



Public Version



nbn submission to the ACMA: Area-wide apparatus licences in the 3.8 GHz band

1 August 2023



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2 Introduction

Thank you for the opportunity to comment on the ACMA Consultation Paper, *Area-wide apparatus licences in the 3.8 GHz band in metropolitan and regional Australia, June 2023 (Consultation Paper)*.

nbn was established in 2009 as a Government Business Enterprise, to provide fast, reliable and affordable connectivity, to enable Australia to seize the economic opportunities before it and service the best interests of consumers. It remains the principal responsibility of **nbn** to operate and continue to build and upgrade the **nbn** network in accordance with the expectations of the Government.

nbn is required by legislation to operate as a wholesale only, open access, non-discriminatory operator. In doing so, **nbn** has developed wholesale products that Retail Service Providers (**RSPs**) use as inputs to their own retail products. This is intended to level the playing field in the Australian telecommunications industry, enhancing competition and innovation, and providing greater choice for customers across the country.

Under the *Telecommunications Act 1997 (Cth) (Act)*, **nbn** is the default Statutory Infrastructure Provider (**SIP**) across all of Australia. This means **nbn** has an obligation to connect all premises to broadband services that meet specified requirements (except in areas where another carrier is the nominated SIP). Under the SIP regime, where it is not reasonable for the SIP to connect premises to a fixed-line network, it must provide fixed-wireless (**FW**) or satellite technology at minimum prescribed upload and download speeds.

In addition to meeting its obligations under the SIP regime, **nbn**'s objectives are set by the Shareholder Ministers' Statement of Expectations (**SoE**). The Government issued **nbn** with a revised SoE on 19 December 2022.

nbn's spectrum requirements have been developed to enable **nbn** to meet its obligations as the default SIP and as set out in the SoE, taking into account the multi-technology mix model and anticipated future demand for services.

The SoE includes requirements that **nbn** continue to improve its services and assist in addressing access challenges in regional and remote areas. **nbn** already invests approximately \$200 million each year maintaining and upgrading the FW network to meet current capacity commitments and optimise the performance and resilience of the network. Last year the **nbn** FW and Satellite Upgrade Program was announced as part of the response to the 2021 Regional Telecommunications Review, which recommended enhancements to **nbn**'s FW and satellite services in response to a step-change in demand for data and broadband services in rural and regional areas.

An additional \$750m investment has been provided for **nbn**'s FW network, comprising of a Federal Government contribution of \$480m and \$270m by **nbn**. Key benefits of the additional \$750m FW network investment are expected to include:

- Improved performance of the entire expanded FW network, with the FW network capable of achieving 'typical wholesale busy period speeds' of at least 50Mbps (download).¹

¹ The 'typical busy period speed' will be an estimate based on a sample of nbn FW wholesale services and will measure the average speed at certain points in each hour of the busy period between 7-11pm to identify a 'typical busy period speed', in line with the methodology outlined in the ACCC's Broadband Speed Claims Industry Guidance Paper (October 2020).



- Potential for RSPs to offer FW products with a Peak Information Rate wholesale download speed of 100-130 Mbps, with up to an estimated 85% of the footprint also able to access Peak Information Rate wholesale download speed of 200-325 Mbps.²
- Improved satellite network performance, due to decongestion of the more heavily used beams with ~120,000 satellite-only premises (including ~25,000 active users) able to access FW. Additionally, Sky Muster Plus Premium has recently been launched, delivering 100% unmetered data usage and faster burst speeds of up to 100Mbps.³

The benefits of this investment could be up to an additional \$6.1 billion in regional GDP over FY 2022 - 26.⁴

Population demographic trends and higher data usage are changing the profile of network demand and usage, particularly in regional Australia. **nbn** predicts a 300% rise in customer demand for data on the **nbn** FW network over the next ten years.⁵

As of 20 July 2023, there were approximately 398,000 and 92,000 active FW and satellite services respectively.⁶

3 Executive Summary

• [CIC] [CIC]

