

Your response

Question	Your response
<p>Question 1: (Section 3) Do you agree with our proposal for a single authorisation approach for new users to access the three shared access bands and that this will be coordinated by Ofcom and authorised through individual licensing on a per location, first come first served basis? Please give reasons supported by evidence for your views.</p>	<p>Confidential? – N</p> <p>Yes in principle, but this depends on whether Ofcom could cope with the workload, if these models suddenly gained broad support. There are possible scenarios in which hundreds or thousands of simultaneous requests could occur.</p> <p>Any process would need to be able to scale effectively – which may need some forms of automation. In any case, Ofcom should set itself targets for response timelines – and enforce rapid responses where 3rd-parties are needed to contribute.</p> <p>There is also a potential risk of “squatting” by organisations wanting to resell rights, or preclude use to others (similar to web domain names etc). Some indication of good-faith would be useful.</p>
<p>Question 2: (Section 3) Are there other potential uses in the three shared access bands that we have not identified?</p>	<p>Confidential? – N</p> <p>An important potential use-case is for Wi-Fi type technology (or at least, 802.11 if Wi-Fi Alliance does not certify & extend use of its brands). This has broadly equivalent applications to private LTE/5G, but could potentially be more cost-effective because of cheaper devices, lower patent-licensing costs, and a larger pool of installation/operations engineers. There are understood to be various existing examples of 802.11 variants that operate in licensed bands, and also 802.11y, a 2008 standard for 3.6GHz usage that could possibly be adapted.</p> <p>It is perhaps worth separately identifying private mobile networks from neutral-host provision. The latter would be specifically designed as a wholesale play, for roaming or MVNO-type access by macro-network providers (eg in-building, or on-campus).</p> <p>Another use-case is for international telecoms providers to offer localised services in particular venues. It could enable “un-roaming”, for example for visitors to a manufacturing plant owned & operated by a foreign investing company.</p>

	<p>The last option is to for FWA to extend from residential to business use, either for small businesses’ broadband connections, or perhaps for facilities wanting direct wireless access to a local “edge computing” data-centre or network-exchange point, with minimum latency and number of “network hops”. This could either be done on a standalone basis, or as part of a hybrid (or backup/failover) model. It should be noted that Amazon’s interest in the US CBRS band may relate to this use-case, although the details are currently opaque.</p>
<p>Question 3: (Section 3) Do you have any other comments on our authorisation proposal for the three shared access bands?</p>	<p>Confidential? – N</p> <p>N/A</p>
<p>Question 4: (Section 3) What is your view on the status of equipment availability that could support DSA and how should DSA be implemented?</p>	<p>Confidential? – N</p> <p>N/A</p>
<p>Question 5: (Section 4) Do you agree with our proposal for the low power and medium power licence? Please give reasons supported by evidence for your views.</p>	<p>Confidential? – N</p> <p>In general, yes. It seems very forward-thinking and fits with the demand for localised private and indoor connectivity. Please also see my article & podcasts on the proposals here:</p> <p>https://disruptivewireless.blogspot.com/2019/01/private-cellular-networks-why-ofcoms-uk.html</p>
<p>Question 6: (Section 4) Are there potential uses that may not be enabled by our proposals? Please give reasons supported by evidence for your views.</p>	<p>Confidential? – N</p> <p>There are potential use-cases that don’t fit well with circular-radius coverage model, eg neutral-host networks being built along road/rail/waterways or along electricity lines</p>
<p>Question 7: (Section 4) Do you agree with our proposal to limit the locations in which medium power licences are available? Please give reasons supported by evidence for your views.</p>	<p>Confidential? – N</p> <p>It is not clear how this would apply to some larger-area business locations such as ports, airports, power stations, large industrial plants, on/offshore wind farms and so on. These could be some of the major users of this spectrum model.</p>
<p>Question 8: (Section 4) Do you have other comments on our proposed new licence for the three shared access bands?</p>	<p>Confidential? – N</p> <p>It may be necessary to consider 3-dimensional licenses. Some buildings and structures are >50m high (office towers, wind turbines etc), so it is unclear how licensing works (is it a hemisphere with 50m radius? a 50m cylinder to the upper atmosphere?). This could also apply to the</p>

