

Review of the 850 MHz and 1800 MHz spectrum licence technical frameworks

Outcomes paper

MAY 2026

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Executive summary

Background

The 850 MHz and 1800 MHz band spectrum licences are due to expire in June 2028. In February 2026, we released the consultation paper [Review of the 850 MHz and 1800 MHz spectrum licence technical frameworks](#) (the consultation paper) that considered updates to the technical framework that would apply to renewed 850 MHz and 1800 MHz band spectrum licences in preparation for opening of the renewal application period in June 2026.

Consultation responses

We received 4 public responses and one confidential response to the consultation: public submissions were from stakeholders in the wireless broadband (WBB) sector and from the rail sector representing rail infrastructure managers and rail operators.

The WBB sector were broadly supportive of proposals in the consultation paper but also proposed some potential changes not consulted on. This included the view that unwanted emission limits in the 1800 MHz band could be relaxed without impacting rail services and that higher power user equipment (UE) should be considered for registration exemptions.

The submission from the rail sector indicated that the industry is concerned about the longevity of rail services authorised by apparatus licences (instead of spectrum licences) and the potential implications of moving to apparatus licences. Views were also provided about the ongoing coexistence between rail services and mobile network operator (MNO) services.

Outcomes

We have considered feedback to the consultation and have decided to implement the following changes to renewed 850 MHz and 1800 MHz band spectrum licences:

- Inclusion of new provisions to support the use of wideband amplifiers, with some variations based on stakeholder feedback.
- The 850 MHz frequency downshift will proceed as proposed, with the correction of minor typographical errors. We will also align how unwanted emission limits in the lower 850 MHz band are specified with the style used in other spectrum licences in other bands.
- We will adopt a hybrid approach for specifying unwanted emission limits in the upper 1800 MHz frequency segment to provide MNOs with greater access to standardised equipment while ensuring coexistence with services operating in adjacent frequencies (including rail safety services). This will consist of unwanted emission limits:
 - Aligning with the 3GPP Category B Option 1 (CBO1) limits for unwanted emissions:
 - falling into the range 1795–1865/1870 MHz¹
 - falling into the range 1865/1870–1880 MHz outside of rail areas²
 - Aligning with the 3GPP Category B Option 2 (CBO2) limits for unwanted emissions from non-AAS transmitters falling into the range 1880–1890 MHz. Existing unwanted

¹ There are two frequency boundaries depending on the location due to the current state rail authority spectrum licence holdings, in Brisbane, Sydney, Melbourne and Perth the boundary is at 1865 MHz, for Adelaide the boundary is 1870 MHz.

² For the purposes of this paper, 'rail areas' mean the geographic areas currently subject to spectrum licences held by the state-rail authorities in Brisbane, Sydney, Melbourne, Adelaide and Perth.

emission limits from AAS transmitters falling into the range 1880–1890 MHz will be maintained on renewed licences.

- No change to the limits for unwanted emissions that fall into the range 1865/1870–1880 MHz inside of rail areas.
- New conditions that will allow unwanted emissions falling into the range 1865/1870–1880 MHz inside rail areas to exceed the limits if there is an agreement with the relevant rail licensee or if specified coexistence arrangements have been met (with the coexistence arrangements to be subject to further consultation).
- Rail-specific conditions will be removed from the renewed 1800 MHz band spectrum licences.
- Editorial updates will be made to ensure consistency with spectrum licences issued for other bands and to update references to instruments that have since been remade.

All other technical conditions on the existing 850 MHz and 1800 MHz band spectrum licences will be carried over to the renewed licences. Sample spectrum licences for the 850 MHz and 1800 MHz bands are available on the [ACMA website](#). These sample licences should be read in conjunction with this paper.

The renewed spectrum licences will refer to the existing section 145 determinations and Radiocommunications Advisory Guidelines (RAGs) for the 850 MHz and 1800 MHz bands, without any changes.

We have noted stakeholder comments on high-level proposals included in the consultation paper for apparatus licensing arrangements for 1800 MHz band rail services. We will consult further on this matter in a separate paper that is expected to be released before the end of Q2 2026.

