Your response

Question	Your response
Question 1: Do you agree with the planning principles and methodologies that we will use in our work to refine the coverage area plan for small-scale DAB?	I will respond later
Question 2: Do you agree with our proposed approach to the required technical licence conditions for small-scale radio multiplex services, and the proposed amendments to the Digital Radio Technical Code?	Signal polarisation 3.69 On 11 June 2019, Ofcom published updated versions of its Digital Radio Technical Code and Guidance, following consultation earlier in the year. Although we were not specifically consulting on making changes to the requirements for the signal polarisation used by DAB transmitters, we received some responses suggesting that we should permit use of horizontal as well as vertical polarisation (the Code currently permits vertical polarisation only). 3.70 Although mixed polarisation is used for FM broadcasting, the circumstances are different to those for DAB and we could see no compelling case for permitting horizontal polarisation to be used. *Not horizontal polarisation alone – agreed – but there is for mixed/slant polarisation.* Specifically, FM broadcasts need to cater for an installed base of rooftop receiving aerials which are horizontally polarised for historical reasons. *Historically, yes, but no longer a valid reason. When Band II FM was introduced it was decided that it would be transmitted with horizontal polarity for the simple reason that a horizontal domestic receive antenna would take up less space when mounted on the same pole as a vertical Band I TV antenna.* Horizontally polarised receiving aerials are better than vertical ones when dealing with reflected signals (particularly in hilly/mountainous areas) which affects analogue radio signals like FM. *Agreed – but reflections alone are not the major consideration here.* 3.71

	Neither of these constraints applies to DAB, *(debatable when considered simply as Band III propagation)* ……..for which there is no installed base of horizontal receiving aerials and aerials on cars are generally vertical. *(policy for at least 10 years has been for vehicle antennas to be of a non-specific polarity design for optimal response to any polarity format.* DAB is also a technology that is largely immune to reflections. *(the data content may be – the RF signal energy level is not.* Adding a horizontal component to transmissions *(we are not considering "adding a horizontal component" here)* ……would make antenna installations more complex, *(moderately as a one-off problem – but thereby also more efficient for the task in hand)* …….would lead to increased transmitter power consumption *(only 0.5dB (12%) for a Lindenblad-format antenna – which if sacrificed would have only a marginal effect compared with physical conditions such as temperature, humidity, weather, foliation, topography.)* ……and therefore a greater environmental impact, as well as potentially increasing costs for licensees. *(not substantiated in view of the above)* Our initial proposal is therefore to continue requiring vertical polarisation only is used. 3.72 We are however open to receiving any evidence of the benefits or disadvantages that adding a horizontal component *(again – "using mixed/slant" as opposed to "adding horizontal"* …….would have for small-scale DAB, or for DAB services more generally. We will review our position on signal polarisation and consider permitting use of horizontal polarisation as well as vertical polarisation *(see above)* ……..if we receive evidence that it would be beneficial to do so. *(see below in "Answer")*

	Question 2: Do you agree with our proposed approach to the required technical licence conditions for small-scale radio multiplex services, and the proposed amendments to the Digital Radio Technical Code? *Answer: In principal, yes, but with the provisos expressed above.* *However, we suggest that the formulation of the document is inaccurate in two specific areas:* 1. *It presumes that signal polarity at the point of reception is the same as, or bears a predictable relationship to, that at propagation. In practice received signal polarity particularly in fringe areas can be totally random as a result of a combination of a number of well-documented physical effects.* 2. *It states that using mixed/inclined polarity is not relevant because DAB is a technology that is largely immune to reflections. Its benefits are not confined to that aspect alone. Regardless of the nature of signal content, adequate signal level together with lack of phase conflict is a primary requirement before decoding takes place. Inclined polarity in particular is employed to enhance penetration and thereby improve signal level.* *There is adequate anecdotal evidence for improvements to signal penetration by the use of slant polarity at a notional 100 MHz and similar effects will be evident at 200 MHz* *We urge Ofcom to institute a field propagation trial as it did for data generation.* *We can provide sites and the appropriate test antenna equipment to facilitate this. The time required to produce a result will be just a few days.*
Question 3: Do you agree with Ofcom's proposed approach to setting the level of reserved capacity for C-DSP services on small-scale radio multiplex services?	I will respond later

Question 4: Do you agree with the factors we are proposing to take into account of in deciding the order and timescale in which Ofcom will advertise small-scale radio multiplex licences?	I will respond later
Question 5: Do you agree with our proposed approach for assessing the technical plans submitted in small-scale radio multiplex licence applications?	I will respond later
Question 6: Do you agree with our proposed approach for assessing the ability of applicants to establish their proposed small-scale radio multiplex service?	I will respond later
Question 7: Should Ofcom require that the studio of a C-DSP licensee be located within the coverage area of the small-scale radio multiplex service it plans to broadcast on? Please explain the reasons for your view.	I will respond later
Question 8: We propose that holders of corresponding analogue community radio and DSP licences apportion their income equally across their licences, unless there are compelling reasons why a different apportionment is reasonable. Do you agree with our suggested approach?	I will respond later
Question 9: Do you agree with our proposal that a prospective C-DSP service provider will be able to apply for a C-DSP licence once we have invited applications for the small-scale radio multiplex licence upon which their proposed C-DSP service is intended to be provided?	I will respond later