- **nbn** is concerned by the proposal to exclude incumbent spectrum licence holders (**nbn**, Telstra, Optus, TPG) from the initial allocation window for this Allocation (**Option 1**). Option 1 is not well targeted to deliver against the objectives of the Act and Ministerial Policy Statement (**MPS**) and may lead to poor allocation outcomes that are detrimental to the long-term public interest derived from spectrum. In particular:
 - There is a lack of clarity about what local area wireless broadband (**LA WBB**) is and why holding existing spectrum is being used as a disqualifying characteristic.
 - Given the amount of spectrum available for the Allocation, to apply nil allocation limits in addition to quantum limits goes beyond what is reasonably necessary to support a range of use cases and promote competitive markets.
 - To initially preclude incumbent licensees from applying for AWLs means the ACMA will be making final allocation decisions without complete information about alternative competing demands for the spectrum that may have greater public benefits.
 - Applying a nil allocation limit for an initial priority window will cause substantial delays, [CIC] [CIC].
 - The spectrum remaining after the initial allocation window may lack contiguous blocks or lack alignment with an applicant's existing adjacent holdings, which will diminish its value.

² Product specifications were updated from potential Maximum information rates of up to 100 and 250 Mbps in early 2023 following a consultation including Retail Service Providers

³ [nbn unveils nbn Sky Muster Plus Premium: offering even more connectivity options for Australia | nbn \(nbnc.com.au\)](#)

⁴ [\\$750 million investment to 5G-enable nbn® Fixed Wireless to deliver faster speeds to regional Australia | nbn \(nbnc.com.au\)](#)

⁵ NBN Co Limited Annual Report 2022, p25.

⁶ <https://www.nbnc.com.au/corporate-information/about-nbn-co/corporate-plan/weekly-progress-report>



• [CIC] [CIC]

- If the ACMA proceeds with the nil allocation limit applying to **nbn** as well as to MNOs then the period during which the limit is applied should be as short as possible.
- Option 2 is preferable to Option 1, as it avoids the substantial delays associated with a lengthy exclusion period. However, it suffers from many of the same deficiencies as Option 1, because the ACMA is still proposing to issue licences to LA WBB, point-to-point (**PTP**) and (fixed satellite services) (**FSS**) use cases first and only assess any remaining applications from MNOs and **nbn** after those licences are issued.
- **nbn** recommends:
 - The ACMA should accept and consider applications for AWL from any applicants concurrently, so that informed planning decisions can be made that maximise utility of the spectrum.
 - An allocation window should be used rather than a first in time approach, and quantum limits are used to ensure the allocation supports a range of users and use cases. **nbn** support 50, 60 or 70 MHz as an initial quantum limit. 60 MHz would be optimal, enabling 2 x 30 MHz carriers. The quantum limits should apply for a limited period to maximise utilisation.
 - If there is competing demand for spectrum within a geographic area that exceeds available spectrum, then allocation principles should include:
 - that the ACMA will take into account and de-prioritise applicants who benefit from significant existing spectrum holdings across the sub 6 GHz frequency range, within the given geography. As a guide, it could be indicated that existing holdings greater than 70MHz low-band/FDD or 140MHz/160 midband/TDD⁷ would generally be considered to be a significant existing spectrum holding.

• [CIC] [CIC]

- Prioritisation of LA WBB should not be done on an absolute basis. It may be one objective of the allocation principles that is weighed against other criteria, including consideration for the proposed use-case and its public benefit, delivery timelines and risk, the objectives of the Act, MPS and other relevant government policies and priorities (including **nbn**'s role as the SIP, the SoE and Government funding of the FW and Satellite Upgrade Program).
- If cross-band limits (of 140 MHz or 140 MHz metro/160 MHz regional) are applied, **nbn** recommends an exclusion from allocation limits for insignificant holdings, similar to that being applied in the context of the 3.4/3.7 spectrum auction, to address areas of overlap at the licence area boundaries of existing holdings.

4 Questions from the ACCC

Use cases

What are the likely intended uses of 3.8–3.95 GHz band spectrum?

[CIC] [CIC]

⁷ This would also include any combination of sub 6 GHz spectrum equivalent to this treating FDD spectrum as double the value of TDD spectrum.



In which geographic areas is the spectrum intended to be used?