Next steps

This paper finalises the technical framework for renewed 850 MHz and 1800 MHz band spectrum licences. Further details on the application process to renew spectrum licences are available in the *Expiring spectrum licences application guide*, which is available on the [ACMA website](#).

We are aiming to release a consultation paper describing proposed arrangements for apparatus licences to support rail use of the 1800 MHz band before the end of Q2 2026.

Background

The 850 MHz and 1800 MHz band spectrum licences are due to expire in June 2028. Under the *Radiocommunications Act 1992* (the Act), licensees are responsible for applying to the Australian Communications and Media Authority (ACMA) within a set timeframe to have their licences renewed. The ACMA must then decide, within the timeframes applicable to the relevant licence, whether to renew a licence. For these bands, the application period commences in June 2026.

Before this application period it is appropriate for the ACMA to review the relevant spectrum licence technical frameworks to ensure they are suitable for their intended purpose and up to date. In December 2025, we published our Expiring spectrum licences stage 4: [Preferred views on bands licensing arrangements, and response to submissions](#) (preferred views paper), with a view that:

- the renewal of spectrum licences for the operation of mobile and fixed wireless broadband in these bands is likely to promote the long-term public interest
- rail services, currently operated under spectrum licences in the 1800 MHz band, should instead be authorised by apparatus licensed arrangements post expiry (that is, we are not minded to renew these spectrum licences).

In February 2026 the ACMA published a consultation paper [Review of the 850 MHz and 1800 MHz spectrum licence technical frameworks](#) (the consultation paper). That paper put forward the view that the legislative instruments that are part of the technical framework for both bands are fit-for-purpose in their current form and can be applied unmodified to the renewed licences. The legislative instruments for these bands are:

- Determinations made under section 145 of the Act (the section 145 determinations):
 - [Radiocommunications \(Unacceptable Levels of Interference – 850/900 MHz Band\) Determination 2021](#)
 - [Radiocommunications \(Unacceptable Levels of Interference – 1800 MHz Band\) Determination 2023](#)
- Radiocommunications Advisory Guidelines (RAGs) made under section 262 of the Act:
 - [Radiocommunications Advisory Guidelines \(Managing Interference from Spectrum Licensed Transmitters – 850/900 MHz Band\) 2021](#)
 - [Radiocommunications Advisory Guidelines \(Managing Interference to Spectrum Licensed Receivers – 850/900 MHz Band\) 2021](#)
 - [Radiocommunications Advisory Guidelines \(Managing Interference from Spectrum Licensed Transmitters – 1800 MHz Band\) 2023](#)
 - [Radiocommunications Advisory Guidelines \(Managing Interference to Spectrum Licensed Receivers – 1800 MHz Band\) 2023](#).

In addition, we proposed that the conditions on existing 850 MHz and 1800 MHz band spectrum licences should be carried over to renewed licences with the following modifications:

- provisions to enable the use of wideband amplifiers be added to renewed spectrum licences in both bands.

- outdated references be removed and the structure of the licences be updated for consistency with spectrum licences in other bands.
- modification of some frequency break points for unwanted emission limits on 850 MHz band spectrum licences to reflect the 1 MHz downshift of this band.
- removal of provisions specific to the operation of rail communications from 1800 MHz band spectrum licences.

The consultation paper also proposed options for relaxing unwanted emission limits for transmitters operating in the upper segment of the 1800 MHz band.

This outcomes paper provides a summary of the feedback received from the consultation, our response to key issues raised in submissions and decisions taken in light of that feedback.

Response to submissions

We received 4 public submissions and one confidential submission in response to our consultation process (the public submissions are available on our [consultation page](#)). Three submissions were provided from the WBB sector and one was from the rail industry. Our response to the key issues raised in submissions is provided in this section.

Proposed spectrum licence framework and apparatus licence arrangements

Two submissions agreed with ACMA's view that the existing section 145 determinations and Radiocommunications Advisory Guidelines (RAGs) for the 850 MHz and 1800 MHz bands can remain materially unchanged for the renewed spectrum licences. One submission questioned whether rail services operating under apparatus licences would have the same rights as those of a spectrum licence, particularly relating to the level of protection from interference.

