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To whom it may concern

**Re: Automatic sunseting of legislative instruments Proposal to remake the Public Safety and Emergency Response Class licence Consultation paper**

Thank you for the opportunity to consult and provide feedback on the proposed renewal of the Public Safety and Emergency Response Class Licence. Fire and Rescue NSW (FRNSW), as users of this spectrum, would like to make comment to this renewal to ensure that the agency's ongoing use case is considered into future planning.

Please find below the FRNSW response to the questions as posed in the Consultation paper:

Q1. Is the class licence needed? Why or why not?

Yes – this provides FRNSW with the ability to use commercially available products to create and utilise ad-hoc communications networks anywhere within NSW.

Q2. Is the class licence operating effectively and efficiently? Why or why not?

From our perspective, yes – it provides us with the ability to create the networks on an ad-hoc basis as discussed above, without limitations on spectrum, location, licencing and approvals.

Q3. How are PSBs currently using the class licence? Are the current authorised services fit-for-purpose?

FRNSW (and Rail Fire & Emergency) are currently using commercially available wi-fi mesh products which are used to create network connectivity and range-extending for devices in coverage limited or denied areas. Examples of this include: in-tunnel repeater links, in-building coverage, range extending from nodes (e.g. Vehicle or other larger/less mobile assets). The mesh utilises the 4.9GHz band for the wide area links between individual nodes.

The mesh network support data transmission which is used for mission critical voice and other data channels, including streaming.

Q4. Is the current class licensing model fit-for-purpose? Why or why not? How would any interference protection or hybrid class/apparatus licensing arrangements work?

Due to the operating model of FRNSW where the agency is required to respond to emergencies anywhere within the state of NSW, the flexibility to establish or demobilise this network anywhere at anytime is a great advantage. At this point in time, FRNSW has not experienced any issues with interference requiring improvements in interference protection, however, use of this spectrum by ESOs in NSW is in its infancy and there has been a slow but gradual uptake of the spectrum. Potentially, there will be challenges in the future with interference that may need to be managed.

Q5. Should specific provisions for cellular mobile technologies be included in the class licence? Why or why not?

As an agency, FRNSW would prefer that the provisions remain as general and agnostic as possible to enable the broadest range of use cases and applicable technologies. FRNSW is continuing to progress its maturity in the 4.9GHz space and additional restrictions, will make it more challenging and potentially limit utilisation.

Q6. Are the proposed emission mask, power limit and EIRP limit for cellular mobile BS appropriate? Does emission mask P, in conjunction with other proposed measures, sufficiently mitigate the risk of adjacent channel interference to other devices authorised under the class licence?

From a practical perspective, FRNSW has not experienced any issues with the current restrictions and licence conditions.

Q7. Are the proposed emission mask, power limit and EIRP limit for cellular mobile user equipment appropriate?

As above.

Q8. Are the emission masks, power limits and EIRP limits for existing services appropriate?

As above.

Q9. Do the technical parameters proposed in the draft class licence restrict the use of any other technologies required by PSBs?

FRNSW foresees potential increases in interference in the event cellular technology provisions are introduced as this will likely drive a significant increase in the development and utilisation of cellular networks in this band due to their capability and relative familiarity for end users. It would be preferable to continue the current class licence conditions.

Q10. Do the current definitions of 'public safety bodies' and 'public safety or emergency response function' remain fit-for-purpose? Do the authorisation arrangements for other bodies remain appropriate? Why or why not?

Within NSW, FRNSW is considered an 'Emergency Services Organisation', not 'public safety body'. There is a second tier of agency that would be considered 'public safety' that works within the emergency management framework as a supporting agency – e.g. EPA,

Transport, etc. Consideration should be given as to the inclusion of the definition of Emergency Services Organisation and how a tiered structure could apply to provide priority to ESOs, then PSBs, etc. This tiered structure could then be applied with respect to managing interference, prioritisation, and various restrictions to enable best utilisation of the spectrum by users.

Q11. Is the 6-month limit for fixed point-to-point services appropriate? Why or why not? Does the 6-month limit prevent deployments of networks aligned with the purpose of the class licence?

FRNSW does not currently use fixed point to point services, however the agency sees the 6 month limitation as inappropriate. There are a couple of other agencies using the point to point mechanism and the 6 month limit provides unnecessary administrative overhead, that requires renewal when the system is working very well with no plans for decommissioning.

Q12. Which channel plan should be adopted in the class licence? Why?

The equipment that FRNSW currently uses can be configured to a channel width specific to the intended use case. The channel width configuration is dependent on the data throughput required for each use case and can range from 1MHz channels to 15MHz channels. FRNSW preference is that the channel plan provides for a variety of different sized channels for different use cases.

Q13. Are the current interference protection measures for radio astronomy sites fit-for-purpose? Are the proposed protection measures from cellular mobile BS and user equipment appropriate?

Consideration should be provided to how the exclusion zones are communicated. Also, it is recommended that the exclusion zones are reviewed in conjunction with the spectrum licence renewal – in a similar fashion, the radio telescope technology is continually evolving and consideration should be given as to whether it is technically possible to reduce the exclusion zones.

In the event you would like further clarification on any of the FRNSW response or use cases, please contact me either via email at [REDACTED] or phone on [REDACTED]

With regards,

[REDACTED]

Chief Superintendent Matthew Wormald  
Commander – Operational Communications  
Operational Capability