
Licensing small-scale DAB

How Ofcom will exercise its new functions

[Licensing small-scale DAB: how Ofcom will exercise its new functions](#) – Welsh translation

STATEMENT:

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1. Overview

- 1.1 Small-scale DAB is a new way of transmitting digital radio that uses advances in software and low-cost computer technology to provide a flexible and inexpensive approach to the terrestrial broadcast of digital radio services to a relatively small geographic area.
- 1.2 This statement sets out how Ofcom will license small-scale DAB using the powers that Government has given us under the Small-scale Radio Multiplex and Community Digital Radio Order 2019. Our conclusions follow the consideration of responses to the consultation we ran on small-scale DAB licensing between July and October 2019.

Key decisions

Ofcom believes that small-scale DAB represents an appropriate use of spectrum, meeting demonstrable demand from community radio, smaller commercial radio stations and new entrants for an affordable pathway to terrestrial digital radio. This, in turn, will help to ensure the continued availability of a diverse range of radio services across the United Kingdom, on a platform which accounts for an increasing amount of radio listening.

We will advertise licences for small-scale DAB in batches – two of the batches will each consist of licences for services in a specified region of the UK, due to a lack of sufficient suitable spectrum in these areas. The other batches will comprise licences for services in different parts of the UK, selected having regard to eight specified factors which are set out in this statement. Applications for the new Community Digital Sound Programme ('C-DSP') licences will open at the same time as the publication of multiplex licence advertisements.

We will keep under review the uptake of small-scale radio multiplex licences and, should spectrum resources allow, we will then consider whether to advertise additional local radio multiplexes, where there is demand.

We have decided, in line with the legislative intent and for all the small-scale multiplex licences we advertise, to apply the 40% limit on population of a local multiplex that can be covered by an overlapping small-scale multiplex (or by multiplexes with the same licensee).

We will now not be requiring all programme services carried by small-scale radio multiplex services to be broadcast using the DAB+ standard, as we had proposed in the consultation.

The 'Key Commitments' of C-DSP licensees will focus principally on the provision of 'social gain', accountability to the target community, and the ability of members of that community to participate in the service. Relative to analogue community radio, the Key Commitments will focus less on specific programming requirements.

As also proposed in the consultation, we will require that the main studio of a C-DSP service is located within the coverage area of the small-scale radio multiplex service upon which the C-DSP service is provided.

2. Background

- 2.1 Digital radio now accounts for 58.5% of total radio listening hours in the UK, with listening to terrestrial DAB radio accounting for 70% of those digital listening hours¹. Ofcom has for some time acknowledged the consumer benefits in facilitating a migration path to DAB for small analogue commercial and community radio stations. We have also recognised the need to provide an affordable route to broadcasting via terrestrial digital radio for new entrants, to provide listeners with new and innovative listening choices.
- 2.2 The concept of small-scale DAB was first tested by Ofcom engineer Rashid Mustapha MBE in 2012. Subsequently the Government funded a two-year programme of work and trials, licensed and facilitated by Ofcom, which demonstrated that small-scale DAB can provide a robust and reliable means for small analogue stations to broadcast on digital, as well as for entrants wishing to launch new radio services on a digital terrestrial platform. Our [technical report](#) on these trials was published in September 2016.
- 2.3 On 25 October 2019 the Small-scale Radio Multiplex and Community Digital Radio Order 2019 ('the Order') came into force, which modifies aspects of the Broadcasting Act 1996 (the '1996 Act') for the licensing of small-scale DAB across the UK. It gives Ofcom the power to license new small-scale radio multiplex services², and will provide for a new category of programme service licence, the Community DSP ('C-DSP') licence.
- 2.4 On 5 July 2019, in anticipation of Parliament approving the Order, Ofcom published a consultation seeking views from stakeholders on our proposed spectrum planning and licensing process for small-scale radio multiplex licences, and the proposed licensing process for C-DSP licences. This document sets out our final decisions on the matters covered by the consultation, following careful consideration of the 129 responses we received.

Legal background

- 2.5 Ofcom's general responsibilities for spectrum management are set out primarily in the Communications Act 2003 (the '2003 Act') and the Wireless Telegraphy Act 2006 (the '2006 Act').
- 2.6 Our principal duties under section 3 of the 2003 Act are to further the interests of citizens in relation to communications matters, and of consumers in relevant markets, where appropriate by promoting competition. In doing so, we are also required (among other things) to secure the optimal use of spectrum and the provision of a wide range of radio services which are of high quality and appeal to a variety of tastes and interests. We must also have regard, in performing our duties, to several factors including the desirability of

¹ Source: RAJAR Q4, 2019

² Multiplex services are bundles of radio channels that have been digitised and compressed to use less spectrum, which are then transmitted using a single frequency block.

encouraging investment and innovation, the desirability of encouraging competition, and the interests of people in different communities within the United Kingdom.

- 2.7 In carrying out our spectrum functions, we have a duty under section 3 of the 2006 Act to have regard in particular to: (i) the extent to which the spectrum is available for use or further use for wireless telegraphy, (ii) the demand for use of that spectrum for wireless telegraphy and (iii) the demand that is likely to arise in future for the use of that spectrum for wireless telegraphy. We also have a duty to have regard, in particular, to the desirability of promoting: (i) the efficient management and use of the spectrum for wireless telegraphy, (ii) the economic and other benefits that may arise from the use of wireless telegraphy, (iii) the development of innovative services and (iv) competition in the provision of electronic communications services.
- 2.8 The technical trials for small-scale DAB were conducted under the Wireless Telegraphy Act 2006, but that legislation has limited scope for the inclusion of licence conditions considered necessary by Government to support the wider provision of small-scale DAB across the country.
- 2.9 The Broadcasting (Radio Multiplex Services) Act 2017 enabled the creation of a new framework for the licensing of small-scale radio multiplex services. It did so by inserting section 258A into the Communications Act 2003 (the ‘2003 Act’), allowing the Secretary of State to make an order modifying aspects of the Broadcasting Act 1996 (the ‘1996 Act’) applying to the licensing of national and local multiplex services to make them more appropriate for small-scale radio multiplex services.
- 2.10 Following the passage of the Act, the Government launched a consultation on 4 January 2018 outlining proposals to create a framework for small-scale DAB licensing. On 13 October 2018, the Government published the policy document [‘Small-scale DAB licensing consultation: Government response’](#). This summarised responses to the consultation and set out the Government’s policy position on a range of issues. Following that, secondary legislation was presented to Parliament, and the Small-scale Radio Multiplex and Community Digital Radio Order 2019 (the ‘Order’) came into force on 25 October 2019.
- 2.11 The Order exercises powers under the new section 258A of the 2003 Act to introduce a framework for licensing small-scale radio multiplex services. It also uses pre-existing powers under sections 262 and 402(3) of the 2003 Act to provide for the creation of community digital sound programme services (‘C-DSPs’). In both cases, the Order achieves this by applying the 1996 Act with modification to types of services defined within the Order as being small-scale radio multiplex services or C-DSPs.
- 2.12 The framework for C-DSPs is effectively the digital version of the community radio licence that currently exists for analogue (AM and FM) stations. It is also closely linked to the framework for licensing small-scale radio multiplex services, because the Order modifies the 1996 Act to require capacity to be reserved for a minimum of three C-DSPs on small-scale radio multiplex services, supporting the “pathway to digital” for community radio stations that is part of Government policy for the sector.

Structure of the document

- 2.13 This statement summarises and considers the points raised by respondents to our July 2019 consultation, and sets out our final decisions on how - within the legal framework required by the Order - Ofcom intends to:
- Plan the use of spectrum for small-scale radio multiplex services (Sections 3, 4 and 5)
 - License small-scale radio multiplex services (Sections 6 and 7)
 - License C-DSP services (Sections 8 and 9).

Impact assessment and equality impact assessment

- 2.14 This document, taken as a whole, comprises an impact assessment as defined in Section 7 of the 2003 Act. We have not identified any detrimental impact on any equality groups (i.e. age, disability, gender, gender reassignment, pregnancy and maternity, race, religion or belief and sexual orientation). Nor have we seen the need to carry out a separate equality impact assessment in relation to the additional equality groups in Northern Ireland: religious belief, political opinion and dependents. This is because we anticipate that the changes proposed in this document will not have a differential impact in Northern Ireland compared to listeners in the rest of the UK.
- 2.15 We have also paid due regard to Ofcom's Welsh Language Standards on Policy Making as outlined in its compliance notice. The policy making standards are applicable at the point where they will have an impact regardless of where the policy decision is made. We anticipate that none of the proposals outlined in this document will have any detrimental effect on opportunities for persons to use the Welsh language, or in treating the Welsh language no less favourably than the English language.

Next steps

- 2.16 This statement includes – in Section 7 – outline details of our planned timetable for advertising small-scale radio multiplex licences and inviting applications for C-DSP licences. In light of the ongoing coronavirus (Covid-19) pandemic, and the impact it will be having on stakeholders, at this stage we have decided not to specify a date when we will publish the first licence advertisements, application forms and accompanying Notes of Guidance. We will keep the situation under review, and commence the licensing programme when a majority of relevant stakeholders (in particular, prospective applicants for small-scale radio multiplex and/or C-DSP licences) consider that they would be able to participate fully in the licensing process.

3. Spectrum planning and methodology

Consultation 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?

- 3.1 In this section we consider responses to the first question in our consultation, which sought views on our proposals concerning the spectrum we intend making available for small-scale DAB services to use; how we intend to plan coverage; how we intend to deal with interference; and the technical planning tool that Ofcom will use.
- 3.2 Some respondents made comments on the coverage area plan itself as part of their response. These are dealt with separately in Section 4 of this statement ('The coverage area plan').
- 3.3 116 respondents provided comments in response to this consultation question. The majority generally agreed with the broad thrust of our proposed planning principles and methodologies, although just over a third raised concerns or objections to specific aspects of the proposals.

Spectrum availability for small-scale DAB

What we proposed

- 3.4 Our consultation set out the legal framework and Ofcom's responsibilities for carrying out its spectrum management duties, and the steps we have taken to ensure we take due regard to those responsibilities in developing our provisional spectrum plan for small-scale DAB services.
- 3.5 We set out that we considered that making spectrum available for small-scale DAB is appropriate and consistent with our wider spectrum duties as well as satisfying the demonstrable demand from smaller scale radio services to have a pathway to digital terrestrial broadcasting.
- 3.6 Our proposals included specifying the frequency ranges that we propose to make available for small-scale multiplex services: these are primarily six frequency 'blocks' (7D, 8A, 8B, 9A, 9B, 9C) from a range known as VHF Band III, sub-band 2. We also said that we intended to investigate the use of spectrum between blocks 10B to 12D of VHF Band III, sub-band 3 in areas where the six sub-band 2 frequency blocks would be insufficient to satisfy anticipated demand. This sub-band 3 spectrum is currently used by existing local and national radio multiplex services, though some blocks in this range are unused in certain geographic areas. We said we would only use such blocks for small-scale DAB to the extent that existing users would not be adversely affected. We set out some notional parameters that we assumed in our planning work, including that transmitter powers would be around 100W ERP.

- 3.7 Our consultation also set out our analysis of the possibility for licensing additional local radio multiplex services. We noted that there are some areas of the UK where sufficient spectrum should exist to support both small-scale radio multiplex services and additional local radio multiplex services. We proposed that while we intended to prioritise our resources on planning and licensing small-scale radio multiplex services, we would review the opportunities for accommodating additional local radio multiplex services on a region-by-region basis, once we have licensed small-scale radio multiplex services in those areas.

What respondents said

- 3.8 The majority of respondents agreed, or generally agreed, with Ofcom's proposed approach. These included a range of existing analogue radio licensees (both community and commercial), small-scale DAB trialists and prospective applicants for future multiplex or programme service licences. Typical comments were "the planning principles and methodologies appear sensible" (Winchester Radio), and "this is the most practical and logical way forward" (Helius Media Group).
- 3.9 A small number of respondents, including commercial radio group Wireless, transmission company Arqiva and four prospective licence applicants, did not agree with our proposals. Two prospective licence applicants argued that Ofcom was taking an unnecessarily cautious approach, and that power levels are too low to achieve viable coverage.
- 3.10 Wireless set out specific concerns on the proposed allocation of spectrum for small-scale DAB, and on Ofcom's proposed approach to licensing small-scale DAB more generally. The company said that our proposals appeared to be based more on considerations of technical achievability than an assessment of consumer or citizen interest, and did not take into account recent developments in the UK commercial radio sector³ which, in their view, will have materially diminished demand among smaller analogue commercial radio services for carriage on small-scale DAB. Wireless also argued that our consultation contained no assessment of the costs and benefits of licensing small-scale DAB, which would allow conclusions to be drawn as to whether it constitutes an optimum use of scarce spectrum compared to alternative radio licensing strategies. Arqiva also questioned the basis on which Ofcom has decided not to assess potential uses of the available spectrum other than small-scale DAB.
- 3.11 Some respondents, including Wireless and Nation Broadcasting, suggested that Ofcom should instead prioritise the licensing of additional local radio multiplex services, and suggested specific locations they felt would benefit from further local multiplexes.
- 3.12 Radiocentre felt that Ofcom should leave open the possibility of licensing additional local radio multiplex services in parallel with developing small-scale DAB.

³ This was primarily the acquisition by Bauer Radio in 2019 of the Celador Radio, UKRD and Lincs FM radio groups, in addition to a number of local analogue licences previously owned by Wireless.

Analysis and conclusions

- 3.13 We set out in our consultation that we considered that allocating spectrum to small-scale DAB services is likely to represent an efficient use of the spectrum. This view was based upon the increasing numbers of listeners consuming radio services via digital platforms, of which DAB remains the most used. We also set out that small-scale DAB provides a pathway to digital for a variety of existing analogue services which contribute towards the diverse range of radio services in the United Kingdom, particularly for community radio services and smaller commercial services. We welcome the broad support for our proposals from the large majority of respondents.
- 3.14 We have, however, carefully considered the responses from those that did not agree with our proposed approach. Our approach towards planning the introduction of small-scale services has as one of its principles the need to protect reception of existing services, based upon criteria that we have applied consistently in the planning of national and local DAB services. This is consistent, in particular, with our duty to secure the availability of a wide range of radio services in the UK. We do not agree that we have been overly conservative in planning for small-scale radio multiplex services, nor in considering whether to introduce additional local radio multiplex services.
- 3.15 We note the arguments made by Wireless and Nation Broadcasting that advertising further local radio multiplex licences in areas where one already exists would provide competition in that area and, in their view, reduce costs of carriage to radio services and benefit listeners through increased choice. However, given that one company could potentially own more than one local radio multiplex licence in the same area, there is no guarantee that licensing a further local radio multiplex service would increase competition in the provision of multiplex services. We also note that the implementation of DAB+ by existing local radio multiplex services would allow for more radio services to be accommodated (thus increasing listener choice), and potentially would reduce the costs of carriage for the providers of those services. In addition, in most areas of the UK, licensing a further local radio multiplex service would limit Ofcom's ability to license small-scale radio multiplex services in the same or adjacent areas, and so would not benefit community radio stations and smaller commercial operators seeking an alternative to carriage on the existing larger-scale, generally more costly, local radio multiplex services.
- 3.16 In relation to actual level of demand for small-scale radio multiplex licences, whilst we acknowledge that this cannot be definitively stated until we commence the licensing process, there is evidence that there will be robust demand when that takes place. Firstly, the trial multiplexes have proved successful. Secondly, our expressions of interest exercise in 2018, and the number of responses we received to the consultation from those keen on providing services, suggest demand will be healthy. Finally, we know that there are a range of community radio and smaller commercial radio analogue services, as well as potential providers of such services, who cannot currently gain access to the analogue radio platform due to capacity constraints. We will therefore proceed to give priority to advertising small-scale radio multiplex licences, but will then consider advertising further

local radio multiplex licences, where there is evidence of demand and spectrum availability permits.

- 3.17 We acknowledge that there was some notable acquisition activity in the commercial radio industry in 2019 – namely, Bauer’s purchase of a considerable number of smaller analogue commercial radio licences – that could affect the level of demand for small-scale DAB. We do not, however, consider that this development by itself suggests demand for small-scale DAB will be materially lower than when we conducted the expressions of interest exercise.
- 3.18 Ofcom plans to commence the small-scale DAB licensing process by advertising small-scale radio multiplex licences in batches. As we complete successive rounds of licensing, we will review the level of demand from potential applicants and consider whether it is appropriate to advertise any additional local radio multiplex licences in areas where there would be sufficient spectrum to enable us to do so. We will then follow the same process for each round of licensing should the demand for small-scale radio multiplex licences be lower than anticipated (potentially leaving spectrum resources unused), and we will then consider whether to advertise additional local radio multiplex licences in those areas.

Defining coverage and protection from interference

What we proposed

- 3.19 We proposed in the consultation that certain technical criteria would be used when carrying out the technical planning for small-scale radio multiplex services. These criteria included a minimum predicted field strength level of 63 dB μ V/m (which corresponds with the level we consider is adequate for indoor reception), which would define the licensed area of the multiplex service.
- 3.20 We also set out our proposal for the maximum level of interference which we considered small-scale radio multiplex services should be permitted to cause in the coverage area(s) of any other radio multiplex service(s) using the same frequency block. This is to protect those other services from interference. This protection would be achieved by setting a maximum signal strength which a small-scale radio multiplex service can place into the coverage area of another radio multiplex service which uses the same frequency block. We proposed that for other small-scale radio multiplex services, the signal strength of the small-scale radio multiplex service in question should not exceed 38 dB μ V/m to protect the indoor coverage area of the other service, and for local radio multiplex services, the limit should be 29 dB μ V/m, to protect the indoor and mobile coverage areas of the local radio multiplex service.

What respondents said

- 3.21 Future Digital Norfolk and Niocast specifically agreed with our proposal to set the indoor field strength planning standard (which defines the coverage of the multiplexes, and hence the population served) at 63dB μ V/m. However, these respondents were concerned that we had not proposed to seek to protect mobile reception of small-scale radio multiplex

services given the importance of in-car reception and asked that we reconsider this position.

- 3.22 U.DAB stated that the 63dB μ V/m field strength level is insufficient to provide 'useable indoor coverage' in dense urban environments such as London and provided further confidential input on coverage and field strength levels.
- 3.23 Open DAB / Brighton and Hove Radio were concerned that low proposed transmitter power levels would lead to insufficient coverage and suggested that fill-in transmitters within small-scale radio multiplex service areas should be permitted.

Analysis and conclusions

- 3.24 The field strength of 63 dB μ V/m has been used consistently by Ofcom throughout the planning of DAB services in the UK as representing the level at which satisfactory indoor reception is possible in most locations. We use this level to determine the extent of the area over which indoor coverage should be possible. Within that area, signal strengths will be higher closer to the transmitters, and applicants are free to suggest transmitter arrangements that maintain higher signal strengths within the licence area (for example by building denser networks of lower power transmitters or by using fill-in transmitters).
- 3.25 The threshold we have consistently applied when predicting the extent of the area where mobile reception should be possible is 54 dB μ V/m, i.e. 9dB less than for indoor reception. Given the likely density of the proposed small-scale networks across the UK, it is not possible for us to limit interference from other areas to a sufficiently low level to protect mobile reception at 54 dB μ V/m within the limited frequency resource which is available. A further consideration is that the level of signals coming into the UK from DAB services using those frequency blocks in other countries will be higher than is needed to protect small-scale mobile reception outside the licensed indoor coverage area, at least in coastal areas, as well as parts of southern and eastern England.
- 3.26 Although we are not planning for (or protecting) mobile reception of small-scale radio multiplex services, mobile reception will be possible at least within the indoor coverage area (i.e. the licensed area of the multiplex) and should also be possible beyond the limit of this coverage area in many circumstances.
- 3.27 Turning to fill-in transmitters, our initial frequency planning work has necessarily made various assumptions about the transmitter characteristics that might be proposed by applicants for small-scale radio multiplex licences. Applicants are, however, free to propose alternative network types or configurations, provided that the thresholds for outgoing field strengths into neighbouring multiplex areas using the same frequency are respected. We expect licence applicants to propose networks that are likely to deliver their desired coverage. If areas of poor coverage within the licensed area are subsequently identified, we would have no objections in principle to licensees adding fill-in transmitters during the licence period (subject to gaining Ofcom's consent to do so), providing that the additional transmitter(s) do not cause outgoing field strengths to increase beyond the defined levels.

- 3.28 We will therefore proceed with implementing our proposals for defining coverage and protection against interference.

Planning tool

What we proposed

- 3.29 We stated in the consultation that Ofcom intends to use a specific software tool (a commercial product called ICSTelecom) for our frequency planning work on small-scale DAB, and we provided details of the settings we intend to use.

What respondents said

- 3.30 Some respondents commented on the availability of planning tools for small-scale DAB. Planning tools are computer software packages which are intended to help plan and model practical transmitter network implementations, and which can provide other information such as the predicted size of the population which would be served by a particular transmitter network.
- 3.31 Niocast and Viamux both felt that the specific planning tool which Ofcom proposes to use when assessing small-scale radio multiplex licence applications should be made available to applicants at an affordable cost.
- 3.32 More generally, U.DAB felt that the proposed approach to coverage planning has “much reliance on computer modelling based on simplifying assumptions with little scope left for experimentation or pragmatism”.

Analysis and conclusions

- 3.33 Although computer modelling uses internationally-recognised parameters, we know that it does not completely reflect real world conditions in all situations. However, as mentioned above, successful applicants are free to propose post-launch network modifications or amendments within their licensed area (e.g. for addressing pockets of poor coverage), subject to outgoing interference constraints.
- 3.34 We intend to definitively state which planning tool we will use when we start inviting applications for small-scale radio multiplex licences. At present, we still expect this tool to be the commercial ICSTelecom product. While Ofcom does not control the terms on which such commercial products should be made available to other parties, applicants can use the same planning tool if they are able to agree terms with the provider. However, applicants are also free to use their own preferred planning tool. Doing so will not count against applications in which alternative planning tools have been used, although applicants should be aware that alternative planning tools may produce different results. It is clearly necessary, however, for Ofcom to settle on a particular planning tool for assessment given the need for us to be able to compare applicants’ technical plans on an equivalent basis.

Measurement of population and overlaps

What we proposed

- 3.35 We outlined in the consultation that, when determining the population capable of receiving a small-scale radio multiplex service, we would count the adult population (aged 15+) which is predicted to receive a signal level of at least 63 dB μ V/m. This is relevant, amongst other things, for determining overlaps with the populations served by other small-scale radio multiplex services in the area, but particularly for determining the overlaps with local radio multiplex services.
- 3.36 The legislation requires that the population covered by a small-scale radio multiplex service should not normally overlap with more than 40% of the population in the licensed area of a local radio multiplex service. On this point, we provided clarification on the practice we proposed to follow in implementing this policy aim. In particular, we highlighted that none of the potential small-scale radio multiplex service licensed areas contained in our coverage area plan overlapped the licensed area population of a local radio multiplex service by more than 40%. We address this issue more fully in Section 4 of this statement, but here we address a specific comment made by one respondent regarding our calculations.