[CIC] [CIC]

How much spectrum is needed to support the intended use case?

[CIC] [CIC]

Downstream markets

What is the good or service that the 3.8–3.95 GHz spectrum can support the production of?

The 3.8–3.95 GHz spectrum has been planned by the ACMA to support the production of a variety of goods and services, including wireless broadband (**WBB**), FSS and PTP services.

The ACMA distinguishes between Local Area WBB services and Wide Area WBB services. For example, in the *August 2021 Information Paper: Spectrum options optimised for local area wireless broadband services*, the ACMA states:

One category of wireless broadband service is the wide-area subscriber network, with an extensive base station infrastructure serving large geographic areas. This category is characterised by telecommunication carrier mobile broadband operations and is often authorised by wide-area spectrum licences.

Another category, and the focus of this paper, reflects more limited networks over smaller, localised areas, including, but not limited to, FWA and private mobile networks. Services provided by wireless internet service providers (WISPs) are a good example of this type of small and medium enterprise (SME) that often provide these services. SMEs and associated use types are often best supported by apparatus or class-licensed arrangements.

There is no clear line between what is a LA WBB and what is a WA WBB and from a technical perspective there is no real difference between LA WBB and WA WBB. A distinction is seemingly being drawn by the ACMA based on a number of factors including the use case, geographic size of the intended network, the size/nature of the entity intending to provide the relevant network, and potentially the business model – e.g., public network versus private network.

[CIC] [CIC]

Where is the good or service intended to be supplied to?

[CIC] [CIC]

Are there substitutes available to the good or service?

Alternative fixed-line networks, mobile broadband and other (non-MNO) alternative FW networks are broadly substitutable for the **nbn** wholesale broadband services to varying degrees. [CIC] [CIC]

How could the spectrum allocation impact the state of competition and/or incentives to invest in downstream markets?

nbn is a wholesale only network, with a unique position in the telecommunications market in Australia.

[CIC] [CIC]

Alternative spectrum

Do you consider that substitutable spectrum exists for the 3.8–3.95 GHz bands that can similarly enable the production of the goods or services in downstream markets?

[CIC] [CIC]

In terms of substitutable spectrum more broadly, that is, spectrum that can similarly enable the production of the goods or services in downstream markets, **nbn**'s view remains that the appropriate cross-band frequency range for allocation limits should be informed by the substitutability of all sub 6 GHz band spectrum holdings, with more weight placed on the low band (sub 1 GHz) and spectrum holdings that use FDD configuration (including 1800 MHz, 2100 MHz and 2600 MHz), to recognise the comparatively superior performance characteristics.

In particular, as noted in **nbn**'s submission to the ACCC on allocation limits advice for the 3.4.3.7 spectrum auction:

- Mid-band (1 – 6 GHz) spectrum is commonly used to provide more capacity rather than coverage. While midband and high-band (> 6 GHz) spectrum is not generally considered suitable as a coverage layer and therefore not substitutable for low-band spectrum, the opposite does not apply.
- Low-band spectrum is effective for delivering capacity over FW and mobile networks and can be used to deliver both coverage and capacity simultaneously. This is particularly the case in regional areas.
- For operators without sub-1 GHz band spectrum such as **nbn**, achieving the required network coverage must be prioritised over capacity in using spectrum holdings. That is, the ability for spectrum holdings to provide capacity is compromised given the competing objective of obtaining the required coverage.
- Carrier aggregation and dual connectivity (i.e., delivering a network to a device using two different spectrum band holdings) are now widely deployed across MNO and FW networks and commonly available on all 3GPP compatible devices (such as Apple iPhone, Samsung Galaxy etc).
- The implications of time division duplex (**TDD**) and frequency division duplex (**FDD**) configuration of different spectrum bands means that where TDD spectrum is relied upon to deliver a given uplink service level, the operator will need to hold 2.5 times the amount of spectrum in TDD configuration compared with an operator who can take advantage of FDD spectrum holdings to deliver the service. As an example, 2 x 40 MHz of paired spectrum in 1800 MHz (as deployed on the eastern and south-western parts of regional Australia) allows 40 MHz of dedicated uplink spectrum in just one band. In comparison, a TDD operator would need to find as much as 200 MHz of TDD spectrum to achieve similar uplink results.

