



Ofcom Consultation:

UK preparations for the World Radiocommunication Conference 2019

Guidance to UK Amateurs for responses

1st September 2018

Introduction

Back in June 2018, Ofcom published a consultation on the UK's preparations for the ITU World Radiocommunication Conference 2019 (WRC-19), which will be held next autumn (Oct/Nov-2019). **The deadline for consultation responses is 13th September 2018.**

There are a number of Agenda Items (AIs) that are relevant to amateur radio, where individual and thoughtful responses to Ofcom are encouraged. All too often amateur radio interests are either overlooked or not understood by others - or Ofcom's own resources are understandably prioritised on other aspects.

The Ofcom consultation document and a response form are at:-

<https://www.ofcom.org.uk/consultations-and-statements/category-1/uk-preparations-wrc-19>

RSGB have some additional background at

<https://rsgb.org/main/news/special-focus/wrc-19/wrc-19-papers/>

When responding we stress it is important to submit your own individual answers and not 'template' copies of this guidance.

Notes:-

- The finalised formal RSGB response to Ofcom may differ or be more detailed, so please do not directly link or refer to this document which is for guidance only.
- Limited time? In the guidance we have highlighted Q23 on the future of the 50 MHz (6m) band and Q28 on Wireless Power as the most important questions where you may wish to focus.
- Responses should be emailed to Ofcom at WRC-19@ofcom.org.uk
- If you have difficulty with the Ofcom rtf format response form, a docx version is available.



Questions and Agenda Items (AIs) of particular note where you are encouraged to reply to Ofcom are:-

Question 1: *Do you agree with the prioritisation of the agenda items, as shown in Annex 5, and if not why?*

We note that Ofcom has set a 'Low Priority' for AI-1.1 (50 MHz, aka the 6-metre band) and also note the definition for 'Low' is in para-3.6.

In practice Ofcom has also adopted a 'neutral position' and currently lacks internal resource for the item. On the other hand RSGB volunteers have been pleased that they are able to participate in the Ofcom/UK-delegation to CEPT preparatory meetings.

Whilst recognising that Ofcom is often resource limited, nonetheless we suggest this is now reviewed and look forward to either a higher Ofcom priority and/or a more positive approach.

Question 2: *Ofcom is supporting the following three priority bands for IMT identification in the RRs: 24.25 – 27.5 GHz 40.5-43.5 GHz (as part of a wider global 37-43.5 GHz tuning range) 66 – 71 GHz If you don't agree with any of these bands, or think we should be promoting other bands, please provide justification for your views.*

This concerns AI-1.13 – Next generation (5G) mobile broadband frequencies. These will be identified for use in new smartphones and other consumer devices in bands above 24 GHz to support very high data rates.

The amateur position is that any result for future 5G mobile-broadband frequencies should ensure that their emissions do not affect the amateur Primary allocations at 24.0-24.05 and 47.0-47.2GHz. Both of these amateur allocations have a variety of amateur use including narrowband weak-signal long distance contacts, propagation beacons/research and wider bandwidth Amateur Video/TV. We believe more than enough radio spectrum is already allocated for mobile use (including in the millimetre-wave bands).

Question 4: *What are your views on the bands within scope of Agenda Item 1.16 and their suitability for Wi-Fi and Wi-Fi like services? Do you agree that Ofcom should support the CEPT position of No Change? If not, please provide evidence to support your view.*

5GHz Wi-Fi largely uses sub-bands below the amateur 5GHz allocations. This is the second successive WRC cycle where an expanded provision for 5GHz Wi-Fi is being considered. Amateurs have a significant interest in the 5725-5850 MHz sub-band (including weak signal narrowband usage at around 5760 MHz, data links and amateur satellite reception at around 5840 MHz).

Given the complexities involved and lack of any new mitigation techniques, there appears to be no reason to go beyond the previous Ofcom consultations/changes which are based on relatively low power indoor use and/or the 25mW CEPT outdoor limit. Therefore a 'no change' is preferred in the 5725-5850 MHz frequency segment. Indeed, as per Ofcom's own comments in the consultation document, it would instead be better to focus on the new '6GHz band' at ~5.9-6.4 GHz as an alternative for future Wi-Fi expansion.

Question 23: What are your views on Agenda Item 1.1, recognising that licensed amateur operators in the UK already have access to parts of the 50 – 54 MHz band?

Agenda item 1.1 regarding 50 MHz is a high priority topic for amateur radio and Ofcom is encouraged to increase its priority, be more supportive – or at least enable volunteers on the UK Delegation to take a more positive position. The agenda item was originally a CEPT-supported when instigated at WRC-15.

The 50 MHz (6-metre) band is a key one for amateur radio throughout the UK, Region-1 and beyond. Although access in the UK was granted in the 1980s it has never been a formal ITU Region-1 allocation, causing some ongoing restrictions, geographical gaps in activity and long term uncertainty. Presently, the band remains allocated by ITU as Broadcasting Primary in Region-1, despite the significant decline in VHF TV broadcasting.

We believe it is important it is now made a formal amateur allocation at ITU level and with the capacity to fully accommodate both current and future amateur applications. Harmonising it across the region is important in helping to raise activity and UK led innovation. In principle we would prefer a 50-54 MHz solution that would achieve maximum harmonisation, but in practice do recognise the CEPT position, as well as the distinct usage patterns present. We also consider some of the compatibility studies submitted by other administrations to CEPT/ITU to be overly conservative compared to the real-world experience from amateur usage to date.

