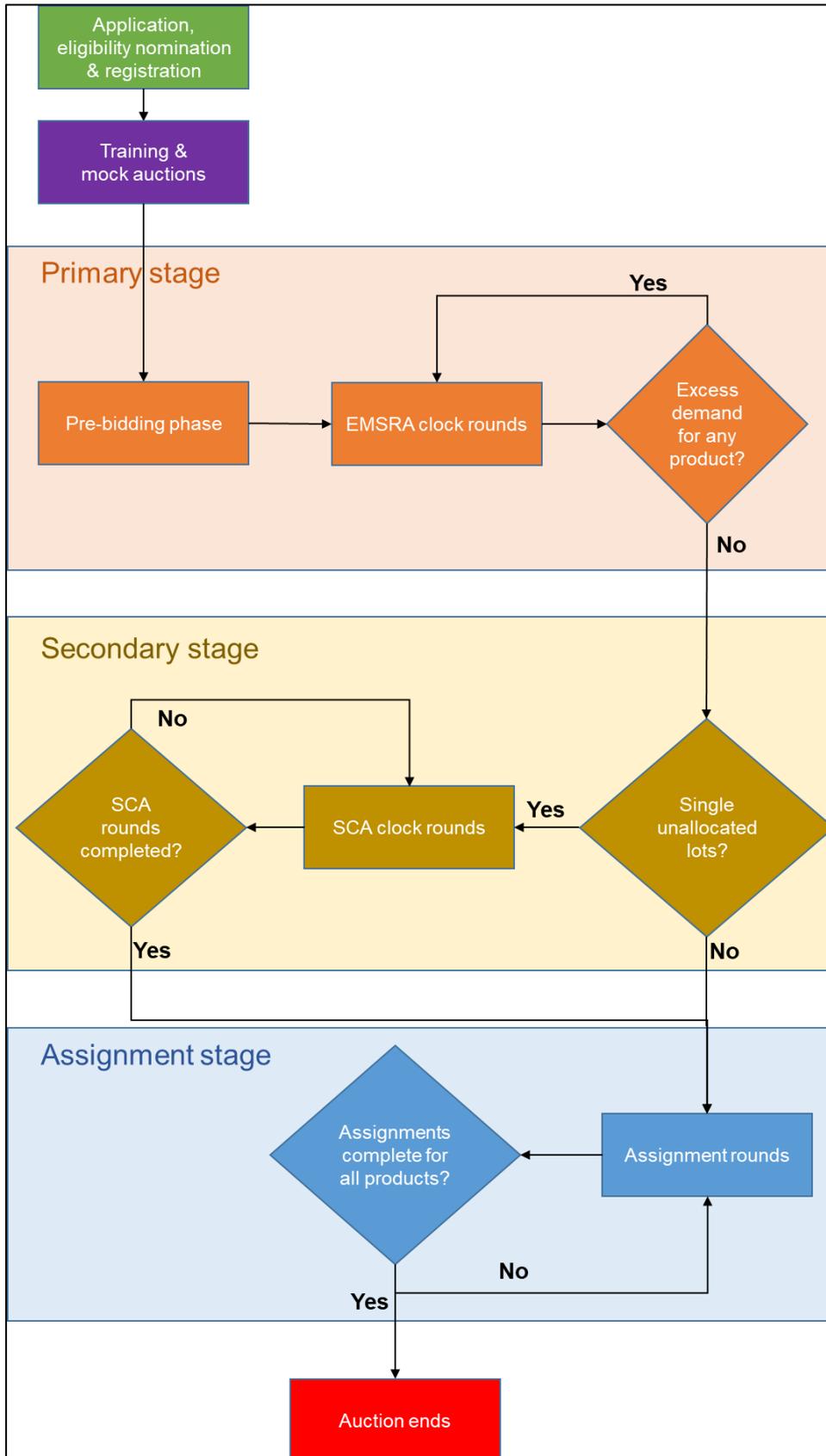
Figure 5 below shows an overview of the key elements of the ESMRA auction process. Each stage of the auction is described in detail with working examples in this chapter.

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<sup>7</sup> For the 26 GHz band auction, all spectrum licences may be issued in the single licence format. That is, for each winning bidder, spectrum won at auction may be issued in one licence.

<sup>8</sup> These limits are specified in subclauses 3(4) and 3(6) of Schedule 1 to the allocation determination.

Figure 5: Overview of the ESMRA auction process



#### **4.2.1 Procedures if there is only one registered bidder**

If there is only one bidder in the auction, then the procedures set out in section 52 of the allocation determination apply. These are:

- > there will be a pre-bidding phase in which the bidder may confirm or change their start demands and MSR selections
- > there will be one clock round in the primary stage using the auction system, in which the bidder may make a bid for the lots of each product
- > the assignment stage will be conducted as soon as possible after the primary stage to enable the bidder to indicate the frequency ranges they wish to have assigned for each product. The assignment stage prices will be zero in accordance with subclause 8(2) of Schedule 3.

#### **4.2.2 Primary stage**

##### **4.2.2.1 Pre-bidding phase**

The pre-bidding phase is a new feature introduced by the ACMA for the 26 GHz band auction. It enables bidders to confirm or change their start demands and MSR selections in the auction system close to the first clock round of the auction.

The pre-bidding phase will be made available to registered bidders via the primary stage interface in the auction system. The interface will be pre-populated with the provisional start demands and provisional MSR selections specified by bidders in their eligibility nomination form.<sup>9</sup> Access to the auction system will be available for at least 3 hours, within 48 hours of the start of the first clock round of the auction. In the pre-bidding phase, bidders may change or confirm their start demand and MSR selections if they wish to do so.

If a bidder does not participate in the pre-bidding phase, then their start demands and MSR selections for the first clock round of the auction will be the same as those recorded in the register of bidders.<sup>10</sup>

The following rules will apply for the pre-bidding phase:

- > A bidder cannot increase their total start demand beyond the maximum eligibility points specified in their eligibility nomination form, as secured by their eligibility payment or deed of financial security.
- > If the changed start demand is less than the maximum eligibility points specified in the eligibility nomination form, no refunds of eligibility payments or updates to deeds of financial security will be processed before the auction concludes. The ACMA will process any cancellations of deeds of financial security and refunds of eligibility payments after the auction.
- > A bidder's eligibility in the first clock round of the primary stage is based on their start demand as specified in the register of bidders or as changed in the pre-bidding phase.

Registered bidders will have the opportunity to trial the pre-bidding phase during their mock auctions. The auction manager will announce the timing and duration of the pre-bidding phase, together with the auction schedule, to registered bidders.

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<sup>9</sup> References to the eligibility nomination form also apply to an updated eligibility nomination form, if required.

<sup>10</sup> This will be the same as the provisional start demands on their eligibility nomination form or updated eligibility nomination form, unless their start demands have been reduced due to an insufficient eligibility payment or deed of financial security, in accordance with subsection 36(4) of the allocation determination.

#### 4.2.2.2 Bidding overview

The primary stage (also known as the clock stage) is a form of simultaneous multiple-round ascending (SMRA) auction process. A bidder's start demands are the number of lots of each product specified in the pre-bidding phase, or their eligibility nomination form if they did not participate in the pre-bidding phase. **A bidder's start demands are binding**, in that it cannot be withdrawn and can only be reduced during bidding rounds if there is excess demand for the relevant product. If aggregate start demand is less than supply for a certain product and remains so until the conclusion of the primary stage, the bidder will be liable to pay the starting price for their start demand for that product.

All products are offered simultaneously. Bidding occurs through a series of rounds that progress according to a clock function, with a defined start time, end time and recess period until the next round.

During a round, bidders may bid on all products available in the auction, subject to the allocation limits (specified in 3.4 in this guide) and sufficient eligibility. Bids may be changed at any time during the round until the nominated end time of the round.

ESMRA auctions have no concept of a 'standing high bidder' or of 'holding lots'. The key concept is demand and supply. For a given product, the price will continue to increase for each round while demand exceeds supply. At the end of a round, the auction system processes all bids from all bidders. If demand exceeds supply for any product, the primary stage continues to the next round. The primary stage concludes when there is no excess demand across all products.

#### 4.2.2.3 What is a bid?

In ESMRA auctions, a bid is **a request to change the bidder's demand at a price**. It is neither solely a price (for example, \$100) nor solely an expression of demand (for example, 8 lots in Adelaide). It is a combination of a demand change and a price. For example:

- > 'I want to increase my demand in Adelaide by 2 lots at \$105'; or
- > 'I want to decrease my demand in Canberra by one lot at \$108'.

There are 3 kinds of bids in ESMRA auctions:

1. **maintain bid** – maintain current demand for a product at the posted price for the clock round
2. **increase bid** – increase current demand by  $n$  lots at a price specified by the bidder
3. **decrease bid** – decrease current demand by  $n$  lots at a price specified by the bidder.

#### 4.2.2.4 Product prices

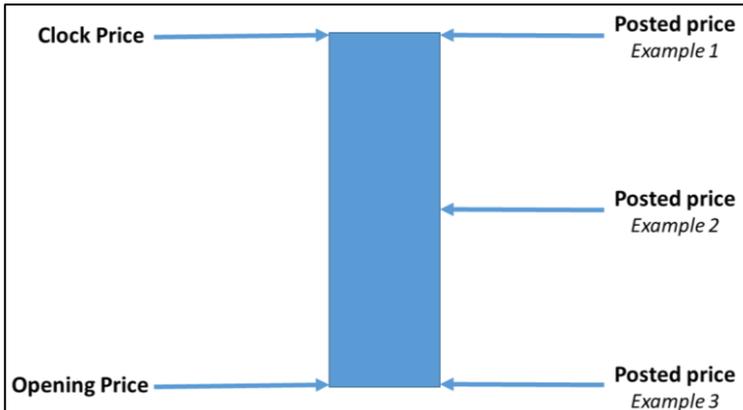
Within a clock round in the primary stage, there are 3 defined prices for lots:

1. **opening price** – price at the start of the clock round
2. **clock price** – opening price plus the bid increment percentage (for example, 10%)
3. **posted price** – calculated at the end of the clock round, as follows:
  - i. if demand > supply, then posted price = clock price; or
  - ii. if demand ≤ supply, then posted price = the highest price among all the bids for the product for which a decrease bid by any bidder was applied (partially or in full); or

- iii. if demand  $\leq$  supply and no decrease bid was applied during the clock round, then posted price = opening price.

The auction system displays the opening price and clock price to all bidders at the start of a clock round, and the posted price at the end of the clock round. The posted price for a clock round becomes the opening price for the next clock round. These prices and example scenarios are shown in Figure 6 below.