Three submissions broadly supported the high-level licensing and technical arrangements for rail in the 1800 MHz band. One submission noted that apparatus licence conditions for rail should not increase regulatory constraints on renewed spectrum licences for mobile network operators (MNOs) and that apparatus licences for rail services in the 1800 MHz band should be issued with a shorter tenure.

Another submission emphasised that continued access to 1800 MHz spectrum is necessary for long-term rail operations, which are dependent on technology developments from Europe and the United Kingdom. This submission also contained several questions about how the proposed apparatus licence framework would operate.

ACMA response

Responses aligned with our view that the existing section 145 determinations and RAGs for the 850 MHz and 1800 MHz bands are fit for purpose and do not need to be updated before spectrum licences are renewed.

The rail sector articulated concerns that operating under apparatus licences might afford a lower level of protection from interference and also provide less certainty around tenure. While we are yet to consult on apparatus licensing arrangements for 1800 MHz band rail services, our intention is that those arrangements will provide a level of protection from interference that is commensurate with the level afforded by their existing spectrum licences. We will take these concerns into consideration and will consult on the proposed apparatus licence framework in a separate paper.

As outlined in the [draft Five-year spectrum outlook \(FYSO\) for the period 2026–31](#), we will conduct a separate body of work determining the long-term use of the 1800 MHz band outside of spectrum licensed areas.

Provisions for wideband amplifiers

Multiple submissions were strongly supportive of including provisions on spectrum licences to support wideband amplifiers and provided feedback to consider minor drafting changes that would provide greater flexibility and clarity. One submission was largely supportive but

suggested that rail services must be protected from wideband interference and out-of-band emissions that might result from the use of wideband amplifiers.

A number of submissions were also supportive of the process of varying spectrum licence conditions and proposals to consult on necessary changes to expand wideband amplifier provisions to include area wide licences (AWL) and public telecommunications service (PTS) licences in the future. One submission suggested expanding provision for wideband amplifiers to PTS apparatus licences.

ACMA response

We agree with comments to expand the wideband amplifier provisions to include operation where there is agreement between separate licensees and to support wideband amplifiers that are capable of operation in the other bands but are not actually transmitting. We also agree with stakeholder comments about clarifying that wideband amplifiers only need to comply with unwanted emissions applicable to base stations and not those limits applicable to user devices. We will include these changes on the renewed 850 MHz and 1800 MHz band spectrum licences.

We note stakeholder support to potentially expand the wideband amplifier provisions to include operation under AWL and PTS licences and may consider this under a future consultation process. We will also seek agreement from spectrum licensees to include this condition on spectrum licences currently issued in other frequency bands (excluding the 20/30 GHz band defence spectrum licences).

Frequency downshift of the 850 MHz band

Submissions provided broad support for the proposed 1 MHz downshift in the 850 MHz band with two submissions highlighting small typographical errors relating to the way that unwanted emission limits are expressed.

ACMA response

We will correct the typographical errors in the renewed 850 MHz band spectrum licences. We also note the typographical error in the consultation paper regarding the changing frequency ranges for unwanted emission limits to reflect the 1 MHz downshift. Both corrections have been made in the sample 850 MHz band spectrum licence, which can be viewed on the [ACMA website](#).

Conditions for 850 MHz user equipment (UE) transmitters

One submission requested that the unwanted emission limits for lower 850 MHz band UE transmitters be reviewed and possibly aligning the frequency offsets with how they are proposed to be specified in the 2.5 GHz band. This submission also suggested the same frequency offsets could be included on 850/900 MHz band³ spectrum licences as well. Two submissions also requested an amendment to the current registration exemption threshold to accommodate 3GPP Power Class 1 (PC1) UE in the 850 MHz band and highlighted the preference for this provision to be consistent across sub-1 GHz spectrum licences.

ACMA response

We have agreed to specify the frequency offsets as a function of channel bandwidth for transmitters in the lower 850 MHz band, which is consistent with how they are specified in

³ Consisting of the 850 MHz expansion band (814-824/859-869 MHz) and the 900 MHz band (890-915/935-960 MHz).

some other spectrum licensed bands. This change has been included in the sample 850 MHz band spectrum licence on the [ACMA website](#). We will discuss with relevant 850/900 MHz band spectrum licensees about potentially including the same specifications on those licences for consistency.