What respondents said

- 3.37 Arqiva noted three specific cases in which it said that our proposed polygons appeared to it to exceed the 40% limit. These related to overlaps in Plymouth, Wiltshire, and North Devon.

Analysis and conclusions

- 3.38 The population we measure in order to calculate overlaps is that included in the total licensed area of a given local radio multiplex service. All three of the areas identified by Arqiva are part of a larger area licensed (to a company owned by Arqiva itself) as a single local radio multiplex service. In the case of Plymouth and West & South Wiltshire, these areas have been part of a larger area licensed as a single local radio multiplex service since they were first licensed – Plymouth/Cornwall and Swindon/West & South Wiltshire respectively. In the case of North Devon, this area was added to the licensed area of the existing Exeter & Torbay local radio multiplex service in 2011 following a consultation prompted by a request from the licensee, Now Digital. It is therefore not the case that the polygons identified by Arqiva overlap the licensed area population of the relevant local radio multiplex services by more than 40%.

Other issues

- 3.39 Central FM stated that in areas where more than one small-scale radio multiplex service would be needed to replicate the geographical coverage of an existing FM service, DAB receivers should automatically re-tune when moving between the two areas.
- 3.40 This issue is related to service signalling and receiver behaviour rather than to coverage planning. Provided that a car radio has previously been 're-scanned' while located within each of the respective small-scale radio multiplex service coverage areas (and that the coverage areas of the two multiplex services are broadly contiguous), then the receiver should automatically retune if the respective audio services carry suitable service identification signalling.

4. The coverage area plan

- 4.1 In this section we consider the points made by some respondents in their responses to consultation Question 1 relating to our proposed coverage plan, and how we plan to deal with matters set out in the legislation, such as the degree to which the coverage areas of small-scale radio multiplex services would overlap with the licensed areas of local radio multiplex services.

Expressions of interest and polygon areas

What we proposed

- 4.2 Our consultation described how we had identified the potential level of demand for small-scale radio multiplex services. This was primarily through [the non-binding 'expressions of interest' process](#) which we undertook during 2018, which also sought to gauge interest in operating programme services on small-scale radio multiplex services.
- 4.3 The consultation also explained how we had developed an initial coverage area plan based on this process. We said that we had sought to allocate a notional 'polygon' (potential small-scale radio multiplex service licensed area) to every location for which we had received an expression of interest. This allocation process was subject to some modifications, for example where multiple expressions of interest were received for similar areas, or where expressions of interest were received for very small population areas which we considered might not be able to support a viable small-scale radio multiplex service.
- 4.4 We concluded that in most areas of the UK there should be enough spectrum to broadly match the potential demand. We called these the locations the 'polygon areas', and expected there to be a frequency available for each of those polygon areas.
- 4.5 However, we noted that in some areas of high demand there appeared to be insufficient frequencies for every polygon to be allocated one. Where this was the case, we grouped the polygons into larger groups called 'macro areas'. In the macro areas we explained that a slightly different approach would need to be taken to advertising licences within those areas. This is because Ofcom would be less able to specify the interference constraints in advance between the polygons within these macro areas, and there would not be sufficient spectrum to be able to license a small-scale radio multiplex service for every polygon (based on assumptions we made about transmitters that applicants might propose).
- 4.6 We also recognised that these initial coverage area plans would be subject to change depending on the conclusions of international frequency coordination discussions between the UK and neighbouring countries.

What respondents said

- 4.7 Some respondents made comments on the notional polygon and macro areas which we published as part of the consultation. As explained above, these polygons were based on the responses we received to our call for expressions of interest and were developed by subsequent frequency planning analysis.
- 4.8 A few respondents, including Wetherby Community Radio and Stafford Radio Broadcasting, were concerned that the proposed polygons in their area either did not match their current FM coverage or the area for which they had submitted an expression of interest in 2018.
- 4.9 Nation Broadcasting and Angel Radio requested flexibility in terms of specific licence areas. They suggested that some smaller polygon areas could be combined (subject to not exceeding 40% population overlap with local multiplexes), suggesting that doing so would benefit areas with neighbouring polygons that individually cover relatively small areas and would make them more financially sustainable.
- 4.10 Similarly, Dr Paul Groves of University College London suggested that mergers of several specific polygons in the macro areas should be investigated in order to maximise the population covered in these areas. He also identified specific VHF sub-band III frequency blocks that he considered should be used in some parts of the macro areas.
- 4.11 More broadly, Radiocentre suggested that it was difficult to assess the true level of demand likely in 2020 based on the 2018 expressions of interest process, and questioned whether the proposed licence areas would be sustainable or commercially viable unless their coverage areas were larger. Like Nation Broadcasting and Angel Radio, it also stated that it would be helpful if some of the proposed licensed areas could be combined in order to provide areas that it believed would be more appropriately sized.
- 4.12 Ofcom's Advisory Committee for Wales noted several specific instances of polygons within Wales which they felt would benefit from modification, and they asked for clarification of the basis on which the polygons had been created.
- 4.13 Other respondents (including Gwent Radio, Actual Radio, Switch Radio, Bristol Digital Radio, Wide FM) felt that there should be flexibility in the polygon boundaries as part of the licensing process, or that specific polygons would benefit from being modified by applicants.

Analysis and conclusions

- 4.14 Our primary aim in developing the notional polygon areas was to accommodate as much of the potential demand (as indicated through the 2018 expressions of interest process) for small-scale radio multiplex services as possible. However, as explained in our consultation, the notional polygon areas do not always exactly replicate the areas for which we received expressions of interest. Specifically, polygon areas were modified in areas where we received multiple expressions of interest covering broadly similar locations, or in order to comply with the 40% restriction relating to overlapping coverage with existing local radio

multiplex services. In some other cases, spectrum availability constraints necessitated modifications, and we did not separately include notional polygons covering very small population areas where these are served by other larger polygons. As some respondents noted, multiplexes with very small coverage areas may also not be attractive to many programme service providers and are unlikely to be financially viable, and therefore would not represent an efficient use of spectrum. We did, however, seek to include such coverage areas within larger multiplexes where possible.

- 4.15 As a result of the compromises involved above, we recognise that some polygons may not exactly match potential applicants' coverage aspirations. However, it would not be possible to exactly satisfy every potential applicant's desires in terms of coverage. Applicants for small-scale radio multiplex licences should propose transmitters that follow the polygon shapes relatively closely. This will ensure the integrity of our overall frequency plan and is also necessary because the statutory award criteria require us to consider the extent of coverage within a defined polygon. However, as we noted in our consultation, we will permit a degree of flexibility where coverage can spill outside polygon areas (by not normally more than 30% by population). Applicants do, therefore, have some flexibility to propose transmitter arrangements to suit their particular coverage aspirations (which are in turn likely to be influenced by the requirements of broadcast services).
- 4.16 We noted that a few respondents suggested the merger or enlargement of multiplex areas to "maximise" population coverage. It is important to note that small-scale radio multiplex services are intended to provide a route to digital radio for smaller services, including both C-DSPs which wish to cater to a community of interest within a specific locality and small commercial services which are similarly focused. Viable scale is important and, as per our consultation, is one factor in deciding on appropriate polygons. However, were we to focus entirely on maximising coverage, this would risk losing sight of the underlying objective, and creating multiplex areas which are less attractive for smaller services in the particular locality.
- 4.17 We have noted the comments from the respondents who suggested changes in specific areas and will take these comments into account wherever possible when we come to advertise the licences. However, there is inevitably a balancing exercise between the preferences of different prospective service providers, and it is not realistic or even possible to produce polygons which are ideal for all broadcasters in a locality.

Coverage overlaps with local radio multiplex services

What we proposed

- 4.18 The consultation explained how Ofcom proposes to apply the 40% overlap threshold ("the 40% limit") that is contained in the small-scale DAB legislation: this refers to the population contained within an area of overlap between the licensed areas of a small-scale radio multiplex service and a local radio multiplex service, which should not normally exceed 40% of the population within the total licensed area of the latter.

- 4.19 We noted that strict application of the 40% limit may not lead to optimum or editorially cohesive licensed areas in some particular geographic areas. We also noted the legislation refers to the desirability of remaining within the 40% level, rather than requiring it in all cases. We therefore proposed to apply the limit flexibly, but only in exceptional cases.

What respondents said

- 4.20 Brian Lister expressed concern that the 40% limit could artificially introduce complexity without offering any public benefit. For example, he proposed a single licence area for the three boroughs of Redcar, Stockton and Middlesbrough, even though this would exceed the 40% limit in relation to the Teesside local radio multiplex service.
- 4.21 Wireless Group was concerned that, outside London, the 40% limit had been applied by Ofcom with no reference to the needs of community radio, nor is it referenced against any explicit consumer benefit.
- 4.22 Switch Radio stated that basing the 40% limit on population size rather than geographical area may be troublesome in areas of high population density. It hoped that Ofcom would exercise discretion in areas where applicants have knowledge of the locality that could support slight adjustments in the size of the polygon. Switch Radio also stated that requests to adjust the size of a polygon should have a clear and well-defined technical case supporting the methodology (beyond a simple increase in coverage), whilst respecting the 40% limit.
- 4.23 Cambridge 105 Radio and Ofcom's Advisory Committee for Wales ('ACW') also requested flexibility in applying the 40% limit, with Cambridge 105, for example, pointing to the potential for surrounding villages to be absorbed as the city of Cambridge expands. ACW supported a flexible approach in relation to the 40% limit so as, for example, not to undermine the editorial appropriateness of an area to be covered by a small-scale radio multiplex service or to avoid creating artificial divisions within potential coverage areas.
- 4.24 Station House Media Unit requested that the proposed polygons for North and South Aberdeen be reconsidered. It questioned why Aberdeen had been split into two separate polygons, which it felt would make it difficult to create a financially sustainable model.

Analysis and conclusions

- 4.25 We are mindful that Parliament's clear intention (in section 50(2A)(c) of the 1996 Act as modified by the Small-Scale DAB Order) is that the population of the overlap between the licensed area of a small-scale radio multiplex service and that of a local radio multiplex service should not normally exceed 40% of the total population covered by the latter. We therefore have no basis for setting the fundamentals of this requirement aside.
- 4.26 However, the Order does allow for an element of flexibility on multiplex size (i.e. it refers to the "desirability" of remaining within the 40% limit, rather than absolutely requiring it in all cases). In our consultation, we said we would apply the limit flexibly only in exceptional circumstances.

- 4.27 We have carefully considered the points raised by respondents in relation to the 40% overlap threshold and recognise the argument that, in a small number of specific geographic locations, the limit may lead to less-than-optimal (for example, less editorially homogenous) licence areas than would otherwise be the case.
- 4.28 We have therefore further considered the circumstances under which we might wish to apply the limit flexibly either by substantially exceeding the 40% threshold in a small number of cases, or by slightly exceeding it in a somewhat larger number of cases.
- 4.29 Having given further consideration, we have identified only a very small number of cases where there is some argument for substantially exceeding the 40% limit to enable an area to be served by a single small-scale radio multiplex service instead of serving it with two or more multiplexes. The most obvious is Aberdeen, where a small area encompassing the city itself accounts for an exceptionally high percentage of the total population of the geographically much larger local Aberdeen local radio multiplex service (which also covers a broader rural area). On balance, we consider that it is not necessary to breach the 40% threshold in order to satisfy demand for small-scale multiplex coverage in Aberdeen (or other areas), since we have in fact been able to plan appropriate small-scale multiplexes in these areas within the limit, and since viable alternative options exist for broadcasters involving carriage on more than one small-scale radio multiplex service. While there may be some benefits in substantially breaching the limit in these cases, we do not consider these outweigh the disadvantages of deviating so considerably from the intent of the legislation and the potential impact on local radio multiplex services.
- 4.30 In some other cases, there may be arguments for slightly exceeding the 40% threshold. However, where the extent to which the 40% threshold is breached is minimal, we consider the benefits likely to be correspondingly small. Further, in order to ensure that we could be fair and consistent in allowing any such exceptions, we consider it would require application of a potentially very complex and subjective set of criteria. In light of that, we consider that applying the 40% limit strictly provides the advantage of clarity for stakeholders as to what is and is not acceptable.
- 4.31 In view of the above, we have decided that we will apply the 40% overlap threshold in all cases. Therefore, the potential coverage of every small-scale radio multiplex licence we advertise will overlap with the licensed area of any local radio multiplex service by less than 40% in population terms. In addition, any applicants who propose coverage which falls outside of the areas we advertise will need to ensure that their coverage nevertheless remains within the 40% overlap limit.

5. Technical standards

- 5.1 Section 43(1)(b) of the 1996 Act permits the inclusion of conditions within radio multiplex licences enabling Ofcom to supervise and enforce technical standards in connection with the provision of the licensed service.
- 5.2 In the consultation (paragraphs 3.59 to 3.72) we:
- Set out the technical standards with which small-scale radio multiplex service licensees will be required to comply;
 - proposed that all programme services carried on small-scale radio multiplex services should be encoded using DAB+; and
 - sought information on the possible use of mixed polarisation and asked for evidence as to any benefits permitting horizontal as well as vertical polarisation might bring.

Consultation 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?

- 5.3 118 respondents provided comments in response to this consultation question. Of these, 45 respondents fully agreed with our proposed approach, one respondent disagreed with our proposed approach as a whole, and 69 respondents raised substantive objections (or suggested alternative approaches) to specific aspects of the proposals or related technical matters. We note at the outset that, in light of points raised in the consultation which we discuss further below, we will not be proceeding with the proposal to mandate DAB+.

Required technical standards

What we proposed

- 5.4 In recognition of the fact that the legislative requirements for small-scale radio multiplex services are very similar to those that already apply to national and local radio multiplex services, we proposed that small-scale radio multiplex services would be required to observe Ofcom's existing [Digital Radio Technical Code](#) (which also requires licensees to observe Ofcom's [Technical Guidance for DAB multiplex licensees](#)).
- 5.5 However, we proposed in the consultation to modify the Technical Code to reflect the slightly different statutory requirement that applies to small-scale radio multiplex services through which they will be required to achieve "*reasonable standards in terms of technical quality and reliability*" (Section 54(1)(g) of the 1996 Act as modified by the Order). For national and local radio multiplex services, the statute requires the achievement of "high" rather than "reasonable" standards.

What respondents said

- 5.6 No respondents objected specifically to the above proposal, although Radiocentre asked Ofcom to provide some indication of what the requirement for “*reasonable standards in terms of technical quality and reliability*” is likely to mean in practice.

Analysis and conclusions

- 5.7 We will proceed to make the amendment to our Technical Code as proposed, and we are publishing a revised version of the Technical Code alongside this statement. Small-scale radio multiplex licensees will need to comply with this Code as a condition of their multiplex licence.
- 5.8 Radiocentre’s request for guidance on what might constitute ‘reasonable’ technical standards is difficult to answer definitively in advance. However, we would note that replacing the word “high” with “reasonable” represents a slight softening of the expected standard in the case of small-scale radio multiplex services, and we can provide some general guidance on our approach to regulating the technical quality of small-scale radio multiplex services. While not a definitive list of matters we will consider, we will expect small-scale radio multiplex licensees to ensure their service is consistent with the following:

Requirements broadly in line with those expected of other radio multiplex licensees

- Transmission systems comply with the parameters set out in their Wireless Telegraphy Act licences to avoid causing interference to other users of the spectrum (noting that transmitting when not in compliance with a Wireless Telegraphy Act licence is a criminal offence);
- equipment and its configuration meets and follows the applicable international standards set out in the Digital Radio Technical Code; and
- reception of other DAB radio services is not be compromised by negligent actions of the licensee.

Less rigorous requirements which will apply to small-scale radio multiplex services only

- Reliability of technical equipment (including programme circuits, multiplexing and transmitter equipment) is adequate to provide a service that, on the whole, is likely to meet the reasonable expectations of the majority of listeners in the target area; and
- audio characteristics of the programme services carried on small-scale radio multiplex services are not subject to regulatory requirements.

Requirement to use DAB+

What we proposed

- 5.9 We proposed in the consultation that programme services on small-scale radio multiplex services should operate using only the DAB+ format (an audio encoding standard). This was primarily intended to ensure that small-scale radio multiplex services could carry a high number of programme services, and to satisfy the anticipated high demand from programme services for carriage on those multiplex services.
- 5.10 We therefore proposed to amend the Technical Code to include a condition requiring small-scale radio multiplex licensees to operate using only DAB+.

What respondents said

- 5.11 Seven respondents explicitly mentioned that they agreed with our proposal that small-scale radio multiplex services should only carry DAB+ programme services. A further 38 respondents expressed general support for the proposals covered by Question 2 in the consultation, and therefore we have assumed this included support for our specific proposal to mandate the use of DAB+.
- 5.12 However, a significantly larger number of respondents, 65 in all, expressed either reservations or objections to mandatory DAB+ encoding. The following sub-sections provide a summary of the issues raised by these respondents.

Support for DAB+ in principle, but with a transition period

- 5.13 Some respondents agreed with the proposals in principle, but suggested that the original DAB audio encoding standard could (or should) be permitted on small-scale radio multiplex services for either a limited time period, or until DAB+ receiver penetration reaches certain minimum levels. These respondents either explicitly or implicitly referred to the fact that there is still a large number of older, non DAB+-enabled, receivers in the market – we discuss this further below.

In-principle objections to mandating DAB+

- 5.14 Some respondents objected in-principle to the requirement for small-scale radio multiplex services to carry only DAB+ services. Many of these respondents, the majority of which were existing analogue community radio licensees, provided similarly-worded replies which set out that they believed that “small-scale multiplex operators should have the choice of providing services on either DAB or DAB+ as they best see fit and not be held to a higher regulatory burden than other DAB operators.”

Concerns about older, non-DAB+ enabled, receivers in the market

- 5.15 Some respondents objected to DAB+ being mandated on the basis that the installed base of receivers which cannot receive DAB+ services could lead to listener disenfranchisement and/or threaten the financial viability of small-scale radio multiplex services.
- 5.16 Andrew Bush suggested that a “digital divide” could be created by excluding those listeners with older sets. Central FM noted that DAB+ has only been available since 2014 and has generally only been available as standard in cars since 2019, which could limit the amount of potential listeners in each broadcast area. Radiocentre and the Community Media Association (‘CMA’) felt that adoption of DAB+ should be a decision left to multiplex operators given that many receivers do not pick up DAB+ and the uncertainty about the number of non-DAB+ enabled radios which are still in use by listeners. The CMA argued that the DAB+ requirement “would be entirely contrary to the spirit and letter of the enabling legislation [...]”.
- 5.17 U.DAB (the operator of the London small-scale DAB trial multiplex service) reported that some stations on its multiplex have chosen to transmit in the standard DAB format due to a desire not to disadvantage listeners with non-DAB+ enabled radios. It stated that Ofcom should not mandate DAB+, but should allow the market naturally to resolve the choice, “especially bearing in mind that without intervention the overwhelming majority of Trial stations have already chosen DAB+”.
- 5.18 Ofcom’s Advisory Committee for Wales was also concerned about older radios not being DAB+ capable, noting that DAB penetration is lower in Wales than in the rest of the UK. However, they also appreciated that this lower baseline might paradoxically mean that there are fewer older receivers in use in Wales.
- 5.19 NLive Radio argued that the Government and Ofcom should do more to make all new radios “digital tick” compliant (i.e. DAB+-capable).

Objections due to multiplex capacity or commercial implications

- 5.20 Some respondents objected to mandating DAB+ primarily on the basis that they felt it could lead to inefficient utilisation of multiplex capacity, or other commercial issues. Particular concern was expressed by respondents about the effect in rural areas, where there may be less demand for capacity on small-scale radio multiplex services than in urban areas.
- 5.21 For example, Bristol Digital Radio predicted that some programme service providers may only be prepared to broadcast in the original DAB format, so as to avoid disenfranchising existing analogue listeners. If those service providers felt that they were being barred from small-scale radio multiplex services, it potentially denies those multiplexes an important revenue stream, and one (taking into account that DAB services generally use a larger proportion of the multiplex capacity than DAB+ services) that is likely to contribute a disproportionately high percentage of the multiplex’s operating costs. Bristol Digital Radio also noted that for the allocation of C-DSP capacity, it would seem to be in the best

interests of the multiplex operator (rather than programme service provider) to allocate this capacity using DAB+. Future Digital Norfolk expressed a similar view.

- 5.22 Nation Broadcasting argued that that having several commercial radio services on a small-scale radio multiplex service broadcasting in the original DAB format using a higher bitrate may also have the benefit of being of ‘subsidising’ capacity for C-DSP services.
- 5.23 Noting the relatively recent introduction of DAB+ as a compliance (“digital tick”) requirement, DC Thomson said that mandating DAB+ would place services at a considerable disadvantage. They said that the requirement would reduce the level of market penetration, and sterilise most commercial business models from the outset. It argued that decisions should be left to the sole discretion of the multiplex owners, who can manage capacity and technology based on market supply and demand pressures.
- 5.24 Opendab (including Brighton & Hove Radio and Sunbury Digital) stated that mandating DAB+ would be likely to see local radio multiplex services “following suit” and also transitioning to DAB+, leading to a potential over-supply of DAB transmission capacity. While Opendab accepted this would be “a substantial public societal gain” (on the basis that DAB+ is more spectrally efficient) it felt this “dramatic shift in supply and demand” would be likely to lead to a reduction in carriage fees for programme services carried on local radio multiplex services, and ultimately may render many small-scale radio multiplex services uneconomic.

Analysis and conclusions

- 5.25 The primary reason that we proposed mandating DAB+ audio encoding on small-scale radio multiplex services was as a means of creating as much capacity as possible, in order to satisfy the very high level of demand for programme services to be carried on these multiplex services that we received when we invited [expressions of interest](#).
- 5.26 While we do not agree that mandating DAB+ would be contrary to the enabling legislation for small-scale DAB, and would be supportive of small-scale radio multiplex services in areas of high demand who chose to carry only DAB+ services to maximise the number of services, we agree that there is merit in some of the arguments made by stakeholders against Ofcom itself mandating DAB+ at this stage. We will therefore not be proceeding with the proposal to mandate DAB+.
- 5.27 In particular, we note that while our expressions of interest process revealed high potential demand for small-scale radio multiplex capacity, there are likely to be significant variations in the level of demand in different geographic areas. If demand for capacity is low in more rural areas, for example, then having the opportunity to use the original DAB coding may actually enhance the viability of some small-scale radio multiplex services. In such cases, the fact more listeners (including those with legacy, non-DAB+ enabled, sets) could be served may make the multiplex more attractive to prospective providers of DSP and C-DSP services without running into capacity constraints.
- 5.28 One of Ofcom’s regulatory principles is to regulate only where necessary. We note that since our consultation was published, a significant number of programme services on

national and local radio multiplex services have moved to, or have launched in, the DAB+ format. This suggests that the wider digital radio market itself is moving to DAB+ of its own accord without regulatory intervention. In light of these developments, and the considerations outlined above, we believe that the case for mandating DAB+ is now weakened.