**Figure 6: Price points for ESMRA primary stage clock round**

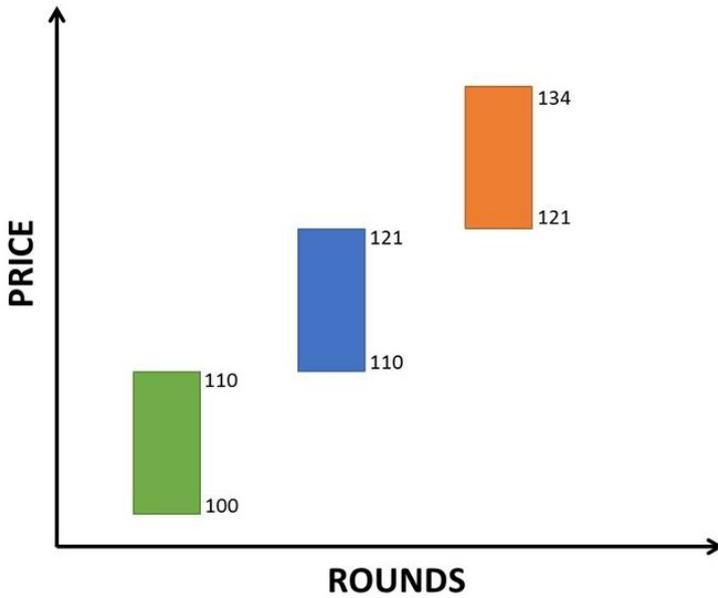


Consider the scenario where the opening price for the clock round is \$100, the bid increment percentage is 10%, supply is 12 lots and aggregate demand is 15 lots. The clock price =  $\$100 + 10\% = \$110$ .

*Example 1:*

In Example 1 shown in Figure 7 below, aggregate demand is 15 lots and only maintain bids are applied during the clock round. Therefore, end round demand is 15 lots, demand is greater than supply and the posted price = clock price = \$110 (round 1 is indicated in the green block). If aggregate demand is greater than supply in subsequent clock rounds, then the posted price would keep increasing with the clock price by the 10% bid increment percentage, to \$121 in round 2 (blue block) and \$134 in round 3 (orange block).

**Figure 7: Example 1: ESMRA primary stage clock rounds where demand > supply**



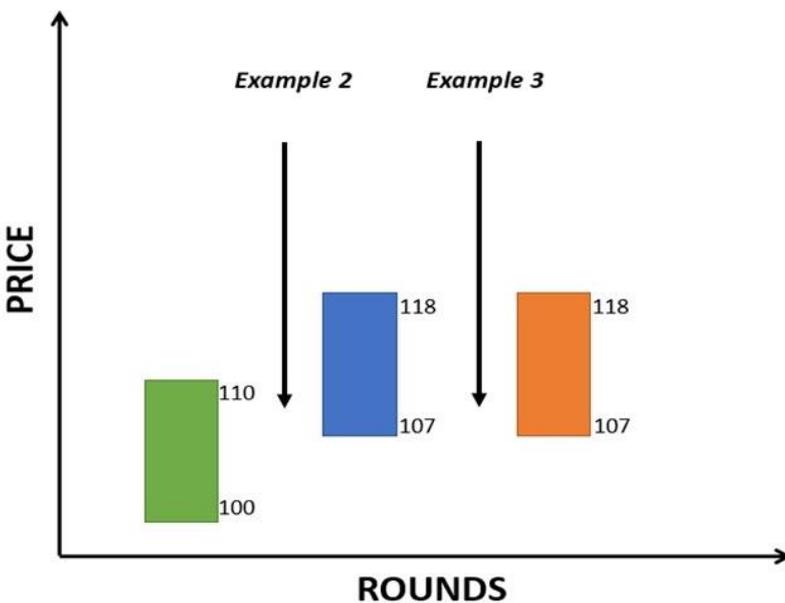
**Example 2:**

As shown in Figure 8 below, a decrease bid of 3 lots at \$107 causes aggregate demand to equal supply at \$107. Therefore, the posted price = \$107. The clock price for the next round is  $\$107 + 10\% = \$118$ .

**Example 3:**

Figure 8 below also shows the clock round immediately following Example 2. Aggregate demand is now 12 lots, the opening price is \$107 and only maintain bids are applied during the clock round. Therefore, demand  $\leq$  supply and no decrease bids were applied during the clock round. Therefore, the posted price remains at \$107. The clock price for the next round is  $\$107 + 10\% = \$118$ .

**Figure 8: Examples 2 and 3: ESMRA primary stage clock rounds, where demand = supply**



Example 3 demonstrates how the price of a product ‘pauses’ when demand  $\leq$  supply and no decrease bids were applied. However, bidding on the product remains open until there is no excess demand across **all** products. The price for this product may increase in later clock rounds if increase bids on the product cause demand to exceed supply.

The bid **price point** is an important concept in ESMRA, especially in bid processing. It defines the percentage between the opening price and the clock price at which a bid is placed. In Example 2 above, the decrease bid at \$107 equates to a 70% price point, because it is 70% of the difference between \$100 (opening price) and \$110 (clock price). All bids for all products in a clock round are processed in ascending order of their price points (see bid processing section below).

#### 4.2.2.5 Bid validity

A primary stage bid is valid and will be accepted by the auction system if it satisfies the following criteria:

- > the bid price is not less than the opening price and not greater than the clock price for the clock round
- > the bid price is a multiple of one hundred dollars
- > the resulting demand from the bid is between zero and the supply of spectrum lots for a given product
- > the resulting demand from the bid does not violate the allocation limits, as they apply to the bidder, for a given product.
- > the bid is received between the start and end times of the clock round
- > the bid does not result in a violation of the MSR (see 4.2.2.9)
- > the bid does not result in available eligibility points being exceeded (see 4.2.2.6).

If a bid is not valid, the auction system will not accept the bid, will display an error message immediately and will ask the bidder to change their bid accordingly.

Partial application of decrease bids occurs when the demand reduction of the bid is greater than excess demand for the product at the time the bid is processed. For example, consider where supply is 12 lots and aggregate demand is 14 lots for the Adelaide product. A bidder makes a decrease bid of 3 lots. Since excess demand is only 2 lots, a reduction of 2 lots is applied, and the remaining one lot decrease bid is left in the bid-processing queue. If an increase bid by another bidder is subsequently applied at a higher price point, the remaining one-lot decrease bid may be applied later.

At the end of a clock round, the auction system undertakes the following actions:

- > places all increase bids and decrease bids for all products in the bid processing queue, in ascending order of price point
- > resolves price-point ties using a pseudo-random process
- > processes bids according to the following algorithm:
  - 1) processes each bid in the queue, starting with the first bid, as follows:
    - a) if applied, remove from queue and return to 1)
    - b) if partially applied, leave remainder of bid in queue and return to 1)
    - c) if rejected, leave bid in queue and process next bid
  - 2) stops processing bids if a bid is rejected and there is no next bid, or there are no bids left in the queue

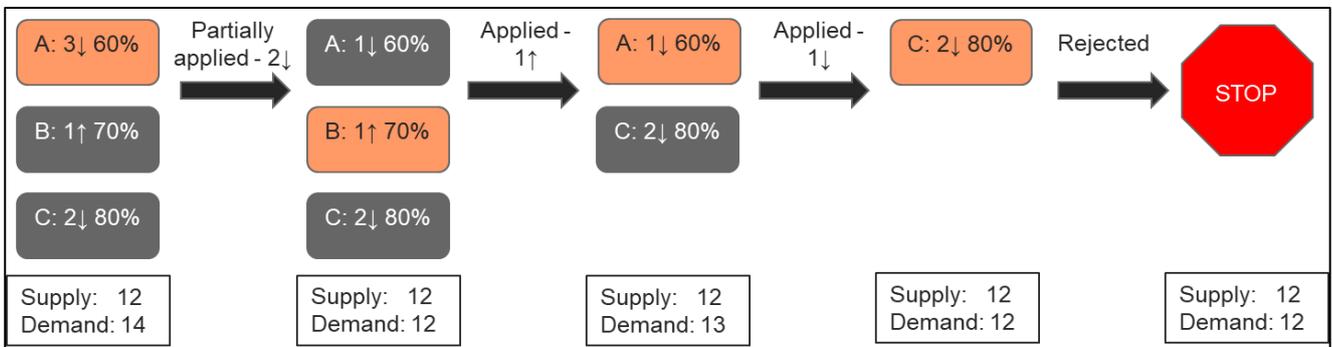
- 3) removes all remaining bids from the queue before the next clock round
- > calculates the posted price and posted demand for each product
- > calculates the eligibility points of each bidder for the next round.

As an example, consider an extension to the scenario above in Adelaide, where supply is 12 lots and aggregate demand is 14 lots at the start of a clock round. The opening price is \$100 and clock price is \$110. The following 3 bids are received for Adelaide during the clock round:

- > Bidder A: decrease 3 lots at \$106 (60% price point)
- > Bidder B: increase one lot at \$107 (70% price point)
- > Bidder C: decrease 2 lots at \$108 (80% price point).

At the end of the clock round, bid processing progresses, as shown in Figure 9 below.

**Figure 9: ESMRA bid processing example**



#### 4.2.2.6 Eligibility points

The operation of eligibility points in ESMRA is similar to a standard SMRA auction. Bidders can bid on any product, or combination of products, up to their nominated limit. This limit is expressed as ‘eligibility points’ – a representation of the lots and their relative value that the bidder seeks to win. Bidders cannot bid on lots in such a way that their bidding activity would exceed their eligibility points.

Applicants are required to calculate their maximum eligibility points in their eligibility nomination form, based on their provisional start demands. Applicants must make an eligibility payment ahead of the auction to secure their maximum eligibility points. If a registered bidder changes their provisional start demands in the pre-bidding phase, their eligibility points will be changed accordingly.<sup>11</sup> The eligibility points at the end of the pre-bidding phase are taken to be the initial eligibility points for the first clock round of the primary stage.

#### 4.2.2.7 Lot ratings

Lot ratings are an estimation of the relative value of the different lots on offer, measured in eligibility points. For example, a product with a lot rating of 60 is approximately 3 times more valuable than another product with a lot rating of 20. They are an important part of the efficiency of the auction because they facilitate switching demand between different products and reduce the opportunity for strategic bidding.

<sup>11</sup> In the pre-bidding phase, amendments to provisional start demands must not be greater than the maximum eligibility points specified in their eligibility nomination form and must satisfy the allocation limits that apply (see 4.2.2.1).

The lot ratings are set out in Table 4, Chapter 2 of this guide. An applicant's maximum eligibility points can be calculated by:

**Maximum eligiblity points**

$$= \text{sum over all products of } \{ \text{product lot rating} \\ \times \text{no. of nominated lots} \}$$

If a bidder changes their start demands (no. of nominated lots) in the pre-bidding phase, then their initial eligibility points are calculated according to the same formula.

For example, if a bidder has nominated the following products and lots in the pre-bidding phase:

- > Canberra: 3 lots at 800 points/lot
- > Sydney: 2 lots at 10,000 points/lot
- > Townsville: 5 lots at 300 points/lot

then, their initial eligibility points =  $(3 \times 800) + (2 \times 10,000) + (5 \times 300) = 23,900$ .

The maximum eligibility points nominated in a bidder's eligibility nomination form determines the amount of the eligibility payment, deed of financial security or combination of both that a bidder must make or give to the ACMA (see section 3.1.4).

The initial eligibility points as calculated in the pre-bidding phase must not exceed a bidder's maximum eligibility points in their eligibility nomination form. These initial eligibility points apply in the first clock round of the primary stage.

As noted in section 3.5 above, if we vary the starting prices under section 37 of the allocation determination, we may also vary the lot ratings.