We therefore encourage responses that will increase its priority and support proposals for:-

- a) A Primary amateur segment (similar to the existing UK national one). The priority for such a segment is at 50.0-50.5 MHz, encompassing the existing weak-signal and propagation beacon/research range. In the 1980s the UK and Ofcom predecessors led the way with 50 MHz permits, leading to a vibrant UK 6m amateur community. Supporting this again should be part of the UK position. A modest size Primary allocation (even if shared) would also provide long term regulatory certainty for all concerned
- b) An ITU allocation in at least the rest of the 50-52 MHz range. Whilst we acknowledge that sharing is required, this has successfully occurred for over 40 years in practice.
- c) A formal option at ITU level, perhaps by means of footnote, that would enable part or all of 52-54 MHz to be made available to the amateur service on a shared non-interference basis where national conditions permit. Parts of this range often have very low utilisation by others and there may be greater benefits from enabling novel amateur developments and usage. National licensing conditions and coordination etc. could easily accommodate the need for specific sharing, or rare occasions of civil contingency use.

In further regard of 52-54 MHz – it would provide a major boost to the highly innovative digital data and video modes currently being pioneered in other experimental VHF bands. This has been led by BATC members in the new Ofcom ‘sponsored’ 71MHz experimental range and is the topic of regular updates to Ofcom’s BRIG forum. UK amateurs have been instrumental in these developments and it would be unfortunate not to support such ground-breaking UK innovations and ‘export’ that expertise more widely via a harmonised frequency range, or at least a footnote that enables provision for such use in a far clearer manner than the ambiguous ‘catch-all’ of Radio Regulation 4.4.

Question 27: What are your views on Agenda Item 1.15, particularly on the protection needs of passive services?

AI-1.15 concerns frequencies in the band 275-450 GHz being identified for use by Fixed/Mobile services. Parts of this frequency range were recently made available by Ofcom to UK Full Licensees by a licence variation that fully protected the passive services. Pioneering work with highly accurate low-phase-noise frequency sources is now seeing the first UK amateur developments occur at 288 GHz, with no doubt more innovation in prospect.

It is therefore important that any agreement for services, such as Fixed/Mobile, still permits other services including the amateur service to continue innovative developments, investigate propagation etc.

In any case the high atmospheric losses and low equipment powers typical of these frequencies all enable relatively easy coexistence and minimises interference to passive services.

Question 28: What are your views on Agenda Item 9.1.6, particularly on the categorisation of WPT and whether WRC action is required?

AI-9.1.6 concerns Wireless Power Transfer for Electric Vehicle (WPT-EV) charging and is another strong concern for the amateur community. In general, RSGB supports the Ofcom view that WPT should be viewed as a radio application (and not ISM) and that no new 'allocation' is required. However we believe it is viable to 'identify' operating frequencies for WPT around 20 and 79-90 kHz which will not cause difficulties to other radio services. As it is intended for mass market usage by electric cars we also have serious concerns regarding density and deployment numbers.

Given its very high power (up to 120 kW CW for large vehicles/buses) our chief concern is there may be significant power levels in its harmonics that couple or even strongly radiate over wide areas and into other frequency allocations. From a broader EMC and standards point of view there are a host of issues including definitions/ambiguities, waveform purity/stability, compliance test plans and specific standards that all need attention – and should be in place by WRC-19

Question 29: Do you have any comments concerning the Standing Agenda Items, where not covered elsewhere in this document?

One aspect related to this question is Agenda Item 8 covering allocation footnotes. There are a number of country footnotes that apply to amateur radio allocations some of which appear to be obsolete or restrict operation – particularly in the 1.8 - 2.0 MHz range where Loran is still listed and relatively low power limits on the amateur service are specified. Whilst not all these footnotes are specific to the UK, we ask for Ofcom to support a long overdue review/update of these.

Question 32:

What changes to the Radio Regulations have you identified that would benefit from action at a WRC and why? Do you have any proposals regarding UK positions for future WRC agenda items or suggestions for other agenda items, needing changes to the Radio Regulations that you would wish to see addressed by a future WRC?

Future Agenda Items. A key concern are proposals for WRC-23 that may affect amateur allocations. Given the early deadline for this consultation, Ofcom should consider a separate consultation as soon as these proposals become clearer in CEPT – and certainly ahead of WRC-19 itself. Of the initial ones known to be under consideration, there are some concerns regarding:-

- Wideband space-borne radar in 40-50 MHz for ice thickness and soil-moisture measurements which may cause harmful out-of-band emissions to weak signal amateur service activities at 50 MHz. We are also not convinced this need be a WRC-23 item and cause four extra years of studies/effort.
- Space weather sensors – which may include wideband HF profilers and other sensors that overlap or intrude into) amateur allocations. Whilst a relevant and important topic, it is one several examples of an agenda item where frequency ranges and ultimate scope are unfortunately far from clear

The RSGB (and IARU) are closely monitoring Agenda Item 10 proposals as they emerge and may comment further in due course.



Remember –

PLEASE ENSURE YOU DRAFT & SUBMIT INDIVIDUAL RESPONSES

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- **and our thanks for your support**