Your response

Question	Your response
Question 1: Do you have any comments on our proposals to gather additional antenna parameters, and would you prefer Ofcom to specify a small number of antenna pattern 'envelopes' or for users to provide details of the specific antenna parameters in use for Ofcom to assess? Please provide reasons for your views.	GSOA agrees that including an antenna pattern is a good step towards assessing directional compatibility. Regardless of whether this antenna pattern is provided by the stakeholder or selected from Ofcom "envelopes", while being an estimate in many cases, it should still be binding as it defines the level of interference caused to other uses, including satellite Earth stations. One suggestion would be that details of the antenna systems to be used should be submitted at the stage of application. More importantly, seeking where a user antenna is intended to cover in terms of degrees in azimuth as well as the directionality of the antenna itself will be important information to assist in any coordination and will provide a significant benefit to an efficient spectrum sharing with other services in the future.
Question 2: Do you have comments on the suggested approach to enable user-led coordination in certain circumstances?	GSOA considers that user-led coordination agreements should be allowed only in cases where the impact of such coordination agreement to all existing usage, including satellite Earth stations, can be properly calculated in terms of aggregate interference, and where an applicant can gather the agreement of all potentially impacted licensees.
Question 3: Do you have any comments on our proposal to increase the power level of our Low Power product by 3dBm in the 3.8-4.2 GHz band?	GSOA acknowledges the benefits of raising the power level of the Low Power product, in view of alignment with CBRS. We also commend the approach of Ofcom to ensure that such change to existing assignments do not cause harmful interference to other users in the band. Any increased power level should consider potential interference exposure it may cause to adjacent sites. We also note that any use of AAS equipment should comply with existing OFCOM EIRP requirements already permitted in the Shared Access Bands, in order to respect the protection distances to satellite Earth stations.

Question 4: Do you have any comments on our proposal to remove the requirement for licensees holding a Low Power 3.8-4.2 GHz licence to keep a record of the address at which mobile terminals connected to an indoor base station will be used?	GSOA agrees with OFCOM's position that "Shared Access in this band should not be used as a mechanism to provide regional or national mobile networks". We also agree with the assessment that "it is highly unlikely that Low Power indoor deployments could be used to assemble a wide area network". Taking this into account, GSOA does not see an issue with removing this requirement for Low Power 3.8-4.2 GHz licensees, only with respect to indoor connectivity.
Question 5: Do you agree with our proposals to assume synchronisation between users, and coordinate base station to terminal instead of base station to base station in the 3.8-4.2GHz band? If no, please explain how other measures could increase sharing of the band.	GSOA notes that assuming synchronisation between users will lead to more dense deployments and therefore increased aggregate interference to existing users. While Ofcom consider that these proposals are not relevant to coordinating Shared Access users with satellite Earth stations (4.38), the resulting densification may indeed impact the protection of existing and future satellite operations. The 3.8-4.2 GHz being the last remaining C-band spectrum for satellite downlink, GSOA's view is that future FSS applications in the band should not be overly constrained by new private network deployments. Especially in high-demand areas, Ofcom would likely need to impose synchronization to mitigate interference issues. This would increase uncertainty to users operating in unsynchronized manner, as a requirement for synchronization may be enforced during the license duration. Although a similar approach may have worked in the 26 GHz band, propagation characteristics as well as the level of demand are different in C-band. An example of BBC using "medium power" 5G private networks for King Charles' coronation in London, provided in CEPT circles (ECC PT1_CG4G(24)002) with specific uplink to downlink ratios for PMSE applications, showed that synchronisation between users may not be possible. This confirms that without mandating synchronisation from the outset, it is impossible to guarantee that two neighbouring private networks will be synchronised, hence increasing the interference risks. Overall, an approach that is presuming synchronization and mandating a specific frame

