Small-scale DAB licensing

Progress report

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Section

1. Overview

1.1 Small-scale DAB is a method 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 relatively small geographic areas.

1.2 Each small-scale multiplex Ofcom licenses allows local stations to take to the digital airwaves, including grass-roots community services, specialist music stations, and services aimed at minority groups and other under-served audiences.

1.3 An important part of the policy rationale for the introduction of small-scale DAB was to enable a pathway to DAB for existing analogue (FM or AM) community radio stations, as well as smaller or more specialist commercial radio services who have found it difficult to obtain and afford slots on the existing local radio multiplexes which serve much larger areas.

Purpose of this report

1.4 Following Parliament's approval of the Small-scale Radio Multiplex and Community Digital Radio Order 2019, Ofcom made its first small-scale multiplex licence awards in March 2021, having consulted on our approach to small-scale DAB licensing during 2019/20.

1.5 We have now completed five rounds of multiplex licensing, and are currently assessing the 33 applications we received for Round Six.

1.6 This progress report follows our initial publication on the demand for small-scale DAB multiplexes in the first three licensing rounds in May 2022. It considers the following key issues:

- The level of demand to date from those wishing to operate multiplexes and from programme service providers;
- the number and range of multiplexes and programme services we have so far licensed;
- the reasons why some multiplex services have failed to launch after being awarded a licence;
- the extent to which the capacity on each small-scale multiplex, including capacity reserved for community digital sound programme services, is being utilised;
- some of the technical challenges those awarded licences have faced in planning and then launching their multiplexes; and
- the potential for further licensing.

Summary of findings[1]

1.7 There has been a good level of demand for small-scale multiplex licences, with 212 applications received for the 167 areas that have been advertised.

1.8 To date, 115 licences have been awarded, with 64 multiplexes having launched so far, between them covering 30.3% of the UK adult population. The number of on-air multiplexes is set to increase significantly next year following the recent award of licences in the south east of England.

1.9 14 of these licence awardees (12%) have been unable to launch their multiplexes within the 18-month statutory launch deadline. The reasons for this are varied, but in most cases the awardees either ran out of time to launch their multiplex, or considered that the multiplex had become commercially unviable in the time since the licence was originally applied for.

1.10 One multiplex (Basingstoke) was able to launch, but is currently off the air following the failure of the original licensee company.

1.11 Only a minority of licensees have been able to launch their services on the basis of their original transmission plans submitted at the licence application stage. Despite this, the average predicted coverage being delivered by the launched multiplexes is broadly in line with what was anticipated at licence award.

1.12 On average, it has taken over six months longer to launch a multiplex than originally anticipated by licence applicants. Around half of awardees have come on the air in the final month of their 18-month launch window, which has left little contingency in case of unforeseen difficulties.

1.13 The multiplexes launched so far are, between them, carrying 590 programme services of which 292 are unique services – an average of just over nine radio stations per multiplex. Of the 292 unique programme services, 65% are newcomers to terrestrial radio broadcasting.

1.14 Some 104 programme services have been licensed under community DSP ('C-DSP') licences, which require those stations to deliver specific community objectives, both on-air and off-ar.

1.15 On average, the launched multiplexes are carrying one or two C-DSP services and seven or eight DSP services.

1.16 Locally oriented services, whether they be community or commercial, comprise the largest category of unique stations (43%). However, small-scale multiplexes are also delivering significant numbers of specialist or themed music services (29%), stations targeting minority ethnic and/or faith communities (17%) and lifestyle/ life-stage stations (9.5%).

1.17 Based on the evidence contained in this report, we consider that, to date, the roll-out of small-scale DAB across the UK has been successful in providing access to digital terrestrial radio for programme service providers (including analogue community radio stations) unable to secure or afford carriage on local DAB

[1] Note all figures in this summary were correct as of 2 September 2024, so will not include any multiplex/ programme service launches or licence awards that have taken place since that date.

multiplexes. This has provided opportunities for new entrants to the radio industry and has increased choice for listeners on the DAB platform.

1.18 Multiplex operators in less densely populated areas have generally found it harder to deliver financially viable multiplexes than operators in urban areas. Nevertheless, we have seen a number of multiplexes launch in less densely populated areas, and smaller multiplexes still provide benefits in terms of consumer choice and opportunities for both new and established services.

