



Non-Confidential

Protecting passive services at 23.6 - 24 GHz from future 26 GHz uses

Additional measures to protect radio astronomy service and earth exploration satellite service (passive) use at 23.6-24 GHz from out-of-band emissions from deployments at 24.25 - 27.5 GHz (26 GHz)

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1 Introduction

BT welcomes the opportunity to provide its views on Ofcom's consultation proposals¹ for technical measures to protect radio astronomy service and earth exploration satellite service (passive) use at 23.6-24 GHz from out-of-band emissions from deployments at 24.25 - 27.5 GHz (26 GHz).

Our responses to Ofcom's consultation questions are set out in section 2 below.

2 Responses to the consultation questions

Question 1 *For future outdoor use of 26 GHz, do you agree that the proposed exclusion zones will provide appropriate protection to the 6 radio astronomy sites? If not please explain your reasons for this providing any supporting evidence.*

Yes, we agree that the proposed exclusion zones around the 6 radio astronomy sites will give adequate protection to radio astronomy and are a proportionate measure. The limitations these present for 5G deployment are relatively minor given their size and specific locations.

Question 2 *For indoor use of 26 GHz, do you agree that additional measures are not needed to protect radio astronomy sites and that we should remove the existing 1 km exclusion zone around Jodrell Bank and Cambridge from the current 26 GHz indoor-only shared access licence product? If not, please explain your reasons for this providing any supporting evidence.*

Yes, based on the technical analysis that Ofcom has provided, we agree that additional constraints on indoor 26GHz deployments are not required to protect radio astronomy sites.

Question 3 *Do you agree with our proposal to limit the number of 26 GHz base stations in 24.25-25.05 GHz to protect EESS (passive) use at 24 GHz? If not, please explain your reasons for this providing detailed supporting evidence.*

Yes, we agree that the proposed limitations on the number of 26GHz base stations that can be deployed in the bottom 800 MHz of the 26 GHz band is appropriate based on the technical analysis Ofcom has provided.

Question 4 *Do you agree with the technical analysis set out in Annex 2? If not, please explain your reasons for this providing detailed supporting evidence.*

Yes, we agree with the technical analysis that Ofcom has set out in Annex 2.

We have gone back through the various source documents that Ofcom has drawn on as the starting point for its analysis and have replicated most of Ofcom's calculations.

We find the technical assumptions to be appropriate, although probably somewhat conservative. For example, the actual out of band emissions of 5G technology might be more than the assumed 2dB lower than the specified values². Also, we understand the interference criterion used in the

¹ https://www.ofcom.org.uk/_data/assets/pdf_file/0029/228836/protecting-passive-services-at-23.6-24-ghz-from-future-26-ghz-uses.pdf

² We note that [ECC Report 249](#) discusses the issue of difference in specified and actual out of band emissions and how this could be considered in compatibility studies. Although it gives some examples for mobile technology, it does not have specific guidance or evidence in relation to 5G NR equipment and the 26 GHz band.

ITU/CEPT studies includes apportionment of interference from other services, but if the incumbent microwave links were not present in the 26 GHz band this may not be required.

Once there is a larger volume of equipment available and greater experience of 5G deployments and operation of these networks in the mmWave band, the possibility to further relax the restrictions on 5G deployments in the future should not be excluded.

