

OPTUS

Submission in response to
ACMA consultation

**1800 MHz and 2 GHz
bands – review of planning
arrangements outside of
spectrum licensed areas**

Options Paper

Public Version

July 2024

EXECUTIVE SUMMARY

1. Optus welcomes the opportunity to provide feedback on the Australian Communications and Media Authority's (ACMA) Options Paper "1800 MHz and 2 GHz bands – review of planning arrangements outside of spectrum licensed areas" (the Options paper).
2. The ACMA's spectrum management decision-making is guided by the need to promote the long-term public interest to be derived from the use of spectrum.¹ We recognise that the ACMA has undertaken considerable work to identify perceived shortcomings the current arrangements for apparatus licensed use of the 1800 MHz and 2 GHz bands in regional and remote Australia. While we do not agree with all the ACMA's conclusions, we welcome the transparency provided by the Options Paper.
3. The 1800 MHz and 2 GHz bands are both FDD spectrum and are close functional substitutes that Optus deploy as a capacity layer and to provide greater capability for customers on our public mobile network. The spectrum is also useful for small, localised private networks including many mine sites and ports. Optus reiterates our view that the public interest in the use of spectrum for Wireless Broadband (WBB) services is best promoted by ensuring the availability of spectrum of sufficient quality and quantity for wide-area public mobile services.
4. Optus acknowledges that the arrangements in both bands are complex and there is no easy solution to the issues that the ACMA has identified. However, there is a total of 135 MHz of apparatus licence spectrum available in remote areas, consisting of 75 MHz (1800 MHz) and 60 MHz (2 GHz) spectrum. In Optus' view it should be possible to develop a framework which supports the ACMA's key objectives in delivering both public and private services to Australians and businesses in the remote areas for the long-term.
5. The ACMA's review of the planning arrangements is being conducted within a broader policy and industry context focused on delivering improved connectivity for regional and remote Australians. The ACMA's approach should have regard to supporting the public benefits of a second 5G network for regional Australia that will be delivered via our Multi-Operator Core Network (MOCN) agreement with TPG (see Appendix A).²
6. It is clear that the ACMA has undertaken a considerable amount of work in preparing the Options Paper. Optus particularly welcomes the appendices setting out the ACMA's "analysis of spectrum usage" for each band and its detailed consideration of "policy elements". That said, in Optus' view, it is not immediately clear how the ACMA's analytical framework and approach relates to the long-term public interest. In particular, we do not consider the ACMA's approach has given sufficient weight to MNOs demand for this spectrum to supply public mobile services.
7. The key reason for this is that Optus considers that the demand and supply metrics presented by the ACMA do not accurately reflect the current situation. The analysis has assumed that the current registrations represent the total demand for access to spectrum in the apparatus licenced areas and that the prescriptive approach used in the 1800 MHz band guarantees access for Optus. However, Optus has been unable to deploy in many locations due to failing coordination, mainly with existing PTP links.
8. Aside from the need for a more nuanced approach to the spectrum utilisation analysis and therefore the ACMA's approach to aligning supply and demand, Optus supports the

¹ Section 3 of the Radiocommunications Act

² See also [ACCC will not oppose Optus and TPG regional mobile network and spectrum sharing | ACCC](#)

ACMA's desired outcomes of alignment, contiguity and, PTP modification and efficiency. We submit that all of these remain desirable outcomes for the long-term band plan.

A long-term approach to replanning the bands is needed to realise public benefit

9. Mobile services are increasingly treated as "essential" services and spectrum is essential to their supply. Optus recommend that, in line with a long-term approach and the efficiency benefits of contiguous spectrum access, focus should be placed on a band configuration that can enable greater access to the spectrum for private wireless and local area use cases, while not jeopardising the use of the bands for public mobile services. In short, the ACMA should adopt a long-term approach to replanning the bands and this must prioritise the public interest to be derived from the spectrum. In Optus' view, this means that the supply of competitive public WA WBB services must remain the principal use case for this spectrum.
10. Optus has used 1800 MHz and 2 GHz as a supplementary 4G coverage layer in regional and rural areas to supplement our low band spectrum. 1800 MHz and 2 GHz also penetrate relatively well into buildings which is important because there is limited sub-1GHz spectrum available and the additional capacity provided by the 1800 MHz and 2GHz bands is essential to deliver adequate user experience indoors. Optus will continue to need access to sufficient 1800 MHz and/or 2 GHz spectrum to cost-effectively deploy quality public mobile services to regional and remote Australia.
11. In our view, the most efficient means of delivering the long-term public benefit to be derived from the use of this spectrum will be to separate the use of the bands for apparatus licensing in remote Australia between more local area use cases and those needed for public mobile services. To this end, we agree with the AMTA recommendation that the use of the 1800 MHz band be identified for Mobile Network Operators (MNOs) while the 2 GHz band be used for infrastructure operators and other private wireless network operators in remote regions. To be clear, MNO access to the 2GHz band in regional areas will still be required. The creation of a dedicated allocation for non-MNOs, which is distinct and separate, is supported.
12. In Optus' view, the key impediment to efficient spectrum utilisation remains legacy Point-to-Point (PTP) links. There is a critical need to remove PTP links from the band, particularly near key population centres. The spectrum channel mapping for IMT and the channel mapping for fixed links are not compatible. The misalignment in channel sizes and duplex spacing means that there are no good options which can effectively manage spectrum utility to allow for both types of uses in the band. Most of the PTP links are operated by Telstra to deliver Universal Service Obligation (USO) services. Optus would suggest that it may be appropriate for there to be some incentives to address the PTP issues effectively, given the potential costs to migrate.³