1.19 We plan to undertake two further rounds of small-scale multiplex licensing, providing interested parties with the opportunity to apply for licence areas that were included in our 2020 statement, but have not yet been advertised. We are also proposing to re-advertise some licence areas where the awardee failed to launch within the 18-month statutory deadline, and also some areas that did not attract applications when previously advertised, but for which we have subsequently received expressions of interest.

2. The multiplexes

Applications and awards

2.1 Following a consultation in 2019, Ofcom decided that we would advertise small-scale DAB multiplex licences in a series of licensing rounds. The majority of these rounds would comprise a mix of areas from across the UK, although we said from the outset that licence areas in the north west of England and north east Wales, and in London and the south east of England, would need to be advertised – and awarded – together. This was due to a potential shortage of frequencies in these areas meaning we may not have been able to make awards in all the advertised licence areas in these regions. These regions would be known as 'macro areas'.

2.2 In the event, we were able to find frequencies for all the successful applicants in the two macro areas.

2.3 To date there have been six rounds of small-scale DAB multiplex licensing, which are set out in Table 1 below (note the table includes licence re-advertisements):

Table 1: Multiplex advertisement rounds

	Advert date	Closing date	Licences advertised	Apps. received	Licences with no apps.	Awards
Round 1	1 Sep 2020	23 Nov 2020	25	45	0	25
Round 2	1 June 2021	1 Sep 2021	22	30	4	17
Round 3	25 Jan 2022	25 Apr 2022	25	32	5	20
Round 4	14 July 2022	14 Oct 2022	29	32	4	25
Round 5	30 Mar 2023	30 June 2023	35	40	6	28
Round 6	19 Apr 2024	18 July 2024	31	33	6	TBA
Total			**167**	**212**	**25**	**115**

2.4 Over the course of the licensing programme there has been a slight reduction in applications received as a proportion of licences advertised, and a slight increase in number of licences with no applications.

2.5 One likely reason for both of these trends is that one of the factors Ofcom took into account when deciding the order in which to advertise licences was the level of demand indicated via 'expressions of interest' from potential licence applicants. Therefore, in general (and not including the macro-areas), licences advertised in later rounds have tended to be in areas with lower levels of expressed demand. Wider economic conditions, and particularly increased energy costs and supply chain challenges, may also be a factor. The reduced number of contested licences, and increased numbers with a sole applicant, may also have been influenced by a recognition that it can be beneficial for local groups to work together on submitting a single strong application. This is likely to be particularly true in the smaller markets where there are a limited number of established community radio broadcasters.

2.6 The advertised licence areas set out in Table 2 did not receive any applications:

Table 2: Licences not applied for, by round

	Licences not applied for
Round One	None
Round Two	Chester & Ellesmere Port; Clitheroe; Rhyl, Ruthin & Mold; Wirral.
Round Three	Lincoln; Shaftesbury; Aberdeen (South); Hull (East); Dundee.
Round Four	Anglesey & North Gwynedd; Ards Peninsula; Kendal & Windermere; Kintyre, Islay & Jura.
Round Five	Central Suffolk; Great Yarmouth & Lowestoft; Haverhill; Ipswich & Felixstowe; North Sussex & Reigate; South Buckinghamshire.
Round Six	Bridgend; Catterick, Ripon & Thirsk; Erewash; Larne, Carrickfergus & Newtown Abbey; Weymouth, Dorchester & Bridport; Workington & Whitehaven.

2.7 The list above – as might be expected – disproportionately consists of larger but less densely populated areas where the technical challenges of achieving good coverage levels are greater and demand from programme services may also be lower. Note that although there were no applications for South Aberdeen and East Hull, applications were received for licences in the adjacent areas of North Aberdeen and West Hull respectively. In both cases, the awardees for North Aberdeen and West Hull have subsequently altered their original transmission plans to cover some of the population that would have been served by the multiplex licences that were not applied for.

2.8 To date there have been only two licences advertised for which we received an application but where a licence was not awarded. Under section 51 of the Broadcasting Act 1996 (as modified by the Small-scale Radio Multiplex and Community Digital Radio Order 2019), the statutory criteria for award apply not only to the question of to whom to award a licence where there are competing applications, but also whether to award a licence at all in light of Ofcom's other statutory duties, including to have regard to efficient use of spectrum. In two cases, this assessment led to licences not being awarded to sole applicants. These were for Southport (Round Two) and Biggleswade & North Hertfordshire (Round Five).

Launched multiplexes

2.9 As of 2 September 2024, there were **64** small-scale DAB multiplexes which had successfully commenced broadcasting within the 18-month statutory launch deadline, and these are listed in Table 3 below. Between them, these multiplexes cover 15.7 million adults (aged 15+), which accounts for 30.3% of the UK adult population.