In its Consultation Paper on the 3.4/3.7 GHz auction the ACMA agreed that spectrum in the 1 - 6 GHz frequency range is likely to be considered broadly substitutable with the 3.4/3.7 GHz spectrum. However, the ACMA goes on to conclude that implementing limits over the 1 – 6 GHz range will further increase the complexity of the allocation due to the diversity of spectrum holdings in these bands. Therefore, this approach has been rejected in the context of the auction. However, no such constraints apply in the context of the 3.8 GHz AWLs, which will be allocated via a broad allocation window.

Therefore, given the acknowledged substitutability, **nbn** strongly recommends that if allocation limits are to be applied in the context of the 3.8 GHz AWLs allocation it would be appropriate to apply a limit that considers all sub 6 GHz band spectrum holdings.

In the Consultation Paper the ACMA has proposed the following options for cross-band limits of:

- Options 1 - Nil during the initial allocation window and during the second allocation window, 140 MHz everywhere or 140 MHz metro and 160 MHz regional



- Option 2 – 140 MHz everywhere or 140 MHz metro and 160 MHz regional

Those cross band limits are proposed to apply based on spectrum in the 3.4-3.95 GHz band. These limits therefore disproportionately impact **nbn**, [CIC] [CIC].

Competitor providers of FW and mobile networks already hold substantial spectrum in other bands that are not proposed to be counted towards the allocation limits. Those competitors are likely to have less need for the spectrum in the 3.8 GHz band given their existing holdings in other bands which have superior performance characteristics. However, for **nbn**, the limits are inequitable, as they treat **nbn** the same as Telstra, who holds 46 percent of sub-1 GHz spectrum in metro areas.

The ACMA has the power under subsection 100(4C) of the Act to have regard to the aggregate of the parts of spectrum that may be used by an applicant under apparatus and spectrum licences. Therefore, there are alternative approaches open to the ACMA that would be entirely consistent with supporting the introduction of LA WBB in the band, without imposing a fixed nil limit in respect of a limited subset of spectrum.

nbn recommends that rather than a nil allocation limit, a preferable alternative approach would be for the ACMA Allocation Principles to provide that the ACMA will take into account and de-prioritise applicants who benefit from significant existing spectrum holdings in the sub 6 GHz frequency range, within the given geography. As a guide, it could be indicated that existing holdings greater than 70MHz low-band/FDD or 140MHz/160MHz midband/TDD would generally be considered to be a significant existing spectrum holding.

This would be a preferable approach to setting a fixed nil limit and/or 140/160 MHz cross band limit because it more appropriately reflects the impacts of spectrum holdings on the communications market and the superior characteristics of FDD spectrum and provides maximum flexibility to the ACMA to consider applications concurrently on their merits. Unlike an auction or first in time allocation process, an allocation window has the advantage of not requiring fixed limits and enables the opportunity for a more nuanced and considered approach to resolving competing applications based on wholistic approach. The relevant decision maker does not need to make an immediate decision to grant or not grant a licence in response to an application, therefore complexity does not need to be avoided and rigid decision-making rules are less necessary with an allocation window approach.

5 Allocation process

Allocation Option 1: 6-month LA WBB priority period

nbn does not support Option 1, and in particular does not support the nil allocation limit that is proposed to apply to **nbn**.

We understand that the purpose of the nil allocation limit is to provide an initial priority window for LA WBB, before WA WBB applications are able to be made. However, there is no clear distinction between what is an LA WBB service and what is a WA WBB service. In addition, it is not clear why the ACMA is equating the holding of existing spectrum to providing a WA WBB service.

[CIC] [CIC]



nbn's response to the ACMA's July 2020 Options Paper, '*Replanning of the 3700–4200 MHz band*' indicated that the spectrum allocated for LA WBB would be most appropriate for **nbn**'s use case.⁸ However, given the proposed nil allocation limit, we assume the ACMA's position to be that the **nbn** FW service in any geographic area, is a WA WBB service rather than a LA WBB service.

