



23 May 2016

Radio Spectrum Band III Consultation

Radio Spectrum Policy and Planning
Ministry of Business, Innovation and Employment
PO Box 2847
Wellington

Dear Sir

CONSULTATION DOCUMENT – OPTIONS FOR 174-230MHZ

Reference: Consultation Document dated April 2016.

The Public Safety Radio Frequency Management Group (PSRFMG) is the Licence Agency authorised by the Ministry of Business, Innovation and Employment (the Ministry) to administer the Emergency Service bands ESA Band, ESB Band and ESC Band. Generally, licences to use these bands are restricted to members of the PSRFMG although on an exceptional basis licences may be granted for use by non-members subject to certain conditions. As there is a concentration of Emergency Service operations in VHF portion of the spectrum the PSRFMG is an interested party to the review and consultation process initiated by the Ministry on options for the future use of the frequency band 174 – 230 MHz.

In this submission, the PSRFMG provides its comments and recommendations concerning possible additional VHF spectrum for PPDR applications. The PSRFMG comments herein relate only to Questions 4, 5, and 6 on Land Mobile and Questions 13 and 14 on PPDR.

PSRFMG response to Questions 4, 5 & 6 on Land Mobile

Q4. Should spectrum in Band III be allocated to LMR? If yes, how much spectrum would satisfy demand in this area?

Demand from PSRFMG members for channels in the ESA Band (75 – 80 MHz) is declining for a number of technical and operational reasons, which includes the growing obsolescence the analogue type of equipment commonly used in this band. Deployment of modern digital radio equipment with all the inherent advances in functionality is leading to increasing demand from PSRFMG members for channels in the ESB Band (138 – 144 MHz). The point has been reached that even following the introduction of a 12.5 kHz channelling plan that congestion is being experienced in the band in the major centres.

Emergency Services and other PPDR agencies are reliant upon LMR for the provision of narrowband voice and data radiocommunications, which operationally are often considered as mission critical applications. Moreover, this reliance is projected to continue well into the 2020s until such time that voice communications

either become less important operationally or when native circuit-switched voice is supported in deployed LTE cellular networks. For the foreseeable future, Emergency Services and PPDR agencies will remain reliant on LMR systems and networks for mission critical voice communications.

In order to relieve congestion in the ESB Band it is desirable that additional VHF spectrum is made available and this matter is further addressed below in the PSRFMG responses to Questions 13 and 14.

Q5. If spectrum is allocated to LMR, should there be technological requirements around the use of this spectrum? If yes, why? If not, why not?

In general, licence conditions on the use of any additional allocation in Band III for LMR purposes should be on the same basis as applicable in other existing LMR VHF bands in which digital equipment using a 12.5 kHz channelling arrangement is deployed.

Q6. If spectrum is allocated to LMR, is it appropriate to charge a fee for this use or transfer the spectrum to the management rights regime? If yes, why? If not, why not?

The PSRFMG has no comment on the spectrum management regime that should be applied to any spectrum allocated to LMR in Band III. However, it should be noted that the PSRFMG was a party to the comments provided to the Ministry on the Review of the Radiocommunications Act 1989 by the WGRN Technology and Operations Committee in November 2014. In these comments the possibility of introducing a form of incentive pricing as an alternative spectrum management regime was opposed on behalf of Government Emergency Services and PPDR agencies.

PSRFMG responses to Questions 13 & 14

Public Protection and Disaster Relief

Q13. Should New Zealand consider PPDR uses in Band III? If yes, why? If not, why not?

Noting the congestion being experienced in the ESB-Band, the PSRFMG recommends that an allocation for PPDR narrowband applications should be made within Band III, preferably towards the lower end of the band. In addition to alleviating the ESB Band congestion, such an allocation would provide PPDR users with similar propagation and hence coverage characteristics as the ESB Band. This would be advantageous operationally, in network capacity planning to meet future traffic demands and should lead to network efficiencies being realised.

The PSRFMG is in agreement with the Ministry's view that an allocation in Band III for broadband PPDR applications is not warranted and that the preferred approach would be to consider an allocation for broadband applications in the 800 MHz band. This view remains as previously communicated to the Ministry in late 2014 on behalf of Government PPDR agencies.

Reference is made by the Ministry in the Consultation Document to the deployment in Japan of a broadband PPDR capability in Band III. However, confirmation has been obtained that the system is not a general purpose broadband PPDR network but rather a means of providing local access video links for transportable video cameras. It is understood that the cameras are linked to scene vehicles equipped with base stations which in turn provide a video only service and backhaul to a command centre either via satellite or a terrestrial radio system. Japanese delegates to an ITU-R meeting have advised that a future wide area broadband PPDR facility will employ 800 MHz band spectrum.

The availability of suitable radio equipment is a potential issue for PPDR users although it is noted that there are manufacturers showing a degree of interest in the potential for PPDR in Band III. True economies of scale in equipment design and manufacture will follow international harmonisation of an allocation for PPDR in the band and New Zealand as one of the countries that has completed the clear-out of TV broadcasting from Band III is in a good place to promote the introduction of PPDR applications into the band through the activities of the APT and the ITU-R. However, the PSRFMG acknowledges that further study and qualification of sources of PPDR suitable equipment needs to be undertaken.

In summary, the PSRFMG recommends the adoption of an allocation for narrowband PPDR applications in Band III.

Q14. If there is demand for PPDR in Band III, how much spectrum would satisfy this demand?

As a preliminary estimate, the PSRFMG considers that an allocation of approximately 2 x 2.5 MHz is required for narrowband Emergency Services and PPDR applications within the range 174 – 225 MHz. It is noted that depending upon the uses in adjacent bands that additional guard bands to avoid band edge interference issues are likely to be required. The amount of spectrum required for PPDR will require further study to provide a more accurate estimation.

Finally, the PSRFMG would be happy to assist the Ministry in studies to support and better qualify an allocation for PPDR in the band 174 – 225 MHz.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Bruce Emirali', with a large loop at the end of the signature.

Bruce Emirali

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