#### 4.2.2.8 Activity rule

ESMRA auctions have a global activity rule similar to standard SMRA auctions, which is used to improve price discovery and maintain auction progress. A bidder's activity is defined as the total eligibility points for the products for which they have expressed demand. Note that eligibility points can only be maintained or decreased as the primary stage progresses. Once decreased, eligibility points cannot be regained in future clock rounds.

The activity rule restricts a bidder's current set of bids to be no larger (in an 'eligibility point' sense) than any of its previous sets of bids. Each bidder must therefore maintain a level of bidding activity if it wants to continue with that level of eligibility later in the auction. In doing this, the activity rule promotes meaningful bidding and price discovery.

Before the auction, the auction manager will set an eligibility requirement percentage (ERP), which is used to calculate the activity target for each clock round. In a given clock round, a bidder's activity must be at least the ERP (for example, 90%), or their eligibility points will be reduced for the next clock round and all subsequent clock rounds.

Due to partial application of bids, a bidder's activity at the end of the clock round (**bids processed activity**) could be lower than the activity calculated based on bids placed by the bidder in that clock round (**bids placed activity**). To ensure that bidders are not disadvantaged when their bids are partially applied, and their resultant activity is lower than expressed in their bids, their eligibility points for the next clock round are calculated based on the higher of the bids placed activity (activity for bids for all

products placed during the clock round) and the bids processed activity (activity after bid processing at the end of the clock round).

The eligibility for the next clock round ( $n+1$ ) is calculated as follows:

$$\text{Eligibility } (n + 1) = \min \left\{ \text{Eligibility } (n), \frac{\max (\text{bids processed activity}, \text{bids placed activity})}{ERP} \right\}$$

For example, say the ERP is 90% and a bidder has 10,000 eligibility points at the start of clock round  $n$ . Their end-of-round activity must be  $\geq 9,000$  points ( $10,000 \times 0.9$ ) to maintain their eligibility at 10,000 points for the next clock round.

During clock round  $n$ , say the bidder makes the following bids to switch demand from Canberra to Adelaide. Maintain bids are made for all other products:

- > Canberra lot rating 800 points/lot – decrease bid 3 lots  $\rightarrow$  2,400 points eligibility reduction
- > Adelaide lot rating 2,400 points/lot – increase bid one lot  $\rightarrow$  2,400 points eligibility increase.

Say the Canberra decrease bid is partially applied due to insufficient aggregate demand and leads to a posted decrease of 2 lots (1,600 points eligibility reduction). There is insufficient eligibility to apply the increase bid in Adelaide because their eligibility would exceed 10,000 points, so it is rejected. If end-of-round activity were calculated solely on the posted demand, the bidder's end-of-round activity would be decreased by 1,600 points to 8,400 points. However, the activity based on the expressed demand (bids placed activity) is 10,000 points. The end-of-round activity is therefore 10,000 points.

Therefore, their eligibility for clock round ( $n+1$ ) is:

- > eligibility ( $n+1$ ) =  $\min [10,000, (10,000/0.9)] = \min [10,000, 11,111] = 10,000$  points.

If the same bidder made a decrease bid of 4 lots in Canberra (fully applied) without an increase bid in Adelaide, their end-of-round activity is  $10,000 - (4 \times 800) = 6,800$ . Their eligibility for clock round ( $n+1$ ) is:

- > eligibility ( $n+1$ ) =  $\min [10,000, (6,800/0.9)] = \min [10,000, 7,556] = 7,556$  points.

The ERP will be set by the auction manager, who will consult with registered bidders on the ERP and other auction parameters closer to the auction. Note that the auction manager may change the ERP during the auction, after consulting with registered bidders.

During clock rounds, the auction system prevents a bidder from making bids if their activity would exceed their eligibility points, assuming all their bids are fully applied. In practice, this affects increase bids. If a bidder does not have sufficient eligibility to make an increase bid for a particular product, a bidder would need to make a decrease bid of equal or greater eligibility for another product.

#### 4.2.2.9 Minimum spectrum requirement (MSR)

The MSR is an optional feature designed to ensure bidders are not left with an amount of spectrum that they may consider to be uneconomic. For the 26 GHz auction, the ACMA has decided to set the MSR at **2 lots across all products**. Therefore, a bidder who selects the MSR is prevented from being left with a single lot in a product they are bidding for.

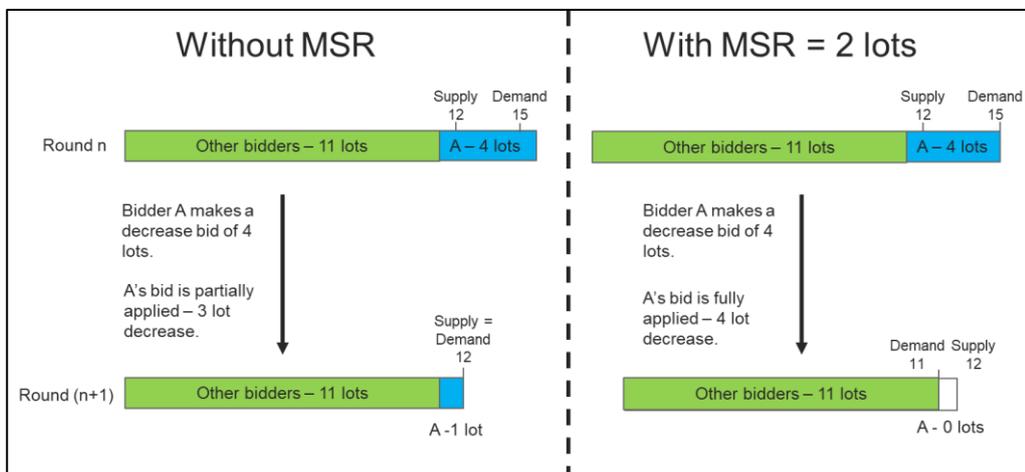
In Greater Perth, Hobart and Margaret River where the lot size is 100 MHz, the MSR will be 2 lots (200 MHz). For all other areas where the lot size is 200 MHz, the MSR will be 2 lots (400 MHz).

This means that:

- > in Greater Perth, Hobart and Margaret River (both lower and upper products), bidders who select the MSR feature are guaranteed not to have a 100 MHz holding in each product available in these areas
- > in all remaining areas, bidders who select the MSR feature are guaranteed not to have a 200 MHz holding.

Applicants can select whether to use the MSR on a per-product basis (Yes (Y)/No (N)) on their eligibility nomination form. These selections can be updated in the pre-bidding phase, if desired.

**Figure 10: Example of how the MSR feature operates**



Selection of the MSR feature will affect a bidder’s ability to bid in the secondary stage of the auction. If a bidder has set their MSR to ‘Y’ for a product and does not purchase any spectrum of that product during the primary stage, they will not be permitted to participate in the secondary stage. This is to prevent bidders from reducing demand during the primary stage in an attempt to obtain an unsold lot at a lower price in the secondary stage.

#### 4.2.2.10 Information policy

In an ascending auction such as the ESMRA format, the auction manager typically provides bidders with information about demand at the end of each clock round. This demand information facilitates price and allocation discovery.

In comparison to standard SMRA auctions, ESMRA auctions can have a higher risk of strategic demand reduction. Strategic demand reduction is a bidding strategy that involves sacrificing some of the spectrum that you might like to have acquired in the auction in return for ending the auction earlier, and at a lower price for the spectrum that you win. In the ESMRA format, providing exact excess demand at the end of each clock round can make it easier for bidders to engage in strategic demand reduction and close out the auction early.

In the case of the 26 GHz band auction, we believe the use of relatively large lot sizes, in a frequency sense, and fewer total lots of supply (12 lots rather than 24 lots for most

products) means there is not a significant risk of strategic demand reduction. We will therefore provide exact demand information in all cases.

At the end of each clock round, all bidders are provided with the following information for each product:

- > posted price (opening price for the next clock round)
- > clock price for the next clock round
- > excess demand (which may be negative if there is excess supply).

The auction system provides an individual bidder with its own quantity of demand at the posted price for each product. Information about individual demands of other bidders is not disclosed.

#### **4.2.2.11 Bidder consultation**

During the primary stage, the auction manager may change the eligibility requirement percentage and bid increment percentage. Before any change, the auction manager must inform bidders of the proposed change, consider their comments and notify them of any change before the clock round when the change will occur.

Each day, the auction manager must inform bidders of that day's schedule at least one hour before the first clock round. The auction manager may change the schedule at any time but must notify bidders of any change as soon as practicable.

#### **4.2.2.12 Primary stage results**

The primary stage concludes when there is no excess demand for any product. Bidders win their posted demand when the primary stage concludes. The price paid per lot by winning bidders is the final posted price for that product when the primary stage concludes. The total price to be paid by winning bidders in the primary stage (primary price) is calculated by:

***Primary price = sum over all products of:  
[final posted price for product × final posted demand]***

For example, when the primary stage concludes, if a bidder has posted demand in the following regions at the given posted prices:

- > Greater Brisbane/Lismore: 4 lots, posted price = \$4,000,000
- > Hobart Lower: 6 lots, posted price = \$150,000
- > Townsville: 2 lots, posted price = \$200,000.

Then, the primary price for the bidder =  $(4 \times 4,000,000) + (6 \times 150,000) + (2 \times 200,000) = \$17,300,000$ .

#### **4.2.3 Secondary stage**

The purpose of the secondary stage is to auction a single lot of any products that remain unallocated from the primary stage (residual lots). If no lots remain unallocated from the primary stage or there are no eligible bidders, the secondary stage is not required.

The allocation limits continue to apply in the secondary stage. Bidders will not be eligible to bid on a lot where they have already reached their allocation limit for that product in the primary stage.

To minimise strategic bidding, a bidder who has selected the MSR for a product and does not win any lots of that product during the primary stage, will not be permitted to

participate in the secondary stage. Eligibility points are not applicable to the secondary stage since there is no activity rule or ability to switch demand between products.

If there are no eligible bidders for the secondary stage due to allocation limits or MSR restrictions, there will be no secondary stage.

The secondary stage uses a Simple Clock Auction (SCA) format with a simple ascending-bid format. All residual lots will be offered concurrently within this stage. The starting prices for the secondary stage are the same as for the primary stage.

A lot will only be offered in the secondary stage if it is the only unallocated lot in that product. If multiple lots remain unallocated in a single product, they will remain unsold and will not be allocated at this time. For example, if only one Albury lot remains unallocated at the end of the primary stage, but 2 Cairns lots remain unallocated, then the Albury lot will be offered in the secondary stage but the Cairns lots will not. As another example, if a single Greater Perth Upper lot remains unallocated and a single Greater Perth Lower lot also remains unallocated, these lots will both be offered in the secondary stage.

Before each round in the secondary stage, the auction manager states the prices of each residual lot (the specified prices) that the bidder must meet in the upcoming round to be eligible to place a bid in the subsequent round. The specified price is calculated by reference to the specified price for the residual lot in the previous round, plus the bid increment percentage for that lot. The bidder can make a bid at or above the specified price (a continue bid) or place a lower bid (an exit bid). An exit bid must be equal to or greater than the specified price for the previous round of the auction (or the starting price if the round is the first round). If a bid for a lot is lower than the specified price of the current round – that is, if it is an exit bid – then it is the bidder's final bid for that lot. Once a bidder has made an exit bid, the bidder cannot resume bidding on that lot in future rounds.

