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Supporting the Universal Outdoor Mobile Obligation in the external territories and territorial sea

Consultation paper

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Executive summary

The Universal Outdoor Mobile Obligation (UOMO) requires Australia's 3 mobile network operators (MNOs) – Optus, Telstra and TPG Telecom – to provide baseline outdoor mobile phone (voice and text) coverage across Australia. This includes the external territories of Christmas Island, the Cocos (Keeling) Islands and Australia's territorial sea. The external territories and territorial sea are referred to as the 'ETTS' in this paper.

MNOs may comply with the UOMO by deploying terrestrial mobile coverage, and by deploying emerging satellite direct-to-device (D2D) services. D2D allows mobile handsets to communicate directly with a satellite rather than through a mobile phone tower or terrestrial base station.

In the ETTS, the MNOs have little-to-no-terrestrial infrastructure, and we anticipate D2D services will play a role in facilitating the MNOs to comply with UOMO, and a role in providing broader coverage more generally. This paper proposes options to enable MNOs to provide D2D coverage in the ETTS from the commencement of the UOMO while minimising disruption to existing services.

D2D services using International Mobile Telecommunication (IMT) spectrum are already supported in other parts of Australia through the spectrum licensing framework. These arrangements have enabled Telstra, in collaboration with SpaceX's Starlink, to provide text and limited data D2D services. As the technology develops, these licences may also have a role in supporting the text and voice requirements of the UOMO, but the licences used do not extend to the ETTS.

As an alternative to using IMT spectrum, MNOs may also be able to use Mobile Satellite Service (MSS) spectrum to deliver D2D services. MNOs may be able to meet the full voice and text requirements of the UOMO using the 2 GHz MSS band, and potentially other MSS bands in the future, including in the ETTS. This consultation is not about establishing those MSS arrangements, which we are consulting on separately. Instead, while this MSS technology develops, this paper will consider options for enabling D2D services in the ETTS using IMT spectrum.

There are several approaches that could authorise D2D services to operate in the ETTS using specified IMT bands. Our preliminary view is that it would not currently be suitable to extend the existing spectrum licensing framework in IMT bands to authorise D2D in the ETTS. Spectrum licensing would require clearing spectrum in the external territories, some of which is already in use to provide services in those areas. It would also require allocating the relevant spectrum under the spectrum licensing framework before the long-term requirements for IMT based D2D services are sufficiently settled. This could also preclude use of that spectrum by alternative users in the ETTS.

We invite views on 2 high-level options to support UOMO implementation that could provide a pathway for future use of IMT spectrum for D2D services in the ETTS:

- **Option 1: Class licensing approach (preferred)** – issuing a class licence that would authorise the use of mobile handsets in the specified ETTS to communicate with satellites using specified frequencies.

- **Option 2: Exemption approach** – exempting mobile handsets in the specified ETTS from the relevant provisions of the *Radiocommunications Act 1992* when communicating with satellites using specified frequencies.

Under each option, the transmissions from satellites to mobile handsets would generally not be subject to the Act and therefore do not need to be licensed.

Both options would allow IMT-based D2D services to be introduced as the technology becomes capable of supporting a broader range of services, while providing scope to manage interference and minimise potential impacts on existing spectrum users in the ETTS.

Under both options, no specific knowledge or action is required by consumers who live in or are visiting the ETTS – the class licence or exemption would automatically apply to transmissions they make using their mobile handsets to satellites.

We expect to consult further in 2027 on the detailed implementation of any option that is progressed.

Issues for comment

We invite comments on the issues set out in this paper:

1. Our preliminary view that allocating spectrum licences in the ETTS and expanding the existing satellite licensing framework to apply to D2D services is not well-suited to supporting D2D in the ETTS by the default commencement date for UOMO (1 December 2027).
2. The suitability of Options 1 and 2 in supporting D2D services in the ETTS from the default commencement date for UOMO.

Introduction

The Commonwealth Parliament has passed the *Telecommunications Legislation Amendment (Universal Outdoor Mobile Obligation) Act 2026* (the UOMO Act) to establish the UOMO.