- 5.29 Therefore, having carefully considered the various responses to our consultation, we have decided not to implement the proposal requiring the DAB+ standard to be used, and will not include a requirement for small-scale multiplexes to operate solely using DAB+ in our revised Technical Code which we have published alongside this Statement. We consider how this decision affects how we will reserve capacity for C-DSP services in Section 6 of this document.
- 5.30 We would emphasise that our decision simply means Ofcom itself will not mandate DAB+. It does not require individual small-scale radio multiplex services to offer the option of standard DAB coding to programme service providers, if they would prefer to offer DAB+ only. As noted above, many existing radio multiplex services are already transitioning to DAB+. It may well be that small-scale radio multiplex licensees (e.g. in areas with high demand for capacity and/or lower numbers of legacy non-DAB+ enabled receivers) decide, as a commercial matter, to adopt DAB+ across their multiplex.

Signal polarisation

What we proposed

- 5.31 While national and local radio multiplex services (as well as the trial small-scale multiplex services) have to date used transmitters which broadcast vertically polarised signals only, in the consultation we invited respondents to provide evidence of the benefits or disadvantages that adding a horizontally-polarised component to the transmitted signal would have for small-scale DAB, or for DAB services more generally. We sought this information following responses to our consultation on amending the Technical Code earlier in 2019. A small number of respondents to that consultation suggested mixed polarisation DAB transmitters should be permitted. Although we did not at that time have evidence that this would be beneficial, our [Statement in June 2019](#) said that we would seek further views and evidence when consulting on implementing small-scale DAB.
- 5.32 We therefore explained in our consultation on licensing small-scale DAB that we would review our position on signal polarisation, and sought evidence of the benefits or disadvantages that adding a horizontal component would have for small-scale DAB, or for DAB services more generally. We said we would consider permitting use of horizontal polarisation as well as vertical polarisation, if we received evidence that it would be beneficial to do so.

What respondents said

- 5.33 Seven respondents expressed views on signal polarisation.

- 5.34 Transplan UK provided a detailed technical response, giving various reasons why consideration should be given to permitting slant or mixed polarisations for radio multiplex services. These included a discussion of the way that signal polarisation at the point of reception can be changed by the transmission path, that vehicle aerials are no longer solely vertical, and that there is anecdotal evidence that use of slant polarity provides improvements to signal penetration. Transplan UK also urged Ofcom to institute a field trial of propagation effects, while Moss Media suggested that mixed polarisation could improve indoor coverage. Wetherby Community Radio stated that “vertical polarisation is no issue”.
- 5.35 Three respondents took a broadly neutral position on alternative polarisations: Bristol Digital Radio supported keeping the matter under review; Future Digital Norfolk stated that more work would need to be carried out before definitive conclusions can be reached; and Cambridge 105 welcomed the opportunity to continue assessing the effect of including horizontally-polarised components.
- 5.36 Viamux was supportive of retaining the current requirement to use vertical polarisation only, while U.DAB supported the consultation’s position (i.e. to permit vertical polarisation only unless there is evidence suggesting otherwise).

Analysis and conclusions

- 5.37 Some respondents supported permitting alternative polarisation options, some argued for retaining the current position of vertical polarisation, while others suggested that further work needed to be done. None of the respondents has provided clear evidence to support its view.
- 5.38 We will therefore retain for now the existing requirement, as set out in the Digital Radio Technical Code, that radio multiplex services must be transmitted using vertically polarised signals only. We will keep this matter under review and will consider revising our decision should we discover compelling evidence that permitting horizontal and vertical polarisation would be beneficial.

Spectrum mask filter requirements

- 5.39 Although the consultation did not mention this issue directly (though our earlier separate [consultation on modifications to the Digital Radio technical Code](#) did), some respondents nevertheless made comments about it.
- 5.40 Bristol Digital Radio said the requirement to only use filters complying with the critical mask characteristic (as is required by our Digital Radio Technical Code) should be kept under review.
- 5.41 There were objections to requiring small-scale radio multiplex services to comply with the critical mask characteristic from, among others, Opendab, who stated that the non-critical mask should be allowed as it is permitted in the international technical specification for DAB (and, more generally, that Ofcom is not adopting 'reasonable' technical standards in

this regard). Future Digital Norfolk argued that Ofcom has not produced empirical evidence on the need for the critical mask and does not believe the critical filter requirement is justified for low-power ‘filler’ transmitter sites. Wetherby Community Radio observed that the critical mask is “probably overkill” for transmitters operating at less than 100 watts.

- 5.42 Cambridge 105 Radio requested that the filtering requirement should be reviewed on a site-by-site basis.
- 5.43 U.DAB noted that there has been a general “tightening of regulatory approach during [the small-scale DAB] trial”, citing the requirement for the critical mask as an example of this tendency.

Analysis and conclusions

- 5.44 All DAB transmitters in the UK are required to comply with the filtering described in the [international technical standard document EN 302 077](#). This specification contains three filter characteristics: the ‘uncritical case’, the ‘critical case’ and ‘exceptional circumstances’. Ofcom’s Digital Radio Technical Code requires that all UK DAB transmitters comply with the ‘critical case’.
- 5.45 As set out above, we previously considered whether to permit use of the ‘uncritical case’ characteristic. We made the decision not to proceed with this on the basis that we judged that further technical work needs to be carried out, and the likely benefits of adopting the uncritical mask were at the time modest at the power levels for transmitters likely to be implemented by operators over the next few years.
- 5.46 The responses we have received to this consultation suggest that moderate power DAB transmitters with output powers of less than 50W ERP are now available at relatively low cost. Such transmitters could be useful in filling in holes in the coverage of small-scale (and potentially larger scale local) radio multiplex services. While these low-cost transmitters comply with the uncritical mask, they do not meet the critical characteristic. To do so would require more expensive filtering which would negate the benefits offered by the low power approach.
- 5.47 There could therefore be cost savings for small-scale DAB operators (as well as other DAB licensees if they build low power transmitters) if we permit the uncritical mask to be used. A consequence of doing so would be that any transmitter adopting an uncritical filter would put slightly more power into adjacent channels that may be occupied by other radio services. Although that level of energy would be small, there would theoretically be a greater impact on reception of any weaker signals broadcast on immediately adjacent frequencies in the vicinity of a transmitter using uncritical filtering compared with one that had critical filtering.
- 5.48 We expect that permitting use of the uncritical mask would, in practice, have minimal impact on reception on either the reception of other DAB services, or on the use of adjacent spectrum by other users such as business radio or wireless microphones. The reasons for this are as follows:

- Most of the additional emission energy permitted to be radiated by the uncritical mask falls into the immediately adjacent DAB frequency block, with negligible additional energy radiated on frequencies outside those blocks.
- The total additional energy in those adjacent frequency blocks is very small in comparison with the power broadcast on the transmit frequency (around 50dB less in the case of a 25W transmitter complying with the uncritical mask). This is much less than the adjacent channel protection ratio of most DAB receivers, which is typically in the range 25dB to 35dB. Therefore, a DAB receiver tuned to weaker services that are on an adjacent frequency to an uncritical mask transmitter will cease receiving that weaker service as a result of the presence of the main transmitted signal (e.g. through receiver blocking) long before there is any impact from the additional energy put in the adjacent block through use of an uncritical mask. In addition, the risk of interference to an adjacent block DAB service would be even lower if the wanted signal level of the adjacent block service was well above the noise floor in the vicinity of the small scale DAB transmitter.
- Business radio users are spaced far enough away from all of the frequency blocks used by DAB for there to be no difference in the level of emissions permitted by the critical and uncritical masks at those separations⁴.
- Many of the frequencies used by wireless microphones are also sufficiently separated from the DAB frequency blocks for there to be no difference in the level of out-of-band DAB emissions they would experience.
- While some frequencies available for use by PMSE are closer to some DAB frequency blocks and may theoretically experience slightly higher levels of emissions from an uncritically filtered DAB transmitter, we consider the likelihood of this leading to any significant degradation to be very low. This is because only some DAB and some PMSE frequencies are affected and both would need to be in use in the same locality. The likelihood of problems occurring would be further mitigated by permitting the uncritical mask for only relatively low power DAB transmitters.

5.49 In view of the above, Ofcom is sympathetic to permitting the use of the uncritical mask for DAB transmitters. While we expect the impact on other spectrum users to be very small, we intend to proceed cautiously. The critical mask will therefore remain the required characteristic for the time being as set out in our Digital Technical Code.

5.50 We will, however, consider permitting the use of the uncritical mask for low power DAB transmitters (less than 50 watts) on a case-by-case basis. Applicants for small-scale radio multiplex licences will be able to propose use of uncritical mask filtering for transmitters radiating less than 50W effective radiated power and we will consider whether to permit that use taking into account the impact that doing so would have on other spectrum users. We will also consider proposals for low power DAB transmitters with uncritical filtering from local and national multiplex licensees.

⁴ The critical and uncritical masks are the same for separations greater than 3 MHz from the centre frequency of the DAB signal.

- 5.51 We will keep under review the level of demand for use of the uncritical mask as well as any impact on other users.

Adjacent channel interference

- 5.52 Arqiva raised concerns in its consultation response about the technical implications of the introduction of small-scale radio multiplex services. It stated that “fundamental technical issues remain unresolved at this relatively late stage in the implementation process”. Arqiva’s concerns primarily relate to the risk that the introduction of small-scale radio multiplex services could cause ‘adjacent channel interference’, and hence disrupt the reception of existing local and national radio multiplex services. It also had particular concerns about the introduction of small-scale radio multiplex services in our ‘macro areas’. To mitigate these risks, Arqiva suggested:
- Removing the proposed licence award criteria which favours serving larger populations;
 - limiting the power levels of small-scale DAB transmitters to no more than 100 watts;
 - initially only permitting a single transmitter to be established in each licence area until more is known about the actual impact of adjacent channel interference; and
 - implementing a ‘pause and review’ process after the first 20 small-scale radio multiplex licence awards. This ‘pause’ would last no longer than three months, and would allow for an assessment of the actual impact of adjacent channel interference.
- 5.53 Future Norfolk suggested that Ofcom should permit self-certified installations, subject to compliance with all outgoing interference and ACI requirements, and Wide FM suggested that the requirement to work with other multiplex operators needs some flexibility as it could produce significant delays for requirements such as evidence of agreement on ACI issues with other radio multiplex licensees. (These points were raised in response to Question 5 of the consultation, which dealt with how Ofcom proposed to assess applicants’ technical plans, but we deal with them here as they are relevant to this section).

Analysis and conclusions

- 5.54 We recognise that introducing new transmitters in an area already served by other DAB services can potentially have an impact on reception of those other services. In certain circumstances this can lead to loss of reception of some services close to the new transmitter – this is often known as ‘adjacent channel interference’ (ACI), ‘blocking’ or ‘hole punching’.
- 5.55 To mitigate the risk of listeners losing access to existing services, Ofcom has published [Guidance](#) for licensees wishing to bring new transmitters on-air. The Guidance requires that the licensee proposing the new transmitter follows a process of impact assessment and liaison to seek agreement with other licensees before requesting consent from Ofcom to bring the new transmitter on air.
- 5.56 Ofcom recognises that this liaison process can be lengthy due to the number of parties needing to be consulted in some areas. Those parties can also find it difficult to agree

proposals for new transmitters if the information provided to them does not include a sufficiently robust assessment, or is incomplete. These factors can lead to delays in bringing new transmitters on air.

- 5.57 We understand Arqiva's reasons for considering that the impact on existing radio multiplex services of a significant volume of new radio multiplex services that may seek to launch over the next few years needs to be carefully monitored and managed. We also recognise that new entrants may not have access to the type of resources and experience possessed by larger-scale broadcasters to carry out impact assessments or measurements.
- 5.58 However, we do not agree that the specific mitigation measures suggested by Arqiva would be appropriate and proportionate to the risk identified (or, in one case, even possible for Ofcom to implement). In relation to the criteria to which Ofcom must have regard when considering applications for small-scale radio multiplex licences, these are set out in statute and thus cannot be changed by Ofcom. In any case, we consider it is important for efficient use of spectrum, and maximum consumer benefit, to achieve high levels of coverage within advertised areas whilst remaining within the statutory provisions limiting overlap with local radio multiplex services. In relation to power levels and number of transmitter locations, we are concerned blanket rules of this sort may adversely impact on the viability of small-scale radio multiplex services, and that these matters are best considered based on individual circumstances.
- 5.59 In relation to Arqiva's 'pause and review' suggestion, the small-scale DAB legislation sets out that small-scale radio multiplex licensees have up to 18 months to launch their service post-award, so any formal pause in the licensing programme would inevitably need to be lengthier than the three months Arqiva has suggested in order to involve a significant number of launched services. We do not consider that substantially delaying roll-out of small-scale radio multiplex services, and thus the benefits this roll-out will bring to radio listeners, in the way suggested is proportionate to the issue Arqiva has raised. We do, however, believe there is merit in keeping the small-scale radio multiplex licence award process under ongoing internal review to assess how well our licensing processes are working in practice in terms of the quality of the technical aspects of the applications and the technical impact on existing multiplex licensees of new services launching (including the agreement of new transmitters and the length of time taken to reach agreements). We have arranged the licensing process into successive rounds allowing us to reflect on the licensing experience and make any improvements for subsequent rounds as may be appropriate. If this ongoing process suggests it is appropriate to slow the process down a little because implementation in practice proves more challenging than expected, then we would consider that. Equally, it may be possible to accelerate subsequent rounds if implementation proves relatively smooth. Our roll-out timetable is already sufficiently flexible to accommodate either possibility. This process of learning from experience, which is common across Ofcom's activities, does not necessitate building in a formal pause period regardless of what the early experience turns out to be, as suggested by Arqiva.
- 5.60 It is not Ofcom's intention to place additional burdens upon the industry, and we will therefore aim to ensure that the licensing of small-scale radio multiplex services does not

do so. Our aim is also that any processes are not unduly lengthy. Taking into account the feedback received from stakeholders summarised above we will:

- Clarify the standards and quality of information required under the existing assessment and liaison process when assessing the impact that a new transmitter might have on reception of existing services;
- carry out an internal review relating to the technical aspects of the licensing process once underway, including the volume of applicants, quality of applications and liaison process with other licensees. The results of this review will inform us whether we need to adjust the remainder of the licensing programme; and
- consider (with appropriate discussion with industry stakeholders) how alternatives to the existing process might work, with a view to relieving the burdens that the existing process places upon licensees. Should this consideration result in us having to amend the process in our Digital Radio Technical Code and Guidance, we would consult on these revisions in due course.

Other issues

- 5.61 Moss Media felt that a lack of minimum technical standards (particularly audio bitrate) for non C-DSP programme services could lead to effects such as stations not having control over the audio quality that they achieve; that poor audio quality could lead to declining listenership; and that there could be widely varying audio quality between different multiplexes. It suggested that Ofcom should consider increasing the minimum C-DSP bitrate, and setting a maximum number of DAB+ services to be carried.
- 5.62 Digilink LLP felt that, because single-frequency networks would be required to cover the notional polygon areas, satellite-based timing references and telemetry should be required in order to prevent ‘hole-punching’ and adjacent channel interference. Digilink also suggested that minimum specifications for connectivity and transmitter equipment should be put in place and noted that support for ‘open digital radio’ based transmission systems was not guaranteed, and that Ofcom should consider publishing a list of approved installers and support organisations.
- 5.63 We do not agree that these matters should be specifically regulated or specified. Ofcom stopped setting [minimum audio bitrates for DAB services](#) some time ago, and we do not believe there is a compelling case to re-introduce them for small-scale DAB. Secondly, we consider that the industry itself is best placed to develop or select transmitter equipment (and associated services) which will best serve the needs of the small-scale DAB sector. Specifying particular technical arrangements for transmission, signal distribution or equipment types may lead to adverse outcomes, such as higher prices for particular technologies, and in our view would risk stifling innovation in this emerging sector of the radio industry. Such stipulations would also, in our view, not be in the spirit of the requirement in the enabling legislation that small-scale radio multiplex services should achieve ‘reasonable’ standards of technical quality (as opposed to the ‘high’ standards of technical quality which are required of local and national radio multiplex services).

6. Small-scale radio multiplex licences: conditions and requirements

- 6.1 We noted in the consultation that, in several key respects, the Order applies the Broadcasting Act 1996 without modifications, and we therefore proposed to include standard licence conditions which are very similar to those included in existing local and national radio multiplex licences.
- 6.2 However, there are some areas in relation to which the Order has modified the 1996 Act, or where slightly different considerations apply to small-scale radio multiplex licences.
- 6.3 This section focuses on those aspects, and in particular responses to the consultation question we asked about our approach to setting the levels of reserved capacity for C-DSP services on small-scale radio multiplex services.

Eligibility and ownership restrictions

What we proposed

- 6.4 The consultation summarised the various additional eligibility and ownership restrictions applicable to small-scale radio multiplex licences that were contained in the legislation (and therefore cannot be amended by Ofcom in our implementation of a licensing regime).
- 6.5 One of the ownership restrictions prevents a body corporate from holding more than one small-scale radio multiplex licence if their coverage areas overlap to a significant extent with that of one and the same local radio multiplex service. The legislation leaves it to Ofcom to determine what constitutes overlapping to a “significant extent”. We proposed in the consultation to consider an overlap to be “significant” if it would lead to a licensee breaching the level of a 40% population overlap with the local radio multiplex service in question or increasing coverage above that level.

What respondents said

- 6.6 Several respondents argued that the statutory restrictions on the ownership of small-scale radio multiplex licences are overly restrictive and, together with the 40% limitation on overlaps with existing local radio multiplex services, would prevent small-scale radio multiplex services being able to compete effectively with existing radio local radio multiplex services. DC Thomson, for example, noted that the transmission areas of many independently-owned local analogue commercial stations are considerably larger than the licensed areas of the proposed small-scale radio multiplex services, and said that this was “clearly unfair given the vast concentration of ownership afforded to the existing DAB mux holders who run vast border to border DAB real estate empires.”
- 6.7 There were some comments from respondents about how Ofcom plans to interpret what constitutes a “significant extent” in the context of the overlap between more than one

small-scale radio multiplex service that is under the same ownership, and an existing local radio multiplex service (see paragraph 6.5, above). A12 Radio, for example, requested that that Ofcom interpret this flexibly, reflecting local circumstances. It said, “The ability to establish and operate small-scale multiplexes will be enhanced through economies of scale and sharing of resources between neighbouring multiplexes, including some common ownership... We note that replicating coverage of smaller commercial radio stations may require carriage in more than one proposed polygon area, but that there are cases in which these multiplexes could not be operated by the same entity if the 40% limit is rigidly applied. This could be a disincentive for such smaller commercial stations to invest in and support the new multiplexes.”

- 6.8 Noting the relative complexity of the ownership restrictions contained in the legislation, Wireless said that Ofcom should provide “comprehensive guidance on this topic ahead of commencing small-scale DAB licensing.”

Analysis and conclusions

- 6.9 In relation to criticisms of the statutory ownership restrictions, we do not address them directly in this statement as the restrictions in question are contained in the secondary legislation that was passed by Parliament, and so cannot be altered unilaterally by Ofcom.
- 6.10 With regard to our interpretation of what it means to overlap “to a significant extent”, our view remains that this particular restriction should be read alongside the more general requirement in the Order that the population overlap between the licensed area of a single small-scale radio multiplex service and that of an existing local radio multiplex service should not normally exceed 40% of the total population covered by the latter. Our approach is reasonably flexible in that it does not prevent a body corporate from holding more than one licence whose coverage area overlaps with one and the same local radio multiplex service. However, it also has proper regard to the purpose of the legislation, which was to introduce a 40% overlap threshold to prevent small-scale radio multiplex services replicating the coverage areas of larger local radio multiplex services. This, in turn, is because small-scale DAB has been viewed from the outset by both Government and Ofcom as being complementary to local DAB, rather than a direct competitor to it.
- 6.11 To take a hypothetical example, there are several ways in which the same body corporate could hold more than one small-scale radio multiplex licence within the geographical area covered by the Plymouth & Cornwall local radio multiplex service. This is because, taken together, the overlap with the Plymouth & Cornwall local radio multiplex service would be no more than 40%, as illustrated in the table overleaf:

Small-scale DAB polygon/licence	Local Mux	Overlap	Examples of permitted ownership by one mux operator		
Isles of Scilly	Plymouth & Cornwall	1%	Owned	Owned	Owned
Newquay, St Austell & Truro	Plymouth & Cornwall	17%	Owned	Not owned	Not owned
Falmouth, Penzance & Redruth	Plymouth & Cornwall	25%	Not owned	Owned	Not owned
East Cornwall	Plymouth & Cornwall	20%	Owned	Not owned	Not owned
Plymouth	Plymouth & Cornwall	37%	Not owned	Not owned	Owned
Total percentage ownership			38%	26%	38%

- 6.12 Noting the complexity of the statutory ownership restrictions, and the fact we wish to encourage a range of applicants to compete for small-scale radio multiplex licences, we intend to publish more detail on the ownership and eligibility restrictions which apply to the holding of small-scale radio multiplex licences in the Notes of Guidance which will accompany the forthcoming multiplex licence advertisements. However, those notes should not be regarded as an alternative to, or substitute for, prospective applicants seeking their own legal advice on these issues.

Reserved capacity for C-DSP services

What we proposed

- 6.13 The new legislation requires Ofcom to ensure that small-scale radio multiplex licensees must reserve broadcast capacity for a minimum of three C-DSP services. In setting the level of reserved capacity for each prospective small-scale radio multiplex service, we proposed to take into account evidence of demand in the geographical area concerned, including (but not limited to) the level of demand as expressed by different types of service providers (including in the 2018 expressions of interest exercise previously conducted); the current number of analogue community radio stations that have been licensed (but are not necessarily all on air); the number of small commercial radio stations that are broadcasting on analogue (but not on local DAB) in the licensed area of the prospective small-scale radio multiplex service; and any additional information we have on the likely demand from such services. We also said that we would take account of the need to ensure the financial viability of the small-scale radio multiplex service.
- 6.14 We proposed that the amount of capacity that must be reserved by the small-scale radio multiplex licensee should be calculated on the basis that each C-DSP service must be able to broadcast its service at a minimum of 48 kbit/s using the DAB+ standard.
- 6.15 The legislation allows small-scale radio multiplex licensees to apply to Ofcom to change the amount of reserved capacity required if they have provided the service for at least three years. However, Ofcom can only grant such a request if the capacity is in fact unused; and

the licensee has taken reasonable steps to identify parties interested in using the reservation, has acted in good faith offering to contract with them, and that it is unlikely the capacity will be used for the remainder of the licence period.

- 6.16 In assessing whether a small-scale radio multiplex licensee has met these requirements we proposed that we would need to see evidence from the licensee that it has pro-actively (and recently) contacted all existing C-DSP licence holders and analogue community radio licensees in the multiplex broadcast area to check that they do not wish to broadcast a service on the multiplex, either currently or in the near future. We said that we would expect the terms offered to C-DSPs for use of unoccupied reserved capacity to be more favourable than for unreserved capacity, and to reflect a genuine attempt to fill the available reserved capacity.

What respondents said

Consultation 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?

