MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

MEMO

DATE	20 October 2023
TO	Daniel O'Grady
PREPARED BY	Georgia Reynolds, Hannah Altern
SUBJECT	**DECISIONS FOR TRANSITION TO FIRST-IN-TIME LICENCING IN 3.30-3.34 GHZ**

RECOMMENDATIONS

Agree to operate an eligibility process before first-in-time period.
Agree to place a hold on all new licenses from 1 January 2024 – 11 March 2024 (stand-down period).
Agree to maintain current licencing assessment process.
Note that we will reconsider changes to the licence assessment at the start of the stand-down period.
Agree proposed communications strategy.
Note other related work underway and any pressures that is going to place team under.

CONSULTATION

RSM: CSAM, licensing team
Legal
Comms

PURPOSE

1. To discuss and agree the process for transition to first-in-time licencing for 3.30-3.34 GHz, considering:

   - How long the 'stand-down' period for this process should be
   - The eligibility and vetting process in the first in time licensing period (before licenses are submitted)
   - The assessment process for licenses submitted in the first in time licensing period including consideration of efficiency improvements

SUMMARY

2. In the 3.30-3.34 GHz regional broadband spectrum we are approaching the transition from exclusive licencing to first-in-time licencing. This marks the operational change in how we allow parties to licence. In the exclusive period, a licensee needed to win a

right to licence at auction, however, in the first-in-time period, any qualifying licensee simply needs to put in their licence before any competing applications are placed. This document lays out the high level and detailed decisions for this transition and includes a stakeholder engagement plan.

3. In order to allow this process to transition smoothly we need to ensure stakeholders are aware of our planned process and we are consistent with prior agreements / communications. "Sufficient notice" and the end of exclusive rights sets out the timeline for this transition process and the urgency on this decision.

4. There are three decisions sought in this memo.

5. *Conditions on a stand-down period*

A stand-down period is needed to process the expected influx of licences at the end of the exclusive period. We need to process these licences prior to accepting new ones so new first-in-time licensees are aware of what spectrum is available where and we are consistent in how we process exclusive licences compared to how we process first-in-time licences.

First, the **length of this stand-down period** is a key decision. **We will request further information from current rights holders to inform this decision.** Longer periods increase the risk of stakeholder uncertainty and concern; however, shorter periods introduce the risk that we do not process all the licences in the queue before opening the first-in-time period. **A stand-down period of approximately two / three months is proposed, closing on 1 January and reopening on 11 March.**

Second, we need to decide to what extent we will **consider licence modifications** in the stand-down process. Licence modifications are an expected part of using a licence. While not considering modifications at all is a simple process, stopping them outright could affect an exclusive rights holder's ability to use their licence (for which they paid for). Instead, **it is proposed to lay out expectations around which new licence modifications we will process within the stand-down period and which we would consider sufficiently different to process with the first-in-time licences.**

Communicating information clearly and early about the stand down period is essential in setting expectations for licensees. It is proposed to **communicate these two factors in the December Business Update.**

6. *Parameters of an eligibility process*

An eligibility process was part of the exclusive rights period and should be included in the first-in-time licencing process also. This process would ensure that all parties participating in the first-in-time licencing period meet

7. *Process for the ongoing licence assessment*

[To be inserted later]

8.

BACKGROUND

9. In July 2023 we made 40 MHz of spectrum available for regional broadband use between 3.30 and 3.34 GHz. This was first to be licenced by those with and exclusive right to licence (auctioned in May 2023) and then to be opened to further licensees in a first-in first-served ("first-in-time") following the end of the 6-month exclusive period. We are now approaching the transition from exclusive licencing to first-in-time licencing.

10. This 'exclusive rights' period is due to end on 31 December 2023, at which point this spectrum will transition to first-in-time licensing for the remainder of the Management Right (30 June 2033).

PROCESSES FOR FIRST IN TIME LICENSING

11. The process outlined in this briefing has considered two main factors:

- Operational feasibility and ongoing sustainability of this Management Right
- Consistency with process for exclusive rights period

12. This process for the exclusive rights period was laid out in the Auction Catalogue and the Exclusive Rights Agreement. As these two documents do not transfer over to the first-in-time approach the communication of both our eligibility process and licence application process needs to be considered.

PARAMETERS AND PURPOSE OF 'STAND-DOWN' PERIOD

13. A stand-down period is a proposed time where we stop accepting new licence applications to process those remaining on the CSAM work queue. We anticipate needing a stand-down period as we expect a large number of last-minute licence applications at the end of the exclusive rights period (11:59 pm 31 December).

14. If we do not process all remaining licences on the CSAM work queue (placed before EOD 31 December) before accepting new first-in-time licences, there is reduced clarity for new first-in-time licences on what spectrum is available and is increased complexity for the CSAM in processing each licence type with each distinct process. Further, the exclusive rights period is set to end within the typical break for Christmas, so opening licences immediately on 1 January is impractical.

Length of the stand-down period

15. The length of the stand-down period should not be primarily determined by internal resourcing constraints. Doing so would pose risks to do with reasonableness. It would

not be reasonable to have resourcing be the key factor, however. there are other things that affect stand-down length that maybe are reasonable.

16. One such factor is current expectation. We must consider not only the expectations we have already set but also those which are setting through action and those which we want to set. Are people relying on prior communication for decisions? There is a risk we are unclear and people should not rely on this uncertainty. The consequence of an operator acting on this is [...] Harms are: business expectation, opportunity costs (closes in 2033)?

17. **Imperfect estimation of licence volume and processing speed**:
We have received licences from just over half of the exclusive rights holders and processed approximate 550 licences in the last 4 months (not approving all of these). Current licensees have anywhere from 2 to 40 licences approved in each tranche, however we expect as the period continues many licensees will continue to licence in their TLAs. At the higher end we may see as much as another 500 licences submitted at the last minute if all remaining operators waited until December. This can be somewhat mitigated if we notify parties early.
Based on recent licence processing times David can assess a 14-licence bundle in approximately 8 hours. However, complications or new AREs significantly increase processing times and other resource required.

18. As part of this stand-down, we also suggest placing a hold on modifications to existing approved licences in 3.30-3.34 GHz. This should be signalled as soon as possible, ideally in the November Business Update.

19. **November Update:** The November Business Update contained a generic note signalling that we would be using a stand-down period, however, does not provide an end date. We intend to collect information from current licensees for their estimated

20. We set out an expectation that first-in-time would follow exclusive rights – the more certain and the shorter the period the less likely to get complaints – risks with this

- The reasoning for placing a hold on modification is because a modification of a licence, could include the moving of a licence a non-insignificant distance. If we allow this during the stand-down period it could affect a future first-in-time licence implementing a licence they wanted. This licence modification should not necessarily get priority over a new first-in-time licence.
- However, making a hard "no licence modifications" decision during this period could affect an exclusive rights holder's use of their licence in a normal manner.
- Add option: No unless there is an exceptional circumstance
- Grey – what is a modification – why would we stop processing it in a typical way

- Articulation of criteria – what we would and would not allow
- Avoid claim that we are stopping someone using their licence in the normal way
- Risk of doing things different until now – set an expectation and should follow that
- First-in time decisions, are about getting process fairness and setting expectations

21. The suggested length of the stand-down is largely informed by current speed of licence application process. At this stage we are suggesting an approximately 2-month long stand-down time. This would close new licence applications from **1 January to 11 March**. On 11 March we would **reopen licencing at midday**.

22. Currently, we are able to assess approximately 14 licences in an 8-hour period, however, this length changes based on complexity of licence, familiarity of the ARE with 3.30-3.34 rules, and other CSAM/planning tasks. We anticipate that 2 months will be sufficient time to work through the backlog, however, does not come without risks. Other options considered include:

23. Setting a floating time period for the length of the stand-down period. For example, stating that "RSM plans to temporarily close licencing in 3.30-3.34 GHz while we process outstanding exclusive rights' licences and we will notify interested parties and Business Update subscribers with at least one months notice in advance of our re-opening of the band for first-in-time licencing (we anticipate this period to last no longer than 6 months)."

24. There is a concern that setting a hard end for the stand-down period

25. The longer we halt licencing and delay re-opening the band, the more concerns are likely to be raised. This pushes the length of the stand-down period to be as small as is manageable for us. Further, earlier signalling of this timeline and process helps mitigate this process risk. We propose to include this in the November Business Update.

26. The feasibility of length of this stand-down period is dependent on availability of people to assess these draft licences and the number of licences received. If significant changes were to occur in personnel availability, increased resource will be required to assess the required licences within the time frame we committed.

27. Other key dates for the CSAM are:

out of scope or 9(2)a

- MSP resource charging commences 1 June
- 3.30-3.34 GHz resource charging commences 1 July

28. Table 1 shows a rough timeline with projected other CSAM and planner activity in the new year.

Table 1 Availability and planned 3.30-3.34 transition work.

	3.30-3.34	CSAM	Planners	Licencing
December	Likely to receive significant numbers of new licences End of exclusive rights period	BAU		
January	Close of licencing Assessing queue Eligibility checking	BAU		
February	Close of licencing Assessing queue Eligibility checking	BAU 1 MSP renewal		
March	Close of licencing Assessing queue Eligibility checking Opening first-in-time 29 March Good Friday	BAU 1 MSP renewal		
April	1 April Easter Monday Processing first-in-time	BAU		

ELEGIBILITY PROCESS

29. Opening eligibility process sets an expectation that the band will open publicly soon – right to start it prior to accepting application – delays following that is worse – makes extending the process less tenable

30. Figure 1 lays out the proposed approach, following the same high levels steps as those that were taken for the exclusive rights period.

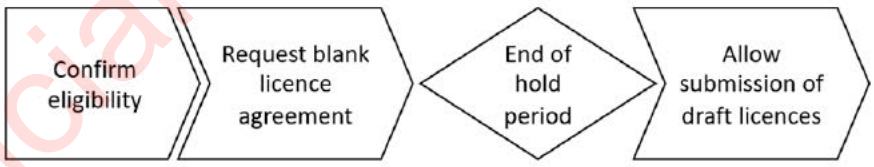

Figure 1 Proposed eligibility process for transition to first-in-time.

31. It is recommended that we open the eligibility process sufficiently in advance of opening first-in-time licencing. This will allow applicants to be ready to submit draft licences for consideration once the band re-opens for first-in-time licencing.

32. As with the exclusive rights period, before we consider the draft licences we would seek to confirm the party is eligible to attain spectrum rights in this band. The requirements proposed as the same as were required for the exclusive rights period:

- Hold a RSM Client ID number;
- Not be "Ineligible". A person is considered "Ineligible" either if that person, by itself or together with or through Associates, holds or has Registered interests in any Management Rights or Controlling Interests in relation to any Management Right, or if due to their acquisition would exceed the maximum number of TLA areas where a person (and or their Associates) can hold licences.

33. We do not consider that current exclusive rights holder will need to complete this step. Instead, it will be sufficient to remind current rights holders of their obligation to inform us of any changes to their eligibility particularly with respect to changes in associates.

34. If an applicant is considered acknowledge, the applicant should then complete a blank licence agreement so they have agreed to the rules, conditions, and requirements included. This is in line with the process undertaken for current rights holders.

35. While it is acknowledged that requiring signed licence agreements adds administrative burden, it is likely important as without this it is unclear that licensees have agreed to the rules and process illustrated in the Licence Agreement.

36. Once the prior steps have been completed and the stand-down period has ended, RSM will consider draft licences from parties for which we have a signed licence agreement. The process for assessing these licencing is covered below.

37. Steps one and two of the eligibility process will still be required if applicants seek to licence following the start of the first-in-time period.

38. [Some consideration should be given to prioritisation between eligibility checks and licencing assessments.]

39. In the exclusive rights period, the elegibility process was covered by email. This seems the best available option. However, is somewhat resource intensive as requires monitoring of the CSAM or RSM inbox. For the exclusive rights period this was handled by policy, however

40. Implementation approach: Emma and you have been helping with this. Is this how you would expect it to continue? Or over to Emma or someone else? If you aren't sure, you could have it highlighted as a question to discuss with Dan.

APPROACH TO ASSESSMENT OF LICENSES

2. In the change to first-in-time licencing it offers an opportunity to make changes to the process we use to assess licences in 3.30-3.34 GHz. It is important to continue to consider the following factors as we make decisions on this topic:

- Process fairness for those who chose to wait until the first-in-time period
- Ongoing operational feasibility
- Ensuring we deliver on the processes we communicated during the exclusive rights period

3. The current process for licence assessment follows the steps illustrated in Figure 1.

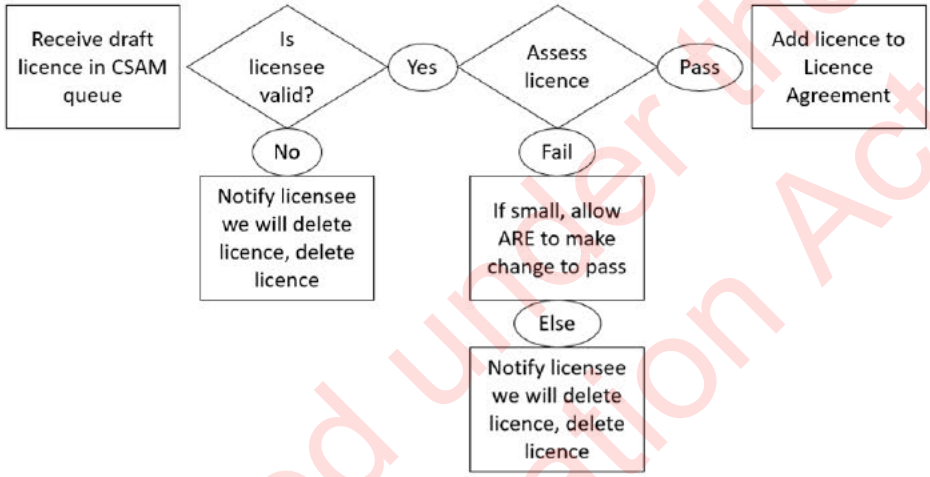

Figure 2 Current licence assessment process.