In the *Five-year spectrum outlook 2026–31*, we undertook to progress work associated with the spectrum management aspects of implementing the UOMO. We aimed to publish a work program in Q4 2026 that would cover any necessary licensing, planning and allocation initiatives, such as examining how D2D services could be authorised in Australia's external territories.

The existing radiocommunications arrangements support D2D services in the Australian states and mainland territories. However, these arrangements do not currently extend to the ETTS, and without action from the ACMA, MNOs will not be able to comply with the UOMO as it relates to these areas.

The UOMO

The UOMO requires Optus, TPG Telecom and Telstra to provide baseline outdoor mobile coverage, comprising voice and text services, to all people in Australia on an equitable basis.

The UOMO Act does not specify how MNOs should meet the obligation, although it is likely to be through either terrestrial networks or through satellite D2D (or a combination of both). It is expected that D2D services provided by low-earth orbit satellites (LEOsats) will be used to meet the UOMO in areas where mobile coverage from terrestrial mobile networks is not available.

The Explanatory Memorandum to the associated Bill states that the UOMO will apply to all states and mainland territories, and the eligible external territories of Christmas Island and the Cocos (Keeling) Islands. It relies on the meaning of 'Australia' in the *Telecommunications (Consumer Protection and Service Standards) Act 1999* and the *Telecommunications Act 1997*. The geographical application of the UOMO Act effectively mirrors that of the USO, which includes offshore waters but does not currently include Norfolk Island.

Our approach to radiocommunications licensing

As outlined in *Our approach to radiocommunications licensing and allocation*, we adopt a flexible licensing framework to promote the long-term public interest that supports the efficient use of spectrum. Depending on the characteristics of a band, the intended use, demand for spectrum and investment requirements, the ACMA may issue spectrum licences, apparatus licences or class licences. The licensing approach for a particular band is determined on a case-by-case basis, considering the objectives of the Act and relevant government policy.

Current licensing arrangements and incumbent services in Australia's ETTS

We have historically issued apparatus licences for mobile services in the ETTS, with user equipment like handsets authorised under a class licence.

Telstra provides mobile services on Christmas Island, through Public Telecommunications Service (PTS) apparatus licences using a combination of 700, 800 and 900 MHz frequency bands. We understand that neither Optus nor TPG Telecom offer services in the ETTS.

Independent telcos provide mobile services to parts of the ETTS using a range of apparatus-licensed frequencies. For example, Christmas Island Fibre Internet (CiFi) provides 4G services in the 870–880 MHz band on Christmas Island.

In both cases, consumer handsets are authorised to communicate with these apparatus-licensed networks under the Radiocommunications (Cellular Mobile Telecommunications Devices) Class Licence 2024.

Current arrangements for D2D in Australia

We have published the regulatory guide *Operation of an IMT satellite direct-to-mobile service* to provide guidance about how the licensing framework can support D2D services through spectrum licensing or apparatus licensing arrangements in Australia.

Depending on the service model, D2D services may be provided through bands assigned for either IMT or MSS, which have different licensing approaches.

IMT bands

The ACMA has issued spectrum licences in several bands designated for IMT on an Australia-wide basis (for example, the 700 MHz, 850 MHz, 900 MHz, 2.3 GHz and 2.5 GHz bands). These spectrum licences do not currently extend to the ETTS.

Spectrum licences have also been issued into several other IMT bands covering metropolitan and regional areas only (that is, the 1800 MHz, 2 GHz, 3.4 GHz and 26 GHz bands).

D2D services can be operated in IMT bands covered by spectrum licences because spectrum licences are technology-neutral, allowing licensees to use the spectrum for D2D services where the operation complies with the conditions of the licence. Use of IMT bands also enables users to access D2D services without special equipment, as consumer mobile handsets are typically already capable of operating on these frequencies.

Spectrum licences are able to authorise transmissions from consumer handsets to satellites, while transmissions from satellites to consumer handsets currently sit outside the scope of our regulatory framework.[1]

MSS bands

D2D services may also operate using MSS spectrum. The ACMA's usual approach to licensing satellite communications has involved apparatus licences and class licensing. The space segment is authorised through space and space receive apparatus licences,[2] while a class licence could authorise the ubiquitous user devices, such as mobile phones communicating with the satellite network.

