

From: [Brewer, Jonathan](#)
To: [Radio Spectrum](#)
Subject: Options for 174 - 230 MHz Consultation Response
Date: Tuesday, 17 May 2016 3:08:53 p.m.

Ministry of Business, Innovation, and Employment:

Telco2 is a consultancy specialising in the design and implementation of innovative wireless networks. It is currently engaged in the build of national LoRa network.

Please find below Telco2's response to the 174-230 MHz consultation.

- 1.) No spectrum in Band III should be allocated specifically for radio microphones. Suitable UHF options are available.
- 2.) No spectrum in Band III should be allocated for DAB, as the probability of the technology becoming mainstream is very low. A comparison is digital satellite radio. Fifteen years after the launch of satellite radio in the US market, the remaining operator (a merged Sirius and XM) has only 30m subscribers. Given the prevalence of Internet radio today, a new venture with a less mainstream technology could never hope to obtain even those meagre numbers.
- 3.) Any allocation of spectrum to DAB would be wasteful.
- 4.) Up to 40MHz of spectrum in Band III should be allocated to use that could include LMR to satisfy demand. It should not be restricted to LMR.
- 5.) Minimum digital modulations and receiver tolerance limits for adjacent channel interference should be required to ensure the most efficient use of the spectrum.
- 6.) Some amount of Band III spectrum should be transferred into management rights regime, provided acquisition limits and requirements for immediate national use are put into place. Some spectrum should be placed into management rights to enable easy, uncoordinated national implementations of telemetry and IoT applications.
- 7.) There is a demand for exclusive spectrum in Band III for IoT applications. OfCom's "VHF radio spectrum for the Internet of Things" statement published 23 March 2016 makes the case in detail.
- 8.) To enable the rapid development of low-cost IoT applications, at least 10 MHz should be made exclusive to IoT. This should not preclude the use of IoT in LMR licenses or management rights.
- 9.) A General User Radio License should be applied to the IoT allocation under consideration.
- 10.) There could be demand for exclusive Band III spectrum for utility companies. Applications are indistinguishable from those considered under IoT or LMR. Utility uses should be satisfied through use of LMR licenses or management rights.
- 11.) No answer.
- 12.) No spectrum in Band III should be allocated to NZDF. They should license their spectrum as any other private or corporate user does, albeit with license detail

suppression.

13.) No answer.

14.) No answer.

15.) A host of other uses of Band III could be considered, however enumerating them or speculating on future potential applications is not a useful exercise. Appropriate rules for spectrum use should never preclude the productive use of the spectrum in any way a licensee or management rights holder requires. Rules should exist only to protect the active services of licensees and management rights holders.