4. Current process is to assess licences in the order in which they were sent to the CSAM work queue. There are some cases where we may choose to allow an engineer to make a change to a licence that would otherwise fail, in this case the resulting new licence is processed with the bundle of other licences for efficiency.

5. In the exclusive rights agreement, we agreed to a process we would follow to assess and approve licences, including how we would prioritise this process between operators. As we have not formed an agreement with first-in-time licensees, there is no need to keep this process in contracts, instead, we propose to have this located on the website along with information regarding pricing. This should be updated prior to the first-in-time licencing period.

6. The current process, where there are conflicting licences (two or more licences that have overlapping protection areas), prioritises the first licence submitted to the CSAM queue. We consider that the overarching first-in-time approach supersedes this and likely is the main factor.

41. The assessment of the licence cannot review every aspect of the licence, as doing so would be akin to doing the engineering work for a second time. Instead, the current licence assessment considers 16 factors that were considered essential to licence integrity *(Licensee; Licence location; Channel type; EIRP of the transmitter; Antenna*

radiation pattern of the FWA base station and at the FWA CPE; Service area size; UEL; MPIS; Coverage of the service area; Transmitter location; Transmitter/Receiver antenna height, azimuth, type, make and model, and configuration losses; Unwanted emissions in the spurious domain; Emissions designator; Authorisations). This assessment is carried out by the CSAM assisted by either a planner or Jeremy.

42. [It might be worth diving into how we selected these factors when we eventually reconsider what factors we assess in future licences in January]

Changes to the current licencing process for efficiency

43. This level of assessment is a new approach for RSM, and has led to unexpected and substantial demands on the time of the CSAM and planners to undertake these assessments. This level of rigor may no longer be achievable alongside other projects or determined necessary after reassessing the risks associated with granting licences. The stand down period may present a strain on resource, and ability to assess the backlog of licences if the number of licences submitted are extensive.

44. In the stand-down period or transition to first-in-time, if we consider that the current process is unsustainable, there are a few options available to us to improve efficiency within the licence assessment process, including:

- Assessing only a sample sets of licences submitted
- Reducing the scope of the assessment to the typical areas of issue

45. However, these changes do not come without risk. We consider that the onus is on us to ensure the licences approved meet the PIBs and other applicable rules. There is no scope ask operators to fix issues with licences we have incorrectly approved. Thus, we have limited to no ability to fix any issues that arise from an error in our assessment.

46. The consequences of an incorrectly approved licence can vary. These consequences could include granting a receive protection area that is too large and limits another user from accessing spectrum; allowing licences within areas the operator does not hold the exclusive right; and/or allowing licences that cause interference to an existing licence (something we said we would do in exclusive rights contract). There is some [ambiguity] around the responsibility of an ARE to ensure some of these factors, however, at this stage, we have received licences which, if not caught, would have been licenced.

47. [Are there areas we have consistently not had issues in we could not look at? What are the areas that take the longest to assess?]

48. We are currently at a point where some AREs are experienced and able to submit large numbers of licences without the need for modification. However, with each new ARE

licencing in the band there is a learning curve where they align their engineering with the ruleset, this can take some time. It is unclear if we can use different assessment methods among the AREs if we took a risk-based assessment approach.

49. At this stage, the risks of using a sampling approach or reduced assessment do not outweigh the risks. This should be reassessed during the stand-down period. We do not consider that we need to inform this decision publicly, so will look to reconsider this decision in January depending on our likely ability to assess the draft licences within the stand-down period.

50. [Who is doing this and when and how]

UPDATE TO PIB39

51. [No major changes are conceived at this stage.]

CLARITY ON RESOURCE CHARGING

7. In August we identified to you a mismatch between the communication of resource charging and how we intended the licences to be charged.

8. Our documentation throughout the whole 3.30-3.34 GHz allocation process has referred to a single licence, but potentially there was an implicit understanding with everyone we spoke to (including WISPA, exclusive rights holders etc) that we were actually describing the licence pair. Given the resource charge represents the number of people a service is perceived to cover, we would be charging twice for the coverage of the same person if we sought a resource charge for both the receive and transmit licences. Initial cost models used this as a baseline.

52. This is similar in the MSP licence agreement whereby 'licence' is referred to throughout without differentiating *base transmitter* and *remote service area licences,* but the MSP agreements navigates the difference in resource charging it by making explicit that the resource charge relates to *base transmitter* only rather than all licences.

53. There are two options for correcting this discrepancy.

I. Adjusting the communications on the website to be clear we do not intend to apply the resource charge to the receive licences in the band (i.e. setting the cost of a receive licence to $0). [Preferred]
II. Adjusting the resource charging page to halve the cost associated with a licence in each Community and Local Board Area.

54. Both options have risks. Option 1 does not propose to change the definition of licence as stated in the licence agreement (Figure 3). This may create some inconsistency where we disucss charging on a per-licence basis. Careful review of our messaging is

critical if we move forward with this option. Further mitigating this risk, the licence agreement (Figure 4) points to a specific webpage for resource charging detail; we are proposing to change this detail.

"Licence"	means a Registered spectrum licence described in Schedule 1 (as it may be updated from time to time in accordance with this agreement), and shall also include each other Registered spectrum licence the Operator holds in the 3.30-3.34GHz (at the relevant time) but which is not included in Schedule 1 (e.g., because it is subject to a different licence agreement between the Operator and the Ministry);

Figure 3 Definition of "Licence" from licence agreement.

2.1. Resource Charge

(a) The Operator must pay the Resource Charge in accordance with this agreement.

(b) The Resource Charge:

(i) is an annual fee applying in relation to each 12 month period during the term of the Licence/s beginning on 1 July (of each year) (**Resource Charge Year**), determined on an annual basis; and

(ii) for a Resource Charge Year, shall be the sum of the per-Licence 'Charge per 20MHz' amounts for each Community and Local Board area applicable to the Licences (Registered at the start of the Resource Charge Year), such amounts published on the [RSM] Webpage [no later than 1 June of the prior Resource Charge Year] (or such other webpage as may be notified from time to time),

Figure 4 Section 2.1 of 3.30-3.34 GHz licence agreement.

55. Option 1 is preferred as it best represents a clarification in our costing approach and mirrors the process undertaken in MSP. Further, option one allows the CSAM to undertake a similar resource charging method as is used in the MSP, which will reduce administrative burdon.

OTHER ADMINISTRATIVE ELEMENTS OF 3.30-3.34

56. Internal team handover – when how

57. Note workload into 2025

NEXT STEPS

58. Comms plan below, business update text, reconsider efficiency in/before January

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Stakeholder Engagement Plan

Purpose

- Provide clarity to current exclusive rights holders of what they can expect as their exclusive period ends, encourage them to get their requests in early to spread administration.
- Make opportunity and limitations of first in time period known to prospective spectrum users, including those that missed out in auction and those that were not previously aware of opportunity.
- Create space for RSM to consistently and efficiently administer 3.3 by setting expectations well

Key messages

- Stand down period: how this will work, when it will run from/to
- Communication key requirements to access
- What is eligible and what is not? I.e. this is intended to be for rural broadband services, with

Timing	Audience	Messages
???	Current rights holders	Licence variation Ask what licences are coming down the pipe – how many and when Exclusive rights period coming to an end Stand-down period coming up Get your licences in as soon as possible to provide plenty of time for review and decision-making Note that we are still declining some licenses that do not meet requirements—if licence needs to be re-submitted after end of exclusive rights period it will not be considered until end of stand-down period If your eligibility circumstances have changed onus is on you to tell us.
	Current AREs that we know	Copy of correspondence to the rights

	about	holders [Anything extra we want to communicate]
November BU	All recipients of BU	Exclusive rights period coming to an end Stand-down period coming up (of a couple of months) Noone including existing rights holders will be allowed to licence during the time. Look for more info on eligibility and how to apply (make it clear that the TLA limits will still apply)
November	Website update	Update website with process for first in time process, clarity for pricing method,
December BU	All recipients of BU	Reminder of exclusive rights expiry and point parties to web updates with more detail on proposed plan to transition to first-in-time approach
December	Current rights holders	Reminder of expiry
January	Current rights holders	Period now finished, no more applications will be considered until after end of stand down period
February	Internal teams involved	Confirmation of approach, resources, capacity
Feb BU	All recipients of BU	Reminder of beginning of first-in-time and eligibility process
March BU	All recipients of BU	Reminder of upcoming switch to first-in-time

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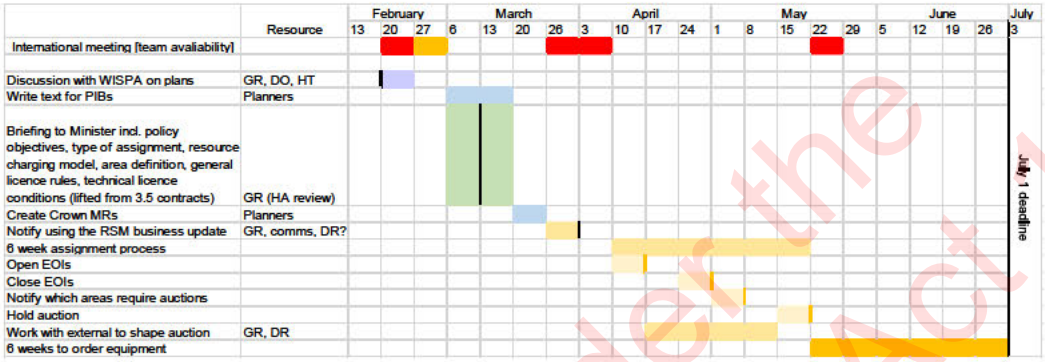
Document 2

3.30 – 3.34 GHz Regional Broadband Internal Decision Document

This document will set out decision making for the key deliverables required before 8 March briefing.

1. Timeline



2. Licencing method

This decision reflects how licences are created, by whom, and what is sold/assigned.

2.1. Options

2.1.1. Time limited area licencing [Preferred]

Offer the right for **an operator** to place licences within a particular area for a limited time. These licences would follow a particular set of licencing rules and would allow operators to secure multiple licences on an exclusive basis for a set period [suggested 6 months – 1 year]. Following this time, the area would be opened for other operators to licence.

This option best combines the area and point licencing methods to use spectrum most efficiently, while allowing operators the ability to "lock-in" the spectrum they are most interested in.

Requires development of:

- Licencing rules [held in PIBs 39, 59]
- Sample licence
- Licencing agreement

2.1.2. Area Licencing

Offer the right for **an operator** to place licences within a particular area for the full licence length.

This is the status quo for the 3.5 GHz band. Also, this option best acts as an area constrained management right, making the right more tradable and therefore valuable. Historically, operators have not used the spectrum across the full TLA, nor subleased the unused areas.

Summary of Comments on [Document 02] [Draft for review] Decisions for 3.30-3.34 GHz.pdf

Page: 1

Number: 1 Author: David Reynolds Date: 28/02/2023 1:48:00 pm
This is easily achieved using a short fixed term licence i.e. expiry date of xx months into the future

Number: 2 Author: Georgia Reynolds Date: 2/03/2023 1:24:00 pm
s 9(2)(h)

Requires development of:

- Boundary limits [for power]
- Sample licence
- Licencing agreement

2.1.3. Point licencing

Offer for sale particular licences [as **generated by either RSM or the operator**]. These would need to comply with a set of technical rules and would be granted individually.

Requires development of:

- Licencing rules [held in PIBs 39, 59]
- Sample licence
- Licencing agreement

2.2. Reasoning for preference

The preferred licencing method is "***Time limited area licencing***".

Against our policy objectives this option would best increase rural coverage / capacity through allowing for better sharing of spectrum. All options preform the same against the remaining criteria of fast delivery and process transparency.

Area/point – area is better for certainty, while point is better for re-use. Want to give operators the opportunity to retain service to existing customers.

It is critical to note this method has more complex deliverables required compared to area licencing. Meaning, to agree to move forward with this option as the preference, we must confirm these deliverables are achievable within the time frame.

Can deliverables be met by 27 March deadline?

If no what are our alternatives? [See section XXX]

Additionally, the long-term administrative burden (largely on the CSAM) for managing this spectrum is larger compared to area licencing. By selecting this method as the preference establishes our prioritisation of policy objective over administrative burden.

Can we accept the prioritisation of efficient spectrum use, meaning it will increase workloads? Are there mitigations we can take to reduce this or decrease existing loads?

3. Assignment method

Once a right/licence is constructed (see above for licencing method) the assignment method is the mechanism we will use to decide which interested party gains access.

3.1. Options

3.1.1. Auction [Preferred]

An auction process uses market mechanisms to determine which operator is awarded spectrum. The auction process would likely be conducted on Trade-me.

Requires development of:

Number: 1 Author: David Reynolds Date: 28/02/2023 1:59:00 pm
This may be resource intensive for and ARE defining licenced areas handled by multi-point receive protection locations defining polygons for licenced areas.
If we choose whole TLA's there could be options to download Shape(?) files from Stats NZ denoting the TLA boundaries.

Number: 2 Author: Georgia Reynolds Date: 2/03/2023 1:37:00 pm
ARE resource doesn't contribute to our ability to meet 27 March deadline (as I do not propose in this solution to sell pre-engineering licences) – but does feed into technical feasibility

Number: 3 Author: David Reynolds Date: 28/02/2023 2:02:00 pm
One saving grace is that as MSP potentially enters a moratorium period up to the end of the Management Right (31 December 2028), this should result in less workload for the CSAM managing MSP activities with no new licensing.