[1] Sections 23(1) and 16(1)(ca) of the Act provide that the Act does not apply to foreign space objects, except those specified in the Radiocommunications (Foreign Space Objects) Determination 2025.
[2] The Radiocommunications (Communication with a Space Object) Class Licence 2025 authorises communications between a space station and an earth station. Frequencies in the class licence may only be used if the owner or operator of the satellite is listed in the Radiocommunications (Australian Space Objects) Determination 2025 or the Radiocommunications (Foreign Space Objects) Determination 2025.

Although no D2D services currently operate in MSS bands in Australia, the ACMA's 2 GHz MSS allocation may provide another option for supporting D2D services in Australia. It is the first largely unencumbered band capable of delivering the voice and text services necessary for MNOs to meet the UOMO using D2D. It is globally harmonised to support MSS, can support 5G Non-Terrestrial Network services (including voice, text and data), and is not currently used for MSS in Australia. In the short term, utilisation of the 2 GHz MSS band is likely to be a preferred path to deliver UOMO obligations. We plan to consult on allocation options for the 2 GHz MSS band in December 2026.

The need for D2D arrangements in the ETTS

D2D licensing arrangements in Australia do not currently extend to the ETTS. We are considering the suitability of different regulatory options to support D2D in the ETTS from the default commencement date.

These considerations have been focussed on D2D services using IMT spectrum.

Existing Australia-wide spectrum licences do not cover the external territories and therefore cannot support end-users accessing the UOMO services in the ETTS. This is because when these licences were originally allocated, the ETTS were not included in those licences. The spectrum in those areas is available under other arrangements, such as apparatus licensing.

Further, the Australian Spectrum Map Grid, which we use for defining geographic areas for spectrum licences, does not currently include the full extent of Australian territory as defined by the Act (see Figures 1 and 2 below).

As explained above, D2D services may also be provided using MSS spectrum bands. The ACMA's 2 GHz MSS allocation process is ongoing and we will consider how this spectrum could also be used to support D2D in the ETTS.