Optus acknowledges that apparatus licence to spectrum licence conversion is out of scope for this consultation. However, any proposed framework changes should not preclude the possibility of spectrum licensing in the future. It is important to assign co-channel blocks between apparatus licences and spectrum licenses to ensure that spectrum is not unnecessarily denied to regional /remote areas due to coordination requirements. Optus also recommends that positioning Optus adjacent to TPG in both bands will also maximize the benefits of MOCN.

Regulatory mechanisms should be used to help deliver the desired band plan

13. Optus considers that realising an ideal band configuration in the long term will require a series of interim steps. We support the use of mechanisms, such as specified

³ Options Paper states that approx. \$100,000 per link for 3.6GHz PTP links

circumstances renewal statements and public interest statements, to facilitate a re-stacking of the spectrum in a manner consistent with this long-term goal. The ACMA should seek to stagger the implementation to prioritise high demand areas with a view to removing embargo 77 in the near future.

14. To this end, we note that the ACMA indicates that the use of renewal statements would impose too great an administrative burden. However, we consider that if designed correctly and applied to licences where it is demonstrated contested demand, then implementation of the renewal statements could largely be self-executing. Optus strongly supports the use of regulatory mechanisms that address “spectrum squatting” or “opportunistic spectrum” acquisitions in the transition to the long-term band plan.
15. Optus considers that it is reasonable requirement for all equipment deployed in either of the 1800 MHz or 2 GHz bands to be able to support requests to retune. Area retunes could then be used to accommodate either new entrants into the area or increase the bandwidths of existing services. Areas such as the Pilbara could easily accommodate greater utility, if it is possible to re-assign frequencies. This can be achieved by only allowing renewal of apparatus licences with a change in frequency.
16. Optus has over 5,000 of 2 GHz apparatus licences in the regional area. We note that the apparatus licence framework is not ideal to manage such a large number of sites. There are significant administrative overheads for both Optus the ACMA teams in the management of these licences.
17. Optus should not be disadvantaged under the proposed changes. Currently the RALIs detail 15 MHz of 1800 MHz and 10 MHz of 2 GHz spectrum for use by Optus. Whilst Optus has not been always been successful in accessing this amount of spectrum in all areas where needed, changes to the framework should not require Optus to reduce capacity and potentially reduce customer experience. Optus would prefer the apparatus licence regime to enable bandwidths of 20 MHz to be deployed in a single band. This provides greater utility and improved customer experience.
18. Optus acknowledges that re-allocation of the apparatus licence spectrum to spectrum licensing is out of scope for this consultation. However, any proposed framework changes should not preclude the possibility of spectrum licensing in the future.
19. Optus supports the position set out in the Australian Mobile Telecommunications Association (AMTA) submission other than to the extent that it differs from the positions set out in this submission. In particular, we support the band configuration outlined in the AMTA paper and welcome the stated commitment from Telstra to clear PTP links to assist with realising this band configuration over time.

OPTUS RESPONSE TO ISSUES FOR COMMENT

20. Optus' response to the ACMA's Issues for Comment are set out below.

Analysis of spectrum usage – PTP links remain key source of underutilisation

Question 1

The ACMA invites comments on the analysis of spectrum utilisation in the bands.

21. Optus considers that the ACMA's analysis of spectrum utilisation does not fully consider the reality of wide area mobile network deployment and therefore, has led to incorrect conclusions about MNOs use of and demand for this spectrum for public mobile services and network deployment in regional and remote Australia.
22. The utilisation analysis undertaken by the ACMA is based solely on the registrations recorded in the RRL. This only represents those registrations which have been successful. Since there is no mechanism for failed coordination requests to be captured, the assumption that this represents the actual demand for spectrum is, in Optus' view, invalid.
23. Optus has faced difficulties in securing spectrum to deploy in the 1800 MHz and 2 GHz PTS Bands to further expand and support of our public network. For example, Mt Isa is a typical case of a failed 1800 MHz PTS licence. Optus has recently attempted to release 1800 MHz technology on a greenfield site planned in Mt Isa. The 1800 MHz band coordination failed due to existing Point to Point links and Telstra PTS registrations.