The bidder can also place a continue bid above the specified price for the round using the 'advance price' feature. The system automatically accepts that 'advance price' as the bid in subsequent rounds until either the advance price falls below the specified price for a round (and hence becomes an exit bid), or the bidder makes a new, replacement bid in a subsequent round (whichever occurs first).

Bidding on a residual lot stops when there is only one continue bid made on the lot in a round, where only exit bids are made on the lot in a round, or where no bids are made on the lot in a round. A bidder will only win if no other bidder places a higher bid, such as when there is only one bidder who bids at least the specified price in the final round, or a bidder who places the highest exit bid in the final round. The highest bidder in the final round wins and pays the amount of the second-highest bid – this is the defining feature of a 'second-price auction'. This ensures that the winner never pays more than necessary to win, which encourages 'true value' bidding.

In the case of tied exit bids in the last round for a lot that are higher than all other bids, the winning bidder will be chosen by pseudo-random selection. The winning bidder will pay the amount of the last bid made by the winning bidder (that is, the amount of the tied exit bid).

The already very low likelihood of tied bids occurring can be further reduced if bidders avoid round numbers as their exit bids. For example, if a bidder's maximum valuation of a lot is around \$500,000, bidders could consider making their exit bid around this figure, for example \$503,200. Bidders should obtain their own advice about their valuation of lots and bidding strategies.

The secondary stage concludes when the final round has concluded for each residual lot available for bidding in the secondary stage.

#### **4.2.4 Assignment stage**

##### **4.2.4.1 Overview**

The assignment stage determines the specific frequency range assigned to the generic lot(s) won by a bidder in the primary stage or secondary stage. The assignment stage being used for the 26 GHz band auction was also used in the 3.6 GHz band auction in 2018.

Only winning bidders from the primary stage or secondary stage can bid in the assignment stage. The purpose of this stage is to assign specific frequencies to the lots won by bidders in the previous stages.

There is no requirement for a bidder to bid during the assignment stage. This stage gives bidders the opportunity to submit additional bids, at prices they choose, to express their preferences for particular frequency assignments from the options presented by the auction manager. These options will be set by the auction manager, in accordance with clause 4 of Schedule 3 to the allocation determination.

The options will ensure the frequency contiguity of the lots of each product that were allocated to each bidder in the previous stages, and also the frequency contiguity of the lots of each product that were unallocated at the end of the previous stages.

Before the auction, the auction manager will consult with registered bidders on the principles for the order and possible grouping of products in the assignment stage. After the conclusion of the secondary stage (or the primary stage if there is no secondary stage), the auction manager will consult with assignment stage participants on the final ordering and grouping of products at least 24 hours before the first assignment round. The auction manager will then generate a list of feasible frequency range options for all assignment rounds. This list will be provided to bidders to assist with preparing their bidding strategies for the assignment stage.

Examples 1 and 2 below illustrate bidding in an assignment round:

*Example 1:*

Consider the case where for a given product with supply of 12 lots, the winning bids are:

- > bidder A: 6 lots
- > bidder B: 3 lots
- > bidder C: 2 lots
- > bidder D: 1 lot.

The auction software would present the frequency range options shown in Figure 11 to bidder A and ask them to submit a bid for each option.

**Figure 11: Assignment stage, Example 1: frequency range options for bidder A**

A (6 lots)		B+C+D (6 lots)	
D (1 lot)	A (6 lots)		B+C (5 lots)
C (2 lots)	A (6 lots)		B+D (4 lots)
B (3 lots)	A (6 lots)		C+D (3 lots)
B+D (4 lots)		A (6 lots)	
B+C (5 lots)		A (6 lots)	
B+C+D (6 lots)		A (6 lots)	

**Example 2:**

In the case where other bidders have similar holdings, the number of frequency range options may be reduced. Consider the case where the winning bids are:

- > bidder A: 5 lots
- > bidder B: 2 lots
- > bidder C: 2 lots
- > bidder D: 3 lots.

The auction software would present a smaller number of assignment options to bidder A and ask them to submit a bid for each option, as shown in Figure 12.

**Figure 12: Assignment stage, Example 2: frequency range options for bidder A**

A (5 lots)		B+C+D (7 lots)	
B or C (2 lots)	A (5 lots)		(B or C) +D (5 lots)
D (3 lots)	A (5 lots)		B or C (2 lots)   B or C (2 lots)
B or C (2 lots)	B or C (2 lots)	A (5 lots)	
(B or C) + D (5 lots)		A (5 lots)	
B+C+D (7 lots)		A (5 lots)	

When each round has ended, the auction system determines:

- > the frequency range option that maximises the sum of the bid prices. If there are 2 or more maximising assignment options, the system selects one pseudo-randomly
- > the price each winner pays, based on a form of second-price rule known as the nearest Vickrey core pricing rule. All assignment prices are rounded to the nearest hundred dollars.

**4.2.4.2 Pre-assigned frequency ranges**

In some cases, frequency ranges are pre-assigned to particular lots before the commencement of the assignment stage.

Any unallocated lots from the primary stage or secondary stage are treated as a contiguous block and automatically assigned adjacent to the frequency 27.5 GHz at the top of the band. This does not apply to the lower band products in Greater Perth, Hobart and Margaret River.

In Greater Perth, Hobart and Margaret River, a bidder may win lots in both the lower and upper products. The following rules will apply in these areas to maximise the opportunity for a bidder to achieve contiguity between their lower and upper product holdings:

1. If a single bidder wins lots in both the lower and upper products, they are guaranteed contiguity for their holdings.
2. If multiple bidders win lots in both the lower and upper products, the bidder who holds the most lots overall is guaranteed contiguity.
3. If there is a tie, the bidder who holds the most lots in the upper product is guaranteed contiguity.
4. If multiple bidders win identical holdings in the lower and upper products, there is no pre-assignment, and the assignment stage proceeds for both products. Bidders may use their assignment stage bids to achieve contiguity.

#### 4.2.4.3 Pricing rule

The assignment prices for the winning frequency range option will be calculated using a form of second-price rule referred to as **nearest Vickrey core pricing**. Under this rule, the Vickrey price for each bidder is calculated first.

The Vickrey price is the bid price minus the incremental contribution; that is, the amount by which the bidder has increased the sum of all high bids. The core price is an amount that is sufficient to ensure there is no other bidder or group of bidders prepared to pay more for the lots. If the Vickrey price is less than the core price, the price is increased to the core price in such a way that is closest to the Vickrey price. Where this price adjustment is applied across a number of bidders, the price increase is shared between the bidders in proportion to the starting prices of their allocated spectrum.

The following scenario is an example of how the Vickrey prices and nearest Vickrey core prices are calculated. Consider the scenario for a given product with supply = 12 lots, where bidders win the following amounts in the primary stage:

- > bidder A: 5 lots
- > bidder B: 4 lots
- > bidder C: 3 lots.

Table 9 below shows the 6 possible assignment options, together with the bids submitted by each bidder for the options in the assignment stage for a category 1 product.

**Table 9: Example assignment stage options**

Lots	1	2	3	4	5	6	7	8	9	10	11	12	Value
ABC	Bidder A: 10					Bidder B: 0				Bidder C: 0			10
ACB	Bidder A: 10					Bidder C: 0			Bidder B: 0				10
BAC	Bidder B: 14				Bidder A: 0					Bidder C: 0			14
BCA	Bidder B: 14				Bidder C: 0			Bidder A: 0				14	
CAB	Bidder C: 13			Bidder A: 0					Bidder B: 0				13
CBA	Bidder C: 13			Bidder B: 12				Bidder A: 0				25	

The CBA option has the maximum sum of bids, with \$25, and the bid prices are {A: \$0, B: \$12, C: \$13}.

To calculate the Vickrey prices for each bidder, their bids are set to zero in turn and the maximum sum of bids determined. This is shown in tables 10 to 12 below.

**Table 10: Calculating maximum sum of bids – bidder A excluded**

Lots	1	2	3	4	5	6	7	8	9	10	11	12	Value
ABC	Bidder A: 0					Bidder B: 0				Bidder C: 0			0
ACB	Bidder A: 0					Bidder C: 0			Bidder B: 0				0
BAC	Bidder B: 14				Bidder A: 0					Bidder C: 0			14
BCA	Bidder B: 14				Bidder C: 0		Bidder A: 0					14	
CAB	Bidder C: 13		Bidder A: 0					Bidder B: 0				13	
CBA	Bidder C: 13		Bidder B: 12				Bidder A: 0					25	

**Table 11: Calculating maximum sum of bids – bidder B excluded**

Lots	1	2	3	4	5	6	7	8	9	10	11	12	Value
ABC	Bidder A: 10					Bidder B: 0				Bidder C: 0			10
ACB	Bidder A: 10					Bidder C: 0			Bidder B: 0				10
BAC	Bidder B: 0				Bidder A: 0					Bidder C: 0			0
BCA	Bidder B: 0				Bidder C: 0		Bidder A: 0					0	
CAB	Bidder C: 13		Bidder A: 0					Bidder B: 0				13	
CBA	Bidder C: 13		Bidder B: 0				Bidder A: 0					13	

**Table 12: Calculating maximum sum of bids – bidder C excluded**

Lots	1	2	3	4	5	6	7	8	9	10	11	12	Value
ABC	Bidder A: 10					Bidder B: 0				Bidder C: 0			10
ACB	Bidder A: 10					Bidder C: 0			Bidder B: 0				10
BAC	Bidder B: 14				Bidder A: 0					Bidder C: 0			14
BCA	Bidder B: 14				Bidder C: 0		Bidder A: 0					14	
CAB	Bidder C: 0		Bidder A: 0					Bidder B: 0				0	
CBA	Bidder C: 0		Bidder B: 12				Bidder A: 0					12	

The incremental contribution for each bidder is:

- > bidder A:  $\max(\text{Table 9}) - \max(\text{Table 10}) = 25 - 25 = \$0$
- > bidder B:  $\max(\text{Table 9}) - \max(\text{Table 11}) = 25 - 13 = \$12$
- > bidder C:  $\max(\text{Table 9}) - \max(\text{Table 12}) = 25 - 14 = \$11$ .

The Vickrey prices for each bidder are calculated by subtracting the incremental contribution from their bid prices. Therefore, the Vickrey prices are:

- > Vickrey (bidder A) =  $0 - 0 = \$0$
- > Vickrey (bidder B) =  $12 - 12 = \$0$
- > Vickrey (bidder C) =  $13 - 11 = \$2$ .

However, the core constraint requires that no other option has higher total bids than the total of prices paid in the winning option. Here, bidder A bid \$10 for each of the first 2 options but was unsuccessful despite bidding \$8 more than the total of prices paid in the winning option. Therefore, bidders B and C must pay at least the amount of bidder A's losing bid, \$10. The \$8 difference is shared between B and C in proportion to their allocated spectrum. Since B won 4 lots and C won 3 lots:

- > Assignment price (bidder B) =  $0 + 8 \cdot (4 / (4 + 3)) = 0 + 4.6 = \mathbf{\$4.60}$
- > Assignment price (bidder C) =  $2 + 8 \cdot (3 / (4 + 3)) = 2 + 3.4 = \mathbf{\$5.40}$

# 5. Post-auction procedures

**This chapter provides information to guide participants through various processes that will take place after the auction, including:**

- > **the publication of auction results**
- > **post-auction processes.**

## 5.1 Publication of auction results

At the conclusion of the auction, the auction manager will provide results to bidders in accordance with section 66 of the allocation determination.