Figure 1: Current Australian Spectrum Map Grid boundary

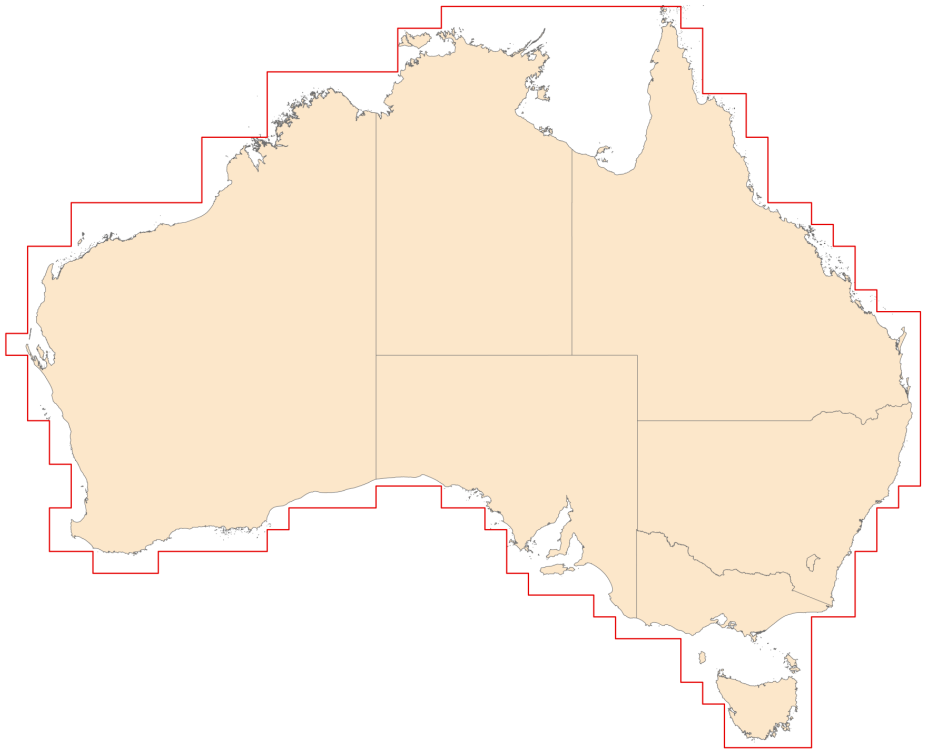
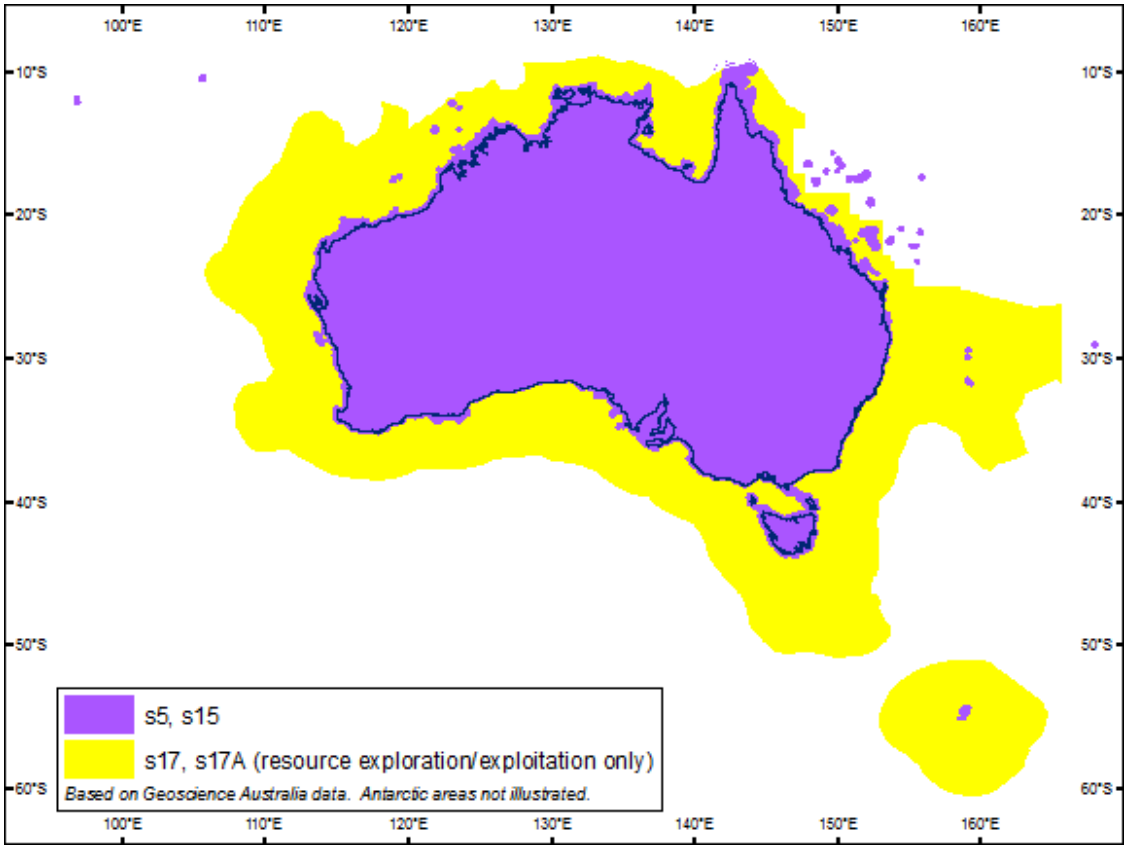


Figure 2: Australian territory defined by the *Radiocommunications Act 1992*[3]



[3] Please note that Figure 2 does not depict all external territories; e.g. the Australian Antarctic Territory.

