

Consultation response form

Your response

<p>Question 1: Do you agree with our assessment of current road tolling use in the 5.8 GHz band in the UK? Is there other current and future planned use that we are not aware of?</p>	<p>Confidential? – N. No comment</p>
<p>Question 2: Do you agree with our analysis of the options for managing sharing between BFWA and RTTT? Are there additional options which we have not considered which in your opinion would result in a better balance of benefits and risks?</p>	<p>Confidential? – N. No comment</p>
<p>Question 3: Do you agree with our proposal to remove the notch and allow BFWA use in the whole of the 5.8GHz band?</p>	<p>Confidential? – N. Response: No.</p> <p>Strongly disagree with the proposal.</p> <ul style="list-style-type: none"> • Parts of the 5.8 GHz band are used by a significant number of legitimately licensed radio amateurs in both the UK and Europe for terrestrial and satellite communications. • The frequency band immediately above 5760MHz is the only common weak signal global Earth-Moon-Earth (EME, or moon-bounce) allocation that does not require the use of cross band/segment communications techniques. The requirement to resort to cross segment operation usually results in less efficient antennas due to the need to ensure effective operation over a wider bandwidth as well as greater difficulty in coordinating communications over very disparate

frequency separations.

- Within the 5.8GHz band 5755-5765 MHz and 5830-5850 MHz are used for very weak signal communications. This part of the spectrum is unique in exhibiting extremely low antenna (sky) noise, allowing the use of advanced weak signal (signal to noise limited) digital and analogue communications techniques for propagation mode scatter and space communications. Commercial digital communications systems, like BFWA, are usually interference to noise limited and therefore more tolerant of interference than weak signal amateur radio systems.
- Whilst broadband digital communications transmissions such as BFWA can function in the presence of some forms of interference, the BFWA signal would be detected in sensitive amateur radio receivers as wide band noise. This directly impacts the amateur radio link budgets. This would have the detrimental effect of increasing the minimum level at which weak signals can be successfully received by weak signal amateur radio equipment.
- An increasing number of UHF and microwave software defined radio (SDR) transceivers are starting to appear at reasonable prices. These are already capable of operation to 5.8GHz. Many new amateur radio digital communications techniques are already starting to exploit this technology. The introduction of BFWA into existing amateur radio 5.8GHz allocations could severely disrupt the ongoing development of these techniques, in which UK radio amateurs are already

taking a global lead.

- Recent questionnaire results have indicated that younger radio amateurs are far more interested on digital radio techniques that lend themselves to satellite and other space communications, including EME. The 5.8GHz band is key to many of these activities.
- No consideration seems to have been taken of amateur satellite operation in the consultation. Again, the UK has a strong presence in developing small satellite systems. The use of the 5.8GHz band for the amateur satellite service would be adversely affected by the introduction of BFWA systems operating in the 5830 – 5850 MHz international satellite allocation. Limited small-satellite power budgets usually mean weak downlink signals at amateur satellite service ground stations. This is therefore regarded as a prime weak signal allocation, easily and severely affected by systems such as BFWA. One BFWA channel could block the entire amateur satellite allocation. There would be no other frequency in the band to tune to.

Given the above it is difficult to accept that OFCOM does not expect the proposal presented here to impact coexistence with these other uses.

The UK Microwave Group believes that OFCOM has ignored the legitimate amateur radio interests in this consultation. In addition there is a lack of any guidance to BFWA operators that might assist coexistence in the band and continue to facilitate amateur radio weak signal reception.

Question 4: Are there any other considerations that you believe need to be taken into account and that are not already covered in this consultation?

Confidential? – N.

UK Microwave Group believes that OFCOM has failed to consider the role of, and impact on, the established amateur radio and amateur radio satellite services in the 5.8GHz band.