As soon as practical after the auction, the ACMA will publish the following information on its website:

- > the names of winning bidders
- > the spectrum allocated to each winning bidder
- > the total sum to be paid, by each winning bidder – that is, the total of the primary, secondary and assignment stage prices for the lots won by the bidder.

The auction manager will consult with bidders about what other information, if any, may be shared with bidders and whether any further information may be published. Unless all bidders agree in writing, the ACMA will not provide bidders with information other than what is set out in section 66 of the allocation determination. Unless all bidders agree in writing, the ACMA will not announce or publish any information other than that set out above regarding the results of the auction.<sup>12</sup>

## 5.2 Winning bidders, payment of winning prices and issue of licences

Bidders who win spectrum in the auction must meet the financial obligations set out in the allocation determination before the ACMA can issue spectrum licences. Payment arrangements for the auction are set out in sections 67, 68 and Schedule 4 of the allocation determination.

The winning price for a winning bidder is the sum of the primary price, secondary price and total assignment price for that bidder across all stages for the lots won at auction. The balance of the winning price is the winning price, less any eligibility payment paid by a winning bidder.

If, for a winning bidder, the balance of the winning price is equal to or less than zero, the ACMA will issue a licence to the winning bidder and refund any amount of the eligibility payment that exceeds the winning price.

The spectrum access charges direction requires the ACMA to make an instalment payment option available to winning bidders. The direction also requires a winning bidder to provide an irrevocable bank guarantee for 5% of the remaining amount owed, as a pre-condition for reaching agreement with the ACMA to pay the spectrum access charge by instalments.

Therefore, for a winning bidder where the balance of the winning price is greater than zero, there are 2 payment options:

1. a single payment of the balance of the winning price – ‘upfront payment’; or
2. instalment payments – a first instalment of 20.32% of the winning price (less any eligibility payment made), with 4 subsequent annual instalments, each of 20.32% of the winning price.

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<sup>12</sup> Bidders should note that 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 1982* (unless an exemption applies) or disclosed to other parties under Part 7A of 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).

As soon as practicable after the auction, the ACMA will notify winning bidders, whose balance of the winning price is greater than zero, of the following:

- > the winning price
- > the effect on the winning price of any eligibility payments made by the bidder
- > that the balance of the winning price may be paid in full, and the date by which it must be paid.
- > that the winning price may be paid in 5 instalments, and the amount and payment date of each instalment. This includes the effect of any eligibility payments made by the bidder
- > the date (at least 10 days after the date of the notice) by which the bidder must give written notice to the ACMA of whether it elects to pay the winning price in full or by instalments.

If a winning bidder does not give written notice of its payment option within the specified deadline, it is taken to have elected to pay the winning price in full.

### **5.2.1 Upfront payment**

If the winning bidder elects the upfront payment option, the ACMA will issue an invoice for the balance of the winning price. The winning bidder must pay the full balance to the ACMA by the date notified by the ACMA.

If the winning bidder elects to pay the winning price in full, the ACMA will issue a spectrum licence as soon as practicable after the balance of the winning price is paid.

### **5.2.2 Instalment payments**

If the winning bidder gives the ACMA written notice that it elects to pay the winning price in instalments, the ACMA must notify the bidder that:

- > the ACMA has received the winning bidder's election
- > the instalment amounts must be paid by the winning bidder to the ACMA on the dates specified in the notice
- > it must give a bank guarantee to the ACMA as a precondition to reaching an agreement with the ACMA for the payment of the winning price in instalments.

The prescribed form of the bank guarantee is attached to this Auction guide. The amount of the bank guarantee is 5% of the outstanding amount (that is, 5% of the sum of the remaining 4 instalments). The form gives more information on the mechanism by which the secured amount is reduced after each instalment is paid.

If the ACMA agrees to the instalment payment option under paragraph 62(2)(b) of the Act, we will issue an invoice for the first instalment. The winning bidder must pay this amount to the ACMA no later than 20 working days after the date of the invoice.

If the winning bidder elects to pay the winning price in instalments, the ACMA will issue a spectrum licence as soon as practicable after:

- > the ACMA has notified the winning bidder that it has received its election to pay by instalments
- > the winning bidder provides the ACMA with a bank guarantee that complies with the requirements set out in the marketing plan
- > the ACMA has reached an agreement with the winning bidder for the payment of the winning price under paragraph 62(2)(b) of the Act
- > the winning bidder has paid the first instalment.

### 5.2.3 Licence commencement

A spectrum licence will come into force 12 weeks after all winning bidders are notified of the results of the auction in accordance with section 66(2) of the allocation determination, or the day the licence is issued (whichever is later).<sup>13</sup>

If a winning bidder elects to pay by instalments:

- > a failure by a licensee to pay any of the remaining 4 instalments may amount to a breach of the statutory licence condition required to be included by section 67 of the Act
- > the licence will include a condition requiring a bank guarantee to be in force, securing 5% of the outstanding instalments.

### 5.2.4 Default

After the auction, if a winning bidder:

- > elects to pay the winning price in full but does not pay the balance of the winning price,
- > elects to pay the winning price in instalments, but either or both:
  - > does not pay the first instalment by the required deadline; or
  - > does not give the ACMA a bank guarantee,

then:

- > a spectrum licence will not be allocated to the winning bidder
- > the allocation of spectrum licences to other winning bidders is not affected
- > spectrum that would have been allocated to the winning bidder may be later made available for allocation.

It is a licence condition that a spectrum licensee meet all its obligations to pay, among other things, the spectrum access charge (section 67 of the Act). If a licensee fails to pay an instalment payment and breaches this licence condition, the ACMA may suspend or cancel the spectrum licence (Division 3 of Part 3.2 of the Act). The spectrum access charge may be recovered as a debt due to the Commonwealth (section 298 of the Act).

## 5.3 Unsuccessful bidders and withdrawn applicants

As soon as practicable after the end of the auction period, the ACMA will notify each withdrawn applicant that their confidentiality obligation has ended. Subject to any decision by the ACMA to retain the eligibility payment paid by the withdrawn applicant under section 75 of the allocation determination, the withdrawn applicant will be refunded any eligibility payment paid.

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 obligation will end when the ACMA publishes the auction results.

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<sup>13</sup> In accordance with section 65 of the Act, a spectrum licence may not come into force before the day it is issued.

Subject to any decision by the ACMA to retain the bidder's eligibility payment under section 75 of the allocation determination, the unsuccessful bidder will be refunded any eligibility payment paid.

If an unsuccessful bidder or withdrawn applicant made an eligibility payment and section 75 does not apply, the refund must be provided no later than 6 months after the notification releasing them from their confidentiality obligation.

## 5.4 Early access to the 26 GHz band

The majority of apparatus licences in the 26 GHz band will end before the auction commences. This will leave much of the band free for use by new spectrum licensees at the commencement of their licence as outlined in 2.2 in this guide. Any apparatus licences remaining in the band will be cancelled automatically at the end of the re-allocation period set in the re-allocation declaration.

Because 26 GHz band spectrum in some locations may be available for use before spectrum licences commence, 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 26 GHz spectrum before the commencement of spectrum licences, are separate from the arrangements applicable to spectrum licences issued in the band as a result of the auction.

Winning bidders may apply to the ACMA to be issued a short duration area-wide apparatus licence (AWL) to access unencumbered spectrum for a period until the relevant spectrum licence commences.<sup>14</sup> The ACMA will consider applications on a case-by-case basis. This will include 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 re-allocation declaration.<sup>15</sup> For other bands, under separate 'early access' arrangements following a spectrum auction, an application to use vacant spectrum by the future owner of the relevant spectrum licence was usually considered to satisfy the special circumstances criteria.

Any apparatus licence issued for early access will be on an interim basis only, would only be renewed if that occurred before the end of the re-allocation period, and will be cancelled at the end of the reallocation period.

As mentioned above, the apparatus licence type will be an AWL, with an annual licence tax rate of **\$0.0003/MHz/pop**. It is anticipated that AWLs will take up to 2 weeks to issue to successful applicants. Therefore, we are likely to process a single application covering all of an applicant's desired spectrum and geographical areas more quickly than a series of applications for different parts of the spectrum and/or geographical areas.

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<sup>14</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 the deployment of a service without causing unacceptable interference to existing licensees or suffering unacceptable interference from existing licensees.

<sup>15</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 issuing an apparatus licence notwithstanding the general prohibition under subsection 153P(2).

## 5.5 Unallocated spectrum

Spectrum lots left unallocated at the end of the auction due to insufficient bidder demand or because of the operation of the affiliation rules may later be offered for allocation by a procedure to be determined by the ACMA. Prospective bidders should not assume that unallocated lots will be offered for allocation soon after the auction, or that they will be offered for allocation at less than the starting prices set by the ACMA for auction.

## 5.6 Refunds and cancellations

An application fee will only be refunded in accordance with subsection 24(2) of the allocation determination, where the ACMA varies starting prices under subsection 37(1) and an applicant withdraws their application before the extended eligibility deadline. Otherwise, an application fee will not be refunded under any circumstances, including if an applicant or bidder withdraws before the auction, or is excluded from the auction.

An applicant's eligibility payment will be refunded:

- > to applicants who withdraw from the auction before the eligibility deadline (or the extended eligibility deadline, if there is one); or
- > to bidders who do not win any spectrum in the auction.

If a winning bidder's winning price is less than their eligibility payment, then we will refund the excess amount to the bidder after the auction. An applicant's deed of financial security provided to the ACMA under the allocation determination will be cancelled, according to the terms of the deed, either:

- > upon payment by the promisor of the amount secured by the deed; or
- > if the promisor receives written notice from the Chair of the ACMA.

The Chair of the ACMA intends to give such written notice shortly after:

- > payment of the balance of the winning price; or
- > both the provision of a bank guarantee required in accordance with the instalment payment arrangements and payment of the first instalment of the winning price (see 5.3.2); or
- > if the bidder failed to win any spectrum, as soon as practicable after the auction, subject to any actions for breaches of the auction procedures.

If a winning price is to be paid by instalments and a spectrum licence is issued to a winning bidder after the first auction instalment is paid, that instalment and each subsequent instalment is not refundable under any circumstances.

# Part 3 – Understanding spectrum licences

## 6. Spectrum licensing and technical framework

This chapter provides information about:

- > spectrum licensing
- > the technical framework applicable to spectrum licences
- > other issues affecting spectrum licences.

**Important warning:** The information in this chapter is intended to provide a general overview of the rights and obligations in respect to spectrum licences issued under the Act and relevant legislative instruments. It does not purport to contain all the information in relation to spectrum licences. Potential applicants should *not* rely on this information alone but should also make their own investigation.

In particular, potential applicants and bidders should note that on the day this guide was published, the Bill had been passed by parliament. When it commences, its provisions may affect matters described in this chapter.