Extending or modifying existing regulatory arrangements to support D2D in the ETTS

We have considered the merits of allocating new spectrum licences to cover the ETTS or expanding the existing regulatory framework to make both the ground component (mobile handset) and the satellite transmissions subject to the Act. This could provide a pathway to enabling D2D services in the ETTS.

Our preliminary view is that both approaches are likely better suited to scenarios where there is less uncertainty about the long-term spectrum requirements for D2D and shape of the D2D market.

Allocating spectrum licences in the ETTS

In practice, this approach would enable D2D in the ETTS by extending the spectrum licensing arrangements that currently apply to Australia to the ETTS. This approach would enable MNOs and the end-users of their networks to use the arrangements currently used for D2D in Australia in the ETTS.

However, the ETTS are not currently spectrum licensed and to do this, we would need to undertake a new allocation of spectrum licences for the relevant spectrum in the ETTS, including making a re-allocation declaration and marketing plan. We cannot expand the geographic boundaries of existing spectrum licences that apply to Australia to the ETTS through mechanisms like licence variation or as part of decision-making for expiring spectrum licences.

As mentioned, there is considerable uncertainty about which bands will be used to support D2D services in the long-term. Spectrum licences are generally used as a long-term licensing arrangement where we have sufficient confidence that arrangements will support the spectrum to be efficiently used. This is because these licences cannot easily be varied or resumed without agreement from the licensee, potentially locking the spectrum into a particular use.

Issuing spectrum licences into the ETTS would likely require incumbent services that currently use that spectrum in those areas to be cleared from those bands.

The combination of uncertainty about the long-term spectrum requirements for D2D and spectrum licensing could therefore result in spectrum being re-allocated to support D2D, disrupting existing services but with the spectrum becoming underutilised over time. Spectrum that is allocated for spectrum licensing is not generally available for use by alternative users who may want to offer services on the ETTS.

Re-allocation of the spectrum would also likely not be progressed prior to the default commencement date, given the timeframes associated with the legal process for allocating spectrum licences.

Expanding the existing satellite/ground segment licensing framework to apply to D2D services

We have also considered modifying the established satellite licensing framework and using apparatus licences to authorise transmissions from satellites and a class licence to authorise handsets. Currently, the satellites that would be used are generally not subject to the Act.

Apparatus licences and class licences, subject to interference management requirements, could flexibly co-exist with incumbent services in the ETTS. They also provide greater flexibility to adapt and change how the spectrum is used over time.

This approach would involve introducing modifications to the existing framework, including amendments to instruments such as the Radiocommunications (Australian Space Objects) Determination 2025, the Radiocommunications (Foreign Space Objects) Determination 2025 and the Radiocommunications (Communication with Space Object) Class Licence 2025.

This would be a lengthy and complex process, and could more broadly impact regulation of D2D services across mainland Australia and the ETTS. It would likely have a much larger scope than enabling D2D in the ETTS and could likely not be fully implemented prior to 1 December 2027.

We think that exploration of this option would be better suited to when D2D technologies and markets have matured further and spectrum requirements are more stable.

Question 1
We invite comments on our preliminary view that allocating spectrum licences in the ETTS and expanding the existing satellite/ground segment licensing framework to apply to D2D services is not well-suited to supporting D2D in the ETTS by the default commencement date for UOMO.

Options for supporting D2D in the ETTS

We have identified 2 high-level regulatory options that we think are suitable for facilitating D2D in the ETTS by the default commencement date for the UOMO:

- **Option 1 (preferred):** issuing a class licence to authorise user handsets to communicate with satellites in ETTS.
- **Option 2:** exempting user handsets from parts of the Act in the ETTS to enable communication with satellites in ETTS.

Both options would authorise transmissions in IMT bands from mobile handsets to satellites. In such bands, the Act generally does not regulate satellite-to-handset communications and these operate on a 'no interference, no protection' basis with the requirement to cease or vary operation if interference occurs.[4]

Our preliminary view is that while either option could provide spectrum arrangements to support D2D in the ETTS by the default start date, Option 1 is preferable as it is more consistent with established licensing practices used to authorise use of the spectrum.

Should either approach be progressed, we expect to consult further on more detailed proposals in 2027.