- 6.17 Of the 121 respondents who responded on this issue, a majority (91) agreed, or broadly agreed, with our proposed approach, with 18 disagreeing (others were neutral).
- 6.18 In determining the number of C-DSP services that capacity should be reserved for on each small-scale radio multiplex service, some respondents maintained that Ofcom must ensure that there is enough capacity for at least the number of community radio stations as are currently broadcasting on analogue in the area. Some respondents were concerned that the minimum reservation required by the legislation (i.e. capacity for three C-DSP services) will in practice become the norm, irrespective of the number of analogue community radio services that are actually on air in the market. Blast FM, for example, said that a more suitable approach would be for Ofcom to set the minimum reservation as equivalent to the number of community radio stations licensed in an area plus three, to allow for future growth of the sector.
- 6.19 The Hospital Broadcasting Association ('HBA') argued that, in addition to considering the number of analogue community radio services broadcasting in a small-scale radio multiplex service area, Ofcom should also take account of the number of hospital radio stations in the area. This is because, while a few hospital radio services hold analogue community radio licences, the majority do not⁵, and the HBA expects there to be significant interest in small-scale DAB from the hospital radio sector over the coming few years.
- 6.20 Some respondents believed that Ofcom should take no account of the expressions of interest ('EOIs') that we solicited and received in 2018. For instance, Niocast claimed that taking into account "speculative" EOIs would result in some small-scale radio multiplex services having "inflated reserved capacity which could remain unsold for the minimum

⁵ Many hospital radio services are licensed by Ofcom under long-term Restricted Service Licences.

period of three years, thereby undermining the viability of many small-scale multiplexes in, what are, vital formative years.”

- 6.21 On the other hand, a small number of respondents considered that Ofcom should invite fresh “expressions of interest” prior to advertising each batch of small-scale radio multiplex licences. However, a far greater number of respondents agreed with Ofcom that this would be administratively burdensome and delay the roll-out of small-scale DAB.
- 6.22 Some respondents, including Radiocentre, welcomed our proposal to take account of the number of small commercial radio stations broadcasting in the area when setting the levels of reserved capacity (in order to ensure there is room on the multiplexes for those wishing to provide commercial radio services using DSP licences). Radiocentre suggested that the minimum of three C-DSP services “should generally be considered as the default number of slots reserved. Any variation that proposes to increase reserved capacity beyond this level should only be agreed in exceptional circumstances where the current and existing demand has been demonstrated by the applicant.”
- 6.23 Sunrise FM (Bradford) argued that small local commercial radio stations should also be entitled to the benefit of reserved capacity on small-scale radio multiplex services, while DC Thomson felt that, in the spirit of equivalence, Ofcom should reserve capacity for small commercial radio stations on local (rather than small-scale) radio multiplex services. However, the relevant legislation does not permit Ofcom to implement either of these suggestions. This is because only C-DSP licence holders can access reserved capacity on small-scale radio multiplex services, and there is no legal requirement for ‘reserved capacity’ on local radio multiplex services beyond that for local and nations BBC radio services.
- 6.24 Niocast and some other respondents called upon Ofcom to make a clearer statement on the criteria it plans to use for determining the levels of reserved capacity on small-scale radio multiplex services, given the critical importance of this to the sector.
- 6.25 Some respondents argued that Ofcom’s proposals to set a minimum bit-rate (of 48 kbit/s using DAB+) for C-DSP services using reserved capacity was overly prescriptive; rather, small-scale radio multiplex licensees should be able to determine the bit rates of these services for themselves. Meanwhile, for the C-DSP licence holders, it was suggested that a minimum bit rate could result in them having to pay for capacity they don’t actually require, or wish to pay for.
- 6.26 Nation Broadcasting claimed that setting a minimum bitrate does not take in to account the actual transmission chain. It maintained that, depending upon factors such as studio set-up, contribution (the circuit from each of the programme services’ source locations to wherever the multiplexing equipment is located) and the type of encoder used, lower bitrates than 48 kbit/s (using DAB+) can deliver “acceptable” audio quality for the listener. Nation Broadcasting added: “Allowing bitrates lower than 48 kbit/s would mean that in highly populated areas, more services could be accommodated overall on the multiplex, enabling a stronger range of smaller broadcasters access to DAB”.

- 6.27 Respondents including Bristol Digital Radio and U.DAB felt that reserved capacity should be measured in terms of capacity units rather than bit rates. Reasons cited for this included the need for higher protection levels, which consume more capacity units, in some environments; and the ability to accommodate a greater number of services. It was also suggested by Bristol Digital Radio that, “licences could include a clause preventing the multiplex operator from specifying how a community radio station must allocate the bit budget they’ve purchased between audio quality (bit-rate) and protection.”
- 6.28 Some respondents were concerned about the possibility of multiplex capacity lying fallow should there be fewer than three C-DSP services broadcasting on a multiplex, or if one or more of the C-DSP services that are on the multiplex elect not to take up their full bit-rate allocation. Niocast for instance, expressed concerns that “having a large amount of unused reserved capacity would not be conducive to securing the viability of the small-scale radio multiplex service, which is important to all broadcasters including C-DSP licensees themselves.” A12 Radio said that, in the scenario where a C-DSP licensee takes up carriage, but declines to take the full reserved 48 kbit/s (DAB+), “we would argue that the public policy purpose - carriage of that service - has therefore been met, and that the remaining, unused capacity be made available immediately for other services to maximise listener choice.”
- 6.29 In order to be able to access reserved capacity on a small-scale radio multiplex service, programme service providers will need to apply for a C-DSP licence that is specific to that particular multiplex. The C-DSP licence will contain social gain commitments relating to the local area being served. This is designed to ensure that any programme service utilising reserved capacity (even if it is a “community of interest” type of service) is one which is genuinely rooted in the local community. It means, therefore, that a single C-DSP licence cannot be used to broadcast a programme service on reserved capacity on multiple multiplexes. Some respondents, including the Community Media Association, argued that confining the use of a C-DSP licence to the reserved capacity of a single small-scale radio multiplex service is, as Future Digital Norfolk put it, “unnecessarily restrictive and economically unsound.” However, this requirement is contained within the legislation, so it is not something Ofcom has the power to change.
- 6.30 Radio Verulam argued that analogue community radio services who also operate the small-scale radio multiplex service in the community where they are based will have no incentive to apply for a C-DSP licence. This is because, as the multiplex operator, the company would be able to guarantee carriage for its own programme service as a DSP licensee, whilst still retaining the ability to apply for Community Radio Fund grants under its analogue community radio licence.

Analysis and conclusions

- 6.31 We note that the majority of respondents agreed with our proposed approach to the reservation of capacity on small-scale radio multiplex services.

- 6.32 Given some of the differences between different radio markets around the UK, in setting the levels of reserved capacity for each small-scale radio multiplex licence we wish to retain a sufficient degree of flexibility to respond to local circumstances, while being clear and transparent about the factors we will always take into account when deciding upon the levels of reserved capacity
- 6.33 We understand the logic of the request from many respondents that reserved capacity should always equate to at least the number of analogue community radio services in the market within the putative small-scale radio multiplex service area. However, while we would ideally like to provide enough reserved capacity to accommodate all those services and enable room for additional services in future, we also need – as set out in our consultation and as many respondents have also recognised – to take account of the overall financial viability of the small-scale radio multiplex service. We also need to ensure there is enough capacity for small local commercial stations to broadcast on the multiplex, given that small-scale DAB was designed to be a pathway to DAB for these services, as well as for community radio services. Finally, we would point out that, on renewal of a small-scale radio multiplex licence, Ofcom has the scope under section 58(4)(c) of the 1996 Act as modified by the Order, to update the reservation for C-DSP services.
- 6.34 We note the variety of views expressed about the extent to which we should take into account previous expressions of interest received by Ofcom to broadcast programme services on small-scale radio multiplex services. While we accept there were limitations to this exercise (which was primarily designed to help us plan the spectrum for small-scale DAB), and the information will inevitably become less reliable as time goes on, our view remains that the expressions of interest we received in 2018 can provide a useful indicator of demand, particularly in areas of the country where the availability of analogue spectrum has been limited in recent years. However, the expressions of interest will only be one factor we consider among several others, including, as noted above, the potential financial viability of small-scale radio multiplex services.
- 6.35 We do not consider that it would be appropriate for Ofcom to regard the requirement in the legislation to reserve capacity for at least three C-DSP services as being the “default position” for most small-scale radio multiplex services. The legislation is clear that this simply to be regarded as a statutory minimum, above which Ofcom will carefully consider the various factors in each market that we have said we will take into account.
- 6.36 Having said that, we recognise that some respondents sought greater clarity about the factors we will take into account in determining the levels of reserved capacity. In particular, it was noted in the consultation that, in addition to taking into all of the factors listed in paragraph 6.13 (above), Ofcom would also consider “any additional information we have on the likely demand for such services.” We can clarify that this would constitute any subsequent clear indications of interest in running C-DSP services in particular geographical areas received by Ofcom subsequent to those received in our invitation for expressions of interest in 2018. We recognise that the 2018 exercise represented a snapshot of demand at that time, which was helpful for Ofcom in spectrum planning but which may evolve over the years.

- 6.37 In terms of our proposal to set a minimum bit rate (of 48 kbit/s using DAB+) for each C-DSP service utilising reserved capacity, we understand the desire of prospective small-scale radio multiplex licensees to be able to manage their multiplexes as efficiently as possible by utilising all the available capacity on the multiplex, particularly in areas of high demand. However, we also consider that C-DSP licensees should be entitled to enough reserved capacity to enable their programme service to be available to listeners in what Ofcom considers to be adequate audio quality, including the use of stereo, which we have defined as being at least 48 kbit/s (DAB+).
- 6.38 We are aware that some C-DSP licensees may not in practice wish to make use of the full 48 kbit/s reservation, agreeing with the small-scale radio multiplex licensee that a lesser amount is sufficient to provide adequate quality taking into account their budget. However, it is important to note that this does not mean that the amount of capacity reserved for all C-DSP services on the multiplex is reduced accordingly. Firstly, this would create a strong commercial incentive for small-scale radio multiplex licensees to squeeze C-DSP licensees into a bit rate that may be suboptimal in order to “release” reserved spectrum which could then be provided at a higher price to DSP licensees. Secondly, it would mean that if a C-DSP service using less than 48 kbit/s left a small-scale radio multiplex service at a future date, the amount of available capacity may be less than a replacement would reasonably require to provide satisfactory audio quality. This does not mean that a C-DSP service agreeing to a lower bit rate would result in the “excess” capacity being unused. It may, for example, be sufficient to accommodate an additional C-DSP service above the minimum required within the reservation (such an additional service may use some reserved and some unreserved capacity).
- 6.39 We recognise that some C-DSP licensees may wish to broadcast using the ‘original’ DAB standard, rather than DAB+ noting that, in section 5 of this document, we have explained that we will not be implementing our original proposal to mandate DAB+ on small-scale radio multiplex services at this time. We have considered whether we should increase the reservation as a result of that decision. However, as set out in section 5, although we are not mandating DAB+, it is for individual small-scale radio multiplex licensees to decide whether or not to accommodate services using the original DAB standard, and there is a trend towards moving to more spectrum efficient DAB+ in light of capacity considerations and the changing balance between the numbers of newer DAB+ radios and legacy sets. For reasons of spectrum efficiency, we do not consider there is a case to increase reserved capacity beyond the 48 kbit/s per service proposed, which is enough capacity to broadcast a music service in stereo using DAB+. This also takes into account the need for small-scale radio multiplex services to be viable, and costs for DSP service providers. Requiring sufficient capacity to be reserved to accommodate three or more original DAB standard services would more than double the proportion of the multiplex capacity which must be reserved on all small-scale radio multiplex services, reducing that available for others. This does not necessarily mean that all C-DSP services using reserved capacity will have to broadcast using the DAB+ codec. They would be free to seek to negotiate carriage at sufficient capacity to enable broadcast using the original DAB standard (typically 112 kbit/s

for a stereo music service), albeit this may mean purchasing 48 kbit/s of reserved capacity and the rest from unreserved capacity. However, as a minimum, they would have access to a minimum of 48 kbit/s of reserved capacity if the small-scale radio multiplex service in question has less than the minimum number of C-DSP services already occupying that capacity.

- 6.40 It should be re-iterated that, as required by the legislation, reserved capacity is *solely* for the broadcast of C-DSP services, so *cannot be occupied at all by other programme services even on an interim basis*. To clarify how this will be enshrined in small-scale radio multiplex licences, where a small-scale radio multiplex licence is required to reserve capacity for three C-DSP services:
- if it has no C-DSP services currently on the multiplex it must keep 144 kbit/s (3 x 48 kbit/s) of capacity empty and ready for three C-DSP services at all times;
 - if it has one current C-DSP service broadcasting at a bit rate of 48 kbit/s or above it must have 96 kbit/s (2 x 48 kbit/s) empty and ready; and
 - if it has two C-DSP services broadcasting at a bit rate of 48 kbit/s or above it must have 48 kbit/s empty and ready.
- 6.41 As already noted, if an individual C-DSP service wishes to occupy less than 48 kbit/s, then the remaining reserved capacity must still be kept free. For example, in the example mentioned above, if the multiplex has only one current C-DSP broadcasting at a bit rate of 30 kbit/s it must have 114 kbit/s (2 x 48 kbit/s plus the “spare” 18 kbit/s) empty and ready.
- 6.42 We were also cognisant of the comments made by respondents regarding the different ways of measuring reserved capacity (i.e. by bit rates or ‘capacity units’), and the issues around potential variances in protection levels. We will therefore specify capacity reservations for each small-scale radio multiplex service in terms of both bitrate and capacity units, with the latter taking account of the assumed protection level. For this purpose we will assume a default protection level of EEP3A (as is used by most DAB+ services) which yields an equivalent reservation of 36 capacity units for each 48kbit/s service.
- 6.43 In relation to Radio Verulam’s specific point about the incentive for analogue community services who operate small-scale radio multiplex services to apply for a C-DSP licence, we accept that there will, for all potential broadcasters, be advantages and disadvantages in holding a C-DSP licence rather than a DSP licence. Broadly, a C-DSP licence provides access to reserved capacity which is likely to be cheaper than unreserved capacity as DSPs are not able to access it (whereas C-DSPs can broadcast on either reserved or unreserved capacity), and the Government has also indicated that the Community Radio Fund will be available for C-DSP services. On the other hand, C-DSP services are subject to licence conditions on funding and community benefits that do not apply to DSP services. As we understand Radio Verulam’s point, a community analogue service already has access to the Community Radio Fund. However, equally, it is already providing community benefit. We do not agree that “guaranteed” access to capacity is a given, not only because the small-scale radio multiplex licensee would have to observe standard licence conditions on

preserving fair and effective competition, but also because operating as a DSP service rather than a C-DSP service would entail occupying unreserved capacity which could alternatively be provided at a higher price than reserved capacity to a third party. So the situation is complex, but still provides a clear incentive for community services which are also small-scale radio multiplex licensees to hold a C-DSP licence.

Other issues

Information requirements on carriage fees and services carried

- 6.44 In light of the legal requirements under section 54 of the 1996 Act as modified by the Order, we proposed to require all small-scale radio multiplex licensees to publish on their website a current ‘rate card’ for carriage of programme services, and to provide Ofcom with details of the carriage fees currently being paid by existing programme service providers on the multiplex.
- 6.45 We also proposed to include licence conditions requiring small-scale radio multiplex licensees to maintain on their websites up-to-date information on the programme services they are carrying, as well as to notify Ofcom in advance of changes to that list (including whether or not the services listed occupy reserved capacity).
- 6.46 Some respondents, including Switch Radio, felt that licensees should not have to publish their rate cards. It argued that requiring operators to publish rate cards would be “counterproductive and unsupported by evidence”. This is, they argued, because since the costs in establishing each small-scale radio multiplex service are likely to be different, it follows that the carriage fees they charge will also be different. This does not mean that the multiplex operator is behaving unfairly. Switch Radio added that small-scale radio multiplex operators with genuinely higher costs could allow small-scale radio multiplex services with lesser costs to charge an artificially high tariff on the grounds that it is the “going rate.” It also feared that some small-scale radio multiplex operators could compromise on the quality of their transmission service to keep their rate cards down.
- 6.47 As noted in the consultation, section 54(1)(i) of the 1996 Act as modified by the Order requires Ofcom, via a licence condition, to require that a licensee, “*publishes information, in such manner as OFCOM considers appropriate, as to the payments to be made by the holder of community and local digital sound programme licences for the broadcasting of their services under the licence.*” Because of the meaning of the word “publish” which implies making information available to the public, we consider that although we have some flexibility as to the manner of publication, the statutory provision inevitably means that licensees must be required to publish something. We consider that placing rate cards (i.e. “the payments to be made”) in the public domain is an appropriate interpretation of this condition. We believe that the actual payments made (if they are different from those specified in a rate card) should remain confidential for some of the reasons around business confidentiality cited by respondents to the consultation, but we will still require these from licensees under section 54(1)(j), which requires licensees to “provide to Ofcom” information on services on the multiplex.

Launch following licence award

- 6.48 We considered in the consultation that the 18-month window permitted by the legislation, as well as being a clear statutory provision, is an ample period within which to launch a small-scale radio multiplex service, and so we proposed to enforce this strictly.
- 6.49 Some respondents had concerns that a strict application of the requirement means there would be no flexibility for a multiplex operator to further develop its multiplex with additional transmitters over a period of time. Opendab, for instance, argued that the economics of building out transmitters within a licensed area will be such that “often it will not be financially possible to commence with all transmitters transmitting on the first day of the licence.”
- 6.50 We have considered the arguments made by some respondents with regard to Ofcom being flexible in its interpretation of the 18-month requirement. However, we remain of the view that this deadline should be strictly enforced. For clarity, this would mean a multiplex licensee must launch with the transmitters it has committed to in its technical plan for the launch of the service. It does not mean that, once launched, the multiplex licensee would be unable to enhance coverage by subsequently building out its transmitter network further (see paragraph 3.27).
- 6.51 It is important in this context to note that one of the statutory criteria for award of a small-scale radio multiplex licence is the extent of coverage proposed to be achieved by an applicant within the area advertised by Ofcom. All other things being equal, an applicant proposing wider coverage within the advertised area would be awarded the licence in preference to one with a more modest proposal. It is therefore incumbent on applicants to be realistic, and include in their technical plan only those elements they can be confident of achieving within the allowed window.

7. Small-scale radio multiplex licences: advertisement and award

- 7.1 This section explains how Ofcom will advertise small-scale radio multiplex licences, the criteria against which the applications will be judged, and how we can be expected to interpret these criteria when making licence award decisions. It also includes details of the order in which we plan to advertise small-scale radio multiplex licences.

Advertisement of multiplex licences

What we proposed

- 7.2 We proposed in the consultation to advertise small-scale radio multiplex licences in batches. In determining the order in which we will advertise the licences, and timescale for awards, we proposed to have regard to the following factors:
- a) The level of likely demand from service providers based on expressions of interest received;
 - b) The desirability of ensuring a broad geographical spread across the UK in early licence awards;
 - c) Population size (i.e. prioritising areas where the greatest numbers of consumers stand to benefit from new-small-scale radio multiplex services);
 - d) Spectrum availability and management considerations;
 - e) Prioritising trial multiplex areas, noting that trial licences are due to expire in early 2020 and it would not be optimal for consumers receiving services via trial multiplexes to experience a loss of service;
 - f) Prioritising areas with full local radio multiplex services ahead of those where existing local radio multiplex services currently have vacant capacity; and
 - g) Managing the workload involved in licensing significant numbers of small-scale radio multiplex services (and associated C-DSPs given applications will open alongside those for small-scale radio multiplex licences) within the resources available to Ofcom.

What respondents said

Consultation 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?

- 7.3 Overall, most respondents to the consultation agreed with the factors listed above that we proposed to take into account in deciding the order and timescale in which we would advertise small-scale radio multiplex licences. For example, Proper Community Media

commented that the “proposed principles make good sense”, while Winchester Radio said that “the factors proposed seem reasonable.” Other respondents were in broad agreement but offered comments on specific aspects of the proposals.

- 7.4 A small number of respondents, including NI Live Radio, disagreed with our overall approach and suggested that, rather than licensing the polygon areas in batches, Ofcom should instead provide additional resources so that it can license small-scale multiplex services across the whole of the UK at the same time. Radio Ninesprings said that Ofcom “need to take on staff or farm out parts of the process as is done on any modern business.”
- 7.5 Several respondents were keen that the polygon licence areas should not be advertised on a region-by-region basis. Transplan UK, for example, said that “taking applications on a random geographic system penalises those who at no fault of their own find themselves at the bottom of the list.”
- 7.6 Some respondents agreed with our proposal that priority should be given to licensing the ten trial multiplex areas. For example, Niocast, which operates a trial multiplex in Manchester, noted that due to the expiration of trial licences, “it would not be optimal for consumers receiving services via trial multiplexes to experience a loss of service”. Your FM argued that geographical areas neighbouring existing trial areas should also be prioritised, because there is an “expectation in these neighbouring areas as to an early introduction of SSDAB in their area”.
- 7.7 However, other respondents, including Media Ireland, Blast 106 and BE FM Belfast, felt that priority should instead be given to areas such as Northern Ireland that were not included in the small-scale radio multiplex trials.
- 7.8 Some respondents questioned whether, as we suggested in the consultation, areas with greater population sizes should be prioritised. Brian Lister said he was not clear why population size should be relevant, given that, “it could be argued that SSDAB will have significant impact in non-metropolitan areas where an early roll-out of new (and perhaps more relevant) radio services will be valuable and appreciated.” Susy Radio was concerned that the proposed policy could adversely affect more rural areas, “pushing them to the back of the queue. It is these consumers who traditionally receive lower priority in many other aspects.” Instead, the respondent felt that a balanced approach was required whereby polygon licence areas could be prioritised according to the popularity and impact of existing community radio services within the proposed multiplex area.
- 7.9 Similarly, some applicants disagreed with Ofcom’s proposal to prioritise areas with full local multiplexes. These are most often urban areas with relatively large population sizes. Moss Media argued that “rather than super-serving an area with considerable digital choice already - which may lead to digital audience fragmentation rather than real audience growth - the opposite approach would deliver the more positive benefit of usefully widening digital choice for the greatest number of presently underserved potential listeners.”
- 7.10 A few respondents suggested other criteria not consulted on by Ofcom should be taken into account in deciding the order in which the polygon licence areas should be advertised.

West Kent Community Radio suggested that priority should be given to areas where community radio FM applications have previously been rejected due to a lack of available frequencies, while Witney Media said that Ofcom should prioritise advertising polygon areas where there are potential applicants who can demonstrate “financial readiness” to launch a multiplex.