- Auction timeline
- Clarification on auction lots

3.1.2. EOIs followed by auction

Expressions of interest (EOIs) can be sought prior to an auction so we know what the demand is prior to an assignment method. This would allow the direct assignment of an area where only one party was interested. Additionally, this gives us the ability to better understand demand.

EOIs require time to complete and additional notification time. This increases the time required by up to 4 weeks.

Requires development of:

- Auction and EOI timeline
- Clarification on auction lots

3.1.3. First-in-time

First-in-time assigns the spectrum to the first operator who applies for it (if they met the pre-defined conditions).

This method would be best utilised where low-to-no demand exists for the rights as it is more suited to allowing operators to gain spectrum as it is needed rather than in a strategic context. This is the fastest allocation method as only a notification period is required.

3.2. Reasoning for preference

The preference for assignment method is "***Auction***" (at least for a first round competitive process)

All options meet our policy objective of transparency. Auctions, particularly Trade-me auctions are a very transparent and user-friendly assignment method. As the auctions are public the price paid is also public.

Auctions use market mechanisms to prioritise spectrum uses. This is preferable to first-in-time which relies on speed of application. Market mechanisms should more effectively ensure spectrum will be deployed and the use with the best return is most likely to receive the spectrum.

Auction **without** EOIs is preferable to auction **with** EOIs on the balance of timely delivery. Certainty of spectrum can be delivered to operators sooner if an auction is conducted without the EOI process.

Complications could arise if dependencies are required meaning some preferences may be dependent on other results. To confirm auction as our preference we must satisfy ourselves these dependency requirements are unlikely to arise.

Are there foreseeable dependency requirements that increase auction complexity?

4. Costing method

This section discusses the options around recovering value for the spectrum and any costs to do with the assignment process.

Number: 1 Author: David Reynolds Date: 28/02/2023 2:04:00 pm
Real demand for spectrum resulting from EOI's may reduce auction workload?

Number: 2 Author: Georgia Reynolds Date: 2/03/2023 1:38:00 pm
Reduces actual auction administration, however because of timelines all sites would need to be created by skylark anyway (areas with 1 interested party would

Number: 3 Author: David Reynolds Date: 28/02/2023 2:05:00 pm
My understanding is this could easily be achieved by Radio Licences rather than spectrum. Others may comment though around pros and cons of using Radio licences.

Number: 4 Author: Georgia Reynolds Date: 2/03/2023 2:34:00 pm
If we auction without EOIs do they have to register?
How do we avoid false bids? – Can we ask bidders to provide their RSM client ID?
Moving to first in first served after round

4.1. Options

4.1.1. Assignment costs recovered at award of spectrum and resource charge covered at licencing [Preferred]

The costs of running the assignment method (e.g. Auction costs) would be recovered in this assignment process while the actual value of the spectrum (resource charge) would be recovered at licencing.

E.g. An operator seeking licences in a TLA may pay the following rate for these licences:

At auction: $500 (reserve) + cost of winning the auction

At licencing: $5 000 per licence (resource charge) + $150 licence fee per licence

(Specific charges only an estimate)

4.1.2. Assignment costs and resource charge recovered at award of spectrum

The costs of running the assignment method (e.g. Auction costs) and the actual value of the spectrum (resource charge) would be recovered together at the assignment method.

E.g. An operator seeking licences in a TLA may pay the following rate for these licences:

At auction: $500 + $50 000 (reserve: cost of running + TLA based resource charge) + cost of winning the auction

At licencing: $150 licence fee per licence

(Specific charges only an estimate)

4.1.3. Assignment costs recovered at award of spectrum and resouce charge covered at licencing (only apply costs on a per area basis)

The costs of running the assignment method (e.g. Auction costs) would be recovered in this assignment process while the actual value of the spectrum (resource charge) would be recovered at licencing on a per area basis.

E.g. An operator seeking licences in a TLA may pay the following rate for these licences:

At auction: $500 (reserve) + cost of winning the auction

At licencing: $50 000 (resource charge for TLA) + $150 licence fee per licence

(Specific charges only an estimate)

4.2. Feedback

4.2.1. CSAM

[Any specific comments on operation and / or learnings from MSP?]

MSP uses Resource Charging on an annual basis, and this is very resource intensive. It's therefore good to see that this approach is not being suggested for 3.3 – 3.4 GHz, instead using a one-off resource charge.

Number: 1 Author: Georgia Reynolds Date: 2/03/2023 2:49:00 pm
Flat rate for urban/rural

Some stakeholders have considered current method of MSP resource charging unfair e.g. why should a licensee serving a small area of Auckland say, get charged for the entire population of Auckland? [MSP/regional Non-National consultation 2021]

4.3. Reasoning for preference

The preference for costing method is "***assignment costs recovered at award of spectrum and resource charge covered at licencing***".

This method best balances ensuring Crown value for money with minimising operational complexity.

Ensuring the reserve price for auction is tied only to the auction costs means that the value of winning the right to "first dibs" is not significantly impacted by the potential number of licences an operators wanted to deploy. This better incentivises operators to only licence the areas where they seek to deploy, better allowing for efficient spectrum use and taking pressure off the use-or-lose requirements.

The way the resource charge is collected is important as it can significantly impact the incentives on operators to over / underestimate licence size. If this charge is applied independent of number of licences (4.12 / 4.13) operators are incentivised to licence more.

If we chose another option: are we secure our lose-or-lose provisions could disincentivise over-licencing?

In addition to the method for applying the costs, we must also consider the intention behind these costs and how this would set reasonable resource charges.

What are the factors we can draw on to set reasonable resource charges?

5. General considerations / licence condit ons

5.1. Eligibi ity requirements

'The Licensee will not, at any time, by itself or together with its Associates, hold or have Registered interests in the Other Management Rights or Controlling Interests in relation to such management rights.'

5.2. Eligibility requirements

'The Licensee will not, at any time, by itself or together with its Associates, hold or have Registered interests in the Other Management Rights or Controlling Interests in relation to such management rights.'

5.3. Use-or-lose

Will have use-or-lose focused on ensuring regional broadband delivery.

5.4. Transfers

Options for transfers largely depend on our approach to resource charging. If we are not getting market value for spectrum, allowing resale would attract speculators. However, allowing resale of spectrum better allows effective use. **Could allow resale only after**

Number: 1 Author: Georgia Reynolds Date: 3/03/2023 9:32:00 am
Dan – do you want these confirmed in the briefing?
Given these are the objectives: we intend to structure the licence conditions like XYZ.

Number: 2 Author: Georgia Reynolds Date: 2/03/2023 1:57:00 pm
MSP requires that there are no National MR holders in other bands (resource overhead for CSAM on licence application)

Number: 3 Author: Georgia Reynolds Date: 2/03/2023 1:53:00 pm
Use it or lose it for initial and ongoing periods (MSP requires stat decs affirming implementation at 2 year anniversary and intervals thereafter so more resource needed)
What factors are taken into account to determine successful implementation?
% population served in a TLA? (Previous 3.5 GHZ regional model)
Number of contracted client entities (end-users) (MSP requires licensee to declare this number, but it's subjective as to what is considered 'sufficient use'

Number: 4 Author: Georgia Reynolds Date: 2/03/2023 1:53:00 pm
After what period of time?
Requirements
MSP lic transfers require licences to be declared as implemented
Receiving party signs an agreement with the Crown
Licences transferred

implementation conditions are met. Or hand back to crown for redeployment (would we ever provide compensation?)

"Transfer licences with approval from RSM/MBIE"

5.5. Subleasing / Change of control

Depends on decision around licence method – if point licencing this is less of a concern.

6. Resource Charging

6.1. Bench-marking with previous holdings

6.1.1. MSP

I have referred to charges across a 10 year right (annual charge x 10) and without GST

	s 9(2)(b)(ii)		
Location	ALK	Urban (non-major)	Rural
Charge per 20 MHz	$101, 052	$55, 688	$9, 533
No. Base station	6	9	4
Charge per site	$16, 842	$6, 187	$2, 383

6.1.2. Extension of 3.5 rights

I have used the 3.5 GHz extension as a cost model for a 10 year right without GST, this is for unlimited licences in an area.

Major Centre	$26, 250
Other	$7, 275

If this were to be applied to the previous

	s 9(2)(b)(ii)		
~~Location~~	~~1x major location~~		~~2x other TLA~~
~~Charge~~	~~$~~	~~$~~	~~$~~
~~No. Base station~~	~~6~~	~~9~~	~~4~~
~~Charge per site~~	~~$26250~~	~~$6, 187~~	~~$72775~~

6.1.3. Costing of national 3.5 rights

Number: 1 Author: Georgia Reynolds Date: 2/03/2023 1:53:00 pm
Are we going to allow this?
s 9(2)(h)
See section above on how change of control is handled cleanly by using licence transfer

As part of the national rights design the spectrum was valued. Below uses this to set the value for 20 MHz of 3.5 GHz rights for 10 years.

There is a parity concern here as MNOs are allowed to pay this through network reinvestment.

National Cost
$4,329,600
National Cost/ Person
$0.8451958

If this costing model was applied to the 3 test cases based on TLA licences are in

	s 9(2)(b)(ii)		
Population	1, 415, 550	710, 301	23, 844
Charge	$ 1, 196, 417	$600, 343	$ 20,153
No. Base station	6	9	4
Charge per site	$199, 402	66,704.82	20, 153

Document 1

Competitive Process				Non-Competitive Process			
Auction	Tender			Allocation		MSP- Like	
Cash	Cash	IRs	Combo	Open		Existing users only	

Analysis

Auction		Tender				Allocation				MSP- Like	
Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons
Market decides best use of spectrum	Depending on reserve price could stifle "new entrants"/small players	Market decides best use of spectrum	Non-transparent by design (can be mitigated)	Ability to get policy outcomes explicitly	Non-transparent	Fast	Not-very-transparent	Fastest	Not-transparent	Transparent	High administrative burden
Good spectrum utilisation	Potential for spectrum to go for small sums (could be mitigated through design)	Good spectrum utilisation	... could stifle "new entrants"/small players	Low up-front costs – "re-investment"	Potential for spectrum to go for small sums (could be mitigated through design)	Not-high administrative burden	If we make a call there is a chance for challenge	Not-high administrative burden	Other plays could be excluded	Access to small players	Potential for spectrum to go for small sums (could be mitigated through design)
Transparent	No explicit trade for policy objectives	Low administrative burden	Potential for spectrum to go for small sums (could be mitigated through design)	Equality with MNO allocation	Hard to pin-point value	Allocation at MBIE discretion	Potential for spectrum to be used more efficiently	Allocation at MBIE discretion	If we make a call there is a chance for challenge	Low-cost	No explicit policy objectives
Low administrative burden	Might be hard for implementation conditions to be imposed	Final allocation a MBIE discretion	No explicit trade for policy objectives	Good spectrum utilisation		Ability to get policy outcomes explicitly		Ability to get policy outcomes explicitly	Potential for spectrum to be used more efficiently		
Open to all		Open to all		Final allocation a MBIE discretion		Ability to tailor cost depending on player					
				Open to all							
To note:		To note:		To note:		To note:		To note: Could consider "pre-allocation" to existing users ie. incumbents in 3.5 regional get a slot, then do another allocation process for the remaining slots in a defined area eg competitive cash auction		To note:	

Other Decisions	
Length of licences	20 Years in line with MRs
	Some shorter period – allows replanning for new technology and or implementation requirements / build conditions
Resource charging	Front load this into the reserve/cost
	Yearly fee (increases admin needed)
Definition of regional boarders	TLAs (Auckland?)
	Limits on the number/types of TLAs you can
Resale	Are rights tradeable once built / implemented?

Document 3

Reflections on 3.30 – 3.34 GHz

Outcomes

[Noting we are not done – keen to get a feeling for initial opinion on policy outcomes]

Given the above considerations, we recommend that the three main objectives for this assignment are:

a. Improving rural connectivity through connecting new areas or increasing capacity to already covered areas.

b. Timely availability of spectrum to regional broadband operators before 1 July 2023.

c. Transparency throughout the assignment process and decision making.

Did we achieve the policy goals set out for the assignment?

- Increase rural connectivity
    - We are seeing licences placed covering rural areas (hard to judge)
        - **DR wrote** – an RRF search of licences in MR 514 readily shows their location on a map (even with a public login). With the right permissions, the Receive Protection locations can also be viewed, and using RRF satellite view coverage into urban/rural areas can be seen
    - PG What about the "transition" from the previous 3.5 GHz regional licence holders?
    - **CAS** This probably has not significantly increased rural connectivity as the activity has been around urban centres. However, we have a framework for low cost access to spectrum which will give opportunities for rural connectivity through the first in time licensing approach from January
    - DO: We have delivered the bit we could control to enable rural connectivity but it is then down to the industry to deliver on the ultimate part of this policy goal.
- Timely delivery of spectrum
    - We chose to ignore this at times in favour of strong process
    - Spectrum was allocated by May and used by July
        - **DR wrote** – spectrum became available according to commencement of MR i.e. 1 July 2023. Spectrum can only be used once licences are engineered, confirmed by Rightholder, assessed by RSM, and a licence agreement is signed off – all of this takes time
        - Licensing took longer than anticipated
        - Focus on delivery of contract and auction within timeframes, but project planning could have usefully covered timeframes/glut around licensing processes more. We assumed that it would take a bit of time for AREs to get licences in, but not that it would take us a few weeks to process licences with a tighter review that we haven't previously done (HA)
        - **BD** One factor that was unusual and has caused a few delays for AREs and licensees has been the implementation of the new Register.
    - Scoping decision to focus on regional broadband only (not private networks)
    - Some TLAs not assigned early access due to bidder invalidity / unresponsiveness.
        - **DR wrote** – should we have been stricter around adhering to the timing we put in place for the milestones? For instance its only this week a letter to

one Operator was sent, detailing a cancellation event due to their unresponsiveness in returning agreements and not paying overdue invoices

  - CAS – This was delivered just on time, ideally we should of had it in licensees hands in Q1 of 2023, of course acknowledging the pressures we were under. That said, new parties are starting off
  - One issue with the short timeframes was having enough time to sort out the winkles in documentation and PIBs. These things take time to fine tune and sort out
  - This was timely delivery done in almost impossible timeframes which is a remarkable achievement through a lot of hard work and long hours
- Transparent process
  - Only targeted consultation (allowed us industry feed-in but was opaque for newer entrants)
    - Received complaints on this – so from an external perspective maybe not met. DO: Yeah, I agree with this. I think we were ticked the box sufficiently to be reasonable but the industry wanted more. Given the time we had I think we did the best we could.
  - A public consultation would of allowed a more open process with better consideration of the different perspectives. However, this would have taken significantly longer as we would of had to wade through all the submissions and issues which in turn could of distorted the outcome we were looking to achieve
  - DO: Transparency of rule changes is another area – updating PIBs
  - DO: The webinar was an example where we were transparent
  - DO: I do still wonder about the balance of auction vs allowing incumbents with existing networks to continue. How strongly do we believe in market forces?!
  - Some sort of simple guide or webinar could of been useful before the auction to outline where to find all the information and how it was going to work
- Maximising spectral efficiency
  - Traded timeliness at times for this
  - Ensuring the register is accurate / frequencies are used
  -
- [...]