Greater clarity is needed in relation to what the ACMA considers to be the defining features of a LA WBB service prior to the finalisation of this allocation process, to provide certainty for applicants and simplicity for the relevant decision makers.

nbn considers that the definition of LA WBB network should be clarified such that it would include [CIC] [CIC]. However, the remainder of this submission assumes that the **nbn** FW service is excluded from qualifying as a LA WBB service. If that is the case, **nbn** submits that the initial priority window should be re-framed to provide priority for both LA WBB services and also for other wireless broadband services in metropolitan and regional Australia [CIC] [CIC].

If the ACMA proceeds with Option 1, then instead of a nil allocation limit, the allocation policy for the initial window should be expanded to including a provision that spectrum would not be allocated as part of the 3.8 AWLs priority period for WA WBB services where, in the ACMA's reasonable view, the 3.4/3.7 auction provided an appropriate alternative mechanism for the relevant spectrum need to be met.

However, if this approach is not adopted and a specific limit based on existing holdings is considered necessary, **nbn** recommends taking an expansive view of the relevant cross-band holdings. Part of the benefit of an allocation window over other allocation methods is that the ACMA can take time to undertake a detailed analysis of options prior to issuing a licence. Therefore, a more nuanced approach can be taken on matters such as cross-band limits. As noted in section 4 above, instead of the nil allocation limit, **nbn** would recommend a policy where the ACMA will take into account and de-prioritise applicants who benefit from significant existing spectrum holdings in the sub 6 GHz frequency range, within the given geography of the relevant application.

The approach recommended by **nbn** is more consistent with the objectives of the MPS for the mid-band allocation, which are:

- Supporting a range of use cases and users;
- Supporting the deployment of new and innovative technology, including 5G;
- Supporting digital connectivity and investment in regional Australia; and
- Promoting competitive markets.

Supporting a range of use cases and users – The nil allocation limit seeks to support a range of use cases and users, by specifically giving priority access to new users over existing users. However, Option 1 is not well targeted against this objective because it does not support WA WBB use cases. Effective support for a range of use cases and users is achieved by other aspects of the proposed allocation process. In particular:

- Using an allocation window approach (as opposed to a first in time approach) takes into account that smaller applicants may not be able to put together an application and supporting documentation quickly.

⁸ **nbn**'s public submission on Replanning of the 3700-4200 MHz band, Options paper dated 16 September 2020. '**nbn** notes ACMA's example articulating our Fixed Wireless network as an example of the Wide Area (WA) WBB service application / service use category. However, other than the physical area of coverage due to our national remit, our deployments are likely to be far more similar to a Local Area (LA) WBB network than of the other WA WBB networks. As such, we respond on the basis that the spectrum allocated for LA WBB would be most appropriate for our use case.'

- The proposed quantum limits of 50/60/70 MHz will ensure that, in general, up to 3 or 4 competing applications are able to be accommodated within geographically overlapping areas.

For these reasons, we believe the nil allocation limit goes beyond what is necessary to support a range of use cases and users, by specifically promoting the interest of one type of applicant over another, regardless of the efficiency or utility of the proposed use or the interest of end users.

Support digital connectivity in regional Australia - As identified in Table 5 of the Consultation Paper, Option 1 is not well targeted against this objective because “available AWLs in the secondary window for MNOs and **nbn** might not be suitable for their services”. **nbn** plays a unique and critical role in supporting digital connectivity in regional Australia, which is a specific objective of the SoE for **nbn**. In particular, the SoE includes a requirement that **nbn** continue to improve its services and assist in addressing access challenges in regional and remote areas. Given the key role played by **nbn** in delivering high speed broadband to the regions, a policy of expressly excluding **nbn** does not deliver against this objective. While allowing smaller operators to establish LA WBB networks may also support digital connectivity in regional Australia, given the quantum of spectrum available and the proposed allocation limits, the nil allocation limit impacting **nbn** goes beyond what is reasonable to support smaller operators, [CIC] [CIC].