Prospective bidders should consider whether to obtain advice or other information on the changes proposed by the Bill, and how they may affect spectrum licences.

## 6.1 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, within a particular geographic area. Licensees can choose how they deploy devices within their spectrum space, the nature of the services they wish to deliver and the technology they use, providing the operation of devices is consistent with the conditions on the spectrum licence.

A licensee's use of spectrum available 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 to be included in the licence in accordance with subsection 66(1) of the Act
- > compliance with statutory licence conditions required to be included in the licence in accordance with sections 67, 68, 69 and 69A of the Act
- > compliance with other conditions that the ACMA may include in the licence 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.

Spectrum licensing is designed to be a technology-flexible, market-oriented approach to managing the radiofrequency spectrum. Some or all of the spectrum space subject to spectrum licensing may be traded in integer multiples of the standard trading unit defined in the [Radiocommunications \(Trading Rules for Spectrum Licences\) Determination 2012](#). The ability to trade and the flexibility of the technology that may be used in accordance 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 spectrum licences on offer for the 26 GHz band is available in Part 3 of the marketing plan, including a sample licence in Schedule 6. The sample licence includes conditions that would apply to any 26 GHz band spectrum licences issued as a result of this allocation process.

## 6.2 The legislative instruments

Legislative instruments referred to in this chapter comprise the technical framework for the band and are available on [the Federal Register of Legislation](#) and [the ACMA website](#). These legislative instruments should be read together and in conjunction with the allocation determination and marketing plan. The technical instruments should be used in the planning of services, they include:

- > [Radiocommunications \(Unacceptable Levels of Interference – 26 GHz Band\) Determination 2020](#)
- > [Radiocommunications Advisory Guidelines \(Managing Interference from Spectrum Licensed Transmitters – 26 GHz Band\) 2020](#)
- > [Radiocommunications Advisory Guidelines \(Managing Interference to Spectrum Licensed Receivers – 26 GHz Band 2020\)](#).

More information about the development of these instruments is available in the overview of the technical framework below.

## 6.3 The technical framework

The technical framework for a band subject to spectrum licensing is the set of technical rules and guidelines, made by the ACMA after consultation with industry, applicable 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 for the 26 GHz band is crafted using several interlocking regulatory elements and includes:

- > a sample licence in Schedule 6 to the marketing plan that sets out the core conditions on the licence in accordance with section 66 of the Act, statutory conditions imposed under sections 67, 68, 69 and 69A of the Act and any other conditions placed on the licence under section 71 of the Act
- > the [Radiocommunications \(Unacceptable Levels of Interference – 26 GHz Band\) Determination 2020](#), made under subsection 145(4) of the Act, for the purposes of assessing applications for device registration (the subsection 145(4) determination)
- > the [Radiocommunications Advisory Guidelines \(Managing Interference from Spectrum Licensed Transmitters – 26 GHz Band\) 2020](#) and the [Radiocommunications Advisory Guidelines \(Managing Interference to Spectrum Licensed Receivers – 26 GHz Band\) 2020](#) (collectively referred to as the advisory guidelines) are made under section 262 of the Act, including any conditions placed on the licence under section 71 of the Act relating to compliance with the advisory guidelines.
- > the [Radiocommunications \(Trading Rules for Spectrum Licences\) Determination 2012](#) made under section 88 of the Act.

The technical framework for the 26 GHz band was developed by the ACMA in consultation with industry via a technical liaison group (TLG). A TLG is a short-term advisory body convened by the ACMA and provides a discussion forum between the ACMA, industry and other stakeholders with an interest in the technical aspects of spectrum licences. The 26 GHz band TLG ran from November 2019 to April 2020 and provided information and advice about the spectrum licence technical framework released for public consultation in July 2020.

An explanation of the technical framework underpinning spectrum licensing in the 26 GHz band and more detailed information on the development of the technical framework for the band can be found on the [ACMA website](#).

## 6.4 26 GHz band core licence 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 specify the geographic area and frequency range of the licence, as well as the maximum permitted emission levels outside the frequency and geographic boundaries of the licence. The core conditions of a spectrum licence deal with the:

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

The following information refers specifically to how each of the core conditions applies to spectrum licences in the context of the 26 GHz band.

The sample spectrum licence in Schedule 6 to the marketing plan specifies the conditions that may be included in a spectrum licence issued in the 26 GHz band in accordance with the marketing plan. The conditions contained in actual spectrum licences issued by the ACMA may vary.

#### **6.4.1 Area of operation and frequency bandwidth**

The geographic areas of operation are described in Table 1 of Schedule 3 of the marketing plan and Chapter 2 of this guide. Licence schedule 1 of the sample spectrum licence in Schedule 6 to the marketing plan shows where the frequency band and geographic areas won at auction will be specified in a spectrum licence. The marketing plan lists the HCIS identifiers for each geographic area where spectrum licences will operate. Applicants can view the geographic areas on Google Earth by converting the HCIS area descriptions to a Google Placemark (KML file). Applicants will need to copy the HCIS identifiers from the marketing plan into the [convertor tool available on the ACMA website](#).

#### **6.4.2 Outside-the-area emission limits**

The outside-the-area emission limit places a cap on the total radiated power (TRP) emitted from a transmitter that radiates outside the area of the spectrum licence. The same limit is also used to define the maximum in-band TRP for transmitters. Different TRP limits apply depending on the frequency range and geographic area the spectrum licensed transmitter is operating in.

The emission limits outside the geographic area are set out in Schedule 4 to the marketing plan.

An additional layer of outside-the-area emission management is imposed at the point of registration of devices, as the ACMA may refuse to register devices that could cause unacceptable levels of interference, within the meaning of the relevant subsection 145(4) determination. This point is discussed in detail at 6.5.3. There are conditions where some devices are exempt from registration and these are listed in subsections 21(2) and (3) of the marketing plan. Even if a device is exempt from registration the spectrum licence has a condition (condition 8 of licence schedule 4 to the sample spectrum licence) that ensures that exempt devices do not cause harmful interference to other radiocommunication devices operated under a different spectrum licence or an apparatus licence.

#### **6.4.3 Outside-the-band emission limits**

The outside-the-band emissions limits are also referred to as unwanted emissions limits. The spectrum licence core conditions cap unwanted emissions by specifying the maximum permitted level of radio emission caused by the operation of radiocommunication devices (transmitters and receivers) under the spectrum licence. Unwanted emission limits are set out in Schedule 5 to the marketing plan. An example of this core condition is provided in licence schedule 2 to the sample spectrum licence.

#### **6.4.4 Core condition agreements**

A spectrum licensee can make a written agreement with an affected licensee to exceed the prescribed outside-the-band emission limits. An affected licensee is a licensee that holds a frequency-adjacent spectrum licence, area-adjacent spectrum licence or a frequency-adjacent or area-adjacent apparatus licence in the frequency range 24.7 GHz to 30 GHz. The written agreement will specify the agreed maximum permitted levels of unwanted emissions. Where no written agreement is in place between licensees, then the unwanted emission limits set out in Schedule 5 to the marketing plan and licence schedule 2 to the sample spectrum licence apply.

The marketing plan does not make any provision for a written agreement that would allow a licensee to exceed the prescribed outside-the-area emission limits.

## **6.5 Statutory licence conditions**

Along with the core conditions of a licence, there are conditions that the ACMA must include in a spectrum licence, in accordance with the requirements of the Act. These are referred to as 'statutory conditions' and a summary of the requirements of each is outlined below and include:

- > payment of charges and taxes
- > third-party use
- > transmitter registration requirements
- > exemptions from registration.

### **6.5.1 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 (the winning price for the lots allocated by auction)
- > amounts of spectrum licence tax as determined by the ACMA.

### **6.5.2 Authorisation of third parties**

Spectrum licensees 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 is that the operation of devices by people other than the licensee must comply with any rules made by the ACMA about third-party use under subsection 68(3) of the Act. The licensee must also notify any third-party user of their obligations under the Act.

At present, the ACMA has not defined any rules relating to third-party use under subsection 68(3) of the Act.

### **6.5.3 Registration of radiocommunication transmitters (and devices)**

Before a transmitter can be operated under a spectrum licence, its details must be recorded in the Register of Radiocommunications Licences (RRL), unless it is exempted from registration. The licence includes a condition, in accordance with section 69 of the Act, that radiocommunications transmitters must not be operated under the licence unless the relevant requirements under Part 3.5 of the Act for registration of transmitters are met. This condition can also exempt particular kinds of radiocommunications transmitters from meeting those requirements.

Subsection 145(1) of the Act gives the ACMA the power to refuse to register a radiocommunications transmitter if the ACMA is satisfied that it could cause an unacceptable level of interference to the operation of other radiocommunications devices when operated. The unacceptable levels of interference for the purpose of registering radiocommunications transmitters for use under a 26 GHz band spectrum licence are set out in the Radiocommunications (Unacceptable Levels of Interference – 26 GHz Band) Determination 2020.

Before a device is registered for use under a licence, licensees may be required to demonstrate that the device will not cause unacceptable interference to other spectrum users. This can be achieved by obtaining an interference impact certificate (IIC) under subsection 145(3) of the Act from an accredited person.

The ACMA has made the [Radiocommunications \(subsection 145\(3\) Certificates\) Determination 2012](#) (Certificate Determination), pursuant to section 266A of the Act, which states the conditions that must be satisfied before an accredited person may issue a certificate for the purposes of subsection 145(3). The conditions require that, before issuing a certificate, the accredited person must be satisfied that:

- > the operation of the radiocommunications transmitter will not cause an unacceptable level of interference as set out in the relevant subsection 145(4) determination; or
- > the use of guard space is sufficient to mitigate potential interference from the radiocommunications transmitter, or
- > consent in writing to interference from the radiocommunications transmitter has been given by all licensees that, in the opinion of the accredited person, may be affected by the interference.

Before issuing a certificate for the purposes of subsection 145(3) of the Act, an accredited person may need to calculate the device boundary of the transmitter to ensure that an unacceptable level of interference does not occur. This ensures that the strength of emissions outside the geographical area of the licence do not exceed the level defined in the subsection 145(4) determination.

Calculating a device boundary involves mathematical calculations to determine where a proposed device would exceed a defined signal strength into a notional receiver. The point this first occurs along 360 horizontal radials separated by one degree each is termed the 'device boundary'.

If the device boundary falls outside the geographic area of the relevant spectrum licence, the ACMA will generally refuse to register the device. This is because such a device is deemed to cause an unacceptable level of interference within the meaning of the subsection 145(4) determination. There are exceptions to this, which are detailed in the subsection 145(4) determination.

Under the subsection 145(4) determination, if the device boundary of a transmitter cannot be calculated in accordance with Part 1 of Schedule 2 of the subsection 145(4) determination, the transmitter is taken to cause unacceptable interference.

The Certificate Determination also defines other methods by which an accredited person can issue a certificate. This includes determining whether guard space applies or if there is an agreement to register the device with the affected licensees. In the case of an agreement, it provides that the affected adjacent area spectrum licensees are willing to allow a higher level of emissions into their spectrum space from a specific device.<sup>16</sup>

Although radiocommunications receivers operated under a spectrum licence are not required to be registered on the RRL, licensees may decide to register radiocommunications receivers based on its assessment of any benefits that may be achieved. A receiver will only be afforded protection by the ACMA if it is registered.

