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Department of
Transport and Main Roads

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The Manager
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Australian Communications and Media Authority
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To the Manager of the Spectrum Planning Section,

RE: Proposal to remake the Public Safety and Emergency Response [4.9GHz] Class Licence

Thank you for your notification of the public consultation on *remaking the Radiocommunications (Public Safety and Emergency Response) Class Licence 2013* via email on 19th June 2023 and providing the opportunity for stakeholders to make a submission.

Refer to attachment for responses to the questions raised in the *Consultation Paper: Proposal to remake the PSER Class Licence*.

In addition to responses to the *Consultation Paper*, as the NCCGR Representative for Queensland, I would like to provide some additional commentary on the proposed *Class Licence*.

After consultation with Queensland Public Safety Bodies (PSBs), I would like to reiterate, on their behalf, that PSBs continue to require access to the 4.9GHz band and there is an expectation of significant uptake of services and technology utilising this band in the near future as new technology and next generation networks are tested and deployed, including 5G services.

I would also like to expand on the concept of *appointing a band manager* that is discussed in *Other provisions* section of the *Consultation Paper*. Including high level provisions for a State level private band manager in the *Class Licence* would provide each State the flexibility to manage and utilise the band to best meet the requirements of their PSBs, while minimising additional overhead on the ACMA. Specifics about implementation of private band manager can be implemented in an ACMA guideline after further consultation with the States and Territories.

The 400MHz Harmonised Government Spectrum State NCCGR representative endorsement function has proven how this band manager can function successfully. A licence could be issued to the same entity, and that entity could third party authorise PSBs

to use the licence. This band manager could then keep a record of utilisation, provide interference protections (if required) and triage any interference queries.

To further reinforce the argument for the inclusion of private band manager provisions in the class licence, it should be noted that the Federal Communications Commission's (FCC) (USA) proposal to introduce 5G in the USA's 4.9 GHz public safety band, referenced in the consultation paper, proposes a band manager function and seeks public comment. While I do not believe there is any advantage to appointing a national band manager as FCC suggest, other provisions could be considered in consultation with the States and Territories.

Queensland thanks the ACMA for the opportunity to make a submission to the *Proposal to remake the Public Safety and Emergency Response [4.9GHz] Class Licence*.

NB: As there is no one central body for spectrum in Queensland, you may receive responses from other Queensland PSBs. There has been consultation and collaboration performed, and this submission is a collated response, but there is an accepted risk that other Queensland PSBs may provide contradictory feedback.

Yours sincerely



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NB: Due to recent machinery of government changes, the Queensland GWN Contract Directorate now resides in the Department of Transport and Main Roads. The GWN licenses will be updated in due course to reflect this change.

Attachment: Responses to questions from the *Proposal to remake the Public Safety and Emergency Response Class Licence [4.9GHz] Consultation paper*.

Question 1

Is the class licence still needed? Why or why not?

Yes, Queensland PSBs continue to utilise and require access to the 4.9GHz band, and there is an expectation of significant uptake of services and technology utilising this band in the near future.

Queensland Police Service have advised that: “A loss of this band would have dramatic implications on, community safety, officer safety and incur large costs for replacement.”

Question 2

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

As stated above, no one single entity within Queensland has full visibility of how PSBs use the class licence. Significant time was spent liaising with stakeholders to understand current and future use of class licence.

While PSBs advised the current class licence is operating effectively and provides the flexibility to test and rapidly deploy different technologies for different use cases, this lack of visibility of use hampers the efficiencies of use and limits any interference protection coordination efforts. This issue will be mitigated by State level private band manager suggested in question 4 response.

Question 3

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

Queensland Police Service regularly utilise and are reliant upon the class licence for the distribution of reliable and interference free media and communications in a range of emergent and mission critical environments.

Queensland Police Service have also advised:

- Planning has commenced on utilising this and for the upcoming Brisbane Olympics in 2032 for the use of Primary and/or Secondary communications and network transmissions.

Queensland Ambulance Service and Queensland Fire and Emergency Service do not currently use the 4.9GHz band but are investigating mesh solutions that do utilise this band.

NB: Due to ACMA publishing submissions on their website, specifics of QPS use have not been included.

Question 4

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?