Table 3: Launched multiplexes and licensees

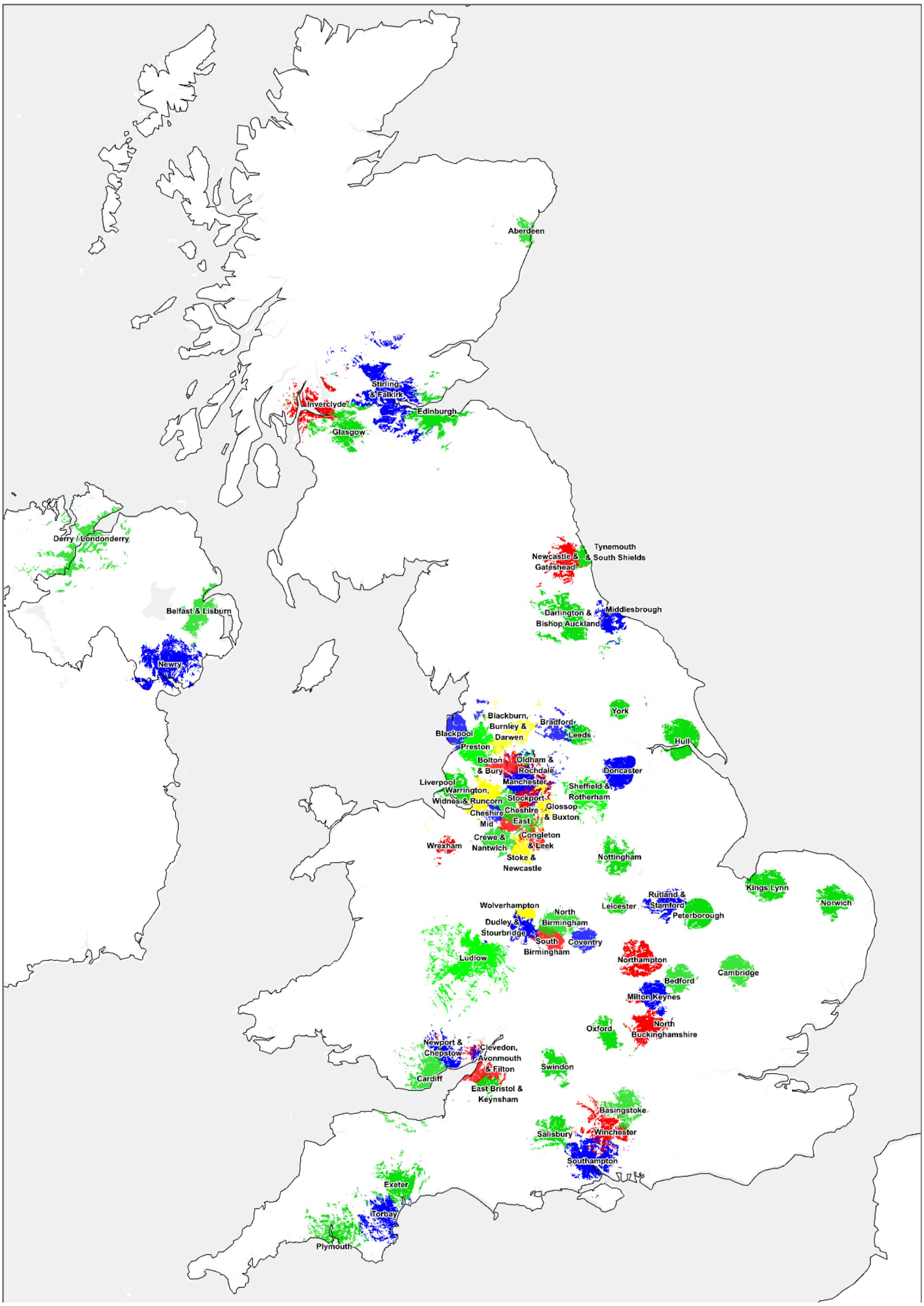
Multiplex	Launch date	Licensee
Aberdeen	15 Jan 2024	Station House Media Unit
Basingstoke *(currently off-air)*	30 Nov 2022	Basingstoke DAB Ltd
Bedford	10 Feb 2024	In2DAB Ltd
Belfast & Lisburn	23 Jan 2024	Lagan SSDAB Ltd
Blackburn, Burnley & Darwen	24 Oct 23	BBD Digital Ltd
Blackpool	23 Aug 22	Fun Coast Digital C.I.C.
Bolton & Bury	23 Oct 2022	Bolton Bury DAB Radio Ltd
Bradford	11 Jul 2022	Bradford Digital Media Ltd
Cambridge	29 Mar 2022	Cambridge Digital Radio Ltd
Cardiff	27 Oct 2022	Cardiff DAB Ltd
Cheshire East	31 Oct 2023	Cheshire East DAB Ltd
Cheshire Mid	12 Oct 2023	Cheshire Radio Ltd
Clevedon, Avonmouth & Filton	14 Nov 2022	Severnside Digital Radio CIC
Congleton & Leek	1 May 2023	Moorlands DAB Ltd
Coventry	15 Dec 2022	Coventry Community Digital Radio CIC
Crewe, Nantwich & Whitchurch	15 May 2023	South Cheshire DAB Ltd
Darlington & Bishops Auckland	29 Jun 2023	Durham Digital Ltd
Derry/ Londonderry	2 Aug 2022	Foyle DAB Ltd
Doncaster	19 Aug 2024	Higher Rhythm Ltd
Dudley & Stourbridge	29 Oct 2022	Digimux Ltd
East Bristol & Keynsham	10 Nov 2022	Bristol Digital Radio CIC
Edinburgh	4 Jul 2022	Edinburgh DAB Ltd
Exeter	9 Nov 2022	ExeDab Ltd
Glasgow	9 Aug 2022	Glasgow DAB Ltd
Glossop & Buxton	2 Oct 2023	High Peak One Digital Ltd
Hull	15 Apr 2024	Hull DAB Ltd

