
The upper 6 GHz band

An update on our sharing proposals

1. Our decision

What we have decided – in brief

There is a major global policy debate around the long-term future of the upper 6 GHz band (6425-7125 MHz). Several countries have already made it available for licence-exempt use including Wi-Fi, and it is also on the agenda of the next World Radiocommunications Conference for potential use by high power mobile technology including 5G. Industry interest is split between these two future uses.

Separately, in February 2022, we published a [consultation](#) proposing to add the band (6425-7070 MHz) to Ofcom's Shared Access licensing framework for low-power, indoor use, as an interim step to enable access to the band while further work to establish its long-term future is being done. Responses to this consultation did not support the proposals, and we have therefore decided not to proceed with them. We will continue to consider whether licence exemption or authorisation for high power licensed mobile use would be appropriate in this band and will engage in relevant international discussions.

Our consultation

- 1.1 In February 2022, we published a consultation proposing to add the upper 6 GHz band (6425-7070 MHz) to Ofcom's Shared Access licensing framework for low-power, indoor use. We said that we expected the licence to be particularly attractive for industrial and research applications, rather than large-scale consumer use.
- 1.2 We proposed that each licence would cover the full band for an area within a 50m radius of a central point. Power levels would be limited to a maximum of 250mW EIRP and there would be an annual fee of £320 per licence.
- 1.3 We said that these proposals would enable greater access to the 6 GHz band without impacting incumbent users or precluding future uses.
- 1.4 We noted industry interest in the use of the upper 6 GHz band for licence-exempt Radio Local Area Networks (RLANs), including Wi-Fi, or licensed mobile networks. Although these were out of scope of the February consultation, we said that we are participating in international work to look at this band, and that our proposals would not impact our ability to consider authorising these uses in the future. This is because either future uses could coexist with the proposed licences, or the licences could be revoked if technical coexistence were not possible.
- 1.5 We considered that adding the upper 6 GHz band to the Shared Access licensing framework would be appropriate as it would enable industrial, business and research users to use the band while further work to analyse whether and how licence-exempt RLANs or licensed mobile networks could use the band is still needed.

Consultation responses

- 1.6 Our consultation closed on 11 April, and we received 29 responses. The non-confidential responses are published on our [website](#). The majority of responses highlighted a preference for either a licence-exempt authorisation or allocation to mobile for this band. The main points raised are summarised as follows.

Interest in authorising the band for mobile use

- 1.7 Seven stakeholders (Huawei, Nokia, BT, Virgin Media O2, Cellnex, Vodafone and a confidential respondent) were in favour of Ofcom authorising the band for higher power licensed mobile networks in the long term. Huawei and two confidential respondents were concerned that our proposals might make this more difficult in the future; BT and Virgin Media O2 also thought that adding the band to the Shared Access framework could weaken our position at WRC-23.

Interest in authorising the band for licence-exempt use

- 1.8 Eleven stakeholders (Cisco, Federated Wireless, HPE, ITGL, Meta, IEEE 302, DSA, Wi-Fi Alliance, TalkTalk and two confidential respondents) were in favour of a licence-exempt authorisation either now or in the future. Cisco, TalkTalk and Freshwave agreed with our proposals as an interim option to begin facilitating RLAN use of the band.
- 1.9 Federated Wireless, DSA, Meta and a confidential respondent also highlighted a preference for an Automated Frequency Coordination (AFC) system to achieve a trade-off between the ability to revoke or make changes and flexibility for users. The responses suggested this could additionally allow higher power and outdoor use.

Low demand for our Shared Access proposal

- 1.10 BT, Huawei, Nokia, DSA and techUK indicated a lack of evidence for demand for licensed, low power indoor use. Some responses said that the uses we envisaged would be better covered by other bands, such as the existing licence-exempt 5925-6425 MHz spectrum or current other Shared Access bands, rather than by a new Shared Access product in the upper 6 GHz range.
- 1.11 Cisco, Cellnex, DSA, HPE, Nokia, techUK, Wi-Fi Alliance, Vodafone and a confidential respondent noted the significant uncertainty surrounding this band and the possibility for revocation of Shared Access licences later if a future allocation is made and we determine that coexistence is not possible. Respondents said this is likely to deter applications and investment as equipment generally has a lifecycle of 15-20 years, requiring certainty throughout this period of time.
- 1.12 Overall, we did not see strong evidence of stakeholder demand for Shared Access licences in the upper 6 GHz band in consultation responses.

International work

- 1.13 The 6425-7025 MHz band (Region 1) and the 7025-7125 MHz band (globally) are on the Agenda for WRC-23 (as part of Agenda Item 1.2) for possible identification to International Mobile Telecommunications (IMT) services.
- 1.14 Ofcom, is actively participating in the international preparations for WRC-23, including for the upper 6 GHz band. We have recently published a [call for input](#) on our preparatory considerations for WRC-23 to help us further gauge the views of interested UK stakeholders, including their views on adding an IMT identification to the band.
- 1.15 Ofcom is also actively participating in a work item within CEPT (WGSE/[PTSE45](#)) which is looking at a technical sharing and compatibility analysis between Wi-Fi/RLAN (using similar technical characteristics as those specified for the lower 6 GHz range) and incumbent services and applications in the 6425-7125 MHz range.

Conclusions

- 1.16 In light of consultation responses, lack of evidence of demand and the wider discussions surrounding the upper 6 GHz band, we have decided not to proceed with our proposals to add the band to the Shared Access licensing framework at present.
- 1.17 We will focus on continuing to assess whether high power licensed mobile or licence exemption could be a suitable use of the band, and analysing the impact of each use on incumbent users. We will feed into international work and discussions, including preparations for WRC-23.