Project planning

[For reference]

Planned process timeline

	November 22	December 22	January 22	February 23	March 23	April 23	May 23	June 23	July 23
Dependencies					Finalisation of National contracts			Implementation plan for National rights	
General			1. Ministerial update						
TWG	2. Minutes from last meeting out?			3. Next meeting?					
Industry consultation				4. Ministerial agreement to consult 5. Consultation document available		Consultation launched			
Public communication of assignment approach					6. Ministerial decision here (following 3.41+ technical arrangements) 7. Public communication				
Implementation of approach **TBC**					*Is there time here to run a contestable process?*	8. MR/s established 9. Licensing rules	10. Licenses assigned and engineered	*TBC Transition approach?*	

Real process timeline

2018 – Band identified for regional broadband / mobile / private networks.

2021 Feb internal decision to propose to move non national services below 3.4 GHz

2021 July Consultation on 3.3 GHz proposal

2022 March – Cabinet decision to set spectrum aside for regional broadband and private networks.

2022 September – Cabinet decision to place this in 3.3-3.4 GHz

2022 November – TWG on coexistence with MNOs. Initial project planning (setting

2023 January – Project planning, setting objectives.

[*Briefing delayed - Change of Minister*]

2023 February – Costing model options developed, consultation with WISPA.

2023 March – First briefing (setting objectives, focusing on regional broadband, laying out assignment model options, requesting targeted consultation). Targeted consultation on price (including consultation on area definition used for 6-month auction and ongoing resource charge). Second briefing (decisions on preferred costing model, area definitions and dates for auction). RFQ for auctioneer.

2023 April – Web content updated, opening EOIs. Contracts developed with CT. PIB 39 and 59 updated. Notification of auction dates. Procurement of auctioneer

2023 May – Auction occurred. Notification of successful bidders. Closing out valid/invalid bids.

2023 June – Transition to BAU.

2023 July – First licences accepted.

2023 August – Webinar on topical issues.

Easy wins – what was worth the time spent or went faster than expected

- Consultation on price was incredibly useful.
- Auction itself – Skylark managed the bulk of the lots very efficiently with minimal input from us.
- Concept of 'exclusive rights' was novel and pulled together quite fast/late after other allocation methods considered. Landed well with users/operators
- Test of market on auctioneer services—even though we went with same operator, we examined what was in market and are more informed for future
- 'Live' engagement with Legal team. Having them running alongside throughout the whole process was helpful in being able to draw them in on an ad-hoc basis as we needed to.
-
- [...]

Items that took longer than expected (mitigations, if any)

- Decisions on preferred approaches (for both assignment and costing)
    - Earlier Ministerial decisions on priorities (probably should have been aiming for this in November 2022).

Summary of Comments on [Document 03] Reflections on 3.3 regional broadband allocation [MARKED UP].pdf

Page: 3

Number: 1 Author: reynold2 Date: 11/08/2023 9:37:00 am +12'00'
Was April 2023 when Section 4.8 Regional Broadband first added?

- Rushing Briefings meant appropriate IMSC consultation did not occur, which hurt working relationships.

- Contract development – thought this would be a simple exercise modifying the MSP or similar, took a lot of rushed manpower working with CT over 2-3 weeks.
  - Allow more time.
  - More consistent early engagement with legal to ensure we/they were setting off on the right track.
  - **DR wrote** – note that legal drafting may have introduced new concepts of handling askew from RadioCommunciations Act, e.g. the term 'Operator' isn't recognised in the Act. In hindsight using terminology only found in the Act or existing agreements may have been better.
  - Consider some of the more complex issues that haven't come up yet. E.g. alignment to s. 55.
- Confirmation of successful bidders – couldn't collect the right information (quickly) from TradeMe bidders.
  - Wouldn't suggest TradeMe as a platform if we have bidding requirements.
    - **DR wrote** – Agree. Some potential auction partners proposed an online registration system. In hindsight, using that approach may have worked better (registration details: auction user ID, email address, phone number, ***RSM Client number***, the latter being paramount)
    - We couldn't check and remove dodgy bidders in advance – only had an ex-post way to handle issues
  - Documentation of operational processes around confirmation of eligible bidders was helpful in taking a consistent approach.
- Granting of licences. More work than anticipated. AREs were not accurately following the PIBs, there were a few things we needed to adjust and we could have been tighter on notifying them. Thoughts for next time:
  - Have another person ready to help operationalise.
  - How do we assess when to say "no" to suggested changes and when to amend them?
  - Need to notify AREs straightaway when we change PIBs
  - Could we have foreseen the issues with the PIBs?
- Technical rules in PIBs: my impression (HA) was that the rule changes were more complex than anticipated in the project plan, which had implications on comms to users
- internally, the PIB 39 rules were claimed to be not clear enough and that they lacked certainty - was this true?
  - **DR wrote:** Feedback I had from an ARE was that they struggled to understand some of it
- Frantic 40+ person-hours spent on having a webinar, seen to be a fix for a perceived problem - what was the actual problem? was the webinar actually necessary? what should have been done previously to not have needed a webinar at all?
-

Unexpected hiccups that added time (mitigations, if any)

- Complaint about consultation resulted in rushed targeted consultation. (Also, multiple OIAs on this)
  - Allocate time for public consultation process.
- EOIs open without eligibility requirements led to all lots going to auction.

    - Apply eligibility requirements to all aspects of allocations if they will apply.
- Classifying bids as invalid.
    - Took significant legal input that wasn't accounted for (account for this in future)
- Commerce Act concerns on price fixing
    - Increase knowledge in industry.
- [...]

Scoping

Some initial scoping decisions were made that narrowed down these projects what worked and what didn't?

- Focus on regional broadband (setting aside private networks for now)
    - Largely allowed us to achieve the assignment within time frame.
- Timely delivery of spectrum

Transition to BAU

[Noting we are still in this part]

- Difficult from a resource perspective dealing with a large number of licence applications being submitted in a short timeframe:
    - **Operational tasks:** Understanding technical requirements & access to internal technical input from RSM Policy & Planning, Assessment, Stakeholder feedback/questions (mainly from ARE's), Feedback discussions within RSM Policy & Planning, updates to PIB 39, iterative licensing approach from ARE's to comply with latest RSM guidance
    - **Administrative tasks:** Tracking of progress, fielding of enquiries and subsequent responses, drafting of licence agreements, clarifying misinterpretations of contract, checking of financials to satisfy settlement conditions, following up with non-responsive Operators, dealing with OIA's & Ombudsman complaints
- Meanwhile, other operational BAU has been compromised on delivery timeframes

Learnings about the transition

- Identifying blockages early to manage them as a project team.
- Setting clear rules and being deliberate with any changes.
- Peer review of technical publications from RSM's Licensing team prior to publication
- s 9(2)(g)(i) (reading/returning contracts/rules etc.)
    - **DR wrote:** Most common problem was Operators signing implementation declaration (Appendix 1 of licence agreement) which is only needed by two-year anniversary date
    - Most common problem in Exclusive Rights Agreement was misinterpretation of handling non-exclusive rights holders having protection in a TLA which they have no exclusive rights
- s 9(2)(g)(i), which has been going on for decades in a short space of time
- Recognising when we are making a change to how our system operates or our role in the system so we can appropriately plan and communicate that change.
- Stakeholder landscape: providers vs AREs vs equipment manufacturers. AREs ended up occupying much of our time, but they were only one stakeholder group.

- [...]

With BAU in mind... what changes would you make to the project

- More comprehensive in-team consultation at the start of the process – try to break down what the implications are for operational team members explicitly.
- Feedback from ARE's has been that holding a licence crafting workshop several weeks before MR 514 commenced may have helped with ARE's understanding and exposed any limitations of the RRF (e.g. number of points specified in receive protection area definitions & upload of licences using API) - What about a webinar format?
- Project management – other branches in BRM have a specific PM function, where is the DCT one?
- In-team consultation re cross policy work implications (e.g. MSP – but sure there were other connections).
- [Any other scoping decisions?]
- Those writing operational policy need more skin in the game - they should do the BAU to understand the consequences of their policy, to understand the pain points, and to fix them
- Compared to the 3.5GHz review - what has been learnt, not learnt from this first review (see below)?
- Drawing a clear line from moving from a policy planning mindset where we are trying to help and solve problems to a more hardline operational mindset with yes / no decisions and standing behind our ruleset

Relevant Learnings from RSM's June 2023 3.5 GHz Review - have we learnt from these?

- Lean more heavily on the process—we can address our knowledge gaps by running a good process
- Be as rigorous as possible during the whole process and hold stakeholders to account on the information they present.
- Do not assume that technical issues can be solved by default; on the contrary, take the time needed to work through technical issues thoroughly before they feed into other parts of the spectrum management/allocation process.

- Spend much more time thinking about risks and formulating plans which are executable to mitigate or supress risks (to the extent possible).
- Pause to think
- More plan for a thorough process where possible, including contingencies. Don't plan for the abbreviated version from the start.
- Identify key 'big' milestones as there is inevitable slippage on the small stuff and when you are in the weeds it is easy to miss the overall picture of things.
- Escalation pathways to deploy when needed, and triggers for escalation (or regular check-ins)
- More discipline and scoping should have been employed early on.
- A more thorough risk analysis upfront – rather than relying on assumptions / opinions based on previous personal experiences
- Ruling out the need for technical input on coverage / roll out obligations / performance requirements which was at least 12 months (possibly 24 months and a few FTEs) of technical work then deciding that we would go down this route with 3 months to deliver, then having to find a 'solution'
- Focusing on taking time to maintain public information throughout process so as not to be slowed when OIAs/miscommunications occurred
- Skimping on project admin resource isn't a saving
- Lack of consistency in terms of having a plan and executing it. Too many changes in directions, reversion and U turns
- Don't assume a matter is trivial when it is being dealt with by another person or team, we may not be aware of the intricacies involved, which might be complex or very intertwined
- Don't assume that others can provide advice on or review a complex matter at short notice
- Plan on everything taking longer than initially expected
- Consider bounds of knowledge in our decision-making: how much we should anticipate unknown commercial plans. Lots we can't know, even if we are well-informed of market
- Cascading effect of other work being put off, delayed
- Kicking the can down the road on many projects
- Emotional impacts – disgruntlement, frustration, even anger
- Long hours for some, leave requests denied?
- Can spread resource thin
- Need to switch our mindset from adrenalin /delivery to BAU
- Scope to learn lots, great exposure to full cycle that might otherwise have taken a long time (e.g. working with ops)
- This has been the project a number of us have cut our teeth on so have learnt a lot
- Camaraderie of crisis
- High stress environment for an extended period
- Challenge critical assumptions – always
- Don't be too risk averse. Act on the balance of legal advice.
- Transparency and peer review, oversight is key, to be highly valued
- We need to LISTEN to each other, really listen, to draw on our collective experience, knowledge, insights, and thinking power
- Planning work program has suffered with impact on the key deliverables expected from the planners. A number of other projects have been delayed with other industry sectors are piling pressure on. Planners working >60 hour weeks.