Multiplex	Launch date	Licensee
Inverclyde	1 Aug 2024	Coast DAB Ltd
King’s Lynn	31 Oct 2022	North Norfolk Digital Ltd
Leeds	25 Oct 2022	Leeds Digital Media Ltd
Leicester	8 Mar 2023	Leicester Digital Partnership CIC
Liverpool	18 Oct 2023	Liverpool DAB Ltd
Ludlow	11 Mar 2024	Murfin Media Digital Ltd
Manchester	5 Jun 2023	Manchester DAB C.I.C.
Middlesbrough & Redcar	27 Oct 2023	Erimux Ltd
Milton Keynes	19 Apr 2024	MK Digital Media Ltd
Newcastle & Gateshead	1 Jul 2022	Tyneside Community Digital C.I.C.
Newport & Chepstow	4 Jul 2024	Gwent Digital Broadcasting Ltd
Newry	15 Jul 2024	UlsterMux Ltd
North Birmingham	8 Apr 2022	Switch Radio
North Buckinghamshire	12 Jun 2024	Bucks DAB Ltd
Northampton	2 Aug 2024	Northampton DAB C.I.C.
Norwich	10 Oct 2022	Future Digital Norfolk Ltd
Nottingham	26 Jan 2024	Nottingham DAB Ltd
Oldham & Rochdale	7 Nov 2023	East Manchester Dab Ltd
Oxford	17 Apr 2024	Oxdab Ltd
Peterborough	5 Aug 2024	Hereward Digital Radio Ltd
Plymouth	8 Nov 2023	PlymDab Ltd
Preston	31 Aug 2023	Preston DAB Ltd
Rutland & Stamford	15 Apr 2024	Creativity Media Services Ltd
Salisbury	28 Mar 2022	Muxcast One Ltd
Sheffield & Rotherham	11 Aug 2022	Shefcast Digital Ltd
South Birmingham	14 Dec 2022	South Birmingham Digital Radio Ltd
Southampton	1 Aug 2024	Southampton Digital Radio Ltd
Stirling & Falkirk	1 Nov 2023	Central FM Ltd

Multiplex	Launch date	Licensee
Stockport	29 Aug 2023	Stockport Community SSDAB Ltd
Stoke & Newcastle	3 Jul 2023	Alternative Broadcast Company
Swindon & Marlborough	15 Mar 2024	Community Radio Swindon Ltd
Torbay	9 Nov 2023	TorDab Ltd
Tynemouth & South Shields	1 Dec 2021	Redarmy Group Ltd
Warrington, Widnes & Runcorn	17 Aug 2023	Warrington, Widnes & Runcorn DAB Ltd
Winchester	29 Sep 2022	Winchester DAB Ltd
Wolverhampton	1 Apr 2023	Wolverhampton DAB Ltd
Wrexham	11 Nov 2023	Wrexham DAB Ltd
York	10 Apr 2024	York Digital Radio CIC

Figure 1: Map of launched multiplex areas

The map below illustrates the 64 multiplexes that have launched to date and their licensed coverage areas (as at 2 September 2024). Note that the colours are for illustrative purposes only, to differentiate the coverage areas of neighbouring multiplexes. The map does not include licence areas awarded by Ofcom that have yet to launch.