We note the proposals to modify the registration exemption threshold to accommodate 3GPP PC1 UE in the 850 MHz band and to consider applying a consistent requirement across sub-1 GHz spectrum licences. While submissions sought this change to deploy PC1 UE, details provided on potential types of devices or use cases were very limited. We also note that current 3GPP standards do not include PC1 devices in the 850 MHz band but we understand that work is currently underway in 3GPP for possible inclusion.

Therefore, we are of the view that setting the registration exemption threshold to accommodate PC1 UE in the renewed 850 MHz band spectrum licences may be premature. We could consider future changes (post licence renewal) to accommodate PC1 UE, subject to further detail becoming available about device availability and use cases, and after assessing the potential impact to other services. This work could also include the consideration of registration exemption thresholds in the adjacent 850/900 MHz band spectrum licences.

Unwanted emission limits for transmitters in the upper frequency segment of the 1800 MHz band

We received support for Option 2, adoption of CBO1 limits in all spectrum-licensed areas, however most submissions recognised that this is likely difficult due to concerns about potential interference to rail services in the upper 1800 MHz band. One submission indicated Option 1 (no change) as their preferred option.

Some submissions supported the adoption of CBO1 limits because it would improve access to global equipment ecosystems and lower costs, leading to easier infrastructure rollouts and an improved experience for the end user.

All submissions suggested a potential new fourth option, which is to adopt CBO2 limits, which moves away from bespoke Australian limits to 3GPP limits, whilst still having stricter emissions than CBO1 that would improve compatibility with adjacent band services. Some submissions also included comparisons of the CBO2-based limits against the current limits and suggested that specifying the limits in terms of *mean conducted power per transmitter port*, as opposed to the current limits that are specified as *radiated power*, would permit the operation of 4-port transmitters, which are becoming more common on MNO networks. However, the comparisons in these submissions also noted that the aggregate unwanted emissions from a 4-port transmitter complying with the CBO2 limits would be approximately 7–10 dB higher in the adjacent band, compared to the current limit.

Some submissions recommended adopting CBO2 limits instead of CBO1 in certain frequency segments to improve coexistence with adjacent band services, or to implement the CBO2 limits as a requirement on specific base stations when there are coexistence concerns with adjacent services.

Stakeholders acknowledged that there are concerns of interference to rail services and proposed alternative options. One suggestion was to adopt CBO1 (or CBO2) limits for all transmitters in the 1800 MHz band, similar to Option 2, with any coexistence issues managed via new mitigation measures included in a Radiocommunications Assignment

Licensing Instruction (RALI). Under this proposal, mitigations would be applied when a base station is identified as having a high risk of interference to existing rail services during the registration process. It was proposed that the ACMA develop these measures in consultation with stakeholders at a later stage.

Some submissions noted that some key concerns relate to interference to GSM-R services, which are only deployed across a few metro areas and are approaching end of life. Therefore, coordination can be managed through the assignment and licensing process instead of as a condition on the spectrum licence, which could unnecessarily impact deployments that pose no interference risk to rail services.

Some submissions expressed a preference to carry over the current limits for unwanted emission falling outside frequency range 1795–1890 MHz. This preference relates to concerns that changes to these unwanted emissions limits can impact currently deployed equipment.

ACMA response

Unwanted emissions falling outside the 1795–1890 MHz range

The consultation paper did not propose changes to the unwanted emission limits outside the 1795–1890 MHz range for upper band transmitters. Noting comments from stakeholders, we have decided to carry over limits in this range onto the renewed 1800 MHz band spectrum licences.

Unwanted emissions falling within 1795–1865/1870 MHz

We note comments that aligning unwanted emission limits on spectrum licences with 3GPP standards (namely the CBO1 and CBO2 limits) will provide licensees with access to a broader range of equipment, reduce costs and avoid bespoke solutions. However, we also need to consider the impact of unwanted emissions on other spectrum users, so direct alignment with industry standards is not always possible.

We are of the view that adoption of CBO1-based unwanted emission levels would have minimal impact to services operating within the frequency range 1795–1865/1870 MHz. Therefore, we will adopt CBO1 limits for unwanted emission limits in the range 1795–1865/1870 MHz.