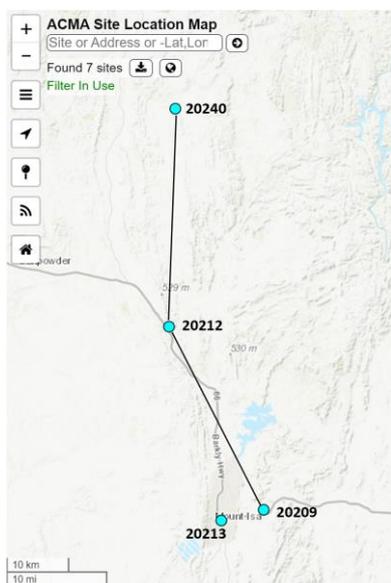


Figure 1 Map showing site locations of existing 1800 Registrations around Mt Isa QLD

SITE_ID	LICENCEE	LICENCE_NO	LICENCE_TYPE_NAME	Start Freq	Stop Freq	1st Adj Start Freq	1st Adj Stop Freq	1805	1810	1815	1820	1825	1830	1835	1840	1845	1850	1855	1860	1865	1870	1875
								1710	1715	1720	1725	1730	1735	1740	1745	1750	1755	1760	1765	1770	1775	1780
20212	TELSTRA LIMITED	88741/1	Fixed	1825.5	1839.5	1811.5	1853.5		ADJ	ADJ	ADJ	Fixed	Fixed	Fixed	ADJ	ADJ						
20209	TELSTRA LIMITED	88743/1	Fixed	1839.5	1853.5	1825.5	1867.5							Fixed	ADJ	ADJ	ADJ					
20212	TELSTRA LIMITED	88743/1	Fixed	1839.5	1853.5	1825.5	1867.5							Fixed	Fixed	Fixed	Fixed	ADJ	ADJ	ADJ		
20213	TELSTRA LIMITED	1939106/1	PTS	1805	1820			PTS	PTS	PTS												
20212	TELSTRA LIMITED	88741/1	Fixed	1706.5	1720.5	1692.5	1727.5	Fixed	Fixed	Fixed	ADJ	ADJ										
20209	TELSTRA LIMITED	88743/1	Fixed	1720.5	1734.5	1706.5	1741.5	ADJ	ADJ	Fixed	Fixed	Fixed	ADJ	ADJ	ADJ							
20212	TELSTRA LIMITED	88743/1	Fixed	1720.5	1734.5	1706.5	1741.5	ADJ	ADJ	Fixed	Fixed	Fixed	ADJ	ADJ	ADJ							
20213	TELSTRA LIMITED	1939106/1	PTS	1710	1725			PTS	PTS	PTS												
AREA								X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
20240	TELSTRA LIMITED	88741/1	Fixed	1825.5	1839.5	1811.5	1853.5		ADJ	ADJ	ADJ	Fixed	Fixed	Fixed	ADJ	ADJ						
20240	TELSTRA LIMITED	88739/1	Fixed	1867.5	1881.5	1853.5	1895.5							Fixed	ADJ	ADJ	ADJ	ADJ	ADJ	Fixed	Fixed	Fixed
20240	TELSTRA LIMITED	88741/1	Fixed	1706.5	1720.5	1692.5	1727.5	Fixed	Fixed	Fixed	ADJ	ADJ										
20240	TELSTRA LIMITED	88739/1	Fixed	1748.5	1762.5	1734.5	1769.5					ADJ	ADJ	ADJ	Fixed	Fixed	Fixed	Fixed	ADJ	ADJ		
AREA								X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Table 1 Registration Details of sites around Mt Isa

24. Table 1 lists the existing registrations in the Mt Isa area along with the frequency and bandwidth details. The table identifies the co-channel blocks for the existing PTS and PTP Links in the area along with the first adjacent channels for the PTP links. This is a simplified method to indicate potential channels.
25. Optus has the prescribed channels C7, C8, C9 (1835 – 1850 MHz Tx, 1740-1755 MHz Rx) which are highlighted in yellow. The existing PTP Link into Mt Isa is co-channel to this allocation and so Optus is not able to meet the coordination requirements. On an initial assessment, there is a potential 10 MHz free at the top of the band C14, C15, however the site 20240 which is 60 km from Mt Isa is co- channel and there is no option. Optus also notes that there are examples in the RRL where the prescriptive allocation has not been followed.
26. This case illustrates how the PTP Link duplex gap is incompatible with the IMT duplex gap. The result of this is a poor utilisation of the band resources. The 75 MHz of the 1800 MHz is only able to support 1 PTS licence and the PTP links into Mt Isa.