	structure only when interference issues cannot be otherwise resolved favours newcomers such as traditional mobile network operators, thereby defeating the original purpose of localized, versatile use of this band. GSOA therefore seek clarity on how this synchronisation assumption is to be managed by private network operators in practice.
Question 6. Please indicate whether you support our preferred option of coordination at -88 dBm/20 MHz (based on I/N of + 3dB, at 1.5m) or a more conservative alternative of -91 dBm/20 MHz (based on I/N of 0dB at 3m), with reasons for your view.	GSOA has no comments on this Question.
Question 7: Do you agree with our proposals for an increase in BEL in 3.8-4.2GHz? If no, are there alternatives which you consider could better achieve similar results?	GSOA seeks clarification from Ofcom on which other assumptions apart from assuming the 30th percentile of the BEL distribution and assuming a 50/50 split of thermally efficient and traditional buildings have been used to arrive at the value of BEL of 14 dB in the 3.8-4.2 GHz band, noting it is the same value used for much higher frequencies (i.e. in mmwave bands)?
Question 8: Do you agree with our proposal that adjacent band protection for Shared Access users is in future limited to considering only the first 5 MHz above and below UK Broadband assignments?	GSOA has no comments on this Question.
Question 9: Do you agree with our assessment that, in circumstances where localised shortages of spectrum have occurred, pricing can be used to influence requested spectrum amounts?	GSOA indeed considers that when aa applicant applies for multiple small bandwidth licences to cover a larger bandwidth deployment on the same base station, they should expect higher pricing considering their collective bandwidth holding in a given location.
Question 10: Do you agree that we should take measures to reflect the impact of bandwidth, power levels and urban/rural location in our pricing approach for the 3.8-4.2 GHz band? Do you think there are other factors we should be taking into account?	GSOA has no comments on this Question.
Question 11: How do you consider the illustrative prices would impact your spectrum requirements and future deployment plans in the 3.8-4.2 GHz band? Please provide evidence in support of your view.	GSOA has no comments on this Question.
Question 12: Do you have any comments on our proposals to clarify the circumstances in which exceptions are available, the tests we	GSOA agrees with Ofcom that Medium Power deployment should be permitted in urban areas only through exceptions process and

will apply, and how this supports user flexibility outside our overarching rules?	commends Ofcom's proposal not to amend power levels for Medium Power systems, given the risk to increased sterilization effect. As highlighted in our reply to Question 4, GSOA agrees with OFCOM that the use of 3.8-4.2 GHz is intended for local private networks and not to provide regional or national mobile coverage. In that sense, it is critical not to increase the power which would defy the purpose of this band to allow flexibility for the implementation of tailor-made private network applications. In general, Medium Power deployment should be discouraged, noting the large sterilisation areas shown in Table 5.3. This is critical to avoid a repetition of previous experiences, where higher power application such as commercial nationwide 5G services implicates the definitive migration of other services.
Question 13: Do you agree with our overall approach based around refining our existing coordination framework for Shared Access, whilst monitoring future opportunities for more user led and outcomes led coordination where evidence suggests it would be of benefit?	GSOA agrees that the framework should be flexible enough to allow changes in the future, not only for user and outcomes led coordination, but also to reflect possible changes in other usage, including by satellite. The framework should be flexible enough for example to allow new satellite use cases, such as direct-to-device using C-band.
Question 14: Do you agree with our assessment of the potential impact on specific groups of persons?	GSOA has no comments on this Question.
Question 15: Do you agree with our assessment of the potential impact of our proposal on the Welsh language? Do you think our proposal could be formulated or revised to ensure, or increase, positive effects, or reduce/eliminate any negative effects, on opportunities to use the Welsh language and treating the Welsh language no less favourably than English?	GSOA has no comments on this Question.
Question 16: Do you have any other comments on the proposals set out in this document?	This consultation focused mainly on reducing constraints for private network applications. The coordination process for sharing between private network is proposed to be more flexible and less conservative. GSOA is however curious on what those modifications would imply with regards to safeguarding both current and future use of the 3.8-4.2 GHz for FSS, including

	for new satellite use cases such as direct-to-device connectivity using C-band. GSOA is also interested in future actions and proceedings that OFCOM is planning to execute for sharing regarding other frequencies such as mmWave bands, and particularly above 40 GHz, where propagation characteristic may lead to very different sharing conditions.

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