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<sup>16</sup> Agreements to exceed the core condition for emissions outside the area are not permitted in the 26 GHz band.

Unless exempted, radiocommunications transmitters must always be registered as either an individual transmitter or as part of a group of transmitters. If 2 or more transmitters are operated to communicate with the same receiver or same group of receivers and they have identical emission characteristics, then they may be treated as a group to simplify the registration process.

Each subsection 145(4) determination sets out the definition of a 'group of radiocommunications transmitters' and a 'group of radiocommunications receivers' to simplify the assessment of whether the devices cause unacceptable interference for the purpose of registration. Groups are defined to help minimise the work associated with the registration process of similar transmitters. They specify how the location details for a group of transmitters and receivers must be calculated to determine whether they meet the unacceptable levels of interference requirements.

Information about how to register a radiocommunications device to be used under a spectrum licence is available on the [ACMA website](#).

#### **6.5.4 Registration exemptions**

Certain kinds of radiocommunications transmitters are exempt from registration. Typical devices that may be exempt from registration are low-powered, mobile and nomadic devices such as cellular mobile telephone handsets, wireless modems, subscriber terminals and smart repeaters.

In the 26 GHz band, the conditions these devices need to meet to be exempt from registration are specified in the licence schedule 3 of the sample spectrum licence in the marketing plan.

Radiocommunications transmitters that meet the following criteria are exempt from registration:

- > a transmitter that operates with a maximum total radiated power less than or equal to 23 dBm per occupied bandwidth
- > an indoor transmitter
- > a fixed transmitter that is not a base station and operates with a maximum total radiated power greater than 23 dBm per occupied bandwidth but less than or equal to 35 dBm per occupied bandwidth.

#### **6.5.5 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, or the income, profits or gains are to be attributable to a permanent business establishment in Australia. Similarly, the spectrum licence must include a condition that at all times when an authorised person derives income, profits or gains from operating a radiocommunications device under the spectrum licence, the authorised person must be an Australian resident, or the income, profits or gains are to be attributable to a permanent business establishment in Australia.

## 6.6 Other licence conditions

Under section 71 of the Act, the ACMA may include other licence conditions on spectrum licences. The ACMA sets out indicative *other licence conditions* in licence schedule 4 of the sample licence in Schedule 6 to the marketing plan. These include generic conditions routinely attached to spectrum licences but may also include additional conditions specific to a single licence. The following licence conditions are proposed to be included on 26 GHz band spectrum licences and are included in the sample licence in Schedule 6.

### 6.6.1 Responsibility to manage interference

The licensee must manage interference between radiocommunications devices operated under the licence and any other radiocommunications devices operated under that licence or another spectrum licence held by the licensee.

### 6.6.2 Co-sited devices

If there are co-sited devices, the licensee must manage interference with any co-sited devices that are operated under the licence or another licence, with the holder of the licence or site manager, as applicable.

### 6.6.3 Incumbent licensees

Each spectrum licensee must not cause unacceptable interference to any radiocommunication devices authorised under an apparatus licence to operate in the 26 GHz band in a re-allocation area until the end of the re-allocation period on 14 November 2022. At the end of the re-allocation period, the incumbent apparatus licences will be cancelled automatically.

### 6.6.4 Registration exemptions and managing harmful interference

A licensee must ensure that the operation of any radiocommunications device that is exempt from the requirement to be registered on the RRL does not cause harmful interference to other radiocommunications devices operated under another spectrum or apparatus licence.

### 6.6.5 International coordination

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

### 6.6.6 Information for the Register of Radiocommunications Licences (RRL)

A licensee must give the ACMA all information as required by the ACMA for inclusion in the RRL. The licensee should assist the ACMA to keep the information on the RRL accurate and up-to-date by informing the ACMA of changes to device registration as soon as possible after those changes occur.

### 6.6.7 Electromagnetic energy (EME) requirements

The licensee must comply with Parts 2, 3, and 4 of the [Radiocommunications Licence Conditions \(Apparatus Licence\) Determination 2015](#) as in force from time to time, as if each reference to a licence in that determination were a reference to a spectrum licence.

### **6.6.8 Record keeping for transmitters**

A licensee must keep certain additional records, and provide these records upon request to the ACMA, relating to transmitters that are located on a communal site and not exempt from registration on the RRL, or high-powered outdoor transmitters that are not base stations.

### **6.6.9 Coexistence requirements**

Additional conditions relating to protection for earth and space receive stations have been included in the sample spectrum licence. These measures are explained in licence schedule 4 of the sample spectrum licence in Schedule 6 to the marketing plan. The coexistence requirements follow.

#### **6.6.9.1 Coexistence with space receive stations**

Licensees are required to ensure that the operation of a radiocommunications transmitter under the spectrum licence complies with the protection requirement specified in Part 4 of the Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters – 26 GHz Band) 2020, as in force from time to time.

#### **6.6.9.2 Coexistence with earth receive stations**

The licensee must not operate a radiocommunications transmitter in the frequency range 25.5–27 GHz if the transmitter is located in an area described with HCIS identifiers: MW4H3, MW4H9, MW4L3, MW5I1. These earth stations are all located within the Australian Capital Territory, where the Canberra Deep Space Communications Complex is located.

Licensees are also required to ensure that the operation of a radiocommunications transmitter under the spectrum licence complies with the protection requirement specified in Part 3 of the Radiocommunications Advisory Guidelines (Managing Interference from Spectrum Licensed Transmitters – 26 GHz Band) 2020.

### **6.6.10 Synchronisation requirements**

The synchronisation requirement is applied only in situations where interference occurs between a radiocommunications device operated under the 26 GHz band spectrum licence (the first device) and another radiocommunication device (the other device) that is not an earth station. The requirement only applies where the other device is licensed under another 26 GHz band spectrum licence or an AWL that operates in the frequency range 24.7 GHz to 29.5 GHz. If interference occurs, the licensee may be required to manage the interference by synchronising the timing of the uplink-downlink configuration (or other sequence of radio emissions) between the first device and the other device.

This requirement only applies if the level of interference exceeds the compatibility requirements set out in Schedule 2 to the Radiocommunications Advisory Guidelines (Managing Interference to Spectrum Licensed Receivers – 26 GHz Band) 2020, and either the licensee or the holder (or authorised third party) of the other licensee wishes to resolve the interference and the parties are unable to reach agreement about how to manage the interference within a specified time.

The uplink-downlink configuration for use when the synchronisation requirement is invoked is detailed in Appendix A of RALI MS 46, which is incorporated by reference by the spectrum licence condition.

Licence condition 13 in licence schedule 4 sets out the timeframe for invoking the synchronisation requirement.

## 6.7 Other information about spectrum licences

### 6.7.1 Flexibility of a spectrum licence

The 26 GHz band spectrum licence has inherent flexibility that allows winning bidders to choose how they deploy service in the spectrum they win. Licensees are able to determine the services they deliver and the technology they employ.

Bidders should take account of the spectrum available and bandwidth needed for the performance of the equipment the bidder desires to operate. The spectrum lots are not pre-designed to accommodate any particular equipment standard. However, they may accommodate the operation of a particular standard (or even non-standard equipment) at a particular location and frequency, depending on the total bandwidth and area of the spectrum licence that a bidder has acquired. Prospective bidders should take this into account in preparing for the auction.

Applicants should base their decisions on careful technical and commercial assessment and take account of emission limits and allocation limits and if they need a minimum spectrum requirement for bidding in the auction.

### 6.7.2 Variation to licence conditions

After a spectrum licence is issued, the ACMA, with either written agreement of the licensee or by written notice, may vary the licence or include one or more further conditions, or revoke or vary a condition of the licence, other than the core conditions. The core conditions may be varied only with the written agreement of the licensee.

### 6.7.3 Spectrum trading

Spectrum licences give the licensee flexibility to use a parcel of spectrum space that incorporates a specific frequency band within a particular geographic area for up to 15 years. This spectrum space is divided into standard trading units and the ACMA specifies the minimum contiguous bandwidth for the purpose of trading spectrum licences.

A spectrum licence may be traded in whole, or in part, by geographic area or bandwidth, or both. Section 88 of the Act permits the ACMA to determine the rules for trading spectrum licences. These rules are set out in the [trading rules determination](#).

The trading rules determination specifies a minimum contiguous bandwidth that limits the smallest contiguous bandwidth that can generally be licensed and reduces the potential for fragmentation in the band. For the 26 GHz band, the ACMA has set the minimum contiguous bandwidth to 50 MHz and is maintaining the same standard trading unit as all other spectrum-licensed bands, namely:

- > a geographic area of a level 1 HCIS cell
- > a frequency bandwidth of 1 Hertz.

### 6.7.4 Licence suspension, cancellation, renewal and appeals

A spectrum licence can be suspended or cancelled in accordance with Division 3 of Part 3.2 of the Act.

The provisions of the Act related to spectrum licence renewal will be affected by the Bill. Renewal statements will not be included on a 26 GHz spectrum licence, as a result of subsection 65A(21). Subsection 65A(21) will be included in the Act when the Bill commences.

When the Bill commences, new Division 3A of Part 3.2 of the Act will apply to the renewal of spectrum licences. If a spectrum licence is not renewed, Division 4 of Part 3.2 of the Act may apply to any process for re-allocating the spectrum licence.

Applicants should consider obtaining their own advice about the operation of the changes to be made to the Act about renewal and re-allocation of spectrum licences.

An application may be made to the ACMA for reconsideration of any of the decisions listed in section 285 of the Act and in accordance with section 288 of the Act. The ACMA's decision on reconsideration can be subject to further review by the Administrative Appeals Tribunal subject to the provisions of the *Administrative Appeals Tribunal Act 1975*.

### 6.7.5 Radiocommunications advisory guidelines

Further guidance on device deployment and coordination with other services is provided in radiocommunications advisory guidelines made under section 262 of the Act (the advisory guidelines). While the use and compliance methods set out in the advisory guidelines are not generally mandatory, they set out the ACMA's policy approach and, in certain instances, will be made entirely or partly mandatory by licence conditions or other instruments under the Act that spectrum licensees must comply with. For further details, see the marketing plan and sample spectrum licence conditions.

The advisory guidelines for the 26 GHz band contain information for spectrum licensees on managing interference to and from services operating under other licenses. The advisory guidelines also contain information for spectrum licensees on managing interference to non-spectrum-licensed receivers. The guidelines do not prevent licensees implementing or negotiating other protection requirements with each other. The ACMA will consider the advisory guidelines or any agreements in place when assessing interference and managing interference disputes. Licensees should follow these guidelines when resolving interference cases.

The advisory guidelines made under section 262 of the Act for the 26 GHz band are:

> **Managing interference from spectrum licensed transmitters**

[Radiocommunications Advisory Guidelines \(Managing Interference from Spectrum Licensed Transmitters – 26 GHz Band\) 2020](#)

This legislative instrument contains information for spectrum licensees about protection intended to be provided to receivers of services operating under other licences in or adjacent to the 26 GHz band.