2.10 Ofcom has so far revoked **14** multiplex licence awards on the basis that we believed that the awardee would not be in a position to launch its multiplex service by the statutory launch deadline (of 18 months from the published licence award statement). Table 4 shows these revoked awards and includes a summary of the reason for the failure to launch cited by the awardee:

Table 4: Revoked licence awards

Licence	Awardee	Date awarded	Reason
Alnwick & Morpeth*	UK DAB Networks Ltd	19 July 2021	Commercial viability
Banbury & Bicester	NOxDAB Ltd	15 May 2023	Commercial viability
Glenrothes & Kirkcaldy	GK DAB Ltd	16 Dec 2022	Commercial viability
Inverclyde*	UK DAB Networks Ltd	11 Mar 2021	Revised technical plan unacceptable to Ofcom
Llandudno & Betws-y-Coed	Sound Bay Community Digital CIC	30 Sep 2022	Commercial viability
Scilly Isles*	Like DAB Ltd	19 July 2021	Ran out of time
Swansea*	Swansea DAB Ltd	19 Aug 2022	Ran out of time
Taunton	Tone Community Media Group CIC	18 Oct 2022	Ran out of time
Wakefield, Castleford & Dewsbury	Mid Yorkshire DAB Limited	2 March 2023	Ran out of time
Warminster, Devizes & Trowbridge*	West Wiltshire Digital Radio CIC	9 Sep 2022	Ran out of time
Wetherby & Harrogate*	Wetherby and Harrogate Local DAB Limited	16 Nov 2022	Commercial viability
Welsh Valleys*	GTFM (South Wales) Ltd	18 February 2021	Funding difficulties
Wigan*	Wigan & St. Helens Community Media CIC	12 May 2022	Funding difficulties
Yorkshire Coast	East Coast Digital Radio CIC	16 Nov 2022	Commercial viability
Total	**14**		

2.11 This represents **12%** of the total number of multiplex licences awarded by Ofcom to date. Eight of these licences (marked * in the table above) have subsequently been re-advertised, albeit in some cases with revisions to the area advertised. Of these, one has launched (Inverclyde), three of those licences have been awarded with statutory launch deadlines to meet of March 2025 (Alnwick & Morpeth, Welsh Valleys and Scilly Isles), and the remaining four were re-advertised in Round Six (with each receiving at least one application).

2.12 Reasons cited by awardees for failure to launch by the deadline have varied. A common reason cited by awardees for failure to launch has been an inability to meet the 18-month statutory deadline for logistical reasons. In some of these cases, planned transmitter sites had become unavailable post-launch or transmitter site fees had significantly increased, meaning that alternative transmitter sites had to be sourced at relatively short notice. In other cases, awardees had waited too long to start launch preparations, under-estimating the time it would take to obtain planning permissions, to secure site connectivity, or to obtain transmitters or other equipment.

2.13 Ofcom is not in a position to change a statutory deadline itself as it would require legislation and, in any event, we note that although the deadline has proved problematic for a small number of awardees, it also creates a clear incentive to launch multiplex services promptly. It has also proved possible to readvertise licences where awardees have not launched within the statutory deadline.

2.14 In six of the cases, the licence awardee had concluded that changes in the marketplace since licence application (typically including increases in transmission site fees and electricity costs, combined with reduced demand from programme service providers) had made the project economically unviable for them. In these cases, understandably, the awardee did not express any interest in re-applying should the licence be re-advertised.

2.15 Some of the awardees who failed to launch said they experienced difficulties in raising the necessary funds to establish the multiplex. In some cases, this was for awardees who were dependent on grant funding or charitable donations to establish the multiplex.

2.16 There are, therefore, a mixture of reasons why some multiplexes have failed to make it to air post-licence award. The multiplexes concerned have varied in size and type of location, so we do not consider there is a single identifiable trend that might threaten the wider viability of the sector going forward. We also consider that the number of licence award revocations Ofcom has made (to date, 12% of the total number of licences awarded) is not unduly surprising given the challenging economic conditions since small-scale DAB licensing began in 2020, and because many successful applicant companies are – like analogue community radio stations – essentially voluntary organisations, who may sometimes find the timescales involved challenging.