Analysis and conclusion

- 7.11 We note that most respondents agreed with our proposed factors for determining the order and timescale in which Ofcom will advertise small-scale radio multiplex licences.
- 7.12 In deciding the sequence of licence advertisements, we carefully considered the comments made about the seven factors listed in our consultation, in addition to some other factors that were raised by respondents.
- 7.13 Ofcom does not have sufficient resources to introduce small-scale radio multiplex services across the whole of the UK at the same time. We also note the merits of a phased approach enabling our process to be refined in light of experience in successive rounds.
- 7.14 We have planned initially on the basis of eight rounds of licensing and anticipate that each round will take approximately nine months from the date of advertising the licences to the last licence award. This includes a 12-week period for applications to be submitted and a further six months for Ofcom to assess applications and award licences. We expect to advertise each batch of licences approximately 12 weeks before we complete our assessment of the applications received in the previous round. Hence we would advertise batches of licences every six months approximately. This is merely an estimate – the actual time it will take us to award licences will depend on, among other things, the number and characteristics of the applications which are submitted. It should also be recognised that we will be assessing applications for C-DSP licences at the same time that we are assessing applications for small-scale radio multiplex licences (paragraphs 9.15 – 9.20).
- 7.15 We have acknowledged the main themes that emerged from the consultation responses and have taken a balanced approach to these factors as far as possible. In particular, we have recognised the desirability of ensuring a broad geographical spread of licensing across the UK in the early licence rounds so are not adopting a region-by-region approach.
- 7.16 However, potential limitations on the availability of spectrum and the implications of this for spectrum planning mean that, for the two ‘macro areas’(covering the North West of England and parts of North East Wales, and South East England), we will need to advertise all of the polygon areas contained in each macro area as a single batch.
- 7.17 We have decided, where we are able, to prioritise advertisement of the trial multiplex areas. This is on the basis of providing some regulatory certainty for both the trial multiplex operators and the programme services that are currently broadcasting on them. This means that five of the ten trial multiplex areas will be advertised in Round 1 of licensing, with the North West macro area, which includes the area covered by the Manchester trial multiplex, comprising Round 2.

- 7.18 Licensing the trial multiplex areas in the South East of England will need to wait just a little longer until Round 4. This is because as we have not yet concluded full international agreement to the use of spectrum in that part of the UK.
- 7.19 We noted the responses we received on our proposal to include as factors population size and capacity constraints. Both these factors tend towards prioritising densely populated urban areas. Whilst we continue to consider these are relevant factors because multiplex services are likely to result in a substantial increase in numbers of digital radio services available to substantial numbers of people, we agree with respondents who suggested that this needs to be balanced with the needs of underserved areas. We recognise that the public benefits of additional digital radio services, particularly with a local focus, in a less densely populated area with few such services may exceed that of such a service in an already well-served urban area. In the interests of widening the choice of DAB digital radio services for the greatest number of presently underserved listeners, we have decided to add an eighth factor, which is to prioritise areas which are underserved by DAB digital radio but where clear demand for new services exists. This results in a balanced approach, which – on a round-by-round basis – will mix advertisements for polygon areas with high populations and/or full local multiplexes with underserved areas.
- 7.20 Regarding the other factors respondents suggested we should take into account in deciding which areas to advertise first, we felt that any assessment to consider the “readiness” of potential applicants in the different polygon areas would add an extra layer of complexity (and therefore delay) to the licensing process. On the FM frequencies point, it is the case that where FM frequencies are unavailable this is usually in the more populated areas, which the consultation already proposed prioritising (see paragraph above).

Details of the first two licensing rounds

- 7.21 The polygon areas we intend to advertise licences for in Rounds 1 and 2 are shown in the table and maps below. For the purposes of drawing up this list for Round 1 we divided the UK into regions (illustrated by the maps at Annex 1) and then selected certain polygon areas from each of these regions, with the exception of those in the two macro areas. The list for Round 2 is formed of all of the polygons in one of those macro areas. Stakeholders should refer to the maps in Annex 1 for detail on all polygon (‘licence’) areas.
- 7.22 In making the selection of licences to be advertised in Round 1, we have taken account of the following factors (these comprise all the factors we consulted upon, as well the eighth factor noted in paragraph 7.19 above, added in light of consultation responses):
- a) The level of likely demand from service providers based on expressions of interest received;
 - b) The desirability of ensuring a broad geographical spread across the UK in early licence awards;
 - c) Population size (i.e. prioritising areas where the greatest numbers of consumers stand to benefit from new-small-scale radio multiplex services);

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- d) Spectrum availability and management considerations;
- e) Prioritising trial multiplex areas, noting that trial licences are due to expire at the end of next year and it would not be optimal for consumers receiving services via trial multiplexes to experience a loss of service;
- f) Prioritising areas with full local radio multiplex services ahead of those where existing local radio multiplex services currently have vacant capacity;
- g) Managing the workload involved in licensing significant numbers of small-scale radio multiplex services (and associated C-DSPs given applications will open alongside those for small-scale radio multiplex licences) within the resources available to Ofcom; and
- h) Prioritising areas which are underserved by DAB digital radio but where clear demand for new services exists.

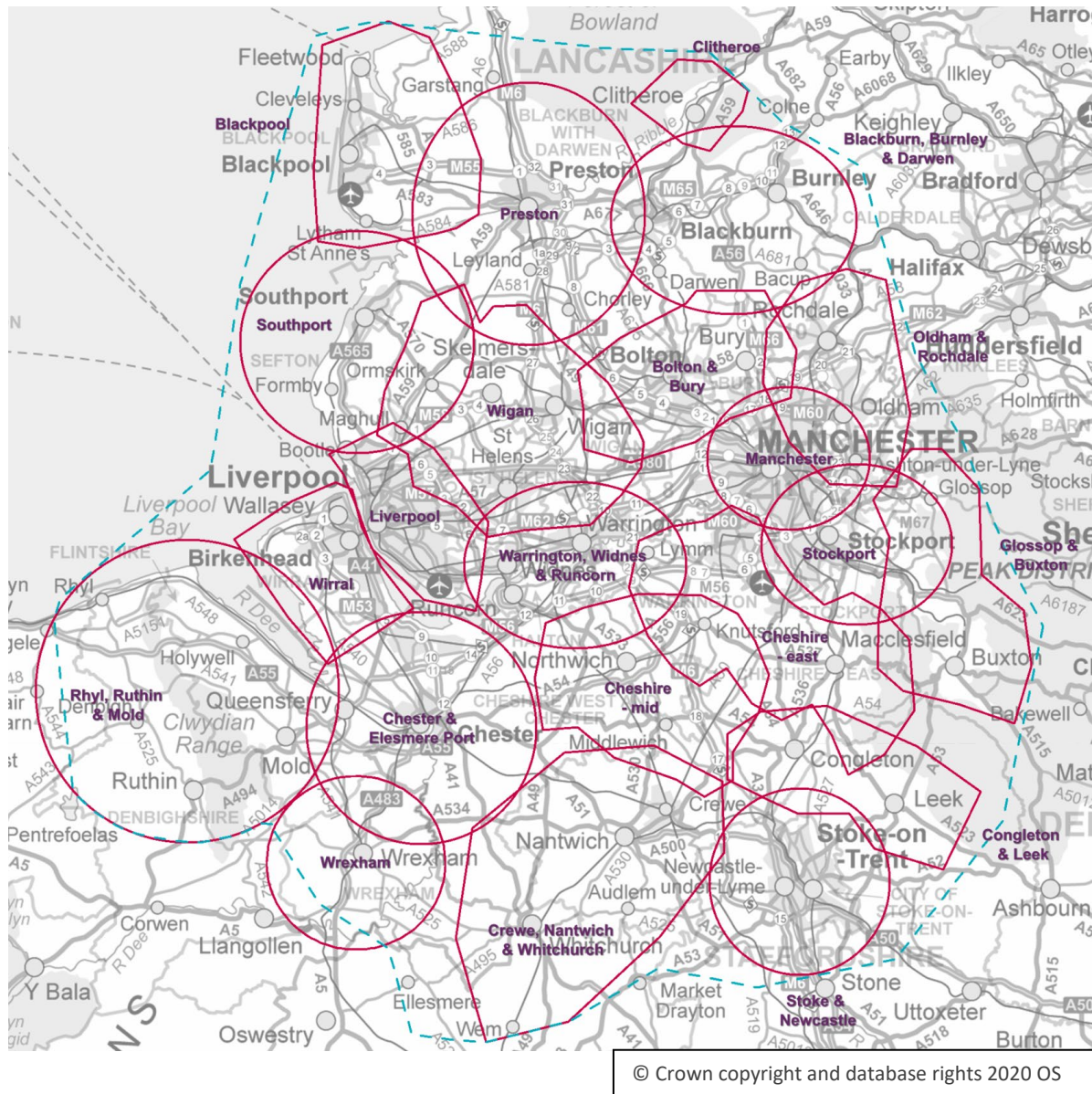
Small-scale radio multiplex licences to be advertised in Rounds 1 and 2

Round 1		Round 2	
Small-scale DAB polygon name	Area	Small-scale DAB polygon name	Area
Alnwick & Morpeth	North of England	Blackburn, Burnley & Darwen	NW macro
Basingstoke	South-east England	Blackpool	NW macro
Derry/Londonderry	N.Ireland	Bolton & Bury	NW macro
Bradford	Yorks & N.Lincs	Cheshire - east	NW macro
Cambridge	East of England	Cheshire - mid	NW macro
Cardiff	Wales	Chester & Ellesmere Port	NW macro
Clevedon, Avonmouth & Filton	South-west England	Clitheroe	NW macro
Dudley & Stourbridge	Midlands	Congleton & Leek	NW macro
East Bristol, Mangotsfield & Keynsham	South-west England	Crewe, Nantwich & Whitchurch	NW macro
Edinburgh	Scotland	Glossop & Buxton	NW macro
Exeter	South-west England	Liverpool	NW macro
Glasgow	Scotland	Manchester	NW macro
Inverclyde	Scotland	Oldham & Rochdale	NW macro
Isles of Scilly	South-west England	Preston	NW macro
Kings Lynn	East of England	Rhyl, Ruthin & Mold	NW macro
Leeds	Yorks & N.Lincs	Southport	NW macro
Newcastle & Gateshead	North of England	Stockport	NW macro
North Birmingham	Midlands	Stoke & Newcastle	NW macro
Norwich	East of England	Warrington, Widnes & Runcorn	NW macro
Salisbury	South-west England	Wigan	NW macro
Sheffield & Rotherham	Yorks & N.Lincs	Wirral	NW macro
South Birmingham	Midlands	Wrexham	NW macro
Tynemouth & South Shields	North of England		
Welsh Valleys	Wales		
Winchester	South-east England		

Map of small-scale radio multiplex licences to be advertised in Round 1



Map of small-scale radio multiplex licences to be advertised in Round 2



- 7.23 With the exception of the advertisement of licences for the polygons contained in the macro areas, we plan to select the polygon areas/licences to be advertised in subsequent rounds on a similar basis close to the time of advertisement, taking into account all the factors described previously as well as current market conditions and/or Ofcom's experience of licensing different types of polygon areas to date.
- 7.24 After Rounds 1 and 2, there will be a short internal review where we may make amendments to the licensing process and/or timetable. Any changes will be made clear when we invite applications for Round 3.

Licence award criteria

- 7.25 As we set out in the consultation document, the Act as modified by the Order requires that small-scale radio multiplex licences be competitively awarded, and modifies section 51 of the 1996 Act to provide the following criteria for award:
- a) the extent of the coverage area (within the area or locality specified in Ofcom's advertisement notice) proposed to be achieved by the applicant as indicated in its technical plan;
 - b) the ability of the applicant to establish the proposed service;
 - c) the desirability of awarding the licence to an applicant that (i) is a person providing or proposing to provide a community digital sound programme service in that area or locality; or (ii) has as a participant a person providing or proposing to provide a community digital sound programme service in that area or locality;
 - d) the extent to which there is evidence that, amongst person providing or proposing to provide community of local digital sound programme services in that area or locality, there is a demand for, or support for, the provision of the proposed service; and
 - e) whether, in contracting or offering to contract with persons providing or proposing to provide community or local digital sound programme services, the applicant has acted in a manner calculated to ensure fair and effective competition in the provision of those services.
- 7.26 We then set out how we proposed to apply these criteria when assessing applications for small-scale radio multiplex licences, and asked for views on our proposed approach to the first two criteria in particular – the extent of an applicant's proposed coverage area, and their ability to establish their proposed service.

Licence award criteria: extent of proposed coverage area

- 7.27 Section 50(4)(b) of the 1996 Act as modified requires applicants to submit a technical plan as part of their application. It requires that this plan must include:
- a) the parts of the area or locality specified by Ofcom in advertising the licence which would be within the coverage area of the service;
 - b) the timetable in accordance with which that coverage would be achieved; and
 - c) the technical means by which it would be achieved.
- 7.28 Applicants are required to submit a technical plan because, as noted above, Ofcom is required to assess the extent of the coverage area they are proposing.

What we proposed

- 7.29 Section 50(3) of the 1996 Act as modified allows Ofcom to issue guidance as we consider appropriate. Due to the importance of the size of the proposed coverage area, the

technical plan is an extremely important part of the application. We proposed as a minimum that the technical plan should include:

- a) a description of the area intended to be served and a prediction of expected coverage;
- b) assessment of overlap with local radio multiplex services;
- c) transmitter site information;
- d) assessment of the risk of 'hole punching' occurring in the coverage of other radio multiplex services; and
- e) a timetable for delivery.

7.30 When inviting applications for small-scale radio multiplex licences, we said we will define coverage areas in advance which we are calling 'polygon areas' (see Section 4). In two larger areas known as 'macro areas' we grouped polygon areas together. This was because there is unlikely to be insufficient spectrum available to allocate frequencies to every polygon area in these macro areas. We said that, in all areas, we would seek proposals from applicants for coverage areas based upon the polygons.

7.31 The considerations we proposed to assess under the 'extent of the coverage area' licence award criterion were as follows:

- **Extent of proposed coverage** - how much of the population contained within the coverage area polygon is predicted to be served by the transmitters proposed in the applicant's technical plan, and how much population overspill falls outside of the polygon area.
- **Compatibility with the overall spectrum plan** – the interference that the applicant's proposed transmitters are predicted to put into the areas where the same frequency is being (or is planned to be) used.
- **Degree of overlap with local radio multiplex services** – the population in the coverage overlap with the licensed area of any local radio multiplex services. The overlap with a local multiplex should not exceed 40%.

7.32 With regard to coverage 'overspill', we said we may allow applicants to exceed the coverage area of the polygon with two important provisos. Firstly, the overspill should be as limited as reasonably possible and, in any event, not generally exceed 30% of the population contained within the original polygon. Secondly, where the small-scale radio multiplex service (including any overspill) overlaps with the licensed area of a local radio multiplex service, the population within that overlap must not exceed 40% of the total population within the local radio multiplex service's licensed area.

7.33 We said in the consultation that we would give preference to applicants that propose to cover a larger proportion of the population covered by the advertised polygon over those who propose to cover less of it, whilst minimising overspill. This is because the former represents a more efficient use of spectrum, is likely to be more attractive to programme service providers, and we consider it to be the clear intention behind the first of the statutory licence award criteria.

- 7.34 We also proposed that, once a licence has been awarded, the successful applicant must follow the process of liaison which states the new licensee must submit to Ofcom evidence of agreement on ACI issues with other radio multiplex licensees during the period between the licence award and the launch of the small-scale radio multiplex service.

What respondents said

Consultation question 5: Do you agree with our proposed approach for assessing the technical plans submitted in small-scale radio multiplex licence applications?

- 7.35 Overall, most respondents broadly agreed with our approach. Some others agreed generally but provided detailed comments of concerns on the specific aspects of the proposals, while 2% disagreed entirely with our proposals.
- 7.36 Some respondents expressed concerns over the complexity of the technical plan requirements and the level of detail required. Winchester Radio argued that the complexity of the technical plan requirements, and the specific planning tool which may be needed to help create the technical plan, may mean that existing or prospective community radio stations are unable to submit an application to operate a licence. Moss Media was concerned that the overall technical work required to draw together information required may discourage new entrants.
- 7.37 Respondents including Nation Broadcasting, Angel Radio, the Community Media Association ('CMA'), Wireless and Future Digital Norfolk felt that the extent to which an applicant's technical plan would deliver coverage of a polygon area should not be a major factor in the licence award. Nation Broadcasting said it could "encourage risky applications to the detriment of operators with sensible, financially viable coverage plans", while Future Digital Norfolk said that "prioritising the maximisation of coverage in the short-term risks the introduction of economically high-risk bids against more sustainable approaches". The CMA said that Ofcom should not give undue prominence to the size of the polygon coverage area which an applicant proposes to cover.
- 7.38 On the other hand, the Dee Radio Group said that Ofcom should be prepared to consider technical plans that are based on the advertised polygon area definition, but have a degree of flexibility and increased scale (within the legislation). It argued that the increased scale would likely to increase the viability of the multiplex service, and may be of particular benefit in 'macro' areas where too tightly defined polygon areas may lead to the exclusion of existing analogue stations. Equally, it felt that tightly defined polygons in rural or semi-areas may lead to low take up of capacity and therefore inefficient use of spectrum and a risk to sustainability.
- 7.39 Wireless asked for a clearer rationale to be provided for our proposal that any overspill of coverage outside of a polygon should not generally exceed 30% of the population contained within the advertised polygon.
- 7.40 A few respondents had concerns about adjacent channel interference. Wireless suggested that appropriate protections should be incorporated by Ofcom into the process of

approving technical plans, and that appropriate resources should be made available for assessing adjacent channel interference.

Analysis and conclusion

- 7.41 We understand some respondents' concerns regarding the complexity of some of the information we will need to see in a technical plan. Section 50(4)(b) of the 1996 Act as modified requires a small-scale radio multiplex licence applicant to submit a technical plan, while section 50(3) of the 1996 Act as modified allows Ofcom to issue guidance as we consider appropriate. With regard to the latter, Ofcom intends publishing detailed Notes of Guidance alongside the advertisements of multiplex licences which will assist applicants on what they need to provide and the format in which they need to do so.
- 7.42 As previously noted, the extent of the coverage area (within the area of locality specified in Ofcom's licence advertisement) that is proposed to be covered by the applicant is one of the multiplex licence award criteria set out by the legislation. Therefore, Ofcom does not have discretion in this area and so the extent of coverage will be assessed as part of the licence award criteria. Applicants are, however, free to propose to serve only part of the polygon area if they deem that achievable and sustainable.
- 7.43 To provide applicants with further flexibility, they may also propose to include a limited amount of coverage that falls outside the polygon area, although we stipulate that overspill coverage should not include additional population exceeding 30% of that contained within the polygon. We have put this constraint in place in order to maintain the integrity of the overall spectrum plan, and to ensure there is sufficient spectrum for all of the planned polygon areas.
- 7.44 We note Wireless' request for further justification for setting the overspill limit at 30%. In relation to this, we note that what may be acceptable overspill would depend on a range of factors including spectrum constraints, the coverage preferences of community and small commercial operators in the locality, and commercial factors influencing viability. Each of these would vary by locality, and we do not consider it would be a proportionate use of resource or conducive to clarity for stakeholders to assess separately for each polygon area we advertise. We consider a 30% limit provides clarity for potential providers and is likely to ensure small-scale radio multiplex service coverage areas reasonably closely reflect polygons developed and advertised by Ofcom by the process set out in this document, whilst not penalising overspill which will inevitably occur in potential multiplex operators legitimately attempting to provide a service to the peripheries of any particular polygon.
- 7.45 The subject of managing adjacent channel interference (or 'hole punching') when small-scale multiplex licensees implement their proposed transmitters is discussed in more detail in Section 5. In respect of Wireless's comments, Ofcom will as part of its consideration of applications take into account the risk that new small-scale DAB transmitters pose to reception of other DAB radio services. We intend including additional detailed information in the notes of guidance for small-scale radio multiplex licences on how applicants can

assess the impact that their proposed transmitters might have on reception of other services, and steps that can be taken to avoid or minimise that impact.

Licence award criteria: ability to establish the proposed service

What we proposed

- 7.46 In assessing applications for small-scale radio multiplex licences against this statutory criterion, we proposed that we would focus on three main areas:
- Financial – we said we will want to know the cost of establishing the new small-scale radio multiplex service, and how these costs will be met.
 - Expertise and experience – we said we will want to know who will be responsible for managing the small-scale radio multiplex service.
 - Technical – we said we will want to know how the technical facilities will be set up, and whether the proposed technical plan is realistic and deliverable.

What respondents said

Consultation question 6: Do you agree with our proposed approach for assessing the ability of applicants to establish their proposed small-scale radio multiplex?

- 7.47 Overall, respondents were approximately evenly divided between those who agreed with our approach, and those who agreed in general but provided detailed comments of concerns on the specific aspects of the proposals. A small minority disagreed with our proposed approach in its entirety.
- 7.48 Respondents including Transplan UK and Radio Ninesprings agreed in general with Ofcom's proposed approach, but suggested it did not go far enough to protect "bona fide NFP [not for profit] applicants from being overwhelmed by much larger established broadcast groups".
- 7.49 Some respondents had concerns about the long-term viability and reliability of small-scale radio multiplex licensees, with some suggesting that Ofcom should give very clear preference to applicants that are already providing existing analogue radio services in the area. Both Exeter Community Radio and Phonic FM, for example, said they would like "reassurances about the long-term ability of the chosen provider to sustain the service through the entire licence period". Moss Media stated that it is important for any small-scale radio multiplex operators to show their ability to maintain the service, not just to establish it, and suggested they applicants need to "show contingencies". Wide FM, Radio Centre and The Dee Radio group were among the other respondents who emphasised the importance of a small-scale radio multiplex licensee's financial viability in maintaining the service.
- 7.50 Nation Broadcasting and Angel Radio agreed in general with the proposed approach, but also felt that we should take into account the multiplex's proposed programme services in the award assessment, including evidence of agreements with service providers and

evidence that a potential small-scale radio multiplex operator will “offer a range of services on the multiplex”. Future Digital Norfolk agreed with this and said that Ofcom should consider how we will ensure that small-scale radio multiplex licensees will carry a diverse range of services.

Analysis and conclusion

- 7.51 The legislation does not enable Ofcom directly to give preference in small-scale radio multiplex licence award decisions to not-for-profit applicants or to applicants who already operate small-scale commercial or community radio services in the proposed multiplex licence area, as some respondents requested. However, one of the statutory licence award criteria (see paragraphs 7.54-7.56, below) requires Ofcom to take into account the desirability of awarding a small-scale radio multiplex licence to a body corporate that is providing, or proposing to provide, a C-DSP service in the locality being advertised. We also note that we are required to take account of the extent to which there is evidence of demand or support for the proposed small-scale radio multiplex service among providers, or prospective providers, of C-DSP and local DSP services. There are reasons why we anticipate that not-for-profit multiplexes and those involving smaller existing services in the locality would be likely to attract expressions of support from such providers (although other factors such as coverage and technical standards will also be relevant).
- 7.52 While section 51(2)(c) of the 1996 Act as modified requires Ofcom to assess the ability of an applicant to establish its proposed service, the Order does not require Ofcom to consider the ability of an applicant for a small-scale radio multiplex licence to maintain its proposed service. Indeed, the Order modifies section 51(2)(c) to remove the words “and to maintain it throughout the period for which the licence will be in force” in respect of small-scale multiplex licence awards only. This change is also consistent with the ‘lighter touch’ ethos of the small-scale DAB licensing regime.
- 7.53 Similarly, there is no requirement in the statutory framework for applicants to provide Ofcom with a full line-up of programme services they intend to provide on their multiplex services, nor provision for us to judge licence applications on the basis of how far they would cater to the tastes and interests of audiences in the locality. Indeed, the Order modifies the 1996 Act to remove that criterion for small-scale radio multiplex licence awards only. We note, however, that section 51(2)(f) requires us to take into account evidence of support for the provision of the service from persons providing or proposing to provide C-DSP and local DSP services. So, while we will not compare the breadth of appeal of the line-ups on different potential multiplexes (i.e. the complementarity of formats of services), we *will* take into account the existence of clear expressions of support from those wishing to provide services on reserved and unreserved capacity. Such expressions will carry particular weight from existing community and local analogue services (i.e. those whose service is already operational and which therefore have a strong likelihood of taking the route to digital that small-scale DAB provides).