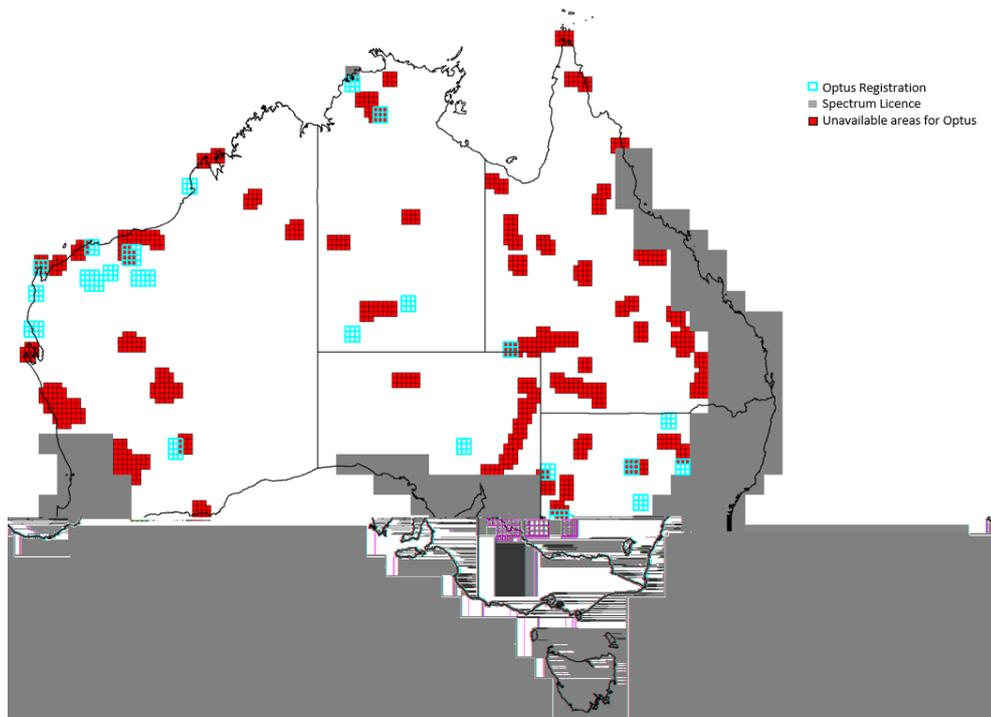


Figure 2 HCISL2 Map showing areas of Optus PTS registrations and Areas where Optus Allocation is Unavailable in the 1800 MHz Band

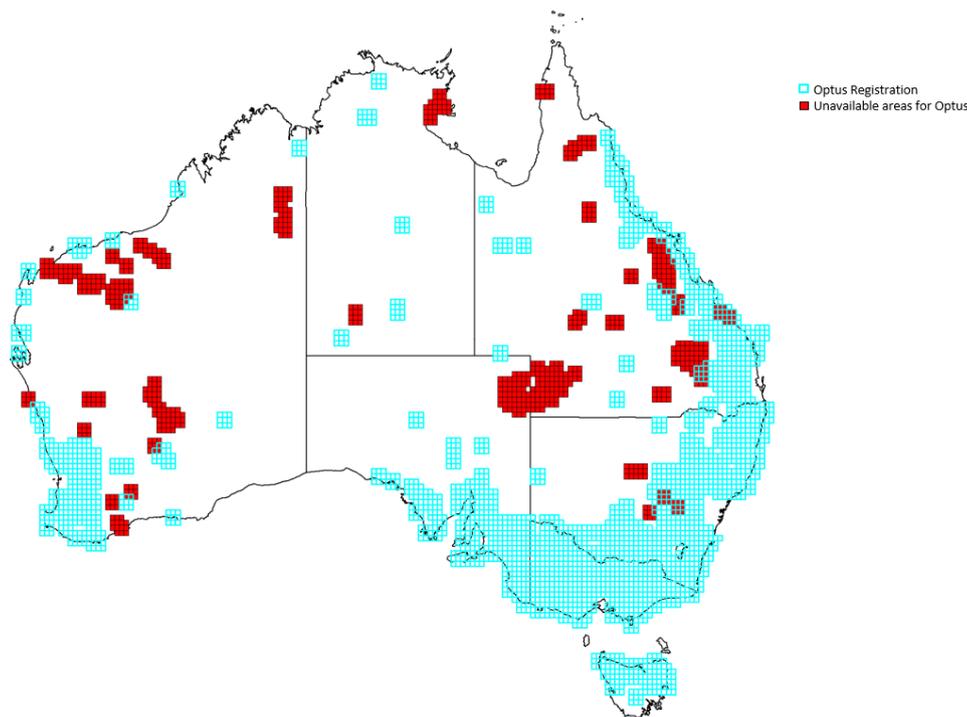


Figure 3 HCISL2 Map showing areas of Optus PTS registrations and Areas where Optus Allocation is Unavailable in the 2 GHz Band