Document 4

3.30-3.34 GHz licensing tracking

licensing update for period 9 Mar – 15 Mar

Total number of licences granted (current)	676 (467)
Total number of planned licences not yet granted	72
Current number of expected licences (sum of the 2 lines above) (current + planned)	748 (539)
Total number of licences with review commenced (note that this may include some re-engineered licences)	22
Total number of licences yet to begin processing	0
Total number of licences at agreement sign-off stage	57
Total number of licences awaiting annual licence fee payment	12
Number applied for this week	5
Number approved this week	22
How many rights holders have submitted licences (planned and approved)	20
How many rights holders have not yet submitted any licences	6
When were the licenses approved this week originally submitted to the CSAM work queue?	21/12/23 6/02/24 15/02/24 20/02/24

licensing update for period 2 Mar – 8 Mar

Total number of licences granted (current)	747 (424)
Total number of planned licences not yet granted	116
Current number of expected licences (sum of the 2 lines above) (current + planned)	863 (540)
Total number of licences with review commenced (note that this may include some re-engineered licences)	32
Total number of licences yet to begin processing	40
Total number of licences at agreement sign-off stage	80
Total number of licences awaiting annual licence fee payment	12
Number applied for this week	20
Number approved this week	60
How many rights holders have submitted licences (planned and approved)	20
How many rights holders have not yet submitted any licences	6
When were the licenses approved this week originally submitted to the CSAM work queue?	6/12/23 1/02/24

licensing update for period 24 Feb – 1 Mar

Total number of licences granted (current)	747 (424)
Total number of planned licences not yet granted	116
Current number of expected licences (sum of the 2 lines above) (current + planned)	863 (540)
Total number of licences with review commenced (note that this may include some re-engineered licences)	32
Total number of licences yet to begin processing	40
Total number of licences at agreement sign-off stage	80
Total number of licences awaiting annual licence fee payment	12
Number applied for this week	20
Number approved this week	60
How many rights holders have submitted licences (planned and approved)	20
How many rights holders have not yet submitted any licences	6
When were the licenses approved this week originally submitted to the CSAM work queue?	6/12/23 1/02/24

licensing update for period 17 Feb – 23 Feb

Total number of licences granted (current)	747 (424)
Total number of planned licences not yet granted	116
Current number of expected licences (sum of the 2 lines above) (current + planned)	863 (540)
Total number of licences with review commenced (note that this may include some re-engineered licences)	32
Total number of licences yet to begin processing	40
Total number of licences at agreement sign-off stage	80
Total number of licences awaiting annual licence fee payment	12
Number applied for this week	20
Number approved this week	60
How many rights holders have submitted licences (planned and approved)	20
How many rights holders have not yet submitted any licences	6
When were the licenses approved this week originally submitted to the CSAM work queue?	6/12/23 1/02/24

licensing update for period 10 Feb – 16 Feb

Total number of licences granted (current)	733 (379)

Total number of planned licences not yet granted	194
Current number of expected licences (sum of the 2 lines above) (current + planned)	927 (573)
Total number of licences with review commenced (note that this may include some re-engineered licences)	22
Total number of licences yet to begin processing	48
Total number of licences at agreement sign-off stage	108
Total number of licences awaiting annual licence fee payment	22
Number applied for this week	22
Number approved this week	0
How many rights holders have submitted licences (planned and approved)	21
How many rights holders have not yet submitted any licences	5
When were the licenses approved this week originally submitted to the CSAM work queue?	NA

licensing update for period 3 Feb – 9 Feb

Total number of licences granted	731
Total number of planned licences not yet granted	200
Current number of expected licences (sum of the 2 lines above)	931
Total number of licences with review commenced (note that this may include some re-engineered licences)	138
Total number of licences yet to begin processing	56
Number applied for this week	4
Number approved this week	6
How many rights holders have submitted licences (planned and approved)	21
How many rights holders have not yet submitted any licences	5
When were the licenses approved this week originally submitted to the CSAM work queue?	23/01/2024

licensing update for period 27 Jan – 2 Feb

Total number of licences granted	731*
Total number of planned licences not yet granted	200*
Current number of expected licences (sum of the 2 lines above)	931*
Total number of licences with review commenced (note that this may include some re-engineered licences)	174
Total number of licences yet to begin processing	88
Number applied for this week	68
Number approved this week	46
How many rights holders have submitted licences (planned and approved)	21
How many rights holders have not yet submitted any licences	5
When were the licenses approved this week originally submitted to the CSAM work queue?	30/01/2024 6/12/2023

	23/11/2023 16/11/2023 15/11/2023 14/11/2023 13/11/2023

* = as of 9 Feb

licensing update for period 20 Jan – 26 Jan

Total number of licences granted	665
Total number of planned licences not yet granted	264
Current number of expected licences (sum of the 2 lines above)	929
Total number of licences with review commenced (note that this may include some re-engineered licences)	74
Total number of licences yet to begin processing	126
Number applied for this week	8
Number approved this week	2
How many rights holders have submitted licences (planned and approved)	21
How many rights holders have not yet submitted any licences	5
When were the licenses approved this week originally submitted to the CSAM work queue?	16/01/2024

licensing update for period 13 Jan – 19 Jan

Total number of licences granted	666
Total number of planned licences not yet granted	270
Current number of expected licences (sum of the 2 lines above)	936
Total number of licences with review commenced (note that this may include some re-engineered licences)	68
Total number of licences yet to begin processing	186
Number applied for this week	2
Number approved this week	18
How many rights holders have submitted licences (planned and approved)	21
How many rights holders have not yet submitted any licences	5
When were the licenses approved this week originally submitted to the CSAM work queue?	16/01/2024 2/11/2023 3/11/2023 4/11/2023

licensing update for period 23 Dec – 12 Jan

Total number of licences granted	657
Total number of planned licences not yet granted	269
Current number of expected licences (sum of the 2 lines above)	926

Total number of licences with review commenced (note that this may include some re-engineered licences)	28
Total number of licences yet to begin processing	216
Number applied for this week	44
Number approved this week	80 Note that many of these were on Friday 22 Dec 2023
How many rights holders have submitted licences (planned and approved)	21
How many rights holders have not yet submitted any licences	5
When were the licenses approved this week originally submitted to the CSAM work queue?	10/11/2023 2/11/2023 1/11/2023 13/10/2023

licensing update for period 16 – 22 Dec

Total number of licences granted	661
Total number of planned licences not yet granted	300
Current number of expected licences (sum of the 2 lines above)	961
Total number of licences with review commenced (note that this may include some re-engineered licences)	56
Total number of licences yet to begin processing	194
Number applied for this week	46
Number approved this week	4
How many rights holders have submitted licences (planned and approved)	20
How many rights holders have not yet submitted any licences	6
When were the licenses approved this week originally submitted to the CSAM work queue?	5/12/2023

licensing update for period 9 – 15 Dec

Total number of licences granted	627
Total number of planned licences not yet granted	338
Current number of expected licences (sum of the 2 lines above)	965
Total number of licences with review commenced (note that this may include some re-engineered licences)	110
Total number of licences yet to begin processing	104
Number applied for this week	0
Number approved this week	0

How many rights holders have submitted licences (planned and approved)	20
How many rights holders have not yet submitted any licences	6
When were the licenses approved this week originally submitted to the CSAM work queue?	N/A

licensing update for period 2 – 8 Dec

Total number of licences granted	627
Total number of planned licences not yet granted	338
Current number of expected licences (sum of the 2 lines above)	965
Total number of licences with review commenced (note that this may include some re-engineered licences)	110
Total number of licences yet to begin processing	104
Number applied for this week	46
Number approved this week	0
How many rights holders have submitted licences (planned and approved)	20
How many rights holders have not yet submitted any licences	6
When were the licenses approved this week originally submitted to the CSAM work queue?	N/A

licensing update for period 25 Nov – 1 Dec

Total number of licences granted	535
Total number of planned licences not yet granted	262
Current number of expected licences (sum of the 2 lines above)	797
Total number of licences with review commenced (note that this may include some re-engineered licences)	80
Total number of licences yet to begin processing	148
Number applied for this week	6
Number approved this week	16
How many rights holders have submitted licences (planned and approved)	18
How many rights holders have not yet submitted any licences	8
When were the licenses approved this week originally submitted to the CSAM work queue?	17/10/23

To make this table

Before beginning this make sure you have an RRF login and permission to view planned licences.

Template:

Total number of licences granted	
Total number of planned licences not yet granted	
Current number of expected licences (sum of the 2 lines above)	
Total number of licences with review commenced (note that this may include some re-engineered licences)	
Total number of licences yet to begin processing	
Number applied for <u>this week</u>	
Number approved <u>this week</u>	
How many rights holders have submitted licences (planned and approved)	
How many rights holders have not yet submitted any licences	
When were the licenses approved this week originally submitted to the CSAM work queue?	

First search licences in RRF

Total number of licences granted

- Should "current" be selected?
- Click down to transmit under transmit/receive
- Click advance search
- Under management right number – type in 514
- **Answer is:** Total results found minus one (Ignore the one with the location ALL NEW ZEALAND)

Total number of planned licences not yet granted

- Licence status: planned
- Click down to transmit under transmit/receive
- Under management right number – type in 514
- **Answer is:** Total results found

Current number of expected licences (sum of the 2 lines above)

Next go to David's spreadsheet: **Applications rcvd in RRF & issues reported.xlsx**
https://mako.wd.govt.nz/otcs/llisapi.dll/link/142708940

Total number of licences with review commenced

- Add up # of licence applications in orange boxes (note that this may include some re-engineered licences).

Total number of licences yet to begin processing

- Control click on each red box of number of licence applications
- Answer is sum of these boxes
-

Number applied for <u>this week</u>

- Date of first application received on CSAM work queue – date within this weeks range.
- Highlight of number of no licence applications within range (sum will show in the bottom of the window right corner).

Number approved <u>this week</u>

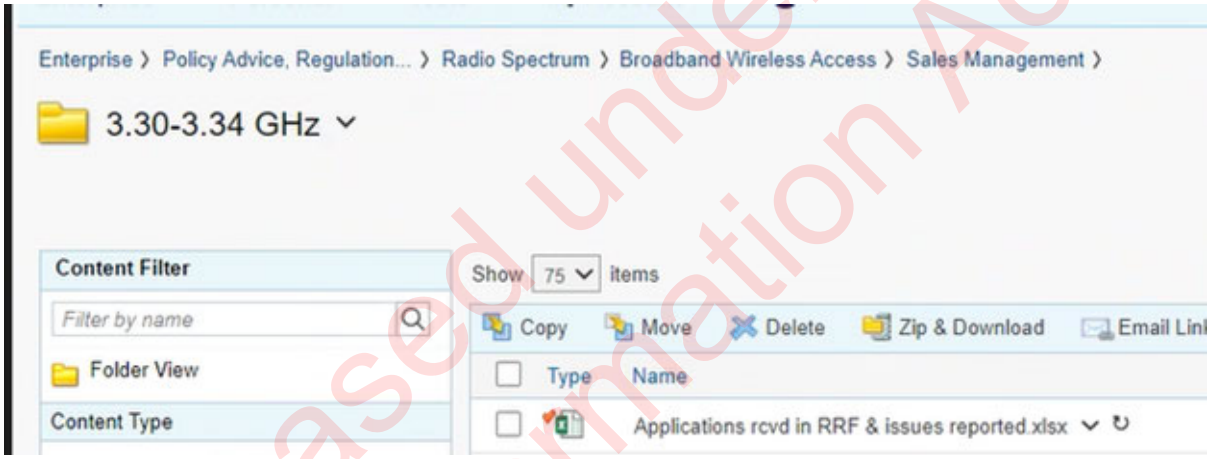
- Remarks in green – dates of this week
- Ones in blue have been approved but they are waiting for licensee to pay the fee. Include these but make note.

How many rights holders have submitted licences

- Search licences in RRF
- Click down to transmit under transmit/receive
- Licence status: click both current and planned
- Under management right number – type in 514
- Click search and order by licensee and show 1000 per page.
- Go down the list and count how many difference licensees there are

How many rights holders have not yet submitted any licences

- To find total number of total number of rights holders go to this folder and 3.30-3.34 GHz (wd.govt.nz) (Mako path also screenshotted below) and order by type so that folders are at the top. Count the number of folders (Should be 26).
- Minus total number of MR holders by the number that have submitted licences