> **Managing interference to spectrum licensed receivers**

[Radiocommunications Advisory Guidelines \(Managing Interference to Spectrum Licensed Receivers – 26 GHz Band\) 2020](#)

This legislative instrument sets a minimum performance level for receivers in the band. The criteria provide a basis from which licensees can 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 have regard to the advisory guidelines. It should be noted that these guidelines only give guidance in relation to registered fixed receivers – they do not give guidance in relation to receivers that are not registered on the RRL or are not fixed. This includes mobile or nomadic receivers operated under a spectrum licence. While it is not mandatory to meet the minimum level of receiver performance specified in the guidelines, receivers will generally be assumed to meet these minimum levels when the ACMA is involved in resolving interference disputes.

Licensees will need to take account of the emission limits permitted under the technical framework when deciding the level of performance they require for their receivers. It is for licensees to balance the cost of receiver performance against the risk of interference.

The framework provides for the operation of receivers that have interference susceptibility commensurate with that achieved by current technology, and for this level of performance to help guide the interference settlement process. Receivers with poor interference susceptibility performance can be used; but in those cases, licensees may need to use more of their own spectrum space as guard space to limit the risk of interference.

Applicants should read the advisory guidelines together, and in conjunction, with:

- > the determination of unacceptable levels of interference
- > the allocation determination and marketing plan (see 1.3 Legislative framework in this guide).

These instruments should be followed by applicants when planning for services in the 26 GHz band.

#### **6.7.6 Labelling radiocommunications transmitters**

Licensees should affix identification labels containing the name and address on all fixed transmitters operated under the spectrum licence.

# Part 4 – Communicating with the ACMA

## 7. Updates, queries, lodgements and payments

**This chapter explains how:**

- > **the ACMA will announce new auction information and updates**
- > **to submit queries about the auction to the ACMA**
- > **to lodge auction documents with the ACMA**
- > **to make auction payments to the ACMA.**

## 7.1 Updates and announcements

The ACMA will post updates and announcements about the auction on the dedicated 26 GHz band auction webpage at [www.acma.gov.au/26-ghz-spectrum-auction](http://www.acma.gov.au/26-ghz-spectrum-auction). Prospective applicants, applicants and registered bidders are responsible for monitoring the webpage for all current information on the auction and associated matters. Interested parties can also sign-up to an e-bulletin for alerts.

If needed, the ACMA will contact applicants and registered bidders directly using the contact details provided on the application form. Where appropriate, the auction manager will contact registered bidders using the electronic messaging facility within the auction system.

## 7.2 Queries

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

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

**Telephone:** (02) 6219 5151

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

## 7.3 Giving documents to the ACMA

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

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

**Delivery to:** Auction Manager  
Major Spectrum Allocations Section  
Australian Communications and Media Authority  
Red Building, Benjamin Offices, Chan St  
Belconnen ACT 2617

Section 7 of the allocation determination sets out procedures for giving documents to the ACMA by email, or via delivery of documents to the physical address listed above.

If a document is **emailed**:

- > the document must be included as an attachment
- > the document must be in the following formats:
  - > for a statutory declaration, statement under section 60 of the allocation determination or a deed: PDF or another format approved by the auction manager; or
  - > all other documents: Word or PDF or another format approved by the auction manager.

The allocation determination sets out the following additional requirements for giving deeds of financial security to the ACMA:

- > If a deed of financial security is executed by a person acting under a power of attorney for a body corporate, a copy of the power of attorney must be given with the deed under subsection 36(8).
- > If a deed of financial security is given to the ACMA by email, the original deed must be received by the ACMA no later than 3 working days after the eligibility deadline (or if the ACMA agrees to a later time, the agreed time).

Subsection 15(6) of the marketing plan sets out requirements if a bank guarantee is provided to the ACMA via email. Namely,

- > that the original guarantee must be received by the ACMA no later than 3 working days after the date (or, if the ACMA agrees to a later time, the agreed time) for the guarantee to be taken to have been provided to the ACMA.

Additional information about the provision of bank guarantees is available in section 15 to the marketing plan.

## 7.4 Making payments

All amounts payable to the ACMA for the 26 GHz band auction (for example, application fees, eligibility payments and winning price payments) must be paid in Australian currency by electronic transfer or bank cheque. Winning price payments may also be paid via BPay or credit card.

Details for each payment method are provided below:

### 1. Electronic transfer

Bank:	ANZ Bank
Branch:	Belconnen
BSB:	012-951
Account no.:	8379 24272
Account name:	ACMA Official Administered Receipts
Transfers should be labelled:	'26 (space) purpose of payment (space) company name'. Note: Because transfer labels are limited to 15 alphanumeric characters, the following abbreviations must be used. For example: '26 appfee <company name>' '26 eligpay <company name>' '26 win <company name>'

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

### 2. BPay (Payment of winning bids only)

Payment information will be available on the tax invoice.

### 3. Credit card payment (Payment of winning bids only)

Payment information will be available on the tax invoice

#### **4. Bank cheque (crossed 'not negotiable')**

Made payable to: Australian Communications and Media Authority on behalf of the Commonwealth

Delivered to: Auction Manager  
Major Spectrum Allocations Section  
Australian Communications and Media Authority  
Red Building, Benjamin Offices, Chan St  
Belconnen ACT 2617

Subsection 9(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 3 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 on or 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 payable. 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, eligibility payment or winning price.

# Appendix A: Auction documents

## Attachments A to I

### Allocation instruments

**Attachment A** – [Radiocommunications \(Spectrum Licence Allocation – 26 GHz Band\) Determination 2020](#).

**Attachment B** – [Radiocommunications Spectrum Marketing Plan \(26 GHz band\) 2020](#)

### Technical framework instruments

**Attachment C** – [Radiocommunications \(Unacceptable levels of interference – 26 GHz Band\) Determination 2020](#)

**Attachment D** – [Radiocommunications Advisory Guidelines \(Managing Interference from Spectrum Licensed Transmitters – 26 GHz Band\) 2020](#)

**Attachment E** – [Radiocommunications Advisory Guidelines \(Managing Interference to Spectrum Licensed Receivers – 26 GHz Band\) 2020](#)

**Attachment F** – [Radiocommunications \(Trading Rules for Spectrum Licences\) Determination 2012](#) and [Radiocommunications \(Trading Rules for Spectrum Licences\) Amendment Determination 2020 \(No. 1\)](#)

### Spectrum re-allocation declaration

**Attachment G** – [Radiocommunications \(Spectrum Re-allocation – 26 GHz Band\) Declaration 2019](#)

### Ministerial directions

**Attachment H** – [Radiocommunications \(Spectrum Licence Limits – 26 GHz Band\) Direction 2020](#)

**Attachment I** – [Radiocommunications \(Spectrum Access Charges—26 GHz Band\) Direction 2020](#)

# Appendix B: Auction forms

There are 10 forms for the 26 GHz band auction:

- > Form 1 – Application form
- > Form 2 – Deed of acknowledgement
- > Form 3 – Deed of confidentiality
- > Form 4 – Associates form – body corporate
- > Form 5 – Associates form – individuals
- > Form 6 – Statutory declaration
- > Form 7 – Eligibility nomination form
- > Form 8 – Deed of financial security
- > Form 9 – Statement about affiliations for primary stage winning bidders
- > Form 10 – Bank guarantee.

Instructions on who needs to complete the forms and when to do so, are provided in the step-by-step guide in Chapter 3 and at the start of each form.

Forms 1 to 10 are available in the *Auction forms booklet* that accompanies this auction guide in the Applicant information package on the ACMA website at [www.acma.gov.au/26-ghz-spectrum-auction](http://www.acma.gov.au/26-ghz-spectrum-auction).

# Glossary

Word/phrase	Definition
26 GHz band lots	As defined in Chapter 2
ACMA	Australian Communications and Media Authority
ACMA Act	<a href="#">Australian Communications and Media Authority Act 2005</a>
Act	<a href="#">Radiocommunications Act 1992</a>
AIP	Applicant information package
allocation determination	<a href="#">Radiocommunications (Spectrum Licence Allocation – 26 GHz Band) Determination 2020</a>
allocation instruments	<a href="#">Radiocommunications (Spectrum Licence Allocation – 26 GHz Band) Determination 2020</a> <a href="#">Radiocommunications Spectrum Marketing Plan (26 GHz band) 2020</a>
allocation limits	Limits on the aggregate amount of spectrum that can be used by a bidder. The allocation limits cap the total amount of spectrum that a single bidder can acquire in the auction (see 3.4). The allocation limits are set out in the <a href="#">Radiocommunications (Spectrum Licence Limits – 26 GHz Band) Direction 2020</a>
auction period	Defined in subsection 4(1) of the allocation determination, the period commencing on the eligibility deadline (or extended eligibility deadline, if there is one) and ending immediately after the auction manager provides the results for the auction in accordance with subsection 66(2).
Broadcasting Services Act	<a href="#">Broadcasting Services Act 1992</a>
Competition and Consumer Act	<a href="#">Competition and Consumer Act 2010</a>
ESMRA	Enhanced Simultaneous Multi-Round Ascending auction
HCIS	Hierarchical cell identification scheme used as part of the Australian Spectrum Map Grid 2012 document published by the ACMA on its website. The following link is to a tool that converts lists of HCIS area descriptions into placemark files to visualise the areas using mapping software: <a href="http://www.acma.gov.au/convert-hcis-area-description-placemark">www.acma.gov.au/convert-hcis-area-description-placemark</a> .
lot	A unit of a product. See subsection 5(1) of the allocation determination.
marketing plan	<a href="#">Radiocommunications Spectrum Marketing Plan (26 GHz Band) 2020</a>
MSR	Minimum spectrum requirement. For the 26 GHz band auction, the MSR is capped at 2 lots across all products.
primary, secondary and assignment stages	The ESMRA auction format has primary, secondary and assignment stages, as defined in the allocation determination.
radiocommunications advisory guidelines (RAGs)	Radiocommunications advisory guidelines are made under section 262 of the Act and 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 services are identified in the RAGs, which enables licensees to

Word/phrase	Definition
	assess the risk of interference between the services and arrange to mitigate this risk.
RALI	Radiocommunications Assignment and Licensing Instruction
re-allocation deadline	The time by which at least one spectrum licence must be allocated. The re-allocation deadline for the 26 GHz band is defined in the reallocation declaration.
re-allocation declaration	<a href="#">Radiocommunications (Spectrum Re-allocation – 26 GHz Band) Declaration 2019</a>
re-allocation period	Sets the timeframe during which the re-allocation process is to be completed. The re-allocation period for the 26 GHz band is defined in the re-allocation declaration.
SMRA	Simultaneous Multi-Round Ascending auction
Spectrum licence limits direction	<a href="#">Radiocommunications (Spectrum Licence Limits – 26 GHz Band) Direction 2020</a>
technical framework	There are 3 interlocking regulatory elements that make up the technical framework for a spectrum-licensed band, including: <ul style="list-style-type: none"> <li>&gt; conditions on the licence (including core licence conditions)</li> <li>&gt; a determination of unacceptable interference for device registration</li> <li>&gt; radiocommunications advisory guidelines.</li> </ul>
Telecommunications Act	<a href="#">Telecommunications Act 1997</a>
TLG	A Technical Liaison Group is an advisory body convened by the ACMA to provide advice on the technical and regulatory aspects required to develop a spectrum licence technical framework.