

## Your response

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<p><b>Question 1: Do you have any comments on our proposal to make Medium Power licences (42 dBm EIRP, up to 10m height) commonly available in urban areas across most of the UK, for the 3.8-4.2 GHz and 1800 MHz bands?</b></p>	<p>Confidential? – N</p> <p>Shure strongly opposes the proposal to permit Medium Power licences in urban areas as a standard product in both the 3.8 – 4.2 GHz band and the 1800 MHz band.</p> <p>Shure is generally supportive of Ofcom’s adoption of a spectrum management model which retains the agility to make reasonable adjustments as its use evolves. However, this proposal represents a substantive departure from the overarching principle underpinning the shared access bands, which is,</p> <p><i>‘to ensure that lack of access to the radio spectrum is not an inhibitor of innovation and that new users who need to access spectrum are able to do so under a simple and common approach.’</i> [s.2.4 of July 2019 Statement]</p> <p>Ofcom expands on those policy objectives in this consultation,</p> <p><i>‘We want to <b>facilitate innovation and growth and ensure the optimal use of the spectrum by providing opportunities for an increasing set of use cases and business models...We have focussed particularly on how to ensure as many users as possible can access the spectrum while managing the risk of interference.</b>’</i>[s.2.10]</p> <p>This proposal directly contradicts those aims and risks materially constraining access to spectrum for Low Power users in urban areas, which are the most promising and likely locations for current and future Low Power deployments.</p> <p>The evidence base provided for the proposal is thin and seeks to accommodate one type of user at the expense of denying spectrum access to others, thereby stifling innovation and limiting competition.</p> <p>A few Medium Power users could preclude access by many more Low Power users. This would not only numerically limit the number of users able to access spectrum, the resultant effect of excluding Low Power users would likely constrain the emergence of innovative and heterogeneous use cases.</p>

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	<p>The proposal would also have a disproportionate effect on the 1800 MHz band, both in the propensity to sterilise what is already a comparatively small amount of available spectrum, and in its effect on the adjacent 1880 – 1900 MHz DECT harmonised band, which is extensively used for many applications, both indoor and outdoor, predominantly in urban areas.</p> <p>Ofcom provides no accompanying assessment of this interference scenario (adjacent channel interference to DECT from Medium Power use in 1800 MHz) and so it remains unclear how a fully informed spectrum management decision can be taken in this respect.</p>
<p><b>Question 2: Do you have any comments on our proposed balancing measures:</b></p> <p><b>i) to continue to only grant Medium Power licences in the Greater London area (as defined in our mm Wave work) by exception, applying the ‘premises sterilisation’ test?</b></p> <p><b>ii) to apply a 100 MHz limit to the amount of spectrum a licensee can transmit at Medium Power in a particular urban area?</b></p> <p><b>iii) to apply a new price as part of this liberalisation, set at £160 per 10 MHz for Medium Power licences in urban areas?</b></p>	<p>Confidential? – N</p> <p>As stated above, Shure strongly opposes Medium Power use (other than by exception) in all urban areas.</p> <p>i. Ofcom has not explained why other major cities (Manchester, Liverpool, Bristol, Birmingham, etc.) fundamentally differ from London, other than in London’s current spectrum availability constraints and demand for SAL. Ofcom’s justification for this proposal appears rooted not in securing the optimal use of spectrum but in reducing the administrative burden for itself and in reducing the friction experienced by applicants for an exception,</p> <p><i>‘As many exception requests are for Medium Power, this should streamline the application process for many users’ (p.4)</i></p> <p>There are sound spectrum management reasons why Medium Power in urban areas was made subject to exception to begin with. The fundamental justification against Medium Power in urban areas has not changed and a high volume of applications does not by itself provide sufficient cause to override those considerations on spectrum management grounds, given the detrimental impact on Low Power users. In what is still a comparatively young sharing framework, it does not account for potential future demand in large cities other than London, nor recognise</p>

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	<p>that all cities/urban areas will be where future demand will concentrate. Permitting Medium Power deployments in urban areas will severely disincentivise or constrain Low Power users in precisely the areas where they would wish to deploy. We also believe that the effect of the increase by 3 dB of the power limit for Low Power deployments needs to be fully evaluated before such a change is considered.</p> <p>ii. It is not clear how Ofcom derived the proposed range over which the 100 MHz limit applies. We think it should be significantly larger, in the order of a few kilometres, but we would like Ofcom to provide clarification to allow an informed opinion by stakeholders, and before it takes a decision.</p> <p>iii. Shure agrees that Medium Power licences in urban areas should be subject to an increase in the licence fee. However, significant questions remain about whether the proposed higher fee appropriately reflects the likely severity of impact on Low Power users in urban areas. For example, Ofcom says that,</p> <p><i>‘setting a moderately higher fee for Medium Power in urban areas than for Low Power can help mitigate the risk of discouraging investment and also help encourage efficient use of spectrum...’[s.5.25]</i></p> <p>However, elsewhere Ofcom states that,</p> <p><i>‘the price increase would be conservative relative to the difference in the sterilisation effect; we estimate that Medium Power might typically sterilise between 3-7 times the area of Low Power in urban locations.’ [s.5.26(ii)]</i></p> <p><i>‘We think it unlikely that this modest price increase would materially harm business cases where Medium Power would be beneficial.’ [s.5.26(iii)]</i></p> <p>A knowingly ‘conservative’/‘modest’ price increase for a proposed measure with a predictably adverse spectrum sterilisation effect to the detriment of Low Power users is not going to encourage efficient use of spectrum. The proposed</p>