Support the deployment of new and innovative technology including 5G - Table 5 of the Consultation Paper notes that Option 1 “supports the delivery of service offerings poorly catered for under alternative allocation mechanisms”. [CIC] [CIC] A nil allocation limit based on existing spectrum holdings is not an effective means to identify whether a particular service offering has been catered for in other allocation processes. A more effective mechanism would be a specific allocation policy, to the effect that spectrum would not be allocated as part of the 3.8 AWLs priority window for WA WBB services where, in the ACMA’s reasonable view, the 3.4/3.7 auction provided an appropriate alternative mechanism for the relevant spectrum need to be met.

Support the deployment of new and innovative technology including 5G - [CIC] [CIC] A nil allocation limit is not an effective means to identify whether a particular application involves the deployment of new and innovative technology. Again, this would be more effectively addressed by specific allocation principles that considered innovation. To the extent ACMA needs to address a specific risk of WA WBB use cases precluding or impeding the development/rollout of LA WBB use cases in regional Australia, this can be adequately addressed by quantum limits and allocation principles that take into account:

- existing spectrum holdings across the sub 6 GHz frequency range, within the given geography.
- whether the 3.4/3.7 auction provided an appropriate alternative mechanism for the relevant spectrum need to be met.

Promoting competitive markets - The Consultation Paper notes that Option 1 “inhibits WA WBB providers getting access to the band for a period, and as such may not optimally promote competition in the WA WBB market. However by supporting smaller market players this approach may promote competition overall, noting that there is an extent of overlap between WA WBB and LA WBB markets.” The impact of the nil allocation limit is therefore not promoting competitive markets overall, but rather supporting one form of competition over another.

The ACMA analysis also fails to take into account the unique role played by **nbn** in the communications market. As a wholesale only provider, the **nbn** network promotes competitive markets by providing wholesale products that RSPs use as inputs to their own products and services. This is intended to level the playing field in the Australian telecommunications industry, enhancing competition and innovation, and providing greater choice for customers across the country. [CIC] [CIC]

For all the reasons set out above, we consider that the decision to exclude **nbn** from the initial 3.8 GHz AWLs allocation using a nil allocation limit is not consistent with the MPS objectives.

An allocation window that excludes incumbent licensees may lead to poor planning outcomes

Even if it is accepted that there is a need to give priority to LA WBB services in allocating the 3.8 GHz AWLs, and that **nbn** is not included as a LA WBB service, it is not clear why the proposed approach (of initially excluding existing licence holders) has been preferred over traditional allocation approaches, where all competing applications will be assessed on their merits against specified criteria.

nbn is very concerned that the ACMA's proposed initial allocation limit of zero for incumbent spectrum licensees may lead to poor allocation outcomes, that will be detrimental to the long-term public interest derived from spectrum. In particular:

- To initially preclude all incumbent licensees from applying for AWLs means that the ACMA will be making final allocation decisions without having access to complete information about alternative competing demand for specific allocations, that may have greater public benefits.
- The utility of the spectrum for WA WBB uses may be adversely impacted by allocation decisions made during the initial allocation window. For example, remaining spectrum after the initial allocation window may lack contiguous blocks or lack alignment with an applicant's existing adjacent holdings. If all competing applications are considered at the same time, then informed planning decisions can be made that maximise utility of the spectrum.

nbn would instead recommend the ACMA accept applications for 3.8 GHz AWL from any applicants, with actual allocations of a licence then subject to ACMA assessment and prioritisation of all applications against agreed assessment criteria. The criteria should include consideration for the proposed use-case, its public benefit, and broader consideration of an applicant's existing spectrum holdings, delivery timelines and risk, the objectives of the Act, MPS and other relevant government policies and priorities (including **nbn**'s role as the SIP, the SoE and Government funding of the FW and Satellite Upgrade Program).

The 2-window allocation approach proposed in Option 1 is not well tailored to deliver an efficient allocation outcome because final allocation decisions would be made during the first window without access to complete information about competing demand. Therefore, Option 1 risks inefficient allocations by expressly preventing potentially more efficient users from applying until less efficient uses have already been allocated spectrum.