Document 5

Lot#	Skylarc Ref	Trade Me Ref	Trade Me Title	Sale Price	Trade Me Buyer Name	Buyer Email	Alternative email	Buyer Entity Name	Buyer Entity Address	RSM ID	Paid	Column1	Column2	Column3	Column4	Column5	Column6
45.1	K143651	4103253804	Right to place licences in 3320 - 3340 MHz in Marlborough District	$4,505.00	acwireless	s 9(2)(a)											
45.2	L143652	4104906441	Right to place licences in 3300 - 3320 MHz in Marlborough District	$505.00	acwireless												
46.1	M143653	4103253939	Right to place licences in 3320 - 3340 MHz in Kaikoura District	$288.00	cantchris												
46.2	N143654	4103254187	Right to place licences in 3300 - 3320 MHz in Kaikoura District	$288.00	cantchris												
50.1	U143661	4104906215	Right to place licences in 3320 - 3340 MHz in Hurunui District	$2,900.00	cantchris												
50.2	V143662	4103253985	Right to place licences in 3300 - 3320 MHz in Hurunui District	$3 000.00	cantchris												
51.1	W143663	4103254260	Right to place licences in 3320 - 3340 MHz in Waimakariri District	$3 500.00	cantchris												
51.2	X143664	4103253967	Right to place licences in 3300 - 3320 MHz in Waimakariri District	$2,000.00	cantchris												
52.1	Y143665	4104906348	Right to place licences in 3320 - 3340 MHz in Christchurch City	$288.00	cantchris												
52.2	Z143666	4103254273	Right to place licences in 3300 - 3320 MHz in Christchurch City	$288.00	cantchris												
22.1	Q143605	4106365944	Right to place licences in 3320 - 3340 MHz in Hastings District	$288.00	saft												
22.2	R143606	4106365685	Right to place licences in 3300 - 3320 MHz in Hastings District	$288.00	saft												
23.1	S143607	4104906252	Right to place licences in 3320 - 3340 MHz in Napier City	$288.00	saft												
23.2	T143608	4106365828	Right to place licences in 3300 - 3320 MHz in Napier City	$288.00	saft												
24.1	U143609	4103254208	Right to place licences in 3320 - 3340 MHz in Central Hawke's Bay Di	$288.00	saft												
24.2	V143610	4106365646	Right to place licences in 3300 - 3320 MHz in Central Hawke's Bay Di	$288.00	saft												
4.1	G143569	4106365835	Right to place licences in 3320 - 3340 MHz in Thames-Coromandel D	$288.00	myfullflavour												
13.1	Y143587	4103253904	Right to place licences in 3320 - 3340 MHz in Taupo District	$298.00	myfullflavour												
13.2	Z143588	4104906489	Right to place licences in 3300 - 3320 MHz in Taupo District	$288.00	myfullflavour												
16.1	E143593	4104906320	Right to place licences in 3320 - 3340 MHz in Rotorua District	$1,010.00	myfullflavour												
16.2	F143594	4104906356	Right to place licences in 3300 - 3320 MHz in Rotorua District	$1,010.00	myfullflavour												
19.1	K143599	4104906475	Right to place licences in 3320 - 3340 MHz in Opotiki District	$288.00	myfullflavour												
19.2	L143600	4103253957	Right to place licences in 3300 - 3320 MHz in Opotiki District	$305.00	myfullflavour												
64.2	X143690	4104906367	Right to place licences in 3300 - 3320 MHz in Southland District	$288.00	myfullflavour												
65.1	Y143691	4103254401	Right to place licences in 3320 - 3340 MHz in Gore District	$288.00	myfullflavour												
65.2	Z143692	4103253823	Right to place licences in 3300 - 3320 MHz in Gore District	$288.00	myfullflavour												
66.1	A143693	4104906313	Right to place licences in 3320 - 3340 MHz in Invercargill City	$288.00	myfullflavour												
20.1	M143601	4103254266	Right to place licences in 3320 - 3340 MHz in Gisborne District	$288.00	rwbgisborne												
20.2	N143602	4104906423	Right to place licences in 3300 - 3320 MHz in Gisborne District	$288.00	rwbgisborne												
21.1	O143603	4103253663	Right to place licences in 3320 - 3340 MHz in Wairoa District	$288.00	rwbgisborne												
21.2	P143604	4104906380	Right to place licences in 3300 - 3320 MHz in Wairoa District	$288.00	rwbgisborne												
28.1	C143617	4106365217	Right to place licences in 3320 - 3340 MHz in Ruapehu District	$288.00	james12												
28.2	D143618	4103253927	Right to place licences in 3300 - 3320 MHz in Ruapehu District	$288.00	james12												
29.1	E143619	4103253864	Right to place licences in 3320 - 3340 MHz in Whanganui District	$405.00	james12												
29.2	F143620	4103254005	Right to place licences in 3300 - 3320 MHz in Whanganui District	$288.00	james12												
30.1	G143621	4104906302	Right to place licences in 3320 - 3340 MHz in Rangitikei District	$288.00	james12												
30.2	H143622	4106365890	Right to place licences in 3300 - 3320 MHz in Rangitikei District	$288.00	james12												
31.1	I143623	4104906506	Right to place licences in 3320 - 3340 MHz in Manawatu District	$288.00	james12												
31.2	J143624	4106365655	Right to place licences in 3300 - 3320 MHz in Manawatu District	$288.00	james12												
32.1	K143625	4104906416	Right to place licences in 3320 - 3340 MHz in Palmerston North City	$288.00	james12												
32.2	L143626	4103254253	Right to place licences in 3300 - 3320 MHz in Palmerston North City	$288.00	james12												
33.1	M143627	4104906533	Right to place licences in 3320 - 3340 MHz in Tararua District	$288.00	james12												
33.2	N143628	4106365711	Right to place licences in 3300 - 3320 MHz in Tararua District	$288.00	james12												
34.1	O143629	4104906387	Right to place licences in 3320 - 3340 MHz in Horowhenua District	$288.00	james12												
34.2	P143630	4103253688	Right to place licences in 3300 - 3320 MHz in Horowhenua District	$293.00	james12												
43.1	G143647	4103253705	Right to place licences in 3320 - 3340 MHz in Tasman District	$4,510.00	chrism2												
43.2	H143648	4103254373	Right to place licences in 3300 - 3320 MHz in Tasman District	$4 510.00	chrism2												
44.1	I143649	4104906288	Right to place licences in 3320 - 3340 MHz in Nelson City	$5,100.00	chrism2												
44.2	J143650	4103254201	Right to place licences in 3300 - 3320 MHz in Nelson City	$4 510.00	chrism2												
61.2	R143684	4106365854	Right to place licences in 3300 - 3320 MHz in Queenstown-Lakes Dist	$12,616.00	liam5696												
5.1	I143571	4103254293	Right to place licences in 3320 - 3340 MHz in Hauraki District	$293.00	spectrum_bidder												
5.2	J143572	4104906281	Right to place licences in 3300 - 3320 MHz in Hauraki District	$1,023.00	spectrum_bidder												
7.1	M143575	4103253951	Right to place licences in 3320 - 3340 MHz in Matamata-Piako District	$1,010.00	spectrum_bidder												
7.2	N143576	4104906514	Right to place licences in 3300 - 3320 MHz in Matamata-Piako Distric	$1 310.00	spectrum_bidder												
8.1	Q143577	4104906502	Right to place licences in 3320 - 3340 MHz in Hamilton City	$2,010.00	spectrum_bidder												
8.2	P143578	4106365875	Right to place licences in 3300 - 3320 MHz in Hamilton City	$305.00	spectrum_bidder												
9.1	Q143579	4106365819	Right to place licences in 3320 - 3340 MHz in Waipa District	$303.00	spectrum_bidder												
9.2	R143580	4104906222	Right to place licences in 3300 - 3320 MHz in Waipa District	$1,020.00	spectrum_bidder												
10.1	S143581	4106365845	Right to place licences in 3320 - 3340 MHz in Otorohanga District	$1,510.01	spectrum_bidder												
10.2	T143582	4106365910	Right to place licences in 3300 - 3320 MHz in Otorohanga District	$1,015.00	spectrum_bidder												
11.1	U143583	4103254238	Right to place licences in 3320 - 3340 MHz in South Waikato District	$2,620.00	spectrum_bidder												
11.2	V143584	4103254329	Right to place licences in 3300 - 3320 MHz in South Waikato District	$2,520.00	spectrum_bidder												
14.1	A143589	4106365733	Right to place licences in 3320 - 3340 MHz in Western Bay of Plenty D	$5 000.00	spectrum_bidder												
14.2	B143590	4106365838	Right to place licences in 3300 - 3320 MHz in Western Bay of Plenty D	$5,000.00	spectrum_bidder												
15.1	C143591	4103254223	Right to place licences in 3320 - 3340 MHz in Tauranga City	$600.00	spectrum_bidder												
15.2	D143592	4104906446	Right to place licences in 3300 - 3320 MHz in Tauranga City	$520.00	spectrum_bidder												
17.1	G143595	4106365800	Right to place licences in 3320 - 3340 MHz in Whakatane District	$5,250.00	spectrum_bidder												
17.2	H143596	4104906207	Right to place licences in 3300 - 3320 MHz in Whakatane District	$3,030.00	spectrum_bidder												
18.1	I143597	4104906460	Right to place licences in 3320 - 3340 MHz in Kawerau District	$288.00	spectrum_bidder												
18.2	J143598	4104906237	Right to place licences in 3300 - 3320 MHz in Kawerau District	$288.00	spectrum_bidder												
61.1	Q143683	4103253955	Right to place licences in 3320 - 3340 MHz in Queenstown-Lakes Dist	$1,275.00	stan												
39.2	Z143640	4103254448	Right to place licences in 3300 - 3320 MHz in Wellington City		NOT SOLD												
4.2	H143570	4104893275	Right to place licences in 3300 - 3320 MHz in Thames-Coromandel D	$506.00	b-c-l												
6.2	I143574	4106365916	Right to place licences in 3300 - 3320 MHz in Waikato District	$7 250.00	b-c-l												
35.1	Q143631	4106365804	Right to place licences in 3320 - 3340 MHz in Kapiti Coast District	$400.00	b-c-l												
25.1	W143611	4103254287	Right to place licences in 3320 - 3340 MHz in New Plymouth District	$288.00	fishym4n												
25.2	X143612	4104906335	Right to place licences in 3300 - 3320 MHz in New Plymouth District	$298.00	fishym4n												
26.1	Y143613	4103253683	Right to place licences in 3320 - 3340 MHz in Stratford District	$288.00	fishym4n												
26.2	Z143614	4104906452	Right to place licences in 3300 - 3320 MHz in Stratford District	$298.00	fishym4n												
27.1	A143615	4103254444	Right to place licences in 3320 - 3340 MHz in South Taranaki District	$288.00	fishym4n												
27.2	B143616	4106365703	Right to place licences in 3300 - 3320 MHz in South Taranaki District	$305.00	fishym4n												
56.1	G143673	4104906437	Right to place licences in 3320 - 3340 MHz in Mackenzie District	$681.00	timaru2009												
56.2	H143674	4106365788	Right to place licences in 3300 - 3320 MHz in Mackenzie District	$298.00	timaru2009												
57.2	I143676	4106365770	Right to place licences in 3300 - 3320 MHz in Waimate District	$10,050.00	timaru2009												
3.2	F143568	4106365752	Right to place licences in 3300 - 3320 MHz in Kaipara District	$1,011.00	rx7system												
67.1	Q143695	4106365739	Right to place licences in 3320 - 3340 MHz in Auckland	$6,550.00	rx7system												
67.2	D143696	4104906229	Right to place licences in 3300 - 3320 MHz in Auckland	$9,000.00	rx7system												
39.1	Y143639	4104906482	Right to place licences in 3320 - 3340 MHz in Wellington City	$1 061.00	telco2ltd												
1.1	A143563	4103244086	Right to place licences in 3320 - 3340 MHz in Far North District	$288.00	ubergroup												
1.2	B143564	4106365727	Right to place licences in 3300 - 3320 MHz in Far North District	$410.00	ubergroup												
2.1	C143565	4106365939	Right to place licences in 3320 - 3340 MHz in Whangarei District	$288.00	ubergroup												
2.2	D143566	4103254464	Right to place licences in 3300 - 3320 MHz in Whangarei District	$288.00	ubergroup												
3.1	E143567	4103254243	Right to place licences in 3320 - 3340 MHz in Kaipara District	$288.00	ubergroup												
53.1	A143667	4106365782	Right to place licences in 3320 - 3340 MHz in Selwyn District	$288.00	tqteam												
53.2	B143668	4103253727	Right to place licences in 3300 - 3320 MHz in Selwyn District	$288.00	tqteam												
54.1	C143669	4106365897	Right to place licences in 3320 - 3340 MHz in Ashburton District	$288.00	tqteam												
54.2	D143670	4106365774	Right to place licences in 3300 - 3320 MHz in Ashburton District	$288.00	tqteam												
55.1	E143671	4104906493	Right to place licences in 3320 - 3340 MHz in Timaru District	$5,105.63	tqteam												
55.2	F143672	4103253716	Right to place licences in 3300 - 3320 MHz in Timaru District	$8 107.13	tqteam												
57.1	I143675	4103254281	Right to place licences in 3320 - 3340 MHz in Waimate District	$6,300.28	tqteam												
59.1	M143679	4103253697	Right to place licences in 3320 - 3340 MHz in Waitaki District	$288.00	gwh01												
59.2	N143680	4103254440	Right to place licences in 3300 - 3320 MHz in Waitaki District	$288.00	gwh01												
60.1	O143681	4103253979	Right to place licences in 3320 - 3340 MHz in Central Otago District	$288.00	gwh01												
60.2	P143682	4103254195	Right to place licences in 3300 - 3320 MHz in Central Otago District	$288.00	gwh01												
62.1	S143685	4103253975	Right to place licences in 3320 - 3340 MHz in Dunedin City	$288.00	gwh01												
62.2	T143686	4104906268	Right to place licences in 3300 - 3320 MHz in Dunedin City	$288.00	gwh01												
63.1	U143687	4103253995	Right to place licences in 3320 - 3340 MHz in Clutha District	$288.00	gwh01												
63.2	V143688	4104906296	Right to place licences in 3300 - 3320 MHz in Clutha District	$288.00	gwh01												
64.1	W143689	4106365761	Right to place licences in 3320 - 3340 MHz in Southland District	$293.00	velocitynet.co.												
66.2	B143694	4106365922	Right to place licences in 3300 - 3320 MHz in Invercargill City	$293.00	velocitynet.co.												
6.1	K143573	4104906544	Right to place licences in 3320 - 3340 MHz in Waikato District	$5,050.00	geekotronic												
48.2	K143658	4103253943	Right to place licences in 3300 - 3320 MHz in Grey District	$293.00	ilkp												
49.1	S143659	4106365882	Right to place licences in 3320 - 3340 MHz in Westland District	$288.00	ilkp												
49.2	T143660	4103254190	Right to place licences in 3300 - 3320 MHz in Westland District	$288.00	ilkp												
12.1	W143585	4106365673	Right to place licences in 3320 - 3340 MHz in Waitomo District	$288.00	tktpc												
12.2	X143586	4106365694	Right to place licences in 3300 - 3320 MHz in Waitomo District	$505.00	tktpc												
40.1	A143641	4104906400	Right to place licences in 3320 - 3340 MHz in Masterton District	$288.00	hi.steaks												
40.2	B143642	4104906373	Right to place licences in 3300 - 3320 MHz in Masterton District	$288.00	hi.steaks												
41.1	C143643	4106365953	Right to place licences in 3320 - 3340 MHz in Carterton District	$288.00	hi.steaks												
41.2	D143644	4106365746	Right to place licences in 3300 - 3320 MHz in Carterton District	$288.00	hi.steaks												
42.1	E143645	4106365795	Right to place licences in 3320 - 3340 MHz in South Wairarapa Distric	$288.00	hi.steaks												
42.2	F143646	4106365808	Right to place licences in 3300 - 3320 MHz in South Wairarapa Distric	$288.00	hi.steaks												
35.2	R143632	4104906265	Right to place licences in 3300 - 3320 MHz in Kapiti Coast District	$288.00	moroz3												
36.1	S143633	4103254469	Right to place licences in 3320 - 3340 MHz in Porirua City	$288.00	moroz3												
36.2	T143634	4103254232	Right to place licences in 3300 - 3320 MHz in Porirua City	$288.00	moroz3												
37.1	U143635	4103254213	Right to place licences in 3320 - 3340 MHz in Upper Hutt City	$288.00	moroz3												
37.2	V143636	4103253928	Right to place licences in 3300 - 3320 MHz in Upper Hutt City	$288.00	moroz3												
38.1	W143637	4104906328	Right to place licences in 3320 - 3340 MHz in Lower Hutt City	$288.00	moroz3												
38.2	X143638	4104906566	Right to place licences in 3300 - 3320 MHz in Lower Hutt City	$288.00	moroz3												
47.1	Q143655	4104906523	Right to place licences in 3320 - 3340 MHz in Buller District	$288.00	wishful9												
47.2	R143656	4106365912	Right to place licences in 3300 - 3320 MHz in Buller District	$288.00	wishful9												
48.1	Q143657	4106365814	Right to place licences in 3320 - 3340 MHz in Grey District	$415.00	wishful9												

s 9(2)(a)

s 9(2)(a)