Other licence award criteria

Involvement of C-DSP service providers in the applicant group

- 7.54 As already noted above, Section 51(2)(ca) of the 1996 Act as modified by the Order requires Ofcom to take into account the desirability of awarding a small-scale radio multiplex licence to a body corporate that is providing – or proposing to provide – a C-DSP service in the locality being advertised.
- 7.55 Wireless argued in its consultation response that the involvement of C-DSP service providers in the applicant group should be an essential, rather than desirable, requirement, and it suggested that Ofcom should “enhance its emphasis on social gain and community benefit as opposed to profit generation”.
- 7.56 While we will indeed take this criterion into account in making licence award decisions, the legislation makes clear this is a desirable rather than a required feature, and it would not prevent a licence award to multiplex applicants not involving a C-DSP service provider directly. We will encourage applications both from applicants directly involving C-DSP service providers in their group, and those who can otherwise demonstrate demand and support from such providers.

Demand or support from potential programme service providers

- 7.57 As noted above, section 51(2)(f) of the 1996 Act as modified requires Ofcom to take into account evidence that the applicant has support from providers interested in having their existing or planned programme services carried on the proposed multiplex.
- 7.58 The evidence we will consider can come from existing holders of DSP licences, or from programme service providers who intend to apply for (or have already applied for) DSP or C-DSP licences, which would include but not be limited to existing analogue community and local commercial licensees. Preference will be given to applicants who can demonstrate that they will be in a position to carry a number of services on both reserved and unreserved capacity.

Fair and effective competition

- 7.59 Section 51(2)(g) of the 1996 Act as modified requires Ofcom to assess whether, in contracting or offering to contract with programme service providers, the small-scale radio multiplex licence applicant has acted in a manner calculated to ensure fair and effective competition in the provision of such services.
- 7.60 In assessing applications against this criterion, we will need to have confidence that the prospective small-scale multiplex service operator has approached a wide range of potential service providers, and in particular those currently holding either a community radio or local commercial analogue licence in the area.

- 7.61 The type of evidence we may require from the applicant will include summaries of steps taken to contact and discuss such services which take place prior to, and during, the multiplex licence application process, and the submission of proposed carriage contracts.

8. Community digital sound programme licences: conditions and requirements

What is a C-DSP licence?

- 8.1 Community Digital Sound Programme ('C-DSP') licences are for new or existing community radio stations wishing to broadcast on small-scale radio (or local) multiplex services. They will only be able to be held by a body corporate that is not profit distributing and will remain in force for an indefinite period (i.e. until they are surrendered by the licensee or revoked by Ofcom).
- 8.2 Section 61(2A) of the 1996 Act as modified by the Order requires that C-DSP licences must have a condition securing that the service is only broadcast on a single small-scale radio multiplex service. This means that a separate licence must be held for each C-DSP service that is broadcast on each multiplex. However, a single corporate entity is permitted to hold multiple C-DSP licences.
- 8.3 Like analogue community radio stations, the holders of C-DSP licences need to meet certain community radio characteristics, including the delivery of "social gain", to the communities they have been licensed to serve. Licences will have similar restrictions as currently apply to holders of analogue community radio relating to how much income they may obtain from the sale of on-air advertising and sponsorship.
- 8.4 A C-DSP licence is not the only option for services wishing to broadcast via a small-scale radio multiplex service. Programme services can also be broadcast under an existing local DSP licence, which – unlike C-DSP licences – do not require their holder to deliver social gain to an identified community.
- 8.5 Unlike the licences for analogue community radio stations, C-DSP licences do not have any spectrum attached to them. C-DSP licence-holders will need to apply to multiplex operators to use capacity on a small-scale radio multiplex service. Typically, this would be capacity that has been ring-fenced for use only by C-DSP licensees ('reserved capacity') although C-DSP licensees are not prevented from applying to access unreserved capacity (e.g. if there is insufficient reserved capacity remaining to accommodate the service). DSP licensees cannot access reserved capacity.
- 8.6 Unlike analogue community radio licences, C-DSP licences will allow – but not require – a service to broadcast. This is because, as already noted, a licensee needs to agree carriage with the multiplex operator. There is not a limitation on the number of C-DSP services licensed in any one locality.
- 8.7 Section 61B(2) of the 1996 Act as modified by the order gives Ofcom the power to vary C-DSP licence conditions (including Key Commitments), having regard to the extent to which the service would continue to result in social gain, the relevant community would continue to be offered opportunities to participate in operation and management of the service, and the licensee would remain accountable to the relevant community. If a service wishes to

make a more substantial change to its licence, the programme service provider could instead surrender its existing C-DSP licence and apply for a new C-DSP that reflects the desired changes.

- 8.8 C-DSP licensees will have to comply with the Ofcom Broadcasting Code, as applicable to all broadcast radio services, and will also need – in common with other licences – to provide Ofcom with information for the purpose of exercising our functions.
- 8.9 A C-DSP licence can only be transferred from one body to another with the written consent of Ofcom. The legislation stipulates that we cannot give our consent unless we are satisfied that the person (body or company) to whom it is proposed to transfer the licence would be in a position to comply with all of the licence conditions. The person to whom it is proposed to transfer the licence will be asked to provide evidence of funds available to the new licence-holder to sustain the service going forward, and other information as deemed appropriate by Ofcom at the time of the request.

Key Commitments: studio location

What we proposed

- 8.10 We proposed that the ‘Key Commitments’ contained in C-DSP licences will focus principally on the provision of ‘social gain’⁶, accountability to the target community and the ability of members of that community to participate in the service. Relative to analogue community radio, we said we would focus less on specific programming requirements, although the Key Commitments will still need to include a description of the character of service. This would include details of the target community; where the target community is located; and a description of the main purpose of the radio service, and its primary function or activities.
- 8.11 As with community radio analogue licences, we proposed that there should also be ‘standardised’ Key Commitments with regard to providing the target community with social gain, accountability and opportunities to participate in the service. We said that the delivery of the Key Commitments for each individual licence must be specific to that licence and the particular locality and community being served.
- 8.12 Given that a C-DSP licensee must provide social gain and opportunities to participate for, and be accountable to, its target community, we proposed that the Key Commitments should stipulate, as they do for analogue community radio, that the studio from which the service is broadcast should be located within the coverage area of the small-scale radio multiplex service on which it is carried.

⁶ Defined as the facilitation of discussion and the expression of opinion; the provision of education or training to individuals not employed by the person providing the service; and the better understanding of the particular community and the strengthening of links within it.

- 8.13 Given that C-DSP licensees are not required to broadcast (in contrast to analogue community radio licensees), we clarified that Key Commitments would only apply to a C-DSP licence if the service is in fact broadcasting.

What respondents said

Consultation 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.

- 8.14 Opinion on requiring studio location to be within the coverage area of the particular small-scale radio multiplex service was mixed among respondents, with 53 who answered this question in support (or broadly in support) of our proposed approach, and 57 against (or broadly critical). Within this, those interested in becoming a small-scale radio multiplex or new C-DSP licensee tended to support Ofcom's proposal, whereas many existing analogue community radio stations and the operators of the trial small-scale multiplexes were opposed.
- 8.15 A few respondents, such as Oldham Community Broadcasting and All Arts and Media, felt that the requirement to have a local studio should be addressed by Ofcom on a case-by-case basis, taking into account the likely importance of a local studio base in relation to the nature of the target community the applicant proposes to serve.
- 8.16 Many of those agreeing with Ofcom's proposal argued it would be unfair if C-DSP licensees from other areas were allowed to use reserved capacity, and were concerned that not having this rule could result in the development of a network of C-DSP licences across many multiplexes, effectively broadcasting their service on a regional or quasi-national basis. Penistone Community Radio, for example, said that would, "not seem appropriate for the principles on which community radio was founded." Central FM said: "These are community-based services to provide something unique to that area so we feel that they must be based in the local broadcast area. These are mainly staffed by volunteers with strong local knowledge."
- 8.17 Another respondent, Brian Lister, noted the potential local economic benefits of having capacity reserved exclusively for locally-based services. He argued that the requirement "will provide the further benefit of creating and maintaining broadcast production experience, work opportunities and facilities in communities across the UK rather than in a limited number of metropolitan centres."
- 8.18 Respondents such as Niocast, who opposed Ofcom's proposals on studio location, argued that the whole concept of a "studio" is anachronistic in an age where the physical location of equipment is of diminishing importance, and presenters can often now broadcast their programmes from their homes. Sunshine 104.9 noted that the ability of stations to broadcast from anywhere, including people's homes, would help volunteers with disabilities.

- 8.19 Some, including Bristol Digital Radio, drew attention to a scenario where a community radio station's existing analogue broadcast area might be "sub-divided" by more than one small-scale multiplex. This may mean the community station having to incur the costs of setting up and renting an additional studio location in order to be eligible for reserved capacity in the second multiplex area.
- 8.20 The most common point raised in opposition to the proposed policy, however, was that a significant number of community radio stations serve a community of interest which is not necessarily correlated to a particular geographical area. Nation Broadcasting, for example, commented that "it is unfair that some stations may be precluded from taking advantage of the benefits of a C-DSP licence, by virtue of being out of area, even though they are a community of interest service that may be of genuine appeal to those in the area to which the multiplex operates." Resonance FM felt our proposals was at odds with Arts Council England's idea of small-scale DAB being part of a "national ecology", while Susy Radio argued that the restriction may cause some existing community of interest services to cease, leading to a loss of choice for consumers and loss of revenue for multiplexes.
- 8.21 There were relatively few comments made about other aspects of our proposed regulation of C-DSP Key Commitments, although some community broadcasters felt that, in order to fully protect community radio characteristics, C-DSP licences should retain the same level of detail with regard to programming commitments as existing analogue community radio licences.
- 8.22 Commedia Sheffield, Community Media Solutions and the Community Media Association all felt that the annual licence fee attached to a C-DSP licence should only be payable once a C-DSP service is actually broadcasting on a small-scale radio multiplex (and is therefore delivering its Key Commitments).

Analysis and conclusions

- 8.23 After carefully considering the diverse range of opinions on the studio location question, we have decided to confirm the proposals that we set out in the consultation, including requiring a C-DSP service to be broadcast from a studio located within the licence area of the small-scale radio multiplex service on which that C-DSP service is being provided. This is consistent with the existing requirement that analogue community radio stations have studios that are based within their licence area.
- 8.24 We share the view of those respondents who noted that allowing a C-DSP service's studio to be located outside the relevant small-scale radio multiplex service area could open the door to quasi-national or regional services using reserved capacity. Such services would compete for limited reserved capacity with those community services which do have a physical presence in the area with the enhanced opportunities for participation and training that respondents noted this entails. It would thereby increase the likely cost of such capacity to all community services.
- 8.25 We additionally consider it relevant that, as set out in our consultation, the Order subtly departs in the way it defines "community" from the legislation underpinning analogue

community radio. Specifically, it says that the community with interests or characteristics in common must be physically based within the particular area or locality. The legislation therefore clarifies that, even if the community of interest is primarily defined by something other than location, social gain from a C-DSP service is specifically that delivered to those individuals in the community of interest who live work or undergo education or training in the locality.

- 8.26 We understand the point made by several respondents that communities of interest are not necessarily, or not only, geographically based. To give a hypothetical example, a service wishing to appeal to students may wish to operate from one university campus only but broadcast via several small-scale radio multiplex services whose coverage area includes a substantial student population. It is important to bear in mind, however, that the policy question is not whether such a broadcaster should be able to operate on that model. Instead it is whether, outside the “home” multiplex area, they should be required either to establish studios within each small-scale radio multiplex service area (to potentially qualify for multiple C-DSP licences) or instead broadcast via DSP licences on unreserved capacity in areas where they have no studio. In our view, for the reasons set out above, that is the appropriate position and is supported by the legislative provisions.
- 8.27 We acknowledge that changes have taken place in technology which has opened up opportunities to undertake activities away from a traditional studio. In 2018 Ofcom, partly in recognition of these changes, further deregulated the locally-made programming requirements for analogue commercial radio stations. However, we note the importance of “off-air” social gain requirements of community radio services, such as providing volunteer training and off-air involvement and engagement with the target community in the local area. We consider that maintaining a physical presence in the form of a studio remains important in effectively (and demonstrably) delivering social gain. This does not preclude services additionally making use of technology to enable the target community to participate remotely, and indeed we encourage innovation in methods of engaging and involving the community.
- 8.28 In implementing this policy we will exercise sensible levels of discretion (as we currently do with studio location issues in analogue community radio) in situations where a station’s studio is located marginally outside the coverage area of the small-scale radio multiplex service on which it is being carried.
- 8.29 We have also decided to maintain our position that on-air programming commitments contained in C-DSP licences should be less prescriptive than those contained in the licences of their analogue counterparts. This is because, as we set out in the consultation and enshrined in the legislative criteria for awarding C-DSP licences, we believe the Key Commitments in C-DSP licences should focus principally on the provision of ‘social gain’, participation and accountability. It is also more consistent with the ‘lighter touch’ programming requirements to be found in DSP licences. Unlike analogue community radio licences, the award criteria for C-DSP licences do not include the extent to which content would cater for the tastes and interests of the relevant community, or cater for tastes and interests different to those already catered for by existing services. In practice, we would

anticipate that requiring accountability to and participation by the relevant community would be likely to steer services towards catering to the tastes and interests of that community. However, this does not require direct regulation via specific programming commitments.

Funding restrictions: apportionment of income for holders of analogue community radio and local DSP licences

What we proposed

- 8.30 Section 61A of the 1996 Act as modified by the Order includes restrictions on the amount of advertising and sponsorship income that C-DSP licensees may obtain. In our consultation, we proposed that, once they have been broadcasting for more than a year, we would require an annual finance report to be submitted by each licensee. This will enable Ofcom to check whether stations are operating within the income limits set out in the legislation. Ofcom proposed to have similar provisions in C-DSP licences as currently apply to holders of analogue community radio licences, relating to how much income they may obtain from the sale of on-air advertising and sponsorship.
- 8.31 Section 67A recognises the possibility of there being “corresponding” analogue community radio and C-DSP services⁷. In such circumstances, the corresponding services will be required to report income together in a single annual financial report. This is because the legislation requires that the licence conditions relevant to funding apply across both the analogue and C-DSP licences together, rather than separately. In effect, this means that the single “fixed revenue allowance” of £15,000 will apply to the corresponding services taken together, and relevant income from advertising and sponsorship above that allowance will be limited to 50% of total relevant income across both the services.
- 8.32 In scenarios where the holder of an analogue community radio licence holds a DSP licence (rather than a C-DSP licence) but where the DSP service corresponds with the analogue service (under the same definition as referred to above), we proposed that the licensee should apportion their income equally between their analogue and DSP licences, unless they have compelling reasons to argue that the income should be apportioned differently. Under the proposals, DSP licensees would not need to seek any prior approval to depart from equal apportionment. However, if they have departed from it, licensees should, if asked by Ofcom, be able to explain why the apportionment is reasonable, and provide evidence to support this.

⁷ Defined in the legislation as where there is an 80% overlap in programme content, with at least 50% broadcast simultaneously.

What respondents said

Consultation 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?

- 8.33 Many of the 106 respondents to this question mistakenly thought it related to the principle of requiring the application of existing restrictions on analogue community radio funding to C-DSP licences. However, the issue of whether such rules should exist and should apply across corresponding analogue community radio and C-DSP services is settled in the affirmative by the legislation (section 61A of the 1996 Act as modified by the Order), meaning that Ofcom does not have any discretion in this area.
- 8.34 The focus of the question related more narrowly to what Ofcom should do in situations where a DSP (rather than C-DSP) service corresponds with an analogue community radio service. This proposal was designed to address a situation whereby analogue community licensees might try artificially to apportion all or most of their commercial revenues to a DSP licence rather than an analogue community radio licence in an attempt to avoid community radio commercial income restrictions.
- 8.35 Ofcom's Advisory Committee for Wales stated that, if the proposed default position of apportioning income across equally corresponding analogue community radio and DSP licences did not exist, there would be a reduced incentive to apply for a C-DSP licence, and therefore less potential 'social gain' delivered to the community.
- 8.36 Some respondents, while agreeing the need for apportionment, felt there should be flexibility for licensees to depart from the proposed equal apportionment between analogue community radio and DSP licences, and to apportion more revenues to the DSP licence. Examples of where respondents believed departure may be justifiable included where:
- there is one analogue community radio licence but the licensee runs multiple corresponding DSP services across different multiplexes;
 - a service's DAB coverage area is much bigger (in terms of population) than its corresponding analogue coverage area;
 - the proportion of digital radio listening in the UK, as measured by RAJAR, increases significantly (for example to 75% or more).
- 8.37 Sunrise FM said it did not believe that analogue community radio stations should be eligible to hold DSP licences at all, "as this suggests they are both community and commercial at the same time."

Analysis and conclusions

- 8.38 In scenarios where an analogue community station also holds a DSP licence, we have decided to proceed with our proposal on 'equal apportionment' While we agree with

respondents who noted that there may be circumstances where it would be appropriate to apportion differently, our consultation already proposed to depart from the default position where there are compelling reasons to do so.

- 8.39 In particular, we may review the ‘default’ 50/50 split between the revenues of a DSP and analogue community licence, should listening to digital radio services – as measured nationally by RAJAR – increase significantly from the current 58.4% share of all radio listening.
- 8.40 To the point raised by Sunrise FM (paragraph 8.37) there is no legislative restriction preventing the holder of an analogue community radio licence also holding a DSP licence, and a few already have one. Ofcom therefore has no powers to introduce such a prohibition.

9. Community digital sound programme licences: application and grant

- 9.1 As set out in our consultation, the grant process for C-DSP licences will not involve a competition between applicants. This differs from the position for analogue community radio because a C-DSP licence is not granted with any allocation of spectrum (nor with an obligation to broadcast), and there is no limitation on the number of C-DSP licences that can be granted in a locality. However, Ofcom must still have regard to certain matters specified in the Order when deciding whether or not to grant a C-DSP licence.
- 9.2 It should not be assumed that Ofcom will grant a C-DSP licence to every person who applies for one. Licences give access to reserved capacity on small-scale radio multiplex services, and it is important that services operating under C-DSP licences generate the required social gain to justify that special status. As previously noted, local DSP licences are available to those who do not wish to be bound by licence conditions regarding social gain, and such licensees can negotiate access to unreserved (but not reserved) small-scale radio multiplex capacity with multiplex operators.
- 9.3 For every C-DSP licence application, we will need to assess whether the applicant's proposals meet the necessary characteristics of a C-DSP service as set out in the Order.
- 9.4 In addition, section 60(6) of the 1996 Act as modified by the Order states that Ofcom must, in determining whether to grant the licence in question, have regard to the extent to which:
- a) "the provision of the proposed service would result in the delivery of social gain to the public or the relevant community";
 - b) "members of the relevant community are given opportunities to participate in the operation and management of the proposed service"; and
 - c) "the applicant is accountable to the relevant community in respect of the provision of the proposed service".
- 9.5 The "relevant community" is defined as "the community or communities which the service is intended to serve".
- 9.6 In this section we describe how we have decided to invite applications for C-DSP licences, and the process we will follow when considering applications and deciding whether or not to grant licences.

Timeline for accepting applications

What we proposed

- 9.7 We proposed in the consultation that a prospective C-DSP service provider would only 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 broadcast. We did not propose to close the “window” for C-DSP applications once open, unless we are unable to award the relevant small-scale radio multiplex licence following the advertisement.

- 9.8 We proposed to process applications for C-DSP licences in each batch on a first come, first served basis.

What respondents said

Consultation 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?

- 9.9 113 respondents provided comments in answer to this question. Most respondents were in favour, or broadly in favour, of our proposal.
- 9.10 Among those in favour of Ofcom’s proposal, Brian Lister, for example, said that small-scale radio multiplex licence applications are likely to be submitted following discussions with potential C-DSP service providers and so it would be sensible for these processes to proceed in parallel. Switch Radio agreed that some C-DSP service providers are likely to already be also submitting small-scale radio multiplex licence applications. Forever DAB said that Ofcom’s proposal will help multiplex operators to plan their stations and work with service providers.
- 9.11 Penistone Community Radio also agreed with the proposal, but was concerned that the ability to apply for a C-DSP licence should not be restricted to those that have aligned themselves to a particular small-scale radio multiplex licence applicant.
- 9.12 While agreeing with the proposal, Susy Radio noted that that the C-DSP licence applicant takes on the risk that, ultimately, there may not be carriage available.
- 9.13 Some respondents advocated opening the applications window for C-DSP licences only after the relevant small-scale radio multiplex licence has been awarded by Ofcom. Bath Hospital Radio, Belfast FM, Radio Grapevine and the Hospital Radio Association all said that this would ensure that potential C-DSP services would not have to pay any licence fees prior to the launch of the small-scale radio multiplex service, which was a particularly important point for non-profit hospital community services. Winchester Radio also favoured this suggestion and expressed concern that Ofcom would benefit financially from fees from “early” applicants who may never get to use their licence.
- 9.14 Nation Broadcasting, Angel Radio, Bristol Digital Radio, Future Digital Norfolk and Viamux were among those who suggested that, if the application window for C-DSP licences in an area was to be delayed until the award of the relevant small-scale radio multiplex licence, Ofcom should require from C-DSP licence applicants evidence of multiplex capacity secured, or an agreement in principle with a multiplex operator . This is because, in areas

of high demand, it would be unfair to non-profit organisations to incur costs without the guarantee of being carried on the small-scale radio multiplex service.