27. Figure 2 and Figure 3 illustrate the current Optus PTS licence areas along with the areas where the Optus designated channels are used by other licensees for the 1800 MHz band and 2 GHz Band respectively. For this analysis the HCIS L2 blocks containing the location of the registration along with the first adjacency blocks have been used to illustrate the area. The addition of the adjacent blocks is to represent the areas where coordination is unavailable and is more representative of what is experienced in practice.
28. This shows that there are large areas where Optus is unable to secure PTS licences. In general, these are of greater concern in locations where there is existing Optus infrastructure around regional and remote towns. Having regard to these observations, Optus provides the following comments on the ACMA's conclusions about supply and demand in the bands:
- (a) We do not agree that the ACMA can conclude that supply and demand in the 1800 MHz band for PTS is unbalanced between usage sectors, with MNO segments generally lightly used and non-MNO segments heavily used, especially in some areas. This is because the ACMA's analysis is only based on successful registrations to date and does not consider the broader context outlined above.
 - (b) We submit that the real reason for supply and demand imbalances not being as prevalent in the 2 GHz band is the lower number of PTP links in the 2 GHz Band compared to the 1800 MHz band.
 - (c) We agree that PTP links are likely to be restricting the ability for PTS services to successfully coordinate, particularly in geographic areas where there is likely high demand for PTS. In fact, we consider that PTP links are the key driver in the denial of access to the bands.
29. Optus agrees with the ACMA's observation that most of the legacy PTP links are Telstra registrations and are most likely in place to support the delivery of Telstra's USO services. Optus' views on the USO are well documented and we refer the ACMA to our

recent submissions in response to the Government's consultations on the delivery of universal services for further information.⁴ We wish to highlight that the removal of PTP links should not be dependent on any USO reform.

30. In this context, we support efforts to clear the bands of legacy PTP links and encourage the ACMA to consider means of expediting this clearance in a cost effective and timely manner in order to alleviate the spectrum denial issues outlined above in a reasonable timeframe. We support the ACMA's preliminary proposal of a 5-year timeframe with priority given to address "high-demand" areas (as characterised by Optus above).

Other spectrum supply factors

Question 2

The ACMA invites comments on these and any other spectrum supply issues.

31. The ACMA has identified that there may be suitable alternative spectrum for PTS licences that may be precluded from accessing PTS licences in the 1800 MHz in some regions. In particular, the ACMA identifies AWLs in the 3400-4000 MHz as potentially providing a suitable alternative. That said, the ACMA also appears to qualify this view with the conclusion that there are different areas of high demand for these bands.⁵
32. Optus does not consider the 3400 – 4000 MHz band to be substitutable with the 1800MHz and 2 GHz bands. The propagation characteristics of the 1800 MHz and 2GHz provide significantly larger coverage areas which is especially important for remote and regional locations. There are also different technical considerations to be factored in since the 1800 MHz and 2 GHz Bands are FDD and the 3400 – 4000 MHz Band is TDD.⁶ For example, TDD spectrum interference management can be more complicated as synchronisation between networks may be mandatory in order to facilitate multiple users in the same area.
33. Optus considers that there is sufficient spectrum available in the 1800 MHz (75 MHz) and 2 GHz (60 MHz) remote areas to enable the delivery of public access networks (via MNOs) and to enable existing landowners to deploy their own networks as well as to support other entrants into the market. Optus suggests that landowners be included in the priority assessment table.
34. That said, Optus agrees with the ACMA's comments on other factors influencing the availability of PTS licences, namely:
- (a) Licensees acquiring PTS licences for operation of devices in areas that the licensee has no site access rights agreed. This can limit the site owners' ability to obtain PTS licences for themselves and in effect may amount to a form of "spectrum squatting", undermining efficient spectrum use.
 - (b) Related licensees acquiring PTS licences through different corporate entities in a manner that reduces the effectiveness of the existing 2x10 MHz SAL (spectrum acquisition limit) per nominal area policy, as prescribed in RALIs MS33 and MS34 for infrastructure licensees.

⁴ Optus submission; Better delivery of Universal services, March 2024

⁵ Options Paper, p.50

⁶ FDD is more suited for use cases where there is need for consistent uplink and downlink traffic such as traditional voice communications. Interference coordination is simpler as the uplink and downlink are separated. TDD is more advantageous in environments where the traffic demand between uplink and downlink is asymmetrical

35. In regard to concerns about “spectrum squatting”, Optus notes that in order to participate in tender requests, spectrum accessibility is required. This means that the spectrum must be secured in order to respond to a proposal and so there may be cases where this has occurred and the spectrum licensee has not won the contract.
36. MNOs have had not been successful in the past trying to directly manage registrations changes with incumbents in both PTS and spectrum licensed bands. There are no advantages for the incumbents to move and these requests are often met with unreasonable and occasionally extortionate demands for financial compensation.
37. In comparison, MNOs often work cooperatively together in order to achieve better outcomes for the band utilisation. By way of example, Optus and Telstra, jointly replanned the Kalgoorlie area in July 2022, to align the registrations back to the standard allocations. This simplified the frequency plan and increased the amount of spectrum available for public use.
38. Optus strongly supports the ACMA’s stated objective of aligning planning arrangements across the 1800 MHz and 2 GHz bands outside of spectrum licensed areas to the greatest extent practicable. However, without direct ACMA support, further band alignments cannot be made.