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Competitive Process				Non-Competitive Process			
Auction	Tender			Allocation		MSP- Like	
Cash	Cash	IRs	Combo	Open	Existing users only		

Analysis

Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons	Pros	Cons
Market decides best use of spectrum Good spectrum utilisation Transparent Low administrative burden Open to all	Depending on reserve price could stifle "new entrants"/small players Potential for spectrum to go for small sums (could be mitigated through design) No explicit trade for policy objectives	Market decides best use of spectrum Good spectrum utilisation Low administrative burden Final allocation a MBIE discretion Open to all	Non-transparent by design (can be mitigated) … could stifle "new entrants"/small players Potential for spectrum to go for small sums (could be mitigated through design) No explicit trade for policy objectives	Ability to get policy outcomes explicitly Low up-front costs – "re-investment" Equality with MNO allocation Good spectrum utilisation Final allocation a MBIE discretion Open to all	Non-transparent Potential for spectrum to go for small sums (could be mitigated through design) Hard to pin-point value	Fast Not-high administrative burden Allocation at MBIE discretion Ability to get policy outcomes explicitly Ability to tailor cost depending on player	Not-very-transparent If we make a call there is a chance for challenge Potential for spectrum to be used more efficiently	Fastest Not-high administrative burden Allocation at MBIE discretion Ability to get policy outcomes explicitly	Not-transparent Other plays could be excluded If we make a call there is a chance for challenge Potential for spectrum to be used more efficiently	Transparent Access to small players Low-cost	High administrative burden Potential for spectrum to go for small sums (could be mitigated through design) No explicit policy objectives
To note:		To note:		To note:		To note:		To note:		To note:	

Other Decisions	
Length of licences	20 Years in line with MRs
	Some shorter period
Resource charging	Front load this into the reserve/cost
	Yearly fee (increases admin needed)
Definition of regional boarders	TLAs (Auckland?)
	Limits on the number/types of TLAs you can

3.3-3.4 GHz Decisions

Type of Allocation

Competitive Allocation

- Auction
  - How to set a reserve price?
    - Probably can't use same value plan as for the MNOs
  - Instalment plans?
    - Not advised due to internal complexities
- Implementation Requirements
  - + Policy goals
  - How to value this?
- Other?

Non-Competitive

- Managed Spectrum Park –like-methodology
  - Not advised
  - + allows "new" players access to spectrum
  - This is higher-value spectrum than has been offer under MSP
  - MSP would need significant alteration to be a functional process again

Structure of Rights

- Exclusive/Non-Exclusive rights
  - Multiple users coexisting within a geographic area
    - Sharing arrangements like in MSP?
    - Tight interference
  - Exclusive rights for a geographic area
    - More flexibility with licencing
- Who can enter
  - Reduced list
    - How is this formed – who would be excluded/included
    - Look at existing users – do they get priority
    - People without existing MSP spectrum
  - Anyone
    - Likely don't want parties with national holdings getting regional too
    - Want to avoid larger players buying spectrum to stop others accessing
- Licence caps/No licence caps

Technical Requirements

- Multiple channels (60 MHz)
  - 3*20 MHz channels vs 2*30 MHz
    - Can you buy all three?
    - Will require feed in from Harsh's coexistence work
- Frame structures
  - Unified 3.3-3.8 GHz
    - Wont require guard and
    - Limitations on max cell size – limit capacity to reach super rural areas mitigations (Harsh's work will feed-in)
  - Opt-out to use other frame structures
    - May require guard bands/other mitigations (Harsh's work will feed-in)
    - Cheaper equipment for rural networks
    - 3.3-3.4 Same frame-structure
      - Better for efficient use of spectrum
      - Can opt-out but must protect other using default
    - 3.3-3.4 "free-for-all" any frame structure

Project re-ignition discussion 3 November 2022.

Present: Craig Scott, Bruce Donaldson, David Reynolds, Georgia Reynolds, , Harsh Tataria, Hannah Altern

Objectives:

- Providing more spectrum for **local/regional/smaller/private** players for the benefits this provides. Rural connectivity, options for regionals, private network benefits.
- Access to 3.5GHz spectrum
- Provision of spectrum for private networks
- Continuing to accommodating amateurs on a non interference basis for the time being
- Overall policy objective of this work.
    - Provide spectrum access to spectrum users other than MNOs who do not need spectrum on a national basis
        - Provide spectrum access for regional broadband
        - Provide spectrum access for private networks
    - Efficient use of spectrum
    - Something else? Cost/allocation approach/design part of this?
- Not just for 5G. Looking to extend use of 5G, but technical reasons (inc. interference) not all use will be 5G. Other uses that are beneficial are fine, but will manage interference.

Outstanding decisions (parking lot):

- Are we providing for incumbent licenses? Or allocation according to others? Amateurs, wide/narrow bands (likely answered)

Elements to resolve:

- Technical work

? Commissioning of external work?

1. What are the spectrum needs?—estimation of spectrum needs what is the minimum, what is adequate, what is ideal? Regional broadband, private networks. Sizing of lots. Traffic. Channel plan. 1: Technical and Policy
2. Co-existence issues-national/regional; regional/regional; private/regional. 1: Technical (underway).
3. Development of technical rules. Technical (follows co-existence). .
4. Regions—how we define areas or area units, what is the coexistence criteria and can this be translated into any boundary conditions (noting hard boundary conditions may be inappropriate / un-definable). TLAs, high-point (3.5), 2.(Technical/Policy)
    - Technical, boundary conditions
    - Billing/resource charge
5. Tiered access approaches? (tied to prioritisation)
6. International best-practice (last done 2018). Options for regional and allocation approach. 1- informs approach we take. Starting point: recent Canadian approach

Sizing of lots / minimum channels.

    - Technical conditions. Iterative

    - Limitations of user equipment
- Allocation approach
    - Who should be able to access the spectrum anyone or certain types of users for certain purposes. For example thought may need to be given to. 1. Part of determining spectrum needs. Technical and Policy
        - Should MNOs and Dense Air be able to use the spectrum?
        - For regional broadband should utilities, councils power companies be able to access the spectrum and potentially use it all up
        - For regional broadband, should it be focused consumer facing services
        - Should there be a limit on how many areas operators can cover (i.e. stop one operator acquiring the country / all major areas
    - Cost/market based approaches for spectrum access 2. Policy. Determine objectives and potential users and then determine approach. What triggers competitive approach?
        - Where is it appropriate to use market based approaches, is demand exceeding supply? Is this likely just to be in major centres or nationwide
        - Where can administrative approaches be used
        - Is there a cost model that can be applied. For example, administrative incentive pricing.
    - Definition of regional areas or area units / borders (noting hard boundary conditions may be inappropriate / un-definable)
    - Caps- areas/regions. Purchase spectrum off other users / secondary market trading?. Policy/Technical
    - International best-practice (last done 2018). Options for regional and allocation approach
    - Allocation rules: Sizing of lots, location requirements. Channel plans
    - Incumbents: treatment of locals/telemetry vs MNOs.
- Length/mode of access
    - 10 or 20 years or shorter? Potentially different for MR vs licensing (likely to fall out of other work)
    - Non-national. Crown management rights (yes) or administrative radio licensing (no)
- Implementation conditions (2)
    - Timeliness
    - What is considered sufficient use of spectrum / use or lose?
- Implementation approach/cutover (2)
    - If we auction—implementation approach
    - Cutover of current to future state (RRF dependencies and others)
    - Dependency on MNO re-tuning.
- Consultation
    - Consultation done on 3.3-3.4 already. Provide second consultation with plans moving forward. February/March? Potentially need to sign contracts for national rights first.
    - Who are our stakeholders?
    - TWG. Finalise record of next meeting.
    - IMSC—commitment to take IMSC through technical process

Decisions we need taken

- Prioritisation of potential users/uses. Is focus private/regional? How do we define different users? Esp. private networks

Related matters

- 20 MHz: Potential indications of national rights to WISPA? (status: floated but not confirmed)
- 3.8-4.2, in spectrum outlook. For private networks?
- MSP
- 2.6GHz review period (with MSP?)
- RRF replacement
- MNO contracts. Agreement to technical conditions in 3.41+ space will have consequence on 3.3-3.4. (potential dependency, def related)

Timing:

- Rough timeline for this (working backwards)
- 1 July 2023 - rights to be made available
- April / May 2023 - Licences assigned (using some method - allowing 3/2 months for payment/transfer)
- March 2023 - Re
- March 2023 - Public communication of assignment methodology
- February 2023 - Consultation/Decision on methodology and technical breakdown (something like an auction catalogue?)
- December/January - TWG 2?

Previous Cabinet decisions of relevance

September 2022

Decisions (Document Overview: DEV-22-MIN-0218 Minute.pdf (wd.govt.nz))

4 **noted** that officials intend to provide approximately 100 MHz for regional operators and private networks, previously agreed by Cabinet [CAB-22-MIN-0080.03], at the bottom of the 3.5 GHz band;

Paper Document Overview: Allocation of 3.5 GHz Radio Spectrum for 5G.pdf (wd.govt.nz)

This approach will also address concerns of WISPs

81. In 2018, when the first Cabinet decisions relating to the 3.5 GHZ band were being made, consideration was given to allocating spectrum to regional wireless services (including WISPs) between 3.41 gigahertz and 3.80 GHz [DEV-18-MIN-0311]. This was conditional on there being sufficient spectrum available after other allocation, and if interference could be reasonably managed.

82. It has become clear that it will not be possible to accommodate WISPs in the 3.41-3.8 GHz range alongside MNOs. Since 2018 additional spectrum has been identified in the 3.3 -3.41 GHz frequency band which Cabinet decided to allocate [CAB-22-MIN-0080.03 refers and it is intended that WISPs be accommodate in the 3.3-3.4 GHz range.

83. While ultimately the intention is to consolidate those WISPs, who are currently spread across the 3.41 – 3.8 GHz range, into the 3.3 - 3.4 GHz band, this requires a lead time for them to undertake various technical activities including re-tuning or replacing their devices.

March 2022

Decisions (Document Overview: CAB-22-MIN-0080.03 Minute.pdf (wd.govt.nz))

Proposed expansion of spectrum range for allocation / sale

4 **agreed** to add the 3.3 GHz to 3.41 GHz range of spectrum to the 3.41 GHz to 3.8 GHz range already agreed by Cabinet, making a total of 500 MHz available to accommodate the following four groups:

- 4.1 group one: 5G operators comprising the existing three Mobile Network Operators (MNOs) requiring national management rights;
- 4.2 group two: Māori, requiring national management rights;
- 4.3 group three: regional operators (for example, WISPs) requiring local rights only;
- 4.4 group four: private networks requiring local rights only;

Next steps

13 **noted** that in December 2018, DEV authorised the Minister of Finance, the Minister of Research, Science and Innovation, the Minister for Māori Crown Relations: Te Arawhiti, the Minister for Māori Development, and the Minister of Broadcasting, Communications and Digital Media to make decisions on the detailed design of the allocations in the 3.5 GHz band, without further referral to Cabinet [DEV-18-MIN-0311];

14 **invited** the Minister for the Digital Economy and Communications to report back to DEV seeking final decisions on the 3.5 GHz spectrum allocation relating to the scope, level, and timing of MNO investment under an administrative allocation, rather than auction sale method of allocation, in a manner consistent with previous decisions.

Paper Document Overview: Cabinet policy paper - Final Revision post DEV (160322) - Allocation of 3.5 GHz spectrum to support rollout of 5G and advancement of rural connectivity.docx (wd.govt.nz)

15 I propose to increase the amount of spectrum available for 5G by adding the 3.3 – 3.41 GHz range. Table 1 summarises the decisions made by Cabinet in 2018 and 2021, along with my current proposal to also include the 3.3 – 3.41 GHz range, bringing the total spectrum available to 500 MHz for allocation to four user groups.

industrial sites and campuses.

39 After consultation with affected parties, officials advise it is possible for regional broadband and private networks to use the 3.3 GHz to 3.41 GHz frequency range. I have asked MBIE to provide me with advice on the best allocation method.

40 Providing regional licences to spectrum in the 3.3 GHz to 3.41 GHz range to regional broadband and private networks would mean that the spectrum Cabinet has already agreed to make available could all be allocated as national management rights for use by the MNOs and Māori.

41 Under Cabinet-agreed parameters, Māori would receive an allocation of 100 MHz. This leaves 300 MHz available for use by cellular mobile networks.