Option 1: Class licensing approach (preferred)

Under this option, we would issue a class licence to authorise mobile handsets in ETTS to operate on specified frequencies and transmit to satellites.

Operation of devices would be limited to specified frequencies that likely align with the frequencies MNOs already have access to in Australia under spectrum licences, and that are being used by that MNO for a D2D service. Operation of devices would also be limited to relevant ETTS, namely Christmas Island, Cocos (Keeling) Islands and the territorial waters around them. We may wish to also include the territorial waters around Australia.

As with existing IMT D2D services, transmissions from satellites on relevant frequencies would continue to operate outside the scope of the Act, and MNOs would need to continue to have commercial agreements with satellite network operators in place, which we expect would include interference management requirements.

No specific knowledge or action would be required from consumers who are on or visiting the ETTS – the class licence will generally automatically apply to transmissions they make using their mobile handsets to satellites. Users would not need to apply for the class licence or pay any fees to operate under the class licence. Any communications from the handset to terrestrial base station or mobile phone tower would not be covered by the class licence (though it may be covered by another class licence).

[4] See Operation of an IMT satellite direct-to-mobile service at page 3, ITU Radio Regulations No. 4.4 and ITU Rules of Procedure.

If this option is progressed, we would undertake a further consultation on the details of a draft class licence. This process would be used to determine the details of the class licence, including the frequencies and areas to which the class licence applies.

Before a class licence is made, we would need to consider the level of potential interference between mobile handsets authorised under the class licence and any other authorised devices that may already operate in the relevant ETTS.[5] While it would not be a requirement of the class licence, in practice, the user would need to have an applicable mobile phone service to receive D2D connectivity.

Case study: D2D services in the ETTS under class licensing

- An MNO holds a 2.5 GHz Australia-wide spectrum licence in an IMT band.
- The MNO currently has a commercial arrangement with a satellite network operator for the provision of D2D services using the 2.5 GHz band.
- Uplink transmissions from MNO customers using the 2.5 GHz band to the satellite network are authorised by the spectrum licence in Australia.
- A class licence is in place authorising handsets to communicate with satellites using the 2.5 GHz band when located on Christmas Island and the Cocos (Keeling) Islands.
- A handset is located on Christmas Island.
- The uplink transmissions from handsets would be authorised by the class licence to use the 2.5 GHz band.
- Downlink transmissions from stations on the satellite to handsets would continue to operate outside the scope of the Act.
- The user would still require an applicable mobile phone plan to access the D2D service.

Option 2: Exemptions approach

Under this option, we would make an exemption under section 302 of the Act to exempt a person's possession and use of a handset to communicate with a satellite, subject to a series of conditions.[6]

Conditions could be used to limit the exemption so that it may only apply to:

- specified ETTS
- communication with satellites for the purposes of D2D
- operation of a handset on specified frequencies.

An exemption could be used to achieve a similar practical effect to Option 1. The exemption would likely be limited to frequencies the MNOs already have access to in Australia under spectrum licences and which are being used for D2D services, and to relevant ETTS.

[5] The class licence would also need to be consistent with Subsection 9(5) of the Radiocommunications (Australian Radio Quiet Zone Western Australia) Frequency Band Plan 2023; Radiocommunications (Mobile-Satellite Service) (1980-2010 MHz and 2170-2200 MHz) Frequency Band Plan 2022, and the Radiocommunications (Television Outside Broadcasting) (2010–2110 MHz and 2200–2300 MHz) Frequency Band Plan 2022.

[6] Section 302 gives the ACMA the power to exempt certain specified acts and specified persons from compliance provisions of the Act, including possessing a radiocommunications device without a licence and operating a radiocommunications device without a licence. Without an exemption, a person undertaking such acts may be subject to a penalty under sections 46 and 47 of the Act.

The exemption would only apply to the handset's communications with a satellite. Any communications from the handset with a terrestrial network would still need to be licensed.

As with Option 1, this option would also not require any specific knowledge or action by consumers who are in or visiting the ETTS – the exemption would automatically apply to transmissions they make using their mobile handsets to satellites. Users would not need to apply for the exemption or pay any fees to operate under the exemption.