Using an allocation window rather than first in time process, along with quantum limits and consideration of existing spectrum holdings, is sufficient to ensure that there is an adequate opportunity for a large number of LA WBB applicants to successfully acquire spectrum, without the need to exclude other potential applicants via a nil allocation limit window.

The duration of any nil allocation limit must be short

If the ACMA proceeds with the nil allocation limit applying to **nbn** as well as to MNOs then it is critical that the period during which the limit is applied is short. We propose no more than 6 weeks.

The 3-, 6- or 12-month options proposed by the ACMA for the duration of the nil allocation limit are excessive to what is required to support new users and use cases. Consultation in relation to the 3.8 AWLs has been ongoing for many years and potential applicants with a business case to use the spectrum will have been preparing for the allocation throughout 2023. Therefore, applying a 6-month nil allocation limit is unnecessary to support LA WBB and will only create delays for other businesses with a legitimate and immediate need for the spectrum.

Given the Allocation won't commence until 2024, even applying a nil allocation for the minimum proposed duration of 3 months will delay **nbn** having certainty needed [CIC] [CIC]

Quantum policy

nbn supports the inclusion of a quantum policy for this Allocation as a reasonable way to ensure that a range of uses and use cases are supported by the 3.8 AWLs allocation.

nbn supports 50, 60 or 70 MHz as an initial limit, and notes the ACMA will have some flexibility in the application of the policy to specific applications.

[CIC] [CIC]

After the initial allocation window, the quantum policy limits should fall away, to maximise the efficient use of spectrum. [CIC] [CIC] Therefore, having quantum limits apply for an extended duration may reduce the overall benefit to end users from this Allocation.

Cross-band limit

The appropriate cross-band frequency range for allocation limits should be informed by the substitutability of all sub 6 GHz band spectrum holdings, with more weight placed on the low band (sub 1 GHz) and spectrum holdings that use FDD configuration (including 1800 MHz, 2100 MHz and 2600 MHz), to recognise the comparatively superior performance characteristics.

If the cross band limits proposed by the ACMA (of 140 MHz or 140 MHz metro/160 MHz regional) are applied in respect of the 3.4–3.95 GHz band, **nbn**'s view is that the cross band limits should only apply for the duration of the initial allocation window. For all the reasons noted above, having limits of extended duration may reduce the overall benefit to end users from this Allocation.

In addition, **nbn** is concerned that applying cross-band limits in a rigid manner at the HCIS level will be harmful to end users at the boundaries of existing spectrum licence area. [CIC] [CIC]

We note that in the 3.4/3.7 spectrum auction, where existing holdings cover less than 30% of the population of the whole geographic area of a product, those marginal holdings do not count towards an assessment of whether issuing a licence would exceed the allocation limit. **nbn** requests that a similar insignificant holdings exclusion be applied in respect of any allocation limits in the context of the 3.8 AWLs allocation, based on the entirety of the licences area applied for in the 3.8 AWLs rather than at a HCIS, state or any other sub area definition.

[CIC] [CIC]

An alternative to an insignificant threshold would be to use a quantum policy, under which the ACMA can take a more flexible approach to considering appropriate limits and relevant exceptions that best reflect the interests of end users.

Allocation principles

The ACMA is proposing to apply the following allocation principles (used for the remote 3.4 – 4.0 allocation) in the first stage and the second stage of the Allocation, in circumstances where there is competing demand for spectrum in a geographic area that exceeds the available spectrum:

- the geographical area of each licence issued should be consistent with the proposed use-cases of the application received

- each licence issued should promote the efficient use of spectrum in a manner consistent with the technical arrangements supporting planned uses
- the allocation will seek to accommodate all applicants
- consider for each applicant the extent to which a refusal to issue the licence applied for would affect the ability of the applicant to deploy services.

As previously noted, **nbn**'s view is that broader considerations should be included in the ACMA's assessment of competing applications including:

- the proposed use-case and its public benefit
- whether the application was unsuitable for spectrum licensing via the 3.4/3.7 spectrum auction due to targeting of a specific geographic
- delivery timelines and risk
- the applicants existing spectrum holdings across the sub 6 GHz frequency range
- the objectives of the Act, MPS and other relevant government policies and priorities (including **nbn**'s role as the SIP, the **nbn** SoE and Government funding of the FW and Satellite Upgrade Program).