42 Existing, agreed and proposed new allocations of spectrum discussed in paragraphs 33 to 41 are summarised in Table 1.

Table 1. Summary of the 3.5 GHz band, existing and proposed Cabinet decisions, and groups and entities being considered for spectrum allocation

<table>
<tr><td></td><td colspan="2">The 3.5 gigahertz (GHz) band is a spectrum range we have defined from 3.3 GHz to 3.8 GHz below. It is informally referred to by its midpoint. The band can be broken into smaller spectrum blocks of various size, typically referred to in megahertz (MHz) units.</td></tr>
<tr><td rowspan="2">Cabinet decisions to date</td><td></td><td>3.41 – 3.8 GHz (390 MHz)</td></tr>
<tr><td colspan="2">In 2018, Cabinet agreed in principle, subject to resolution of treaty issues, to auction long term rights from November 2022 to this 400 MHz block of spectrum to MNOs and possibly regional operators /WISPs.
Short-term allocations to MNOs were made in 2020.
In 2021 Cabinet agreed that 20% of commercial allocations be provided to Māori.</td></tr>
<tr><td rowspan="3">Proposals in this paper</td><td>3.3 -3.41 GHz (110 MHz)
Add to available spectrum</td><td>3.41 – 3.8 GHz (390 MHz)
Existing agreed spectrum for allocation</td></tr>
<tr><td colspan="2">3.3 – 3.8 GHz (500 MHz)</td></tr>
<tr><td colspan="2">Administrative allocation of 400 MHz to the four groups below, with frequency block in the band to be determined:
- Group One: 300 MHz evenly across the three Existing Mobile Network Operators to accommodate 5G rollout (Spark, Vodafone, 2 Degrees). Spectrum value traded off for faster 5G rollout and rural connectivity investment by the MNOs.
- Group Two: 100 MHz to Māori for 4/5G (IMSC)

Allocate 100 MHz to a mix of:
- Group Three: Regional broadband / WISPs for 4/5G
- Group Four: Private networks for 5G</td></tr>
</table>

MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

BRIEFING

Outcome of consultation on using 6 GHz band for Wi-Fi

Date:	31 August 2021	**Priority:**	Low
Security classification:	**In Confidence**	**Tracking number:**	2122-0776

Action sought		
	Action sought	**Deadline**
Hon Dr David Clark Minister for the Digital Economy and Communications	**Advise** officials if you have any questions or concerns	When convenient

Contact for telephone discussion (if required)				
Name	**Position**	**Telephone**		**1st contact**
Len Starling	Manager, Radio Spectrum Management Policy and Planning	04 462 4221	s 9(2)(a)	✓
Ceara Nicolls	Policy Advisor	04 901 8486		

The following departments/agencies have been consulted:
N/A

Minister's office to complete:

- ☐ Approved
- ☐ Noted
- ☐ Seen
- ☐ See Minister's Notes
- ☐ Declined
- ☐ Needs change
- ☐ Overtaken by Events
- ☐ Withdrawn

Comments:

MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

BRIEFING

Outcome of consultation on using 6 GHz band for Wi-Fi

Date:	31 August 2021	**Priority:**	Low
Security classification:	**In Confidence**	**Tracking number:**	2122-0776

Purpose

To provide an update following MBIE's consultation on Wi-Fi (wireless local area network) use in the 6 GHz spectrum band.

Recommended action

The Ministry of Business, Innovation and Employment recommends that you:

a **Advise** officials if you wish to discuss the contents of this briefing

Discuss / Not necessary

Len Starling
Manager, Radio Spectrum Management Policy and Planning

31 August 2021

Hon Dr David Clark
Minister for the Digital Economy and Communications

..... / ..... / .....

Background: Proposal for Wi-Fi / WLAN use in the 6 GHz band

1. Wi-Fi is the most commonly used technology in Wireless Local Area Networks (WLAN), which are wireless computer networks that connect on a local level. Wi-Fi use in New Zealand is continuing to increase. This technology is important for providing internet connectivity and delivering broadband to end users, and growing use creates a growing demand for spectrum to be allocated for this purpose. The COVID-19 pandemic has also increased the reliance on Wi-Fi networks as more people are working and learning from home.

2. The increase in reliance on Wi-Fi networks means that we are facing congestion problems. These present as increasing time to connect and slow speeds. There is also a view internationally that the current spectrum available for Wi-Fi devices will soon be insufficient.

3. Wi-Fi 6E is the latest iteration of Wi-Fi. It will help to alleviate network congestion and increase the speed of Wi-Fi, largely by increasing the amount of spectrum available to Wi-Fi devices.

4. Internationally, there have been a number of countries making the 6 GHz band available for WLAN, especially the lower half of the band (5925 - 6425 MHz). In line with these trends, we have been considering using 6 GHz for Wi-Fi 6E. To this end, we ran a technical consultation on a proposal for WLAN use in the 6 GHz band. The primary aim of this consultation was to identify any unintended consequences or adverse effects. The questions that were asked related to the band allocation, power limits and other use conditions.

Summary of proposals in consultation

5. Our consultation had two major proposals. In line with international thinking, we suggested divided the band into two parts; lower and upper, and put forward different proposals for each part. These are outlined below.

Proposal for use of Lower part of the band (5925 - 6425 MHz)

6. We proposed making the lower 6 GHz band available for WLAN use. To allow newcomers to co-exist with incumbents (including Fixed, Fixed Satellite, and Ultra Wide Band systems), we proposed low power options.

7. These options (low power for indoor use and very low power for outdoors use) will allow newcomers to operate within a restricted area, thus minimising the risk to any services that are already operating.

Proposal for Upper part of the band (6425 - 7125 MHz)

8. There is a notable lack of international consensus about use of the upper part of the 6 GHz band. Some countries have already made the band available for unlicensed WLAN use but others are considering using it for cellular mobile systems. In addition, the International Telecommunication Union Radiocommunication Sector (ITU-R) is studying the upper part of the band for a possible cellular mobile identification. A decision on that won't be made until late 2023.

9. We proposed to keep monitoring international developments before making decisions on the upper band. This decision was made for a number of reasons, including the lack of clarity internationally, and also because there is a possibility to use the band for other purposes (such as contributing to our domestic 5G strategy).

Submissions received

10. We received twenty three submissions, from mobile, terrestrial and satellite industry entities. Of these submissions, the majority were positive with regards to the proposals concerning both the upper and lower portions of the band.

11. All twenty three submissions agreed with the proposal to make the 6 GHz lower band available for WLAN use. Regarding the upper band proposal:

    - The Wi-Fi industry suggested allowing the whole 6GHz for unlicensed Wi-Fi use, in line with plans by US and Canada.

    - Mobile Network Operators and 5G equipment manufacturers emphasised the potential for the upper band being used for licensed 5G, and suggested that MBIE defer making a decision.

Consultation with Australian Officials

12. Wi-Fi devices are included under New Zealand's mutual recognition agreement with Australia. This means that Wi-Fi devices declared, labelled and supplied in Australia may also be supplied in New Zealand without a New Zealand declaration of conformity or compliance labelling. It is therefore important that New Zealand and Australia's plans are similar because this will allow for regulatory harmonisation between our two countries.

13. We have been in touch with our Australian counterparts to confirm their plans for the 6 GHz band. Australian officials have informed us that they are planning to keep their original consultation proposal, which is similar to ours. Australian regulators have advised they will approve the Wi-Fi 6E usage in the lower band by the end of this year.

14. For the upper band and higher power use, Australia will later have another consultation to test the market demand and industry appetite.

Outcome of consultation

15. Under the Radiocommunications Regulations 2001, granting general user licences is the responsibility of the Te Tumu Whakarae mō Hikina Whakatutuki - Secretary for Business, Innovation and Employment and Chief Executive.

16. The majority of submissions were positive with regards to the proposals, both for the upper and lower portions of the 6GHz band. Based on this feedback we have made the following decisions:

    - Make the lower band (5 925 – 6 425 MHz) available for Wi-Fi and reserve the upper band for further studies.

    - Update the general user licence to enable Wi-Fi 6E low power indoor and very low power outdoor use.

17. We expect that these decisions will result in a reduction in congestion and increase in the speed of Wi-Fi for consumers and businesses.

18. We are, of course, available to discuss these decisions should you so wish.

Next steps

19. We anticipate the following next steps:

    - Towards the end of this year, we will be in contact with major equipment suppliers to the New Zealand market to alert them of our decisions. This will ensure that manufacturers are aware of the upcoming changes and will be able to supply appropriate equipment for the New Zealand Market.

    - We will publish updates to relevant Public Information Brochures on the RSM website. This will let the public, as well as industry players and Wireless Internet Service Providers, know the planning decision.

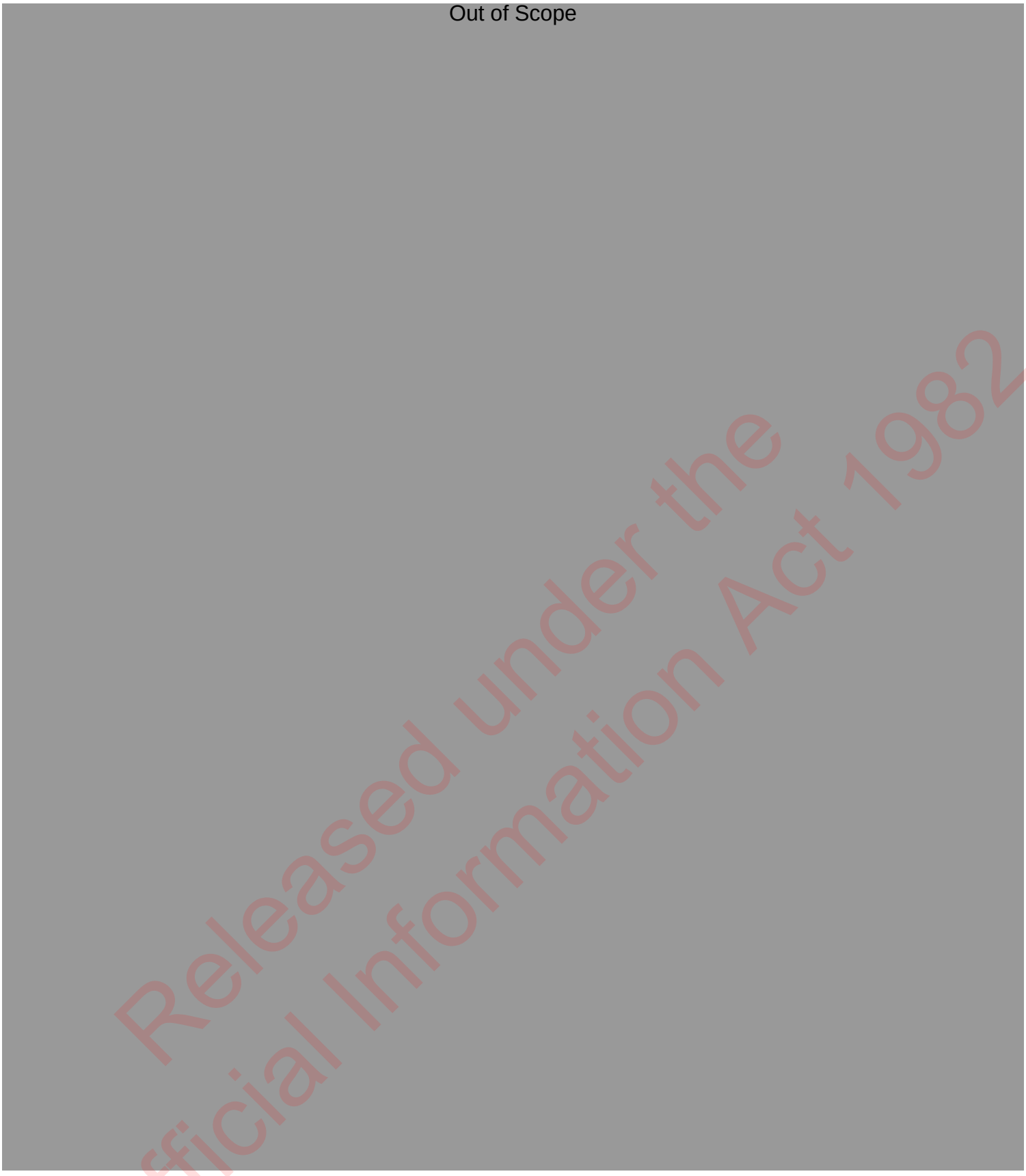
20. These steps will be timed to coincide with parallel announcements from the Australian regulator.

MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

MEDIA & COMMUNICATIONS PORTFOLIO
Communications Officials' Fortnightly Report

Fortnight ending:	23/11/2025	**Priority:**	Medium
Security classification:	**In Confidence**	**Tracking number:**	0023912

Recipients	**Action sought**
Hon Paul Goldsmith **MINISTER FOR MEDIA AND COMMUNICATIONS**	**Note** the contents of this report
Jenny Marcroft MP **PARLIAMENTARY UNDER-SECRETARY TO THE MINISTER FOR MEDIA AND COMMUNICATIONS**	



Title	Comment
Automatic Frequency Coordination: consultation opened by Australia Daniel O'Grady 9(2)a	The Australian Communications and Media Authority (ACMA) has opened consultation on using Automatic Frequency Coordination (AFC) for spectrum sharing with existing radio users in the 6 GHz band. This is an early step, seeking stakeholder interest and understanding feasibility. If a next step is taken, implementation could be some time away. There is likely to be some interest in this consultation from New Zealand as we may share a market for AFC system vendors in the future, and—as is the case in Australia—WISPs have expressed interest in using AFC systems to access additional spectrum. AFC systems enable spectrum sharing by protecting incumbent fixed link users (e.g. those links used by Kordia, Chorus, Airways etc) while allowing WISPs to opportunistically use spectrum when and where it is not needed by incumbents. RSM is currently monitoring international AFC use and trends and starting to consider how we enable AFC use in New Zealand. We will review any outcomes from the Australian consultation process.

Out of Scope

Out of Scope