

Title:

Mr

Forename:

Peter

Surname:

Blair

Representing:

Self

Organisation (if applicable):**If you want part of your response kept confidential, which parts?:**

NONE

Ofcom may publish a response summary:

Yes

I confirm that I have read the declaration:

Yes

Additional comments:

I am a retired professional engineer who worked for 45 years in the electronics systems area, including radar, navigation and communications. I am a Fellow of the Royal Academy of Engineering and a Fellow of the IET. I was licenced as G3LTF in 1957 and have operated since then mainly on the VHF, UHF and microwave bands. My particular interest is moonbounce (EME) communications and I have done this on the microwave (>1296MHz) bands since 1967, on 2320 MHz since 1992 and on 3.4GHz since 2007. I am a trustee of two charities which encourage young people to consider an engineering career and as part of that we run courses in both radio communication and electronics. The industry needs engineers whose skills include RF experimentation and knowledge.

Having benefited enormously in my professional life from my early amateur experiments I am very keen that we preserve access to interesting frequencies for future generations.

Question 1: Do you agree that it is likely that the benefits to UK consumers and citizens will be greater from the MoD's release of spectrum in the 2.3 GHz and 3.4 GHz release bands than from retaining the current amateur use?:

Yes

Question 2: Are there current uses in the release bands other than those detailed in RSGB's band plan and discussed in Section 3 of this consultation?:

None to my knowledge

Question 3: Are there further consequences of removing the release bands from amateur licences that have not been considered in our analysis?:

No

Question 4: There is an option (although not preferred) to remove access to the adjacent bands, as well as to the release bands. What are the consequences of removing access to the adjacent bands from amateur licences?:

The loss of access to the 2.3 and 3.4GHz bands would remove a very interesting part of the spectrum from a significant body of experimenters. For example long range forward scatter from aircraft (essentially bi-static radar) is a currently funded research topic. This is just starting to be seriously exploited by amateurs through the use of internet available aircraft data. Undoubtedly there will be other interesting phenomena discovered by the fusion of data from the internet and amateur communication tests. Auroral reflection communications has yet to be explored above 1296MHz.

Moonbounce (EME) at 2.3 and 3.4GHz can be achieved with relatively small dishes and moderate (~200W) powers and in many ways the 2.3 and 3.4GHz bands are ideal for EME. There are a growing number of users worldwide.

Question 5: Are there current uses in the adjacent bands other than those detailed in the RSGB's band plan and discussed in Section 3?:

Not to my knowledge

Question 6: Are there additional mitigation measures which would provide demonstrable proof that amateurs would not cause interference into LTE in the release bands following the release?:

The two main mitigation factors are band planning and filtering. The RSGB and associated groups such as UK Microwave group and BATC have years of experience in devising and implementing effective band planning. Mitigation of interference from LTE stations can be achieved by filtering at the early stages of amateur receivers. It is also important (and fair) that the LTE receiver filtering specs should recognise the presence of amateurs in the adjacent bands. Clearly good filtering throughout the transmitter upconverter and final stages will be important to avoid interference but this is not difficult and many amateurs using this part of the spectrum are familiar with microwave filter design, several design websites exist.

Question 7: Do you agree with the proposed process for varying licences following cases of reported interference and our proposal to vary licences should dealing with the number of reported cases become too onerous?:

The organisations mentioned in my Q6 reply contain many professional engineers with experience of these frequencies and so should a serious number of problems start to appear it would in my view be sensible to meet, understand the problem and explore mitigation before undertaking a global licence modification.

Question 8: Do you agree with our preferred option?:

Yes. As I have discussed above I believe there are sound reasons why preserving access for experimenters to this part of the spectrum is desirable and important from a national skills base viewpoint.

Question 9: Are there additional changes to the Amateur Radio Licence which would assist amateur in lowering the risk of causing harmful interference to new uses?:

I believe that the current obligation not to cause undue interference to other services is well understood. I do not consider that variations are necessary