While the class licensing model is fit for purpose, Queensland would like to have the option to take up a State wide licence and perform a private band manager function. The State level private band manager would hold the licence for the full band, manager usage and interference protection requirements, and third party authorise other entities.

As each State already has a NCCGR representative that effectively performs a private band manager type function of the 400MHz HGS bands, it is suggested that the licensee of HGSA licenses in each State is the licensee for 4.9GHz band.

As this State level private band manager would provide little additional requirements on ACMA, nor result in any loss of taxes, it would be expected that the licence would be offered at a nominal tax rate fee to recoup costs to establish the 4.9GHz licence in ACMA RRL.

To manage the coexistence scenario, the private band manager could then allocate channels for deployment scenarios based upon the State's requirements. For instance, services that where interference protection is required. This would remove the requirement for apparatus licensing but provide protection where required. To manage the coexistence across borders scenario, similar procedures to the RALI LM8 section 6.9.1 *Geographic boundary power spectral density (PSD) limitations* should be considered.

In Queensland, in the private band manager scenario, we would host a PSER/4.9GHz User Group with PSBs to internally coordinate band usage. This User Group would manage a record of usage. These type of requirements could be placed upon State level private band managers.

It is expected that there will be significant uptake of services within the 4.9GHz band in future associated with next generation networks and technology. While interference protections are not an issue today, there is an expectation that interference could be an issue in the future.

Question 5

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?

Queensland PSB's would welcome provisions to utilise the class licence for 5G radio communications as per the 3GPP specifications.

Question 6

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?

Without detailed examination, it appears the details provided are inconsistent with 3GPP 5G specifications and ACMA's own 5G spectrum licenses. The specific provisions need to align with current and future 3GPP specifications and not limit any use of 3GPP compliant devices.

Question 7

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

Queensland would like to suggest that the class licence should have emission masks and EIRP limits that allow "3GPP High Power User Equipment" (HPUE) (Class 1: 31dBm, 1.25W) for 5G services, including provisions for higher EIRP due to higher antenna gain for the same transmit power. This would also be applicable to base stations.

In a State the size of Queensland and with significant areas of low population density, any technological advances that could provide additional coverage from existing technology need to be provisioned for in the Radiocommunications Act.

While the advantages HPUE in this band are debatable, provisions in the class licence would allow testing of equipment / functionality before being deployed in other cellular bands.

Question 8

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

Refer to question 6 response above.

Question 9

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

Queensland is not aware of any scenarios.

Question 10

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

The definition of 'public safety bodies' needs to be amended to include management entities that provide radio services to PSBs to utilise the licence.

In Queensland, the apparatus licenses for the "Government Wireless Network" are licensed by the Department of Communities, Housing and Digital Economy and represented by the "GWN Contract Directorate", and PSBs are authorised to use those licenses under an "Instrument of Authority" (as per section 114 of the Radiocommunications Act). The definition of 'public safety bodies' needs to be amended to include these scenarios. Also, the spectrum management functions and NCCGR HGS Frequency Assignment Endorsement function is performed by the GWN Contract Directorate (a management entity) on behalf of Queensland.

In our response to question 4, we proposed appointing a State level private band manager. It is envisioned this private band manager function, if initiated, would be perform the GWN Contract Directorate on behalf of Queensland.

Question 11

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?

Queensland supports the 6-month limit for fixed point-to-point services.

Queensland also supports the class licence intent of, "not to restrict network deployments but to ensure long-term fixed point-to-point services are authorised via one of the fixed services spectrum bands".

Queensland requests that the 6-month limit is not applicable to other types of services (e.g. low power devices, mobile devices, 5G services).

Question 12

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

Queensland would prefer to maintain the status quo, that is, Channelling Plan A. Queensland acknowledges the provisions in section 12 of the class licence that allow use of 2 or more contiguous channels.

By including provisions for State level private band manager in the class licence (refer to question 4 response), each State could implement their own channelling plan based upon their requirements. This would be the preferred approach to address channelling plan requirements that differ from Channelling Plan A.

Question 13

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?

Nil response.

There are no RAS sites within Queensland, but we do acknowledge the Paul Wild Observatory, Narrabri, is approximately 160km away from the Queensland border.