	medium power licenses, eg for drone usage if the CAA permits.
Question 9: (Section 4) Do you agree that our standard approach to non-technical licence conditions is appropriate? Please give reasons supported by evidence for your views.	Confidential? – N N/A
Question 10: (Section 4) Are you aware of any issues regarding numbering resources and Mobile Network Codes raised by our proposals which we have not considered here?	Confidential? – N Some potential use-cases (eg for enterprise private communications, blending private mobile + voice/UCaaS propositions), could require substantial number resources for the largest employers. There are also scenarios where MNC codes could be requested by significant numbers of new providers, especially if there is automation involved. For instance, imagine the combination of private networks with a cPaaS (comms platform as a service, similar to Twilio & others), which could allow enterprises or application-developers to create entirely separate networks, with their own identities. This could enable some very innovative models for multinational businesses or software companies.
Question 11: (Section 5) Do you agree with the proposed technical licence conditions for the three shared access bands? Please give reasons supported by evidence for your views.	Confidential? – N N/A
Question 12: (Section 5) Are there other uses that these bands could enable which could not be facilitated by the proposed technical licence conditions? Please give reasons supported by evidence for your views.	Confidential? – N N/A
Question 13: (Section 5) Do you agree with our proposed coordination parameters and methodology? Please give reasons supported by evidence for your views.	Confidential? – N N/A
Question 14: (Section 5) What is your view on the potential use of equipment with adaptive antenna technology (AAS) in the 3.8-4.2 GHz band? What additional	Confidential? – N N/A

<p>considerations would we need to take into account in the technical conditions and coordination methodology to support this technology and to ensure that incumbent users remain protected?</p>	
<p>Question 15: (Section 5) Do you agree with our proposal not to assign spectrum to new users in the 3800-3805 MHz band and the 4195-4200 MHz band?</p>	<p>Confidential? – N</p> <p>N/A</p>
<p>Question 16: (Section 6) Do you agree with our fee proposal for the new shared access licence? Please give reasons supported by evidence for your views.</p>	<p>Confidential? – N</p> <p>It seems a reasonable level, that should encourage innovation and experimentation. It could catalyse better access to network resources – and also have spin-off benefits in creating new UK wireless businesses with global opportunities.</p>
<p>Question 17: (Section 7) Do you agree with our proposal to change the approach to authorising existing CSA licensees in the 1800 MHz shared spectrum? Please give reasons supported by evidence for your views.</p>	<p>Confidential? – N</p> <p>N/A</p>
<p>Question 18: (Section 8) Do you agree with our proposal for the Local Access licence? Please give reasons supported by evidence for your views.</p>	<p>Confidential? – N</p> <p>Yes. I think in principle it is an innovative approach to improving coverage, and ensuring efficient use of a rare asset.</p> <p>It is essentially “use it, or don’t complain if somebody else does, until you’re ready to use it”, which appears to be an elegant solution to a real problem – and encourages innovation as well.</p>
<p>Question 19: (Section 8) Do you have any other comments on our proposal?</p>	<p>Confidential? – N</p> <p>The proposals appear to be a good compromise between encouraging existing license-holders to build out coverage in their bands, and to enable a mechanism for secondary re-use if not.</p> <p>Potentially, this model, if successful, could be held up as an international example of imaginative spectrum-licensing policy, in the same way that the US CBRS band is today.</p>

<p>Question 20: (Section 8) What information should Ofcom consider providing for potential applicants in the future and why would this be of use?</p>	<p>Confidential? – N N/A</p>
<p>Question 21: (Section 8) Do you agree with our proposal to have a defined licence period and do you have any comments on the proposed licence term of three years?</p>	<p>Confidential? – N</p> <p>Yes - The 3-year timescales also provide a good way of holding operators to their commitments, if they reject applications on the basis of intention to build.</p> <p>The timeframes for the local access licenses also allows for additional future innovation around even more dynamic spectrum allocation – for instance a hypothetical future marketplace based on decentralisation / blockchain.</p>
<p>Question 22: (Section 8) Do you have any other comments on the proposed Local Access licence terms and conditions?</p>	<p>Confidential? – N N/A</p>
<p>Question 23: (Section 8) Do you agree with our fee proposal for the new local access licence? Please give reasons supported by evidence for your views.</p>	<p>Confidential? – N N/A</p>