Question 3

The ACMA invites comments on the case for action conclusion and the desirable planning outcomes.

Case for action conclusion and desirable planning outcomes

39. Optus generally supports the desirable planning outcomes.
40. As noted above, while we support the ACMA’s view that matching spectrum ‘supply’ with demand for PTS licences is a priority, we have a different view on the impediments to realising this outcome.
41. Optus also support ‘alignment’ and ‘contiguity’ as priority objectives to guide future planning, However, we also submit that efficiency (e) must also be prioritised. This is because facilitating the efficient planning, allocation and use of spectrum is a key element of the objects of the Act and therefore must inform the ACMA’s spectrum management decision-making in all cases. The ACMA’s approach to efficiency involves consideration of technical and economic efficiency.⁷
42. Mobile networks are highly efficient users of spectrum, with new generations of mobile technology delivering continual improvements in quality and performance to meet ongoing increases in demand for data. Australia’s digital future and competitiveness will depend on enabling the efficiency benefits of new mobile technologies and sustainable supply of essential public mobile services.
43. The digitalisation of industries, services and supply chains across the economy will depend significantly on the availability of ubiquitous connectivity. Providing wide area coverage of public mobile services, particularly in areas of regional and remote Australia, requires economies of scale. Economies of scale and more efficient mobile network deployment are improved by access to spectrum of sufficient quantity and quality.
44. Optus submits any arrangements that support use of 1800 MHz and 2 GHz by private use cases in the short term should not disproportionately limit the availability of spectrum

⁷ See further ACMA’s ESL Stage 2 consultation paper and chapter 3 of Optus’ Stage 2 ESL submission, June 2024

to MNOs that provide public mobile services over the long term. To this end, the ACMA should employ its regulatory tools under the Act to ensure that access for local area use cases does not preclude access for MNOs providing essential public services for the long-term public benefit.

45. To be clear, Optus considers that whatever band configuration the ACMA decides upon, Optus supports the AMTA position that MNOs should still be afforded prescriptive assignment of spectrum. In the interim, the extent of areas which do not have full utility of the bands due to coordination failures could be significantly reduced, particularly in high use areas, if licensees were required to support retunes. In this context, we consider the following mechanism, or a combination thereof, may assist with the implementation to deliver the desired long term band plan:
- (a) New PTS licence conditions and/or requirements in associated instruments that would require licensees to support retunes within the band if and when needed to enable the supply of public mobile services. The ACMA assignment order can be used as the basis to support any retunes.
 - (b) The use of renewal statements, that specify the circumstances in which the ACMA will renew a PTS licence in spectrum that has been prescribed for MNOs in the long-term band plan.⁸ For example, this may provide that the PTS licence will only be renewed if no demand for that spectrum has been expressed by an MNO.
 - (c) Further to the above, this could be complemented by the use of public interest statements to the effect that the ACMA will only renew a PTS licence if it is satisfied that it is in the public interest to do so.⁹ Optus considers that such a test would be useful to support the reassignment of spectrum to MNOs in prescribed frequencies, if and when demand arises.
46. We note that the ACMA has indicated that it considers that the use of renewal statements would impose too great an administrative burden. However, if targeted at problem areas and designed correctly, with clear wording as to the specified circumstances that must be fulfilled for renewal, then implementation could be self-executing. This could be particularly useful for “problem licences” where competing demand or use has been demonstrated.
47. For example, a renewal statement may be useful in cases where MNOs are unable to access any or preferred spectrum that is subject to an existing apparatus licence. This might be particularly useful in frequencies that have been identified for future MNO use and where the MNO has a demonstrated need to access the spectrum for public mobile services. The ACMA could vary the existing licence to require that the licensee must retune to suitable non-MNO frequencies where available.
48. The ultimate objective is to achieve greater spectrum utility by enabling movement within the bands to optimise the area frequency plan. Noting concerns about “spectrum squatting”, the ACMA could also consider a similar mechanism to assess existing use of licensed spectrum. Optus also strongly support the need for public consultation on any proposal to renew apparatus licences with a long licence duration and suggest that any proposal to do so in spectrum bands that are also subject to spectrum licensing should not undermine the potential for the wider spectrum licensing in the future.

⁸ Section 103A of the Act

⁹ Section 103A(15) of Act

Possible policy elements and preliminary views

Question 4

The ACMA invites comments on the identified policy elements and factors, or others that could be considered.

49. Optus welcomes the work that the ACMA has undertaken in preparing the Options Paper. In particular we support the transparency provided by Appendices A and B which set out the ACMA's "Analysis of spectrum usage" for each band and the detailed consideration of "policy elements".
50. That said, it is also not immediately clear to Optus how the ACMA's analytical framework relates to the long-term public interest. This is because we would normally expect that options for planning would be based on information gathered through a prior consultation process, rather than presented as pre-determined for comment.
51. While Optus considers that the identified policy elements represent the key issues facing the band, we would welcome a clearer articulation of how they promote the long-term public interest. In our view, in planning for future arrangements for the bands, the ACMA must have regard to the actual demand constraints and consider the impact on incumbent licensees of a change in spectrum arrangements, as well as the public benefits to be derived from the use of the spectrum for public mobile services.
52. We also suggest that the promotion of competition in the supply of public mobile services should be a relevant consideration in forming any final view on the quantum of spectrum that may be made available to MNOs.