A key benefit of an allocation window approach is that where there is competing demand for spectrum in a geographic area that exceeds the available spectrum, the ACMA is able to conduct a merits based assessment of competing applications to ensure the overall benefit to end users from the Allocation is maximised.

Allocation Option 2: general allocation approach

To the extent that **nbn** is not considered an LA WBB service and is excluded from participating in the initial allocation window under Option 1, **nbn** support Option 2 as preferable to Option 1, as it avoids the substantial delays associated with a lengthy exclusion period.

However, Option 2 suffers from many of the same weaknesses as Option 1. In particular, as outlined in the consultation paper, although Option 2 does not have a specific priority window or nil allocation limit, it is still proposed to issue LA WBB licences before applications for WA WBB are assessed. The Consultation Paper notes that:

- the ACMA is proposing to have an additional allocation criterion with Option 2, which is: *"where there are competing applications between LA WBB, PTP and FSS use cases and WA WBB use cases **the ACMA will prioritise LA WBB, PTP and FSS use cases.**"*
- following the closing of the allocation window *"the ACMA decision maker, having regard to the allocation principles, would look to initially prioritise the issue of licences to LA WBB, PTP and FSS use cases. Following the prioritisation and licence issue for these use cases, the ACMA would then assess any remaining applications from MNOs and **NBN Co.**"*

For these reasons, **nbn** has many of the same concerns with Option 2. In particular:

- It is not sufficiently clear what the distinction is between LA WBB and WA WBB.
- Considering applications for WA WBB only after licences have already been issued for LA WBB may lead to poor allocation outcomes, that will be detrimental to the long-term public interest derived from spectrum, because:
 - The ACMA will be making final allocation decisions without having access to complete information about alternative competing demand for specific allocations, that may have greater public benefits.

- The utility of the spectrum for WA WBB uses may be adversely impacted by allocation decisions made during the initial allocation window. For example, remaining spectrum after the initial allocation window may lack contiguous blocks or lack alignment with an applicant's existing adjacent holdings.

nbn recommends the ACMA accept and consider applications for AWLs from all applicants simultaneously, with actual allocations subject to ACMA assessment and prioritisation of all applications against agreed assessment criteria. The prioritisation of LA WBB should not be on an absolute basis. It should just be one factor that is weighed against other criteria (as outline in this submission) including consideration for the proposed use-case and its public benefit, along with broader consideration of an applicant's existing spectrum holdings. If all competing applications are considered on their merits at the same time, then informed planning decisions can be made that maximise the overall utility of the spectrum.

[CIC] [CIC]

6 Tenure and Renewal

nbn supports the proposed arrangements for tenure and renewal for AWLs in the 3.8 GHz band, as set out in the consultation paper. In particular, we support limiting the initial duration of licences in the band to December 2030, to align with the expiration of licences in the 3.4 GHz band. This will facilitate potential replanning and defragmentation at that time to the extent necessary.

We agree that whether spectrum has been used, and whether there is unmet demand for spectrum in the 3.4-4.0 GHz band, are relevant factors the ACMA should take into account in deciding whether licences should be renewed beyond 2030.

However, **nbn** does not support applying the default renewal application and decision making periods. **nbn** recommends that licensees are able to apply for renewal up to two years before licence expiry. This will provide greater certainty to continue to make network investments that support the public interest in delivering service continuity and high service quality.

7 Technical Framework

nbn supports the proposed technical frameworks but remains concerned with the co-ordination approach between the Spectrum and AWL technical conditions. In particular, the potential for unsynchronised operation in any portion of the 3.4-4.0 GHz band does not appear to be an efficient approach if it results in a requirement for a guard band between Spectrum areas and AWLs. **nbn** would support extending a consistent approach from the Spectrum licence regime.

Additionally, **nbn** has concerns about the application of the current spectrum licence out of band emissions limits being applied at 3800 MHz when it is possible devices maybe registered and operating across the 3.4-4.0 with a mix of licence types between Spectrum and AWL.