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	<p>fee also betrays a clear bias to one type of user over another, with little regard to the opportunity cost of the sterilisation effect caused by Medium Power to Low Power business cases.</p>
<p><b>Question 3: Do you agree with our proposal to remove the TRR in relation to Low Power outdoor base stations in 3.8-4.2 GHz?</b></p>	<p>Confidential? – N</p> <p>Shure agrees with this proportionate change.</p>
<p><b>Question 4: In relation to our impact assessment, do you agree with our assessment of the potential impact of the further proposals we are making?</b></p>	<p>Confidential? – N</p> <p>The impact assessment is short on quantitative detail. For example, there is no technical analysis on the potential effect on the DECT band in 1880 – 1900 MHz from a proposal to permit Medium Power deployments in the adjacent 1800 MHz band.</p> <p>Elsewhere, the impact assessment constitutes little more than a summary of Ofcom’s proposals. For example, in ‘Impact on potential future users’ Ofcom states simply, ‘For future users who can meet their needs in urban areas with a Low Power licence, there will be no negative effect.’ [s.6.26]</p> <p>But what of Low Power users who would <b>not</b> be able to meet their needs in urban areas sterilised by Medium Power deployments (some 3-7 times the area of Low Power in urban locations by Ofcom’s own estimate)? The impact assessment is silent on that possibility and considers the potential effects only through the eyes of Medium Power users. For example, in its discussion of the impact of the proposed Medium Power fee, which fails to consider whether the pricing, described by Ofcom as both ‘modest’ and ‘conservative’, may disincentivise optimal use of spectrum, or what alternatives were considered to reduce friction in the exception application process.</p> <p>Another example is s.6.17 (‘By removing the need to obtain an exception to access Medium Power in urban areas, we are simplifying the licensing process for users.’). This is inaccurate. Ofcom would be simplifying the licensing process for <b>one group of users</b>, potentially at the expense of another group. However, information about the</p>

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	<p>potential effect on Low Power users is scant and is not considered in the 'impact on investment and innovation' section either, even though the negative effect on Low Power use cases, and on innovation, from greater Medium Power deployment could be considerable.</p>
<p><b>Question 5: In relation to our equality impact assessment, do you agree with our assessment of the potential impact of the further proposals we are making on specific groups of persons?</b></p>	<p>Confidential? – N</p> <p>No comment to make on this assessment.</p>
<p><b>Question 6: In relation to our Welsh Language impact assessment, do you agree with our assessment of the potential impact of our further proposals on the Welsh language?</b></p> <p><b>Do you think our further proposals 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?</b></p>	<p>Confidential? – N</p> <p>No comment to make on this assessment</p>
<p><b>Question 7: Do you have any further comments on our proposals?</b></p>	<p>Confidential? – N</p> <p>Ofcom has previously shown boldness and clarity in its ambition for the Shared Access Licence framework. Its replication, for example in Norway and more recently in CEPT, provides vindication. However, Shure is concerned by some of these latest proposals, which seem poorly reasoned and contradict the original policy aims underpinning the SAL framework. The evidence base underpinning Ofcom's thinking also appears thin.</p> <p>Referring to the July 2019 Statement ('Enabling wireless innovation through local licensing'), a key policy objective was to ensure that lack of access to the radio spectrum does not prevent innovation. It stressed that Medium Power deployments would be limited to rural areas where they are unlikely to constrain low power users.</p>



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	<p>Balance appears to have been surrendered. Ofcom has repeatedly highlighted the sterilisation effect on spectrum access that would be caused by Medium Power deployments in urban areas. It has also highlighted the lack of an evidence base for related claimed spectrum requirements and pricing (see s.5.24 for example). Yet, on the back of this, acknowledging that, <b>‘Medium Power use will sterilise a much larger area than Low Power and can therefore impact the number of innovative users we can accommodate’</b> [s.5.25], it is making the proposal regardless and in direct contradiction of its stated policy objectives.</p> <p>There is also an unnecessary fixation on synchronisation, which can only be achieved with the same technology and similar frame structures. This is inherently incompatible with the principle of technology neutrality. The decisions and further consultation proposals favour 3GPP technology and a comparatively narrow set of use cases with similar UL/DL ratios at the expense of non-3GPP 5G technologies like DECT NR+, or new technologies which might yet emerge. A future consideration of synchronisation requirements in the 3.8 – 4.2 GHz band (footnote 26) is concerning for the same reasons.</p> <p>The ‘Spectrum Strategy commitment to achieving an efficient balance between interference protection and opportunities for other users’ (s.3.23) is incompatible with Ofcom’s accommodation of creeping use of the 3.8 – 4.2 GHz band by some stakeholders to carry public network traffic or to generate additional revenue from such public network traffic (s.4.4). It appears contradictory to claim to promote innovation while simultaneously making proposals that demonstrably favour one type of technology and user, and which Ofcom knows could sacrifice future spectrum access opportunities for many Low Power users.</p> <p>Shure remains available to discuss the points raised above and thanks Ofcom for the opportunity to respond.</p>

