

## Higher power limits for licence-exempt devices

### Understanding the Scope for a Power Increase at 2.4 and 5 GHz

Redline Communications (EMEA) Ltd is the UK registered division of Redline Communications Inc based in Toronto. The company develops and manufactures Broadband Wireless Access products. The product portfolio includes both access and infrastructure products that operate in the 5.4GHz and 5.8GHz licence – exempt bands around the world. The company supplies systems across the UK and Europe and has supported the drive to create a European regulatory framework for the 5.8GHz band through active participation in both the relevant ECC committees and ETSI standardization projects. The company is therefore very familiar with the developments concerning the 5.8GHz band in Europe.

Redline Communications welcomes the opportunity to comment on this consultation. Redline has experience in the 5GHz bands but currently does not develop systems to operate in the 2.4GHz band. Therefore the responses are directed in the main to the proposals for increased power in the 5.8GHz Band C.

Unfortunately, Redline Communications is disappointed that there appears to be no intention at this time to harmonise the UK regulations and technical conditions for systems in the 5.4GHz Band B and 5.8GHz Band C.

***Q1: Have all the possible victims of interference been correctly identified and quantified as far as possible?***

Redline Communications Response:

Redline Communications believes that the document adequately summarises all the possible victims of interference. Considering the 5.8GHz Band C and **paragraph 3.51**, Redline Communications would like to point out that the draft ETSI Norm EN302 502 (recently completed PE and soon to begin National Voting) now includes test signals derived from the characteristics of frequency hopping radars which will increase the confidence that compliant systems will in fact properly detect and avoid frequency hopping radar systems operating in Band C. Additionally the ETSI Norm (and draft ECC Recommendation) clearly identify the impact of antenna gain (and hence EIRP) on determining the appropriate DFS threshold.

***Q2: Have the costs and benefits been correctly captured? In particular, are the costs of interference to WLANs appropriately assessed?***

Redline Communications Response:

Redline Communications notes that the studies for the 5.8GHz Band C are based around a cellular type multipoint system. In fact a very important business opportunity also exists around the provision of back-haul services based on P-P connections which would clearly benefit from the higher EIRP proposals considered in the document. Therefore the total benefits might be underestimated especially as the higher directivity antennas could constrain the extra interference that is cited as a limiting factor (ref: paragraph 4.7).

Redline Communications also encourages Ofcom to continue to examine the possibility for higher EIRP (>4W) in Band C for systems deploying high gain antenna systems<sup>1</sup>.

***Q3: Are there any other mechanisms that could be used to restrict device operation to appropriate areas? Of the schemes set out which should be preferred?***

Redline Communications Response:

Redline Communications believes that the current registration scheme for the 5.8GHz band is working well and is not aware of any recommendation from spectrum sharing studies that would require a “rural only” restriction to an increase in EIRP in the 5.8GHz Band C.

***Q4: Should we move from specifying radiated power to specifying conducted power?***

Redline Communications Response:

Redline Communications is disappointed that the conducted power proposal seems limited only to the 2.4GHz band since at 5.8GHz, it would introduce the possibility for higher EIRP levels in P-P applications with a potential economic benefit (see Q2 response). Redline Communications would also point out that in the 5.8GHz Band C, increased “elevation gain” mentioned in paragraph 5.19 may also benefit the satellite service sharing scenario overriding the impact of a larger interference footprint in the intended direction of operation. Redline Communications also points out that greater directivity can reduce the potential for interference in directions away from the main beam.

***Q5: For 2.4GHz which of these options do you favour? Are there other viable options that should be considered? Or should regulations be left unchanged?***

Redline Communications Response:

Redline Communications has no view on the 2.4GHz band options.

***Q6: For 5GHz should Ofcom increase the power to 4W EIRP at 5.8GHz in accordance with ECC Recommendation and as set out in the draft IR2007? Should Ofcom open the database for public access to facilitate coordination?***

Redline Communications Response:

Redline Communications strongly supports alignment of the UK regulations with the ECC Recommendation (06)04 for all applications (whether P-P or MP and whether fixed or nomadic). In addition, now that the ETSI Norm EN302 502 is stable, VNS 2107 should be withdrawn.

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<sup>1</sup> Redline Communications draws attention to the 5.8GHz band regulations in Norway that adopt just this approach. Here an EIRP level of up to 200W is possible for systems deploying antenna gains greater than 23dBi.

As stated above, Redline Communications encourages Ofcom to consider further improvements to the regulatory framework to allow greater EIRP for high directivity antenna applications in 5.8GHz Band C by extension of the “conducted power” proposals.

Redline Communications has examined the proposed IR2007 revision in Annex 7, and has the following comments:

- a) The reference to the Decision ERC/DEC(99)/23 seems incorrect and expects that a reference to ECC Recommendation (06)04 would be more appropriate.
- b) In several places, the ETSI Norm number is incorrectly identified as EN302 508. EN302 502 is the correct number.
- c) In Table 2.1, the service is shown as “Fixed”. The ECC Recommendation (06)04 refers to the situation in “...**which the use of the terminal stations may be fixed and/or nomadic**”. Redline Communications strongly encourages Ofcom to change the column heading from “Service” to “Applications” and to enter “Fixed/ Nomadic” as the entry.
- d) There is no Annex A channel plan proposed. Delete the reference.

Concerning the database, Redline Communications agrees that access could be beneficial for coordination purposes.