Analysis and conclusions

- 9.15 We note that the majority of respondents were in favour, or broadly in favour, of our proposal that a C-DSP service provider would 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.
- 9.16 We carefully considered the views of those respondents who favoured opening the opportunity to apply for a C-DSP licence only once Ofcom has awarded the small-scale radio multiplex licence upon which their proposed C-DSP service is intended to be provided. We understand that applying for a C-DSP licence before the award of the relevant small-scale radio multiplex licence involves a risk on the part of applicants, as it would involve an application fee and effort in compiling an application, when the small-scale radio multiplex licence may not ultimately be awarded to an applicant with whom the prospective provider of a C-DSP service has an agreement in principle for carriage.
- 9.17 However, it is important to note that applying as soon as applications open is only an option, not a requirement. Some prospective C-DSP service providers may wish to wait until they know for certain that the small-scale radio multiplex service on which they wish to broadcast has been licensed (i.e. not to apply immediately after the small-scale radio multiplex licence is advertised). As was stated in the consultation, we also recognise that there may be some prospective C-DSP service providers who would prefer to be granted a C-DSP licence at the earliest opportunity, even if they do not yet know whether the small-scale radio multiplex service on which they wish to be carried will be awarded a licence.
- 9.18 As several respondents noted, there are significant advantages in allowing applications when the relevant small-scale radio multiplex licence is advertised rather than later, when it is awarded. We also note that section 51(2) of the 1996 Act as modified by the Order requires Ofcom to take into account, among other things, “evidence that, amongst persons providing or proposing to provide community or local digital sound programme services in that area or locality, there is a demand for, or support for, the provision of the proposed service”. We understand it may be relatively challenging for applicants for a small-scale radio multiplex licence to demonstrate that a person expressing support (other than one currently providing an analogue service) is genuinely planning to operate a service on the multiplex. One way to do so would be if expressions of support came from potential providers who had in fact submitted a completed C-DSP licence application to Ofcom. Therefore, we consider it is useful to offer the option, but not the requirement, to apply at that stage.
- 9.19 In relation to the point raised by Penistone Community Radio, the opportunity to apply for a C-DSP licence will not be limited to those aligned with a particular small-scale radio multiplex licence applicant. Any prospective C-DSP service provider may apply although, as previously noted, while holding a C-DSP licence provides an opportunity to access reserved

capacity on a small-scale radio multiplex service it does not guarantee carriage as the number of C-DSP licences in an area is not limited to the number of slots being reserved.

- 9.20 In relation to payment of licence fees to Ofcom, we recognise that application fees are non-trivial for smaller applicants. However, they represent a relatively small part of the costs of providing a radio service, and are necessary to contribute to covering the costs of processing applications. As noted above, applying prior to being certain of carriage on a small-scale radio multiplex service is an option but not a requirement for potential C-DSP service providers.

Assessment and award of C-DSP licence applications

What we proposed

- 9.21 Section 60(6) of the 1996 Act requires Ofcom to have regard to three statutory criteria in determining whether to grant a C-DSP licence. We explained the criteria in some further detail and proposed in the consultation to evaluate them in the following ways:
- a) **Provision of social gain:** To help Ofcom assess the extent of the social gain being proposed, applicants would be encouraged to set out what they aim to do, with reference to their own experience and any proposed partnerships with other groups. This would not be compared against the extent of social gain proposed to be provided by other applicants, but we would expect all licensees to demonstrate clearly how their service provides material social gain.
 - b) **Participation in the operation and management of the service:** The legislation requires Ofcom to have regard to the extent to which an applicant's proposals give members of the relevant community opportunities to participate in the operation and management of the proposed service. Applications might set out how groups or individuals from the target community can get involved in station activities and the management of the service. We would expect a clear statement on how this will be secured and how the applicant will demonstrate it being achieved when broadcasting.
 - c) **Accountability:** Ofcom is required to consider how an applicant will make itself accountable to the relevant community, and we proposed that applicants would need to set out clearly how they intend to address this, including reference to formal and informal ways that they will be accountable to their target community. Applicants would be expected to provide precise information about how this will be secured and measured.
- 9.22 Unlike holders of analogue community radio licences, there is not a restriction on holding more than one C-DSP licence. We said in the consultation document that we would assess how an application for a C-DSP licence provides social gain, participation and accountability in the specific local area for which the C-DSP service was proposed to be provided, i.e. that any such proposals should demonstrate how the service would provide social gain, participation and accountability in addition to that already provided by other C-DSP licences that might be held by the applicant or related persons.

- 9.23 We said that we would set out full details of how a C-DSP licence application should be presented in the application form and accompanying notes of guidance. These will be published by Ofcom alongside the first small-scale radio multiplex licence advertisements. The questions asked in the application form and the information required will be designed to enable Ofcom to consider an applicant's proposals against the relevant legislative requirements.

What respondents said

- 9.24 Although we did not ask a specific question in the consultation about how we would assess applications for C-DSP licences, Nation Broadcasting and Angel Radio said that Ofcom should "ensure [that] the C-DSP service provider is financially solvent and technically competent to ensure [that] quality services [are] broadcast."

Analysis and conclusions

- 9.25 Unlike the case with many licences awarded by a competitive process such as analogue community radio licences, the statutory framework for licensing C-DSP services does not place on Ofcom a requirement to assess the ability of an applicant to maintain its proposed service. This is in part because there is no legal requirement for these types of services to broadcast.

Other issues

Existing community radio licensees

- 9.26 GTFM (South Wales) suggested that Ofcom should consider allowing community radio licensees with existing DSP licences to swap these for the appropriate C-DSP licence at no cost. Commedia Sheffield, Community Media Solutions and the Community Media Association requested a fast-track route for existing analogue community radio licensees, with these applicants being able to apply immediately and know if they have been awarded a C-DSP licence before applying to be a small-scale radio multiplex licensee.
- 9.27 We will not be prioritising existing analogue community radio licensees in the application process. Community radio licensees should make their own decision about whether they wish to apply for a C-DSP licence, with associated Key Commitments, or a DSP licence. As explained above, inviting applications for C-DSP licences once we have invited applications for the small-scale radio multiplex licences upon which they intend to broadcast will help us to process applications more quickly than would be the case if there were no restrictions on when applications for C-DSP licences could be submitted. Therefore, making an exception for existing licensees would delay the processing of applications, and limit the ability of other community groups from accessing C-DSP licences.

Carriage on a multiplex

- 9.28 Media Ireland, Juice Belfast, Blast 106, IUR-FM and Sunshine 1049 expressed concern that there is little to prevent hundreds of applications being submitted for C-DSP licences for services to be carried on the first advertised small-scale radio multiplex licences, and for all of those applicants to state that they intend to broadcast on any/all of those small-scale radio multiplex services. They also questioned what protections there are against commercial operators being granted C-DSP licences and filling the reserved capacity, and against pricing out/blocking existing community radio stations due to capacity being filled.
- 9.29 Because C-DSP services are location and multiplex specific, those who apply for a C-DSP licence will need to broadcast from a studio in that area and deliver social gain, participation and accountability to the community in that licence area. If they wish to broadcast on a different multiplex, they will need to submit an application for another C-DSP licence. We consider that this will disincentivise programme service providers from applying for C-DSP licences in areas they have no intention of serving.
- 9.30 C-DSP licences can only be awarded to companies limited by guarantee without share capital who are not-for-profit. This mitigates against commercial operators applying for and being granted a C-DSP licence to prevent genuine community radio services from accessing reserved capacity. C-DSP services should not be provided for commercial reasons, or for the financial or other material gain of the individuals involved in providing the service (regulation 4(2) of the Order). Regulation 4(4) of the Order requires that any profits made by a C-DSP licensee should be used for securing or improving the future provision of the service, or for the delivery of social gain to the members of the public or the community that the service has been licensed to serve.
- 9.31 Moss Media suggested that there should be a waitlist for reserved capacity by multiplex area to be awarded on a first come first served basis.
- 9.32 Small-scale radio multiplex licensees are required to reserve the amount of capacity specified by Ofcom, but it is up to prospective small-scale radio multiplex licensees to decide how to allocate that capacity, and who to contract with.

A1. Annex 1: Maps of multiplex polygons

- A1.1 The maps overleaf show the polygons which will form the basis for the small-scale radio multiplex licences to be advertised. We have presented them in regions for legibility only and the regions have no significance for licensing purposes, except for the two macro areas where we will advertise all of the polygons within each macro area in a licensing round.
- A1.2 We expect that a small-scale radio multiplex licence will be available for each polygon area, except perhaps in the macro areas. In the two macro areas, we may not be able to award a small-scale radio multiplex licence for every polygon area – the licences awarded will depend on the applications we receive.

Figure 1(a): Scotland (North)

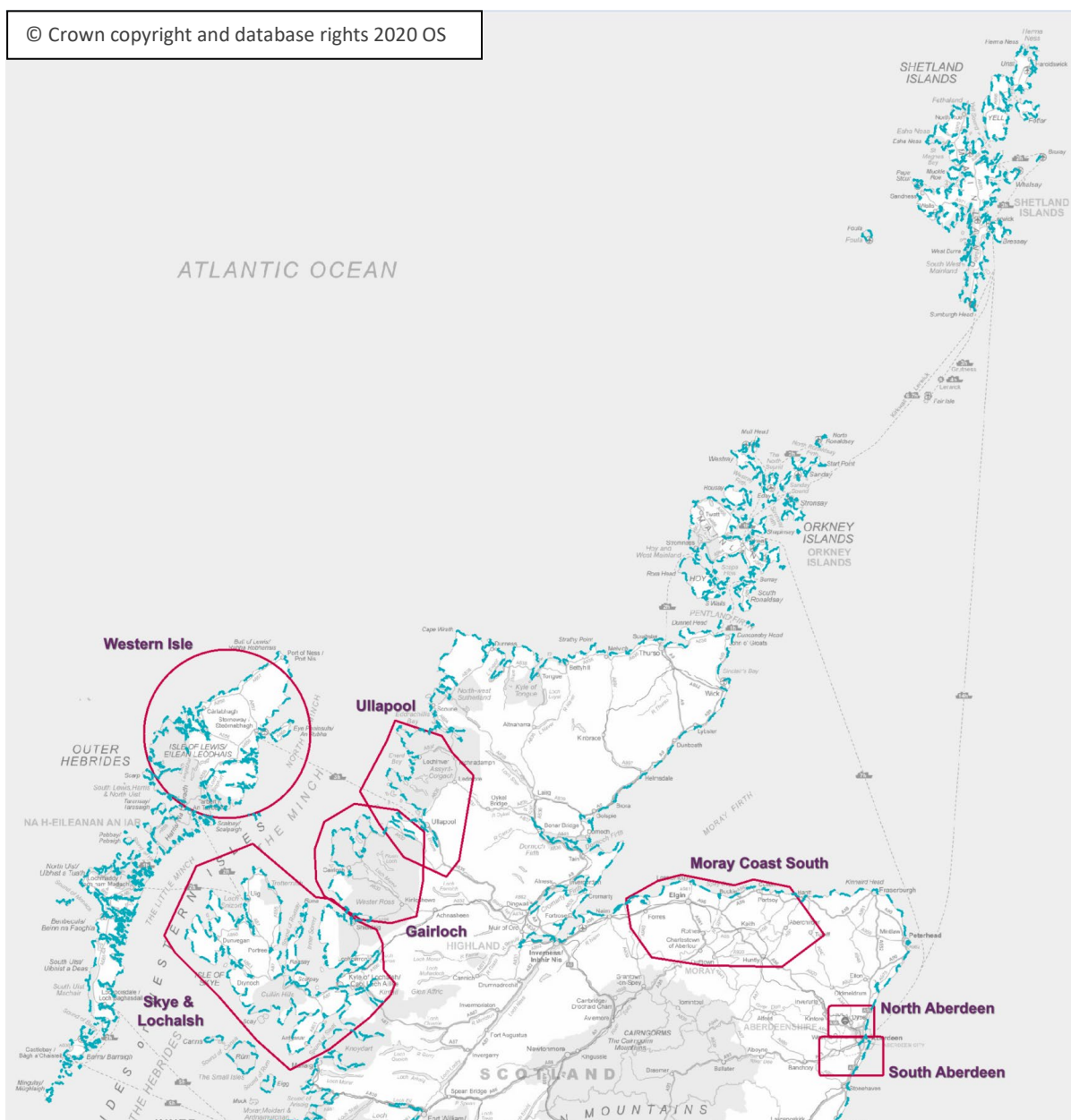


Figure 1(b): Scotland (South)

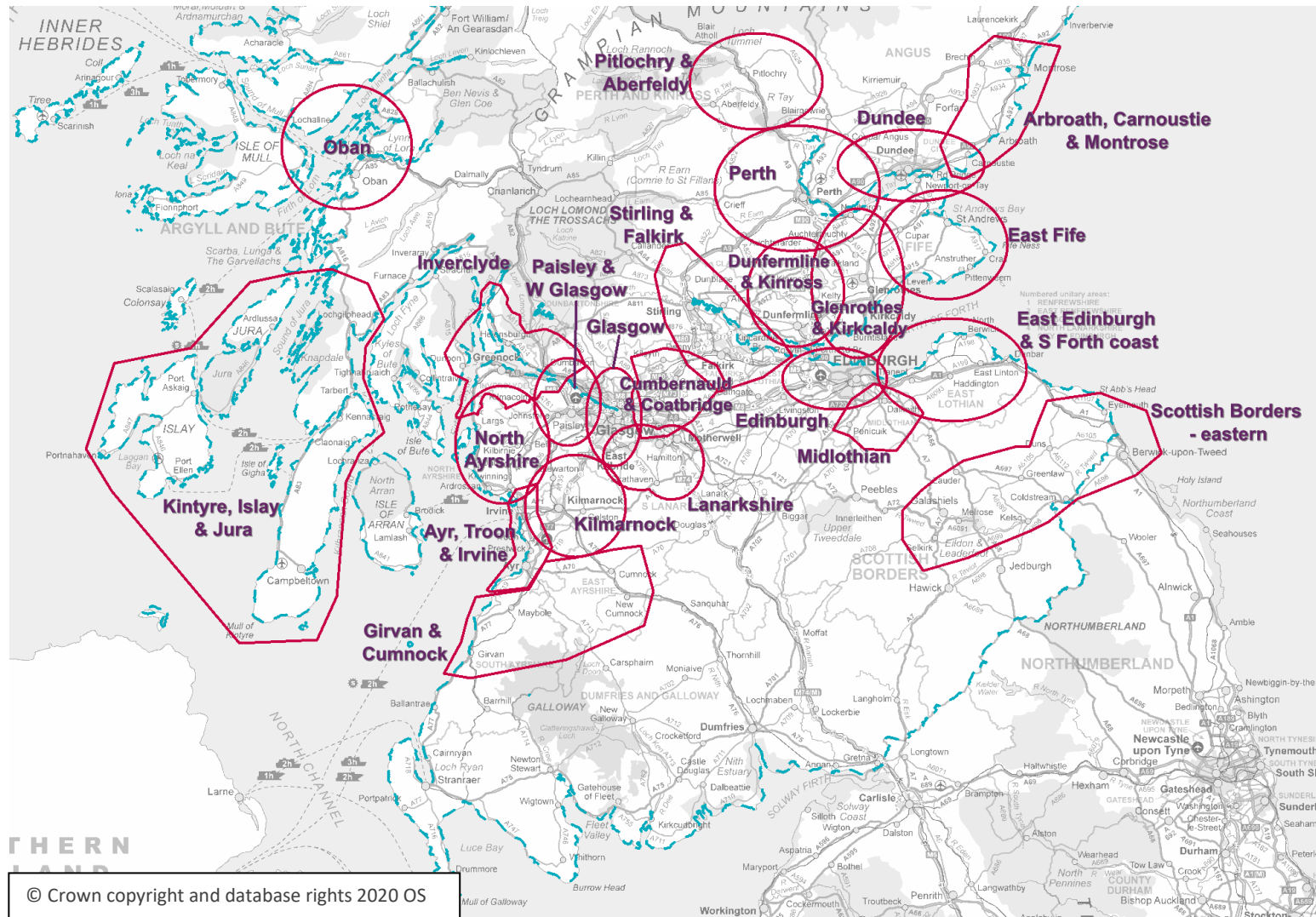
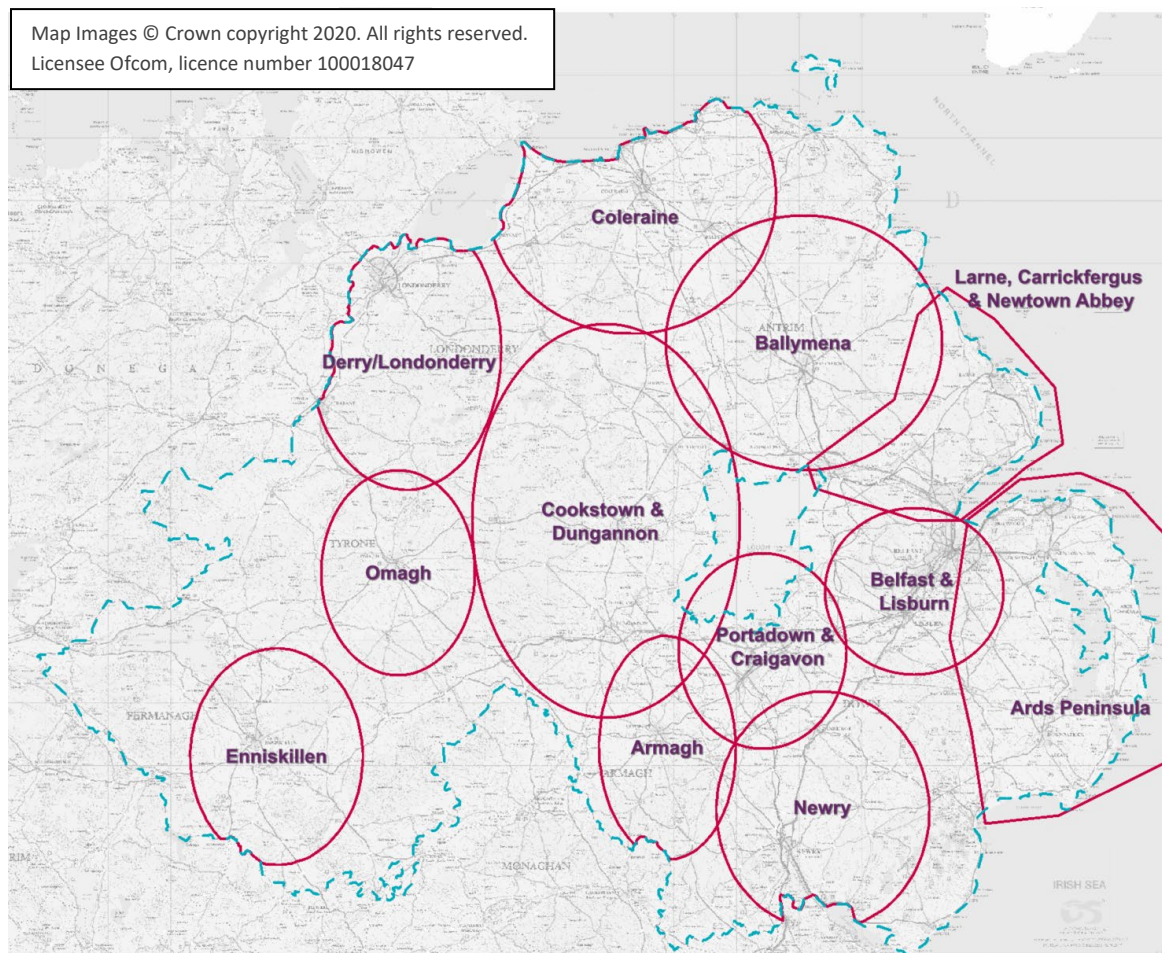


Figure 2: Northern Ireland⁸



⁸ Five Northern Ireland polygons are drawn precisely follow the border with the Republic of Ireland. As with actual coverage areas throughout the UK, we anticipate a degree of overspill in seeking to cover the peripheries of any given polygon. However, again in common with other areas of the UK, in assessing applications we will take into account the extent of coverage specifically within the polygon.

