Expanding spectrum access for satellite gateways

BT's response to Ofcom's Statement and Consultation issued on 19March 2026

Issue 1.0

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1 Introduction

BT notes Ofcom's Decision[1] to make spectrum available for satellite gateways in Q/V band and welcomes the opportunity to comment on the further consultation proposals to extend this use to 'high density' urban areas.

BT holds a 'Spectrum access high density 40 GHz licence' in the 41.5 - 42.5 GHz band and holds fixed links licences in the 37.5 – 39.5 GHz band. We are therefore potentially directly affected by the proposals for satellite Gateway operation in these bands.

Our response to the consultation questions is provided in section 2 below.

2 Response to consultation questions

Gateway use of Q/V band in HD areas

Question 1: Do you agree with our proposal to authorise gateways (NGSO and GSO) in urban HD areas? Please explain your reasons.

Yes, under the constraints and conditions that Ofcom proposes to apply to the Gateway use of Q/V band in the 'high density' areas, we have no objections to Ofcom's proposals.

Question 2: Do you agree with our proposal to limit receive frequencies available in urban HD areas to 37.5 – 40.5 GHz, and for operations to be on: (a) a 'non-interference' basis with respect to fixed links and mobile services in the downlink direction, (b) a 'non-protection' basis with regards to adjacent mobile services in 40.5-43.5 GHz? Please explain your reasons.

We agree that the satellite Gateway use in urban areas should be limited for the downlink transmissions to the band 37.5-40.5 GHz. Furthermore, this satellite use must be on a non-protection and non-interference basis in relation to any adjacent band 40 GHz mobile use, as set out in para 5.23 of the consultation document.

Operation of satellite Gateways in urban areas in the band adjacent to 40 GHz mobile services is only viable on an unprotected basis as it is not appropriate or feasible to control interference from mobile services that may be deployed under the rights conferred by existing Spectrum Access licences issued in the 40 GHz band.

Allowing satellite Gateways to use 40.5-43.5 GHz in urban areas would be somewhat inconsistent with Ofcom's previous decisions to require fixed links to be removed from that band in favour of future mobile services. We agree with Ofcom's proposal to exclude use of the band for the satellite downlink in urban areas (see also our response to Q5).

Question 3: Do you agree with our recommended option A for managing co-existence with Ofcom coordinated fixed links through our usual, first-come, first-served coordination. Please explain your reasons.

BT agrees that Option A is best from an interference management point of view. Option B might still effectively be accomplished by trading and ceasing any problematic fixed links licences if it was very important to site the Gateway in a place where an existing fixed link might prevent successful coordination.

[1] Statement and Further Consultation Expanding spectrum access for satellite gateways

Question 4: Do you agree with our proposal to authorise NGSO gateways in 'high density' areas at a MEA of at least 20 degrees and GSO gateways at an MEA of at least 15 degrees. Please explain your reasons.

Yes, this should promote more efficient use of the spectrum as below the minimum elevation angles separation distances with fixed links will increase substantially. The chosen minimum angles are thought by Ofcom to be feasible from the satellite network perspective and if this is so then it is appropriate to apply these.

Question 5: Do you have views on the benefits of additional co-channel access for gateways in 40.5-42.5 GHz in future, and how the interference risks we have identified could be mitigated in practice (including through gateway shielding and site locations, and discussions between gateway operators and the MNOs). Please provide supporting analysis, as appropriate.

The initial premise, that it is necessary to site Gateway Earth stations in urban areas, is itself questionable given the increasing availability of fibre connections outside these areas and the existence of Earth station facilities today in rural areas such as Madley in Herefordshire and Goonhilly in Cornwall. Indeed, the NGSO Gateway Earth stations generally require excellent visibility in all directions and work down to lower elevation angles than user terminals, meaning that many places in urban areas may be unsuitable given the number and height of surrounding buildings.

If it is necessary to site Gateway Earth stations in urban areas, it does seem plausible that a limited number of Earth stations might be successfully coordinated against future mobile deployments at 40 GHz. This might require the Earth stations to have some shielding to reduce interference distances and for them to be located away from the busiest places. However, once a Gateway earth station is coordinated and deployed, if they were to be afforded ongoing protection this would limit the ability of the holders of auction licences to fully exploit their spectrum for mobile. It would therefore be appropriate that any regulatory provisions should be compatible with enabling commercial arrangements between the concerned parties, whereby Gateway earth station operators would compensate 40 GHz auction licence holders for accepting constraints on mobile deployment that arise from protection of Gateway Earth stations sited in urban areas.

Question 6: Do you have any further comments on our Consultation proposals?

BT has no additional comments.