In cases where the current unwanted emission limit is more relaxed than the adopted limit, the current limit will remain in place to ensure compatibility with currently deployed equipment. In the first 200 kHz offset the current unwanted emission limit is more relaxed than the CBO1 limits so it will remain in place.

Unwanted emissions in the frequency range 1865/1870–1880 MHz outside of rail areas

Similar to the 1795–1865/1870 MHz frequency range, we are of the view that the adoption of CBO1-based unwanted emission limits would have a minimal impact to services operating in this frequency range outside of the rail areas. Outside of rail areas, spectrum licences for the frequency range 1865/1870–1880 MHz are held by the MNOs. Therefore, we will adopt CBO1 limits for unwanted emission limits in the range 1865/1870–1880 MHz outside of the rail areas.

Unwanted emissions in the frequency range 1865/1870–1880 MHz inside rail areas

Although our view is that 1800 MHz band rail services will operate under apparatus licences in the range 1865/1870–1880 MHz (the rail segment) after their current spectrum licences

expire, the interference environment risk is likely to remain the same for the short-to medium-term. As a result, we have decided to not change the unwanted emission limits (for both AAS and non-AAS transmitters) for emissions that fall into the rail segment for transmitters operating within a rail area.

Submissions proposed adopting CBO2 limits as they are stricter than CBO1 limits. In the non-active antenna systems (non-AAS) case, CBO2 limits have the potential to be higher than current unwanted emission limits. The change from the current radiated equivalent isotropically radiated power (EIRP) limits to a conducted power allows for the use of higher gain antennas and multi-port transmitters which can increase the unwanted emission power into the rail segments. Discussions with rail authorities have identified that there are still reported cases of interference to their mobile terminals and they would be concerned that changes to these limits might increase the risk and severity of the interference.

For the AAS case, the current limits on spectrum licences are more relaxed than the CBO2 limits, allowing licensees the benefits of accessing a standardised ecosystem for AAS equipment. This means that the current unwanted emission limits do not impede the operation of AAS transmitters.

We understand that spectrum licences have a long tenure and the use of standardised equipment will benefit the long-term utility of the licence, however, consideration is needed for the gradual transition (8–10 years) of the existing GSM-R service to 5G-based technologies. We also note that GSM-R services have not been deployed in all rail areas and that future work is needed to determine what is the best use of the rail segment in the long term.

Taking this uncertainty and variability into account, we agree that, while the current limit will remain as a core condition on renewed licences, there is a case for providing additional flexibility to exceed these limits in some scenarios (discussed further below). In addition, the technical framework developed at this stage does not mean that it will remain unchanged until the end of the licence term. When there is certainty on the future usage of the current rail segments, there will be another opportunity to review the unwanted emission limits.

There is a core condition on spectrum licences that allows operation that would exceed the unwanted emission limits where there is a written agreement between the licensee and affected frequency-adjacent spectrum licensees. On expiry of the spectrum licences, we anticipate that 1800 MHz band rail services will be authorised via apparatus licences instead of spectrum licences, so this condition will be expanded on renewed spectrum licences to allow for the written agreement to be made between the licensee and frequency-adjacent rail licensee.

We also will include a condition on renewed spectrum licences that unwanted emission limits into the rail segment can be exceeded if the transmitters comply with coexistence provisions detailed in RALI MS34. The inclusion of this condition will provide additional flexibility to spectrum licensees in the absence of an agreement, but where the proposed operation would not impact adjacent-band rail services. We plan to consult on these coexistence provisions as part of our forthcoming consultation on apparatus licensed arrangements for 1800 MHz rail services.

Unwanted emissions in 1880–1890 MHz

There is not yet sufficient evidence to suggest that there would not be a coexistence issue between WBB and Digital Enhanced Cordless Telecommunications (DECT) services

operating above 1880 MHz, if the unwanted emissions limits were relaxed to align with CBO1 limits. Due to this uncertainty, we are unable to rule out the potential undue impact of permitted CBO1-aligned unwanted emissions above 1880 MHz.