Question 5

The ACMA invites comments on the analysis and preliminary views on the policy elements.

53. Optus provides the following comments on the ACMA's preliminary views on the policy elements discussed in the Options Paper.

Definition of "High demand areas"

54. The ACMA proposes to define "high-demand areas" as "any level 3 HCIS cell with more than 10 PTS base stations" at "a point in time".¹⁰ As noted above, we consider that the ACMA's analysis of spectrum utilisation is based on the incorrect assumption that current registrations represent the total demand in the apparatus licenced areas and that a prescriptive approach to allocation in the 1800 MHz band guarantees access for Optus. As explained above, this demand analysis does not reflect the reality that we have been unable to deploy in many locations due to failing coordination.
55. Optus would consider that high demand areas are not dependent on the number of registrations, rather it should be the utilisation of the current channels. The Mt Isa example described in detail in Question 1 illustrates this. Even though there are only a small number of registrations, the impact of these mean that there is no ability for any additional licensees to have access to spectrum. Mt Isa 1800 MHz band is unavailable so it should be considered a high demand area. In contrast, there is no difference between a licensee having 1 registration using 2 channels or 100 registrations using 2

¹⁰ Options Paper; p.3

channels in the 1800 MHz band. If there are no other registrations, there would still be 13 channels available for use. This is not a high demand area.

56. The proposed high demand areas do not reflect the areas where access to PTS licences is restricted. Rather, Optus would define a high demand area as area where there is less than 20 MHz available for new registrations. Optus's comments on high use areas in this document reflect this approach.

Spectrum limits

57. Optus considers that it is more important to improve band utilisation before expanding the spectrum limits. The critical issue is access and increasing the spectrum limits before addressing optimising the band will further entrench a framework which is not flexible enough to ensure that the current and future requirements can be accommodated.
58. Whilst Optus agrees that access to 2 x 30 MHz in remote areas would deliver improved service capability for consumers, we caution that the implementation of such a policy too early could result in further denial of spectrum to users.
59. Optus supports ensuring that there are effective policies in place to ensure that there is PTS spectrum available to deliver essential public services, support local site owners, support local communities and to promote effective competition. Optus would consider access to 2 x 30 MHz to be reviewed once access and flexibility in high use areas has been implemented and its success measured.

Preferred spectrum assignments

60. Again, Optus reiterates that the critical element required in the PTS licencing framework should be the use of regulatory mechanisms which can help adjust registrations so that they align with the assignment policies.
61. Optus notes that currently MNOs have access to a potential 15 MHz in remote 1800MHz and 10 MHz in regional and remote 2 GHz. MNOs do not access 15 MHz in remote 2GHz. Optus currently used a maximum of 25 MHz PTS licencing. We would support the reduction of bandwidths into new areas in order to address the complexity of the band.

Size of the area that spectrum limits are applied

62. Optus considers that a reduction in the minimum distance to 30 km to be a reasonable change in the licencing instructions. We note that in practice this distance will be extended to meet the coordination requirements in the licences particularly when macro installations designed for maximum coverage are being deployed.

PTP spectrum denial to PTS services

63. Spectrum denial in the remote and regional areas is strongly correlated to the PTP Links. The Mt Isa example is indicative of many situations. Optus considers that the only way the band utilisation can be improved is via the removal of the PTP links and there needs to be a plan developed to achieve this. Priority should be placed on those links with the greatest impact. The amount of additional spectrum available in the bands will not materially change without addressing the PTP links.

Inefficient Spectrum Use:

64. Without mechanisms to facilitate better spectrum efficiency for PTS licences, there will be no substantive improvement for greater access into the bands. Optus has set out a

number of mechanisms that it considers the ACMA could use to improve band utilisation in the transition to a more efficient long term band plan.

Licence duration and renewal

65. Optus agree with the ACMA that licence duration and renewal arrangements may contribute to the inefficient spectrum use issues that have been identified in these bands. Optus suggest that realisation of a preferred band configuration will be assisted by adopting a maximum one (1) year licence term for 1800 MHz and 2 GHz apparatus licences in regional and remote areas.
66. In line with our views on the potential benefits of the introduction of renewal statements, particularly for licences in areas where there is contested demand, we also consider that the ACMA should move away from a presumption of automatic renewal. While a “no change” option may “minimise burden” for stakeholders, we consider that if designed correctly and strategically targeted at problem areas, licence terms and conditions such as a “usage test” can greatly assist with delivering ACMA’s desired objectives without imposing a disproportionate administrative burden.