MNOs would need to continue to have commercial agreements with satellite network operators in place, which we expect would include interference management requirements.

While it would not be a requirement of the exemption, in practice, the user would need to have an applicable mobile phone service to receive D2D connectivity.

Case study: D2D services in the ETTS under an exemption

- An MNO holds an 2.5 GHz Australia-wide spectrum licence in an IMT band.
- The MNO currently has a commercial arrangement with a satellite network operator for the provision of D2D services using the 2.5 GHz.
- Uplink transmissions from MNO customers using the 2.5 GHz band to the satellite network are authorised by the spectrum licence in Australia.
- An exemption is in place exempting a person from provisions of the Act relating to possession and use of an unlicensed device when located on Christmas Island and the Cocos (Keeling Islands), and operated to communicate with a satellite network using the 2.5 GHz band.
- A handset is located on Christmas Island.
- The uplink transmissions from handsets would be permitted to use the 2.5 GHz band, enabling provision of D2D coverage.
- Downlink transmissions from stations on the satellite to handsets would continue to operate outside the scope of the Act.
- The user would still require an applicable mobile phone plan to access the D2D service.

Preliminary views on Options 1 and 2

While both options could generally be used to provide similar practical outcomes, we currently prefer Option 1.

Option 1 is more consistent with the usual regulatory approach of licensing radiocommunications devices and transmissions, rather than exempting them. We consider it broadly preferable that, where devices and communications can be licensed under the existing licensing system in a straightforward manner, they should be. Generally, we think that exemptions should be used for use-cases that are incompatible with the licensing system, or where there are other relevant public interest considerations. Option 1 is also similar to the existing space/space receive model for licensing satellites, is more intuitive, and likely more familiar to our stakeholders.

Option 1 could also potentially be used to provide long-term licensing arrangements, should the bands used to provide D2D services in the ETTS be relatively stable.

Question 2
We invite views on the suitability of Option 1 and 2 in supporting D2D services in the ETTS from the default commencement date for UOMO.

Next steps

Following the conclusion of the consultation period, we will review submissions and consider whether changes should be made to our preliminary views. Stakeholder feedback will inform our assessment of the most appropriate licensing framework for supporting customer equipment for the provision of UOMO services in the ETTS.

Table 1 sets out our current indicative implementation pathway.

Table 1: Milestones and indicative timing

Milestone	Indicative timing*
Public consultation on proposed options	26 November 2026
Close consultation period	12 February 2027
Consider submissions and finalise position	Q1 2027
Develop and consult on regulatory arrangements	Q2–Q3 2027
Implement final arrangements	Q3/Q4 2027 (prior to 1 December 2027)

** The timeframes provided above are indicative only and may change due to issues raised during consultation, legislative requirements and broader government decisions relating to implementation of the UOMO.*

Invitation to comment

Making a submission

We invite comments on the issues set out in this consultation paper.

- Online submissions can be made by uploading a document. Submissions in PDF, Microsoft Word or Rich Text Format are preferred.
- Submissions by post can be sent to:

  The Manager
  Spectrum Strategy and Futures
  Australian Communications and Media Authority
  PO Box 13112
  Law Courts, Melbourne, VIC 8010

The closing date for submissions is **COB, 12 February 2027**.

Consultation enquiries can be emailed to spectrumstrategy@acma.gov.au.

Publication of submissions

We publish submissions on our website, including personal information (such as names and contact details), except for information that you have claimed (and we have accepted) is confidential.

Confidential information will not be published or otherwise released unless required or authorised by law.

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View information about our policy on the publication of submissions, including collection of personal information during consultation and how we handle that information.

We may use an artificial intelligence (AI) tool to analyse and summarise your submissions for internal purposes to inform the process for updating benchmarks and future individual band consultations. This may include using AI to summarise submissions you provide that may contain personal information.

Information on the *Privacy Act 1988*, how to access or correct personal information, how to make a privacy complaint and how we will deal with any complaints, is available in our privacy policy.