Dear Ofcom,

Angel Radio welcomes the opportunity to respond to Ofcom's DAB Technical Code consultation. 2019 is the year in which Angel Radio celebrated its 20th anniversary of FM broadcasting to older people with our unique mixture of music, information and entertainment. We have been broadcasting on DAB for nearly 10 years, and longer online. On 19th August 2015 we launched the Portsmouth small scale DAB multiplex, one of the leading multiplexes in the Ofcom/DCMS small scale DAB trial.

Question 1: Do you agree with our proposed changes to the ACI/blocking procedures?

We welcome Ofcom's decision to review the existing ACI procedures. In particular, we welcome the timescales mentioned for third party multiplex operators to respond to proposals to launch new transmitters. However, we are disappointed that Ofcom does not state a timescale for itself to reach a final decision where one or more multiplex operators are in dispute over the impact of a site. We suggest that Ofcom should set itself a target of 25 working days to reach a decision.

Angel Radio is also concerned that the description of Ofcom's proposed category Red is too wide.

When further small scale DAB multiplexes are licenced, it is unlikely that the transmitters used will be highly powered on traditional large masts. Transmitters are likely to be lower powered compared to established multiplexes, and as a result will need to be in more central, urban, locations near to the potential listeners. The development of small scale DAB will be severely constrained if the transmitters are classed as Red and not permitted, even if mitigating factors such as high field strength of established multiplex operators, type of antenna proposed etc, just by virtue of being in an urban area or near a busy road.

For example, Angel Radio is shortly planning to launch a 5w ERP transmitter to fill in a small coverage hole. This transmitter is situated in a very residential area, however we believe with our low power, and the high incoming field strength of the other available multiplexes is unlikely to be contentious. Yet under Ofcom's proposed definition, this would be a category Red site.

We also note that our original DAB transmitter at Highbury College would have been a site in the Red category due to it being in a residential area and next to the A27. For the avoidance of doubt, Angel Radio appreciates that ACI can be an issue to DAB reception. Angel Radio agrees that it is important to ensure new transmission sites do not damage coverage for established multiplexes. However, Angel Radio believes that transmission sites in urban areas and/or next to main roads can be acceptable if certain criteria are met.

Angel Radio believes it is not commercially viable for small scale DAB operators to provide population counts when calculating the effect of ACI, and would suggest that either Ofcom make the UKPM software freely available to multiplex operators or make the requirement to provide population counts optional, not compulsory.

Question 2: Do you have any comments on the adoption of the new ETSI mask characteristic and on the potential use of the non-critical spectrum mask?

We support Ofcom's proposals on the adoption of the non-critical spectrum mask.

Question 3: Do you agree with our proposed changes on DAB+ audio encoding?

Angel Radio was the first DAB multiplex operator in the UK to launch regular DAB+ broadcasts. We strongly believe that it should be a matter for individual radio services to elect whether or not they opt for DAB or DAB+ audio encoding. Each radio service should be free to decide whether or not DAB+ is appropriate based on commercial and audience considerations.

Angel Radio broadcasts some of its own services in DAB+, and we made this decision based on what we believed to be appropriate on a service by service, multiplex by multiplex basis. Likewise, Angel Radio offers DAB+ to services on our own DAB multiplex in Portsmouth. Angel Radio therefore welcomes Ofcom's proposed approach.

Question 4: Do you agree with our other proposed revisions to the Digital Radio Technical Code outlined in Section 6 of this document? Do you have any views on alternative models for dealing with the administration of Sid and TII codes?

The importance of SId codes should not be underestimated. There are severe consequences when SId codes are incorrectly allocated or applied. Scenarios include:

- Different services being allocated the same SId in areas where multiplexes overlap may cause receivers to only present one service to the listeners instead of both.
- A branded service with different audio on overlapping multiplexes, but with the same SId will prevent listeners from selecting the audio they want to hear.
- Radios not correctly following services or sending listeners to the wrong service on FM-FM, DAB-FM or FM-DAB
- Confusing 'orphan' labels on DAB, where a service has changed SId, but the old SId was withdrawn without being renamed (or without a sufficient time).

We believe that Ofcom should be clearer on it's policy to the way it allocated SIds to give clear advice on how SIds are allocated as there hasn't always a consistent approach to this in the past. Angel Radio is not against the principle of a body other than Ofcom administering SIds, but we cannot stress enough the risks from not administrating SIds correctly.

We support Ofcom's revisions to the Code, but wish to make the followings comments. DAB transmission must currently have vertical polarity only under the Guidance, with horizontal not permitted. While Angel Radio does not have any immediate intention to conduct horizontal or mixed polarity transmission, we believe that the Guidance should at least allow for horizonal or mixed polarity transmission should there be circumstances which require it.

As Ofcom is now using frequency blocks as low as 7D, low powered repeaters should be permitted to operate below frequency block 10B, to encompass the 7D to 12D frequency blocks.

We believe that only permitting HE-AACv2 for DAB+ is too narrow. Multiplex operators and broadcasters should be able to use any permitted AAC profile. For example, where our Angel Radio service is broadcast in DAB+ we operate using HE-AACv1 because parametric stereo is not required for our content. In Portsmouth on our own multiplex, we have operated high bitrate services using

AAC-LC. The proposal by Ofcom to permit HE-AACv2 would prevent higher bitrate DAB+ services, and we ask Ofcom to revise the Guidance to permit the full range of AAC iterations.

Angel Radio welcomes Ofcom's proposed changes in relation to the FIG repetition rates. We have demonstrated to Ofcom that by using the Factum Radioscape Enmuxa multiplexer we can comfortably transmit more than 20 services while maintaining compliance with repetition rates in the MCI/FIC.

Queston 5: Do you agree with our other proposed revisions to the Technical Policy Guidance for DAB Multiplex Licensees document outlined in Section 7 of this document?

In addition to our response to Question 1, Angel Radio would like to respond to the provisions concerning error protection levels.

While we agree that UEP level 3/EEP level 3a should be the minimum protection level, a multiplex operator should be able to improve the protection level of a service beyond this, but still retain the right to be able to lower the protection level back to UEP level 3/EEP level 3a. Ofcom's current approach is that such a proposal to raise error protection *might* not be able to be reversed at a later date (if additional coverage was not provided).

Although Angel Radio is unaware of Ofcom ever refusing a request to drop a service from a higher level of error protection back to UEP level 3/EEP level 3a, we would appreciate the Guidance being updated to provide this flexibility to allow services to change protection level without the burden of investing in further coverage.