



Vodafone Response to
Ofcom consultation:
Expanding spectrum access for
satellite gateways in the 28 GHz
band



Expanding access to 28GHz

Vodafone welcomes the opportunity to respond to Ofcom's consultation regarding the prospect of expanding satellite gateway access to the 28GHz band.

We support making the UK an open and innovative market for the provision of service via satellites, particularly in the context of deployment of Non-Geo Stationary Orbit (NGSO) constellations. Where possible, we have sought to facilitate the deployment of satellite earth stations in the UK, by leasing spectrum in our licensed 28GHz bands (subject to recovery of our costs). We will continue to facilitate such usage, and regard Ofcom's proposals as complementary to this in that it will better allow adoption of wideband technologies operating across the 28GHz band. **We therefore support Ofcom's proposals in principle, subject to the caveats set out below.**

- Vodafone uses the 28GHz band for backhaul from our masts where it is not practicable or economically feasible to provide fibre connectivity. The stability and security of the links is therefore important, given a loss of connectivity would render the relevant mast inoperable, with consequent impact to availability of access to the emergency services in the area. It is essential that any satellite usage does not interfere with incumbent usage.

We note that the consultation does not set out any licence terms for the spectrum usage. We would expect that any licence will specify maximum Out-Of-Band (OOB) emission limits that apply, subject to agreement with the adjacent licensee. This would mean that if a satellite gateway operator were to strike deals with incumbent licensees to lease spectrum to "piece together" the frequencies to facilitate wideband usage, then the OOB constraints could be redundant as part of the preparatory technical exercise would ensure no undue interference to existing usage. Conversely, if a satellite gateway solely intended to operate in the spectrum vacated by Arqiva (27.8285-28.0525 GHz / 28.8365-29.0605 GHz) and guard bands, then OOB limits would apply because in principle the gateway operator would have had no communication/agreement with the adjacent incumbent licensee. We are open to alternate approaches that might be suggested by Ofcom, but note that these must be commensurate with protecting access to blue light services.

- The proposal as set out effectively ring-fences the spectrum concerned for satellite usage. Whilst supporting the proposal, we believe that Ofcom needs to keep a careful eye on utilisation. For example, we believe it unlikely that anyone will seek to deploy a satellite gateway for NGSO usage in the central London region vacated by Arqiva. If this proves to be the case, then it would be unfortunate to effectively quarantine 2x224MHz of spectrum in this area. Although we do not believe this warrants adopting a different approach to that suggested by Ofcom, the situation should be kept under review and Ofcom should be open to expanding access to the band for other applications should it remain unused.



- We note that Ofcom proposes maintaining a fee structure based on cost recovery for NGSO gateway licences, until this is reviewed “in due course”. We disagree on this point, and consider that licence fees should be set according to Administered Incentive Pricing (AIP) principles – otherwise it is most unfair that the incumbent Spectrum Access 28GHz licensees and new NGSO licensees are being charged on a different basis for usage of the same spectrum band. It cannot be credibly argued that Vodafone’s usage of 2x112MHz is preventing the deployment of individual fixed links (as next highest value user), whereas NGSO usage of 2x224MHz of the same spectrum causes no such issue. We note that for the period until 2026 when Arqiva retains rights at three locations, they *are* being charged on an AIP basis pro-rata for the 3 x 5km radii they retain compared to a relevant regional licence (i.e. approximately £10k/yr/location). Based on an assumption that the new gateway licences will have protection from the deployment of gateways within a similar distance, we cannot understand why administrative pricing would be adopted.

Vodafone UK
September 2023