## **Your response**

Question	Your response
Question 1: Do you have comments on the overall approach to the review?	It is good to see a regulator running consultations from time to time, but it is also important to listen to what is said in the response replies as well, and keep an open mind.
Question 2: Have we captured the major trends that are likely to impact spectrum management over the next ten years?	No, I think there are other related issues that will be observable in the next ten years that will impact on the development as well.
Question 3: Could any of the future technologies we have identified in Annex 6, or any others, have disruptive implications for how spectrum is managed in the future? When might those implications emerge?	Yes in particular spectrum pollution is increasing and the amount needs to be considered and managed by Ofcom as well otherwise it may lead to disruption of low power signal reception.
Question 4: Do you agree that there is likely to be greater demand for local access to spectrum in the future? Do you agree with our proposal to consider further options for localised spectrum access when authorising new access to spectrum?	Yes, it is clear that there will be a need for more localised radio access in its various forms, as developments in user electronics multiply, many making use of wireless technology.
Question 5: Do you agree with the actual and perceived barriers identified for innovation in new wireless technologies, and our proposed ways of tackling those?	Yes in part, but I believe there are other factors that have not been considered; harmful interference can be caused by other devices that are not designed to be Radio Transmitters as such (see 9), but nonetheless radiate (unintentionally) interfering emissions through the Radio Spectrum and make efficient use of the spectrum impossible.
Question 6: Do you agree with Ofcom's proposals to improve our outreach and reporting activities, and spectrum information tools?  • Are there additional ways that Ofcom could better engage with existing and	Yes, Ofcom should make technical detail of their interference assessments more accessible, and also like their predecessor the RA, publish details of which actual devices are causing interference issues in the UK each year from their

future users and providers of wireless communications?

 Please explain any specific areas where you believe more or better provision of information could provide value to stakeholders interference work, so trends can be readily seen.

Question 7: Do you agree that it is important to make more spectrum available for innovation before its long-term use is certain? Do you have any comments about our proposed approach to doing this?

Making spectrum available for innovation radio use is an excellent idea, actual radio spectrum needs to be chosen carefully so that weak signal current users use is not affected.

Question 8: Do you agree that it is important to encourage spectrum users to be 'good neighbours' to ensure more efficient use of the spectrum? Do you agree with our proposals to:

- a) increase realism in coexistence analysis at a national and international level?
- b) encourage spectrum users to be more resilient to interference?
- c) ensure an efficient balance between the level of interference protection given to one service and the flexibility for others to transmit?

Do you have any comments on which of these will be the most important?

The Radio Spectrum is finite natural resource and reducing spectrum pollution to enable efficient use by all is probably the most important issue.

Spectrum users can only be resilient up to a point, when spectrum pollution occurs on the frequency being used this is almost impossible to clear without removing the offending device or getting it suppressed correctly. No amount of selectivity or filtering can remove wideband interference that is causing harmful interference in the radio spectrum.

Question 9: Are there any other issues or potential future challenges that should be considered as part of this strategy?

There are a number of future trends that may impinge on radio Spectrum use. e.g. EV car chargers in home or charging sites. These chargers which use a Switch Mode Power Supply principle (SMPS) and have the potential to cause harmful interference through radiated harmonic energy. The Aircraft Radio-navigational beacon band could easily be disrupted by emissions from these devices. During 2002-2003 the Radiocommunications Agency (RA) the predecessor to Ofcom's spectrum management office commissioned a report on SMPS devices, poor SMPS devices are still in evidence. Devices with a CE stamp is no guarantee that harmful emissions will not occur.

e.g. In 2005 Ofcom announced that the Band 2 PMR 66-86MHz band noise floor had now increased by 12dB so the information in the RA report seems to be ignored as most of this

noise is from SMPS devices. This part of the spectrum cannot be used efficiently with this noise in evidence. Just last year Ofcom had to respond to interference to Aircraft landing in Scotland contacting Air Traffic Control at an airport caused by a number of light bulbs that were installed in a domestic location near the flight path to the airport. No amount of Ofcom's market surveillance of products or spectrum monitoring seemed to have spotted this one coming. I think this is an indication that Ofcom really should be more proactive in spectrum management rather than reactive and increase funding to enable this to occur in practise by increasing its engineering staff in the future to be able to deal fully UK wide. Question 10: Do you agree that continued use Yes I agree, but you need to be aware of the of our existing spectrum management tools increasing amount of spectrum pollution. (as set out in sections 4-7) will be relevant and important for promoting our objectives in the future, in light of future trends? Question 11: Is there anything else we should I believe it would assist government bodies, be considering doing, or doing differently, to spectrum users and the public to be able to see promote our objectives? which interferences cases are truly resolved by Ofcom, separating them from the cases that are just closed without resolution, rather than just closed off and lumped together under all the 'resolved interference cases' in Ofcom's yearly published KPI 2 statistics.