Figure 3: North of England

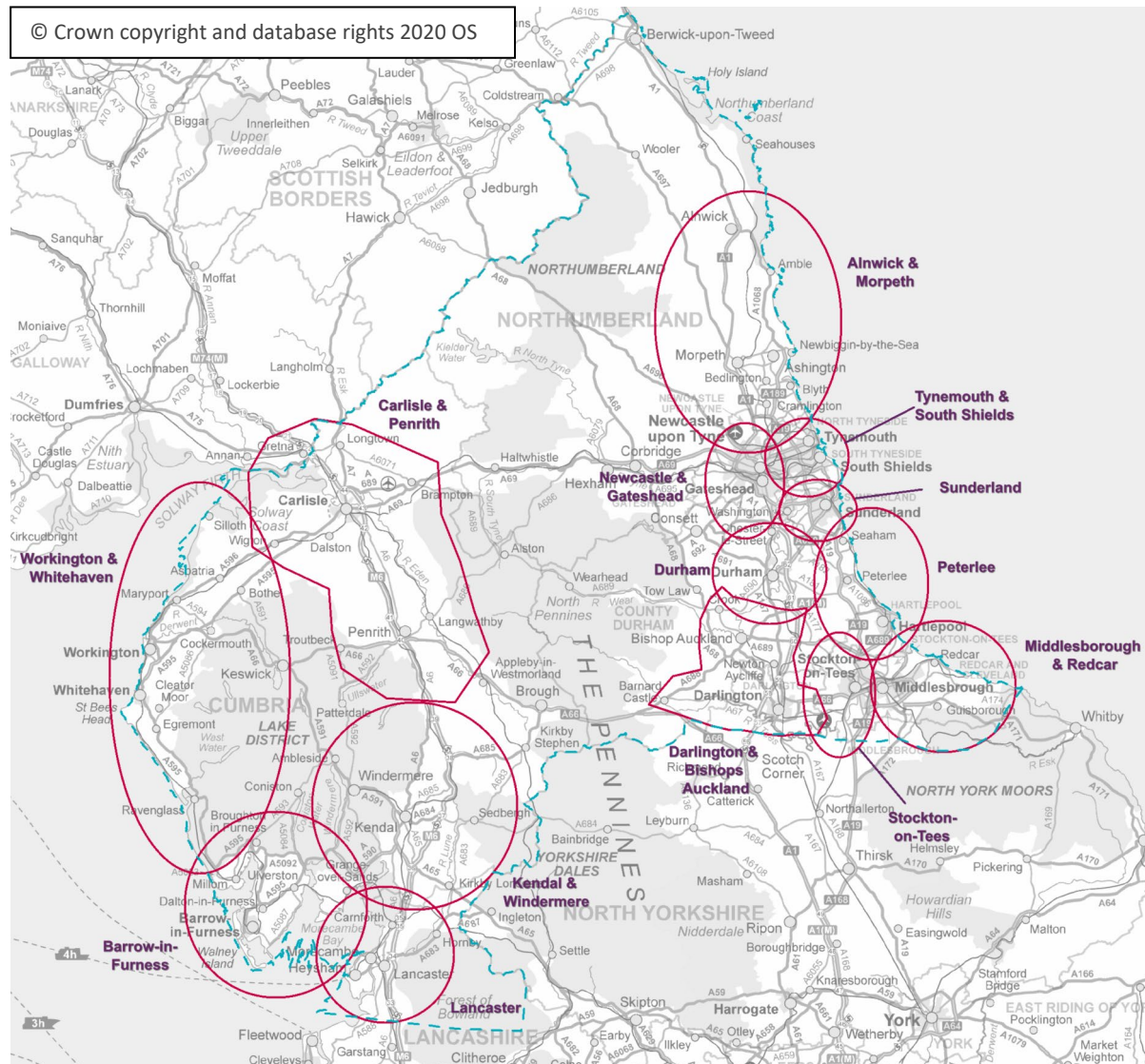


Figure 4: Yorkshire & North Lincolnshire

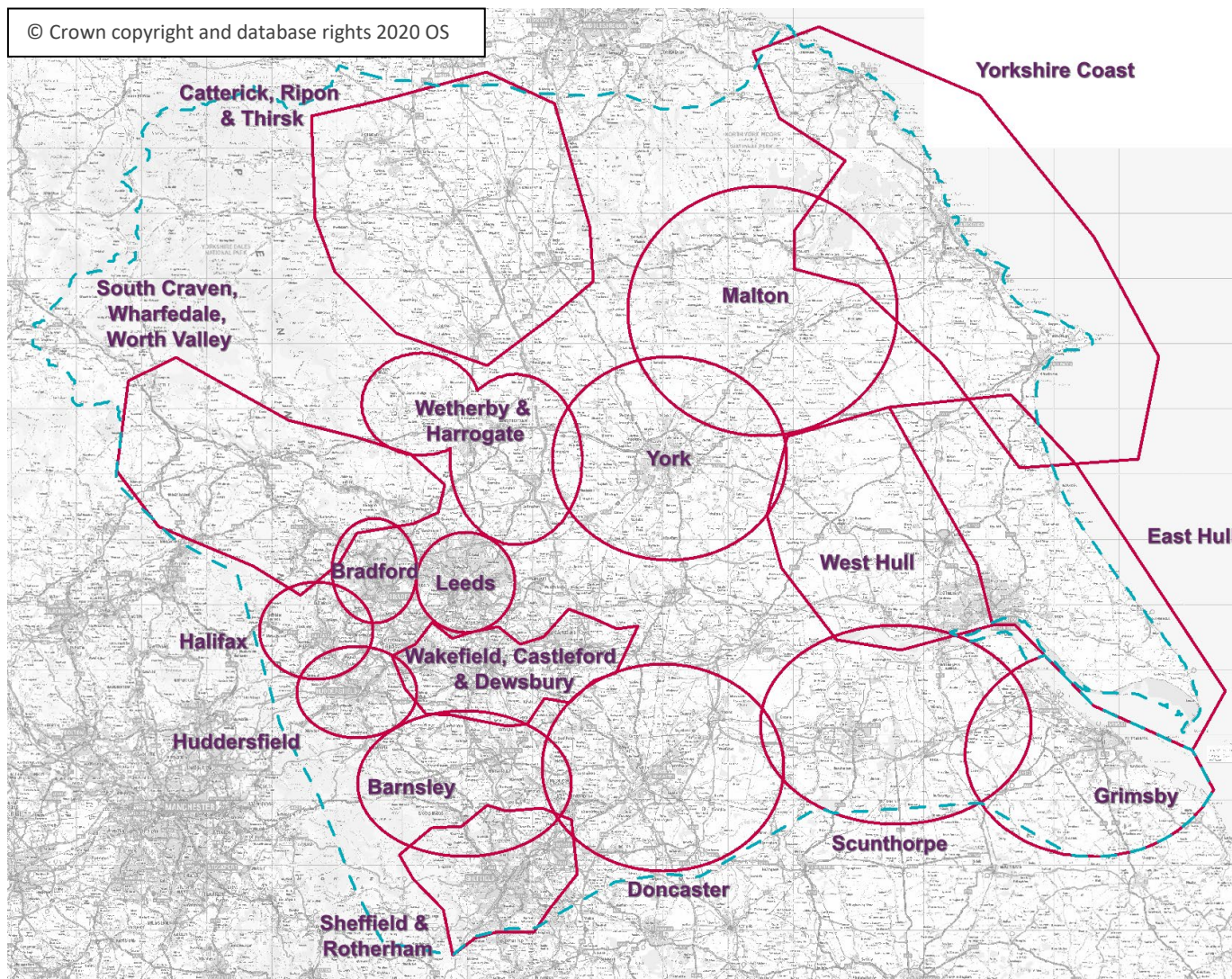


Figure 5: North West of England (macro area); North East Wales

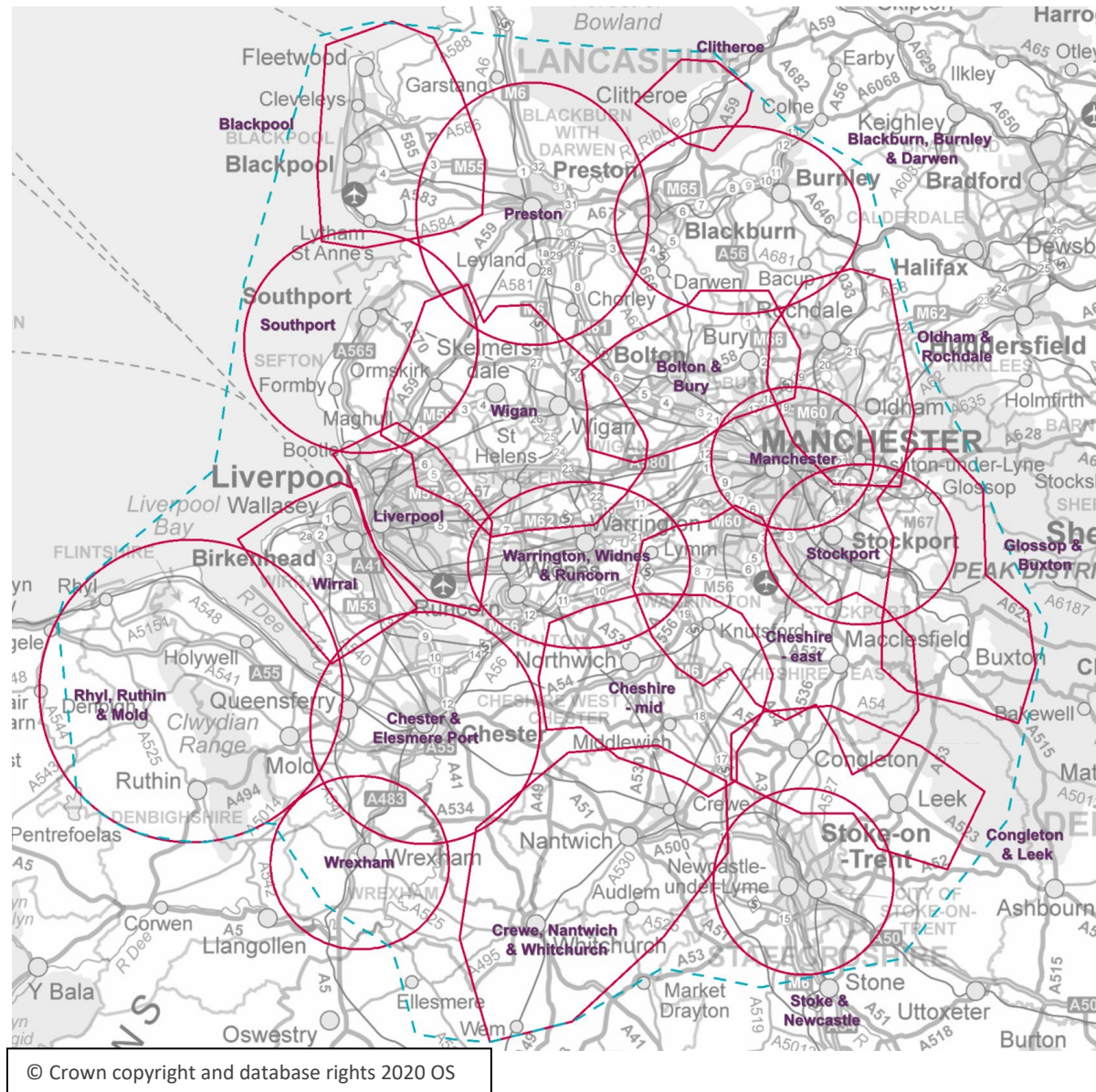


Figure 6: Wales & Severn Estuary

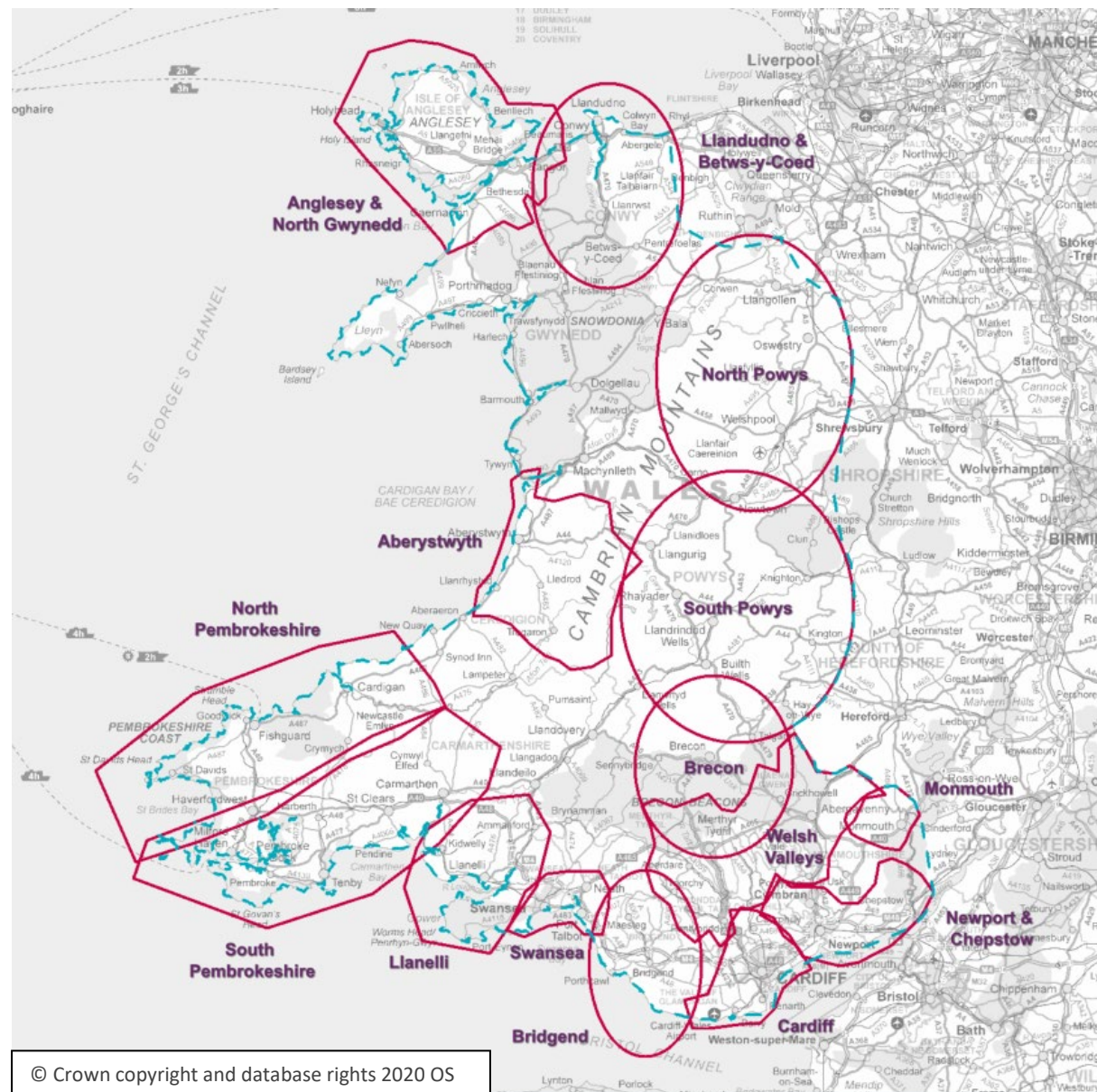


Figure 7: Midlands

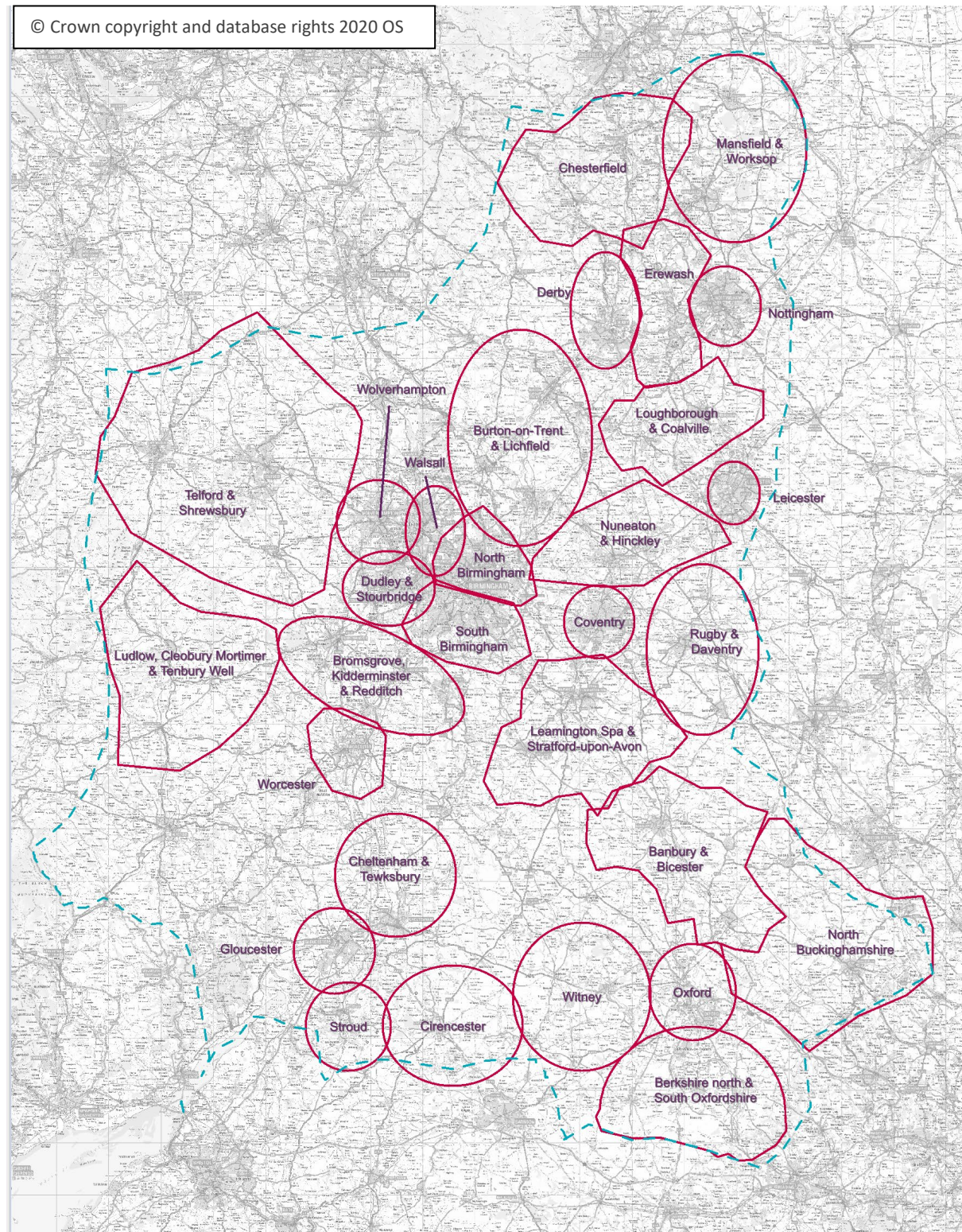


Figure 8: East of England

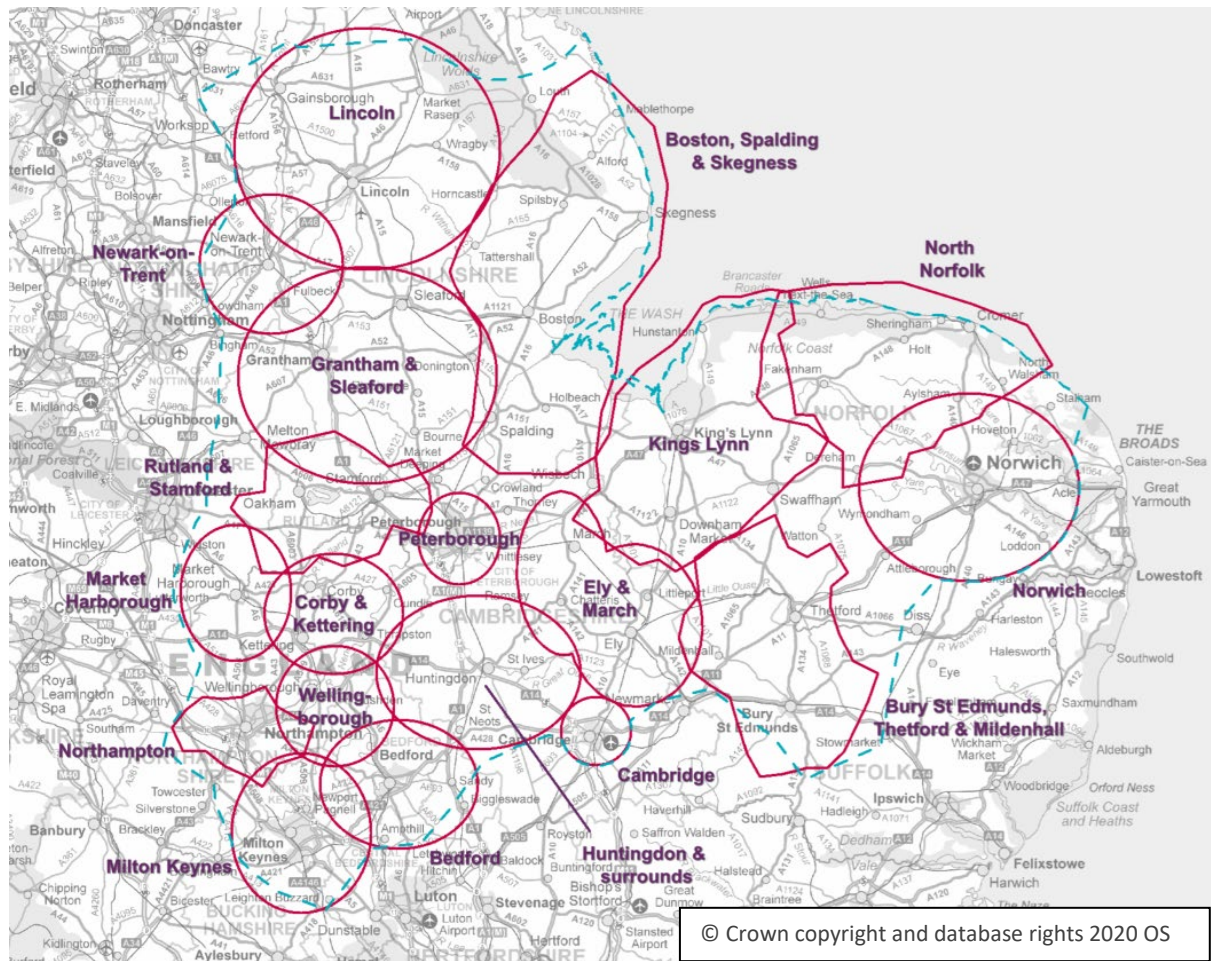
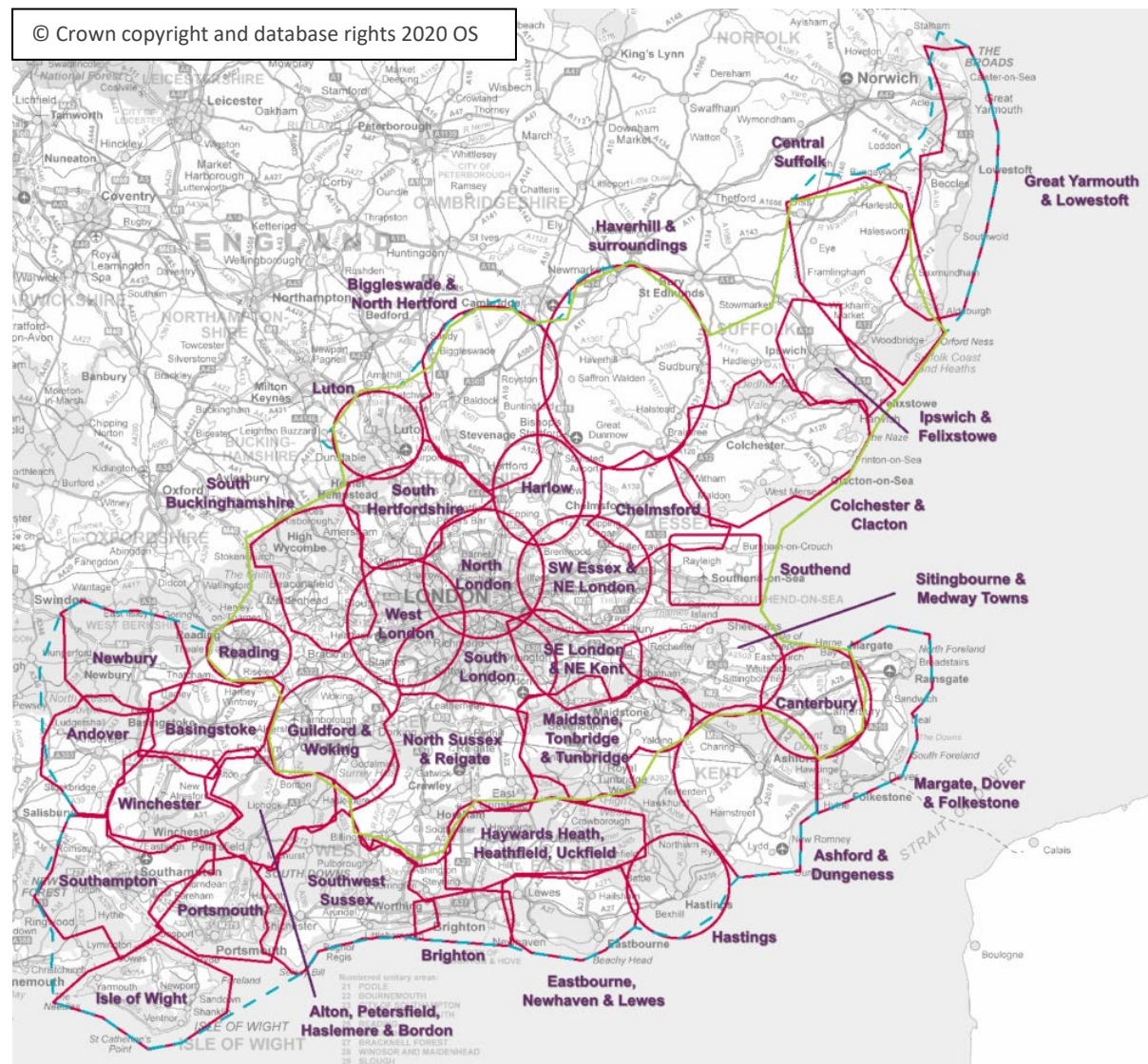


Figure 9: South East of England (including South East macro area)



Note the polygons enclosed by the green boundary in the map above form a 'macro area' within the South East of England region

Figure 10: South West of England