However, the potential impacts on DECT from CBO2 limits have been studied by the Electronic Communications Committee (ECC), which concluded that coexistence is achievable.⁴ As a result, we will implement CBO2-aligned unwanted emission limits for non-AAS equipment in the 1880–1890 MHz frequency segment. For AAS equipment, the CBO2 limits are stricter than the current limit, so there will be no change to the limit. This will provide more flexibility for spectrum licensees whilst minimising the impact to adjacent-band DECT services.

Removal of rail-specific conditions in 1800 MHz spectrum licences

Three submissions were broadly supportive of removing rail-specific conditions from renewed 1800 MHz spectrum licences, with one submission noting that GSM-R specific conditions should remain on any licences issued for rail usage. One submission noted that regional and remote rail services would benefit from higher power cab radios to harmonise standards and improve interoperability with metropolitan rail networks where higher power cab radios are already permitted.

ACMA response

Rail-specific conditions will not be carried over to renewed 1800 MHz band spectrum licences. Our preference is that the planned apparatus licensing arrangements for 1800 MHz band rail services will support the same devices that are currently operated under spectrum licences. We will consult on the proposed apparatus licence framework in a separate consultation paper which is expected to be released in Q2 2026.

Conditions for transmitters in the lower 1800 MHz segment

One submission raised concerns about the unwanted emission limits below 1710 MHz. The submission also noted that relaxing the exemption from registration conditions to accommodate PC1 devices in the 1800 MHz band could be delayed to enable further consideration.

ACMA response

We note comments on unwanted emission limits below 1710 MHz and the possible consideration of varying the exemption from registration condition to support the use of PC1 devices. Neither of these issues were included in our consultation paper, so we do not have evidence on how these potential changes could impact other spectrum users. Therefore, we have decided not to implement these changes in the renewed 1800 MHz band spectrum licences, however we are open to considering both these issues at a future time.

Comments on other matters

Expanding agreement provisions

We received one submission that proposed that the exceedance of unwanted emission limits could be permitted where agreement is reached by all affected licensees and not just limited to agreements with adjacent spectrum licensees, which is currently the case. The submission

⁴ [ECC Report 297, Analysis of the suitability and update of the regulatory technical conditions for 5G MFCN and AAS operation in the 900 MHz and 1800 MHz bands](#)

also suggested that this could be further extended to segments of unoccupied spectrum, as well as frequency segments subject to class licensed arrangements.

ACMA response

We understand the views proposed on this issue, however, in practice we consider such an approach might be difficult to implement and maintain in many cases. Core condition agreements with apparatus licensees is inherently unstable as apparatus licences can be issued, varied, transferred, or cancelled, meaning that the set of affected licensees is not static. This would require continual re-coordination and renegotiation of agreements. It could also be complex to apply when the apparatus licensed arrangements are site-based (i.e. the licence authorises access for a service at a particular location).

That said, there may be some scenarios where core condition agreements with an apparatus licensee are feasible, such as the expanded agreement arrangements discussed in the *Unwanted emissions in the frequency range 1865/1870–1880 MHz* section. Establishing agreements with AWL licensees may also be feasible in some cases (as AWLs provide access to a frequency range and geographic area in a similar manner to spectrum licences), however there are currently no AWLs issued in bands adjacent to the 850 MHz and 1800 MHz bands.

While class licences operate on a no interference/no protection basis, our technical frameworks are developed to minimise the risk of interference to services operating on these licences. However, we note that, as discussed in the *Unwanted emissions in 1880–1890 MHz section* above, we have relaxed the limits for unwanted emissions into spectrum used by DECT services, which operate under a class licence.

Apparatus licences for rail

One submission included concerns about the level of interference protection apparatus licensed rail services would receive from spectrum licensed services, as well as the level of certainty of tenure under apparatus licensed arrangements, as compared to spectrum licences.

ACMA response

We have noted stakeholder comments with regards to the proposed apparatus licensed arrangements for 1800 MHz band rail services. This will be subject to a separate consultation on proposed arrangements for apparatus licences to support rail use of the 1800 MHz band.