Question 6

The ACMA invites comments on whether and how an associates test could be used when applying spectrum limits.

67. Optus supports the use of an associates test to support the integrity of any allocation quantum policy and as a further mechanism to help align spectrum supply with demand for PTS licences and avoid the inefficiencies of spectrum hoarding and/ spectrum squatting.¹¹ To support the long-term defragmentation of the band, we also suggest that the ACMA may have regard to the degree of association between existing licensees when considering whether to renew a PTS licence.
68. Optus suggest that the associates test identified in Table 19 of the Options Paper as having applied to the recent remote 1800 MHz allocation probably provides the most useful example of who might be captured by the associates test (member/director, holding company and local agent).¹² That said, we would suggest that the ACMA could also add “related body corporate” to the list of parties captured by the test, given the corporate relationships between infrastructure sector licensees in these bands.¹³

Replanning options and assessment of options against desirable planning outcomes

Question 7

The ACMA invites comments on the proposed options, their assessment and our conclusions.

69. Optus considers that a long-term approach to promoting the public interest to be derived from this spectrum is most aligned with Option 4, or a variant thereof. To be clear, we do not support an approach to Option 2 that would remove a prescriptive approach to spectrum assignment for MNOs in their designated band. However, we accept that in reaching the desired end state, a revision of relevant policies, including RALIs MS 33 and 34 will clearly be required.

¹¹ We agree that section 100(4)(a) of the Act provides sufficient basis for the ACMA or delegate to apply an associates test when considering whether to issue a PTS licence.

¹² Options Paper, p.60

¹³ Para 255 of the Options Paper

70. Optus considers that there is potential for greater band utility if current licence holders are capable of retuning their equipment. Without introducing some methods to pre-empt band replanning now, it is unlikely that the 1800 MHz and 2 GHz PTS licencing framework can deliver on the key objectives.
71. Optus opposes the use of over-the-top licencing. The unintended consequences that result from a further complication of the licensing arrangements in an area will ultimately undermine efficiency and the long-term public interest. Optus considers that there are other options which could be incorporated into the licences to improve band efficiency. The addition of conditions on licences which require licensees to accept being assigned different frequencies in the band and a mechanism to trigger mandated retunes are some ideas which could warrant further review.

Question 8

We seek views on means to manage an expected initial high demand.

72. In order to manage an expected initial high demand, Optus would support an initial stage of a prescriptive priority scheme before reverting to a preferred scheme. Optus would welcome further industry engagement on steps to manage this stage of implementation once the planning arrangements are further defined.

Other aspects of technical frameworks

Question 8

The ACMA invites comments on the other aspects of the technical frameworks.

73. The Options Paper sets out various other technical matters relating to the bands, including (i) Composite authorisation for in MS 34; (ii) Licence special condition C22 for 2GHz PTS (iii) Alignment with relevant spectrum licence technical frameworks and (iv) Spectrum embargos. Optus makes the following comments:
- (a) Optus supports including the provision of condition C22 to 2 GHz Band PTS licences. Optus would also support the ability of MNOs to also include registrations with the same conditions.
 - (b) In order to deliver public and private networks for Optus consumer and Business Enterprise customers, Optus can use the PTS licences to support cell-on-wheels as well as dedicated infrastructure for larger scale business customers. As MNOs have previously not had this condition available, it makes licence compliance difficult. The only work around is to have random sites created with low levels of accuracy in order to meet the regulatory framework. This is not the most elegant solution and can result in more registrations in the RRL.
 - (c) Optus supports alignment of RALIs MS33 and MS34 to the spectrum licencing technical framework.
74. Optus would also support the introduction of a method to allow for spectrum licences to PTS licence co-ordination. Currently there is no formal mechanism for a spectrum licence to register close to the spectrum boundary without meeting the spectrum boundary level of protection requirements. In cases where an MNO wishes to extend the coverage across a spectrum boundary and also holds the surrounding PTS licences, there should be no requirement to management interference at the boundary. PTS licences co-ordinate with individual sites so this should also apply to sites within the spectrum licence.

Appendix A – Optus-TPG MOCN agreement

75. On 5 September 2024, the ACCC announced that it would not oppose Optus and TPG’s regional mobile network and spectrum sharing agreements (MOCN agreement).¹⁴ Pursuant to our MOCN agreement, we will accelerate our 5G deployment by fast-tracking the number of 5G sites in the regional MOCN area (which covers approx. 17% of the population – from 81.6% to 98.4%) to 1500 sites by 2028 and 2444 sites by the end of 2030.¹⁵ This will improve regional connectivity in the MOCN coverage area and provide competition to Telstra’s 5G network.
76. <<CIC begins>>
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80. <<CIC>>
81. <<CIC ends>>

¹⁴ [ACCC will not oppose Optus and TPG regional mobile network and spectrum sharing | ACCC](#)

¹⁵ [TPG Telecom and Optus sign network sharing agreement marking new era of mobile services for regional Australia](#)