Outcomes and next steps

We have now concluded our review of the 850 MHz and 1800 MHz band spectrum licence technical framework that will apply to renewed spectrum licences. Conditions on the renewed spectrum licences will include those proposed in the consultation paper, as well as the changes discussed in this paper (summarised below):

- New provisions to support the use of wideband amplifiers – see Core Conditions 5 and 7 in the sample 850 MHz and 1800 MHz band licences respectively.
- Change of frequency ranges in the 850 MHz band licence to reflect the 1 MHz frequency downshift and to correct minor errors in Core Conditions 9 and 10 of the sample licence.
- Changing how the frequency offsets for unwanted emission limits in the 850 MHz lower band are specified, for better alignment with spectrum licences in some other bands – see Core Condition 11 of the sample licence.
- Modification of the updated emission limits for transmitters in the upper 1800 MHz band – see Table 1 below.
- Rail-specific conditions will not be carried over to the renewed 1800 MHz band spectrum licences. However, our aim is that the expected 1800 MHz band apparatus licensed arrangements will continue to support the operation of existing rail services.

All technical conditions that will be included on renewed licences are detailed in the sample spectrum licences available on the [ACMA website](#). We have also made editorial updates for consistency with spectrum licences issued in other bands and to update references to instruments that have since been remade.

There are a number of changes proposed in response to the consultation that we have decided not to implement on the renewed spectrum licences. However, we can consider changes to the spectrum licence technical framework at a future time when there is a demonstrated need for amendment. Potential changes should be proposed through our Five-year spectrum outlook process in the first instance.

We do not intend to make any changes to the section 145 determinations or RAGs for these bands prior to the expiry of spectrum licences. These instruments will apply to the renewed licences without modification.

The outcomes of this process coincide with the ongoing expiring spectrum licences (ESL) process, with the intent to support spectrum licence technical frameworks that remain fit for purpose after renewal. The renewal application period for the 850 MHz and 1800 MHz bands will begin on 18 June 2026. Further details on the application process are available in the *Expiring spectrum licences application guidelines* that are available on the [ACMA website](#).

We will consult on the proposed apparatus licence arrangements for rail services in the 1800 MHz band with the release of a separate consultation paper aimed for Q2 2026.

Unwanted emission limits for transmitters in the upper frequency segment of the 1800 MHz band

We have adopted changes to the 1800 MHz band unwanted emission limits, which are described in the *Unwanted emission limits for transmitters in the upper frequency segment of the 1800 MHz band* section. These changes will be implemented in Core Conditions 9 to 16

in the renewed 1800 MHz band spectrum licence. A summary of the core conditions is provided in Table 1 – also see the sample 1800 MHz band spectrum licence.

Table 1: Summary of the core conditions in the sample 1800 MHz band spectrum licence that relate to the unwanted emission limits in the upper frequency segment

Core condition	Table	Antenna type	Geographical area	Frequency range of unwanted emissions	Limits ⁵
9	3	Non-AAS	Outside of rail areas	1795-1880	CBO1
10	4	AAS	Outside of rail areas	1795-1880	CBO1
11	5	Non-AAS	All areas	1880-1890	CBO2
12	6	AAS	All areas	1880-1890	No change
13	7	Non-AAS	Inside of rail areas	1795-1865/1870 (non-rail segments)	CBO1
14	8	AAS	Inside of rail areas	1795-1865/1870 (non-rail segments)	CBO1
15	9	Non-AAS	Inside of rail areas	1865/1870-1880 (rail segments)	No change
16	10	AAS	Inside of rail areas	1865/1870-1880 (rail segments)	No change

The core condition that allows for the exceedance of unwanted emission limits if a written agreement can be obtained has been expanded so that it will continue to apply to the 1865/1870–1880 MHz frequency segment, which will be subject to apparatus licensing after existing spectrum licences expire. This is implemented in Core Condition 4 on the sample 1800 MHz band spectrum licence.

A new condition that allows for unwanted emission limits to be exceeded by complying with coexistence provisions in RALI MS34 has been added as Core Condition 5 on the sample 1800 MHz band spectrum licence. These coexistence provisions will be developed in the forthcoming consultation on apparatus licensed arrangements for 1800 MHz rail services.

⁵ The current unwanted emission limit is higher (more relaxed) in the first 200 kHz offset compared to the CBO1 and CBO2 unwanted emission limits, therefore the current limit will remain within this offset in scenarios where the CBO1 and CBO2 limits are adopted to ensure compatibility with currently deployed equipment.