Post-launch problems

2.17 Two of the multiplex licences awarded by Ofcom (Basingstoke and Winchester) were able to launch by the statutory deadline, but subsequently stopped broadcasting as the licensee company failed. The licensee company , which operated both multiplexes, had launched the Winchester multiplex in September

2022 and the Basingstoke multiplex in November of that year, but ceased broadcasting both and entered voluntary liquidation in October 2023.

2.18 Both multiplex licences were subsequently transferred to new owners, with the Winchester multiplex returning to the air in February 2024 following a public consultation on a new coverage plan. At the time of writing, the Basingstoke multiplex remains off-air while the new owners await final permissions for a new transmitter site. Although failure to broadcast is a breach of licence, and a licence is liable to be revoked in the case of a persistent breach, where there are financial difficulties and/or previous transmission sites are no longer available, our priority in the specific circumstances of an insolvency is to work with the new licensee to find a way forward to restore coverage for the programme services and their listeners.

3. The programme services

3.1 The table below lists, **in order of multiplex launch date**, the total number of programme services (i.e. radio stations) carried by small-scale multiplexes on 2 September 2024, and lists how many of these programme services operate under Digital Sound Programme Services ('DSP') and community DSP ('C-DSP') licences. The table also shows the required number of reserved capacity slots (which can only be occupied by C-DSP services) for each licence.

Table 5: Number of programme services per multiplex

Multiplex (in order of launch)	Total programme services	DSPs	C-DSPs	Reserved capacity slots
Tynemouth & South Shields	15	11	4	4
Cambridge	12	11	1	6
North Birmingham	24	19	5	7
Salisbury	21*	19	1	3
Newcastle & Gateshead	16	12	4	7
Bradford	15	13	2	7
Edinburgh	17	14	3	6
Glasgow	18	14	4	8
Derry/ Londonderry	5	2	3	4
Sheffield & Rotherham	9	6	3	7
Blackpool	12	12	0	4
Winchester	15	13	2	3
Norwich	22	22	0	4
Cardiff	11	8	3	6
Leeds	15	10	5	7
Dudley & Stourbridge	8	6	2	4
King's Lynn	15*	14	0	3
Exeter	10	9	1	4
Clevedon, Avonmouth & Filton	12	12	0	7
East Bristol & Keynsham	15	13	2	7
South Birmingham	18	16	2	7

Multiplex (in order of launch)	Total programme services	DSPs	C-DSPs	Reserved capacity slots
Coventry	10	7	3	6
Leicester	9	3	6	9
Wolverhampton	11	9	2	6
Congleton & Leek	5	4	1	3
Crewe, Nantwich & Whitchurch	5	4	1	3
Manchester	20	15	5	9
Darlington & Bishops Auckland	8	6	2	4
Stoke & Newcastle	5	3	2	6
Warrington, Widnes & Runcorn	7	6	1	5
Stockport	20	17	3	4
Preston	6	6	0	6
Glossop & Buxton	7	6	1	3
Cheshire (Mid)	5	5	0	3
Liverpool	10	8	2	6
Bolton & Bury	7	5	2	6
Blackburn, Burnley & Darwen	7	7	0	6
Middlesbrough & Redcar	6	5	1	5
Cheshire (East)	5	5	0	5
Stirling & Falkirk	5	3	2	4
Wrexham	9	9	0	3
Oldham & Rochdale	8	5	3	6
Plymouth	7	5	2	5
Torbay	9	8	1	6
Aberdeen	1	0	1	4
Nottingham	9	7	2	6
Belfast & Lisburn	10	7	3	9
Bedford	6	4	2	5
Ludlow	1	1	0	3

Multiplex (in order of launch)	Total programme services	DSPs	C-DSPs	Reserved capacity slots
Swindon & Marlborough	2	1	1	4
York	3	2	1	5
Rutland & Stamford	3	2	1	3
Hull	13	12	1	6
Oxford	6	6	0	5
Milton Keynes	5	3	2	5
North Buckinghamshire	1	1	0	4
Newport & Chepstow	6	6	0	4
Newry	9	8	1	4
Southampton	5	5	0	8
Inverclyde	5	4	1	3
Northampton	2	2	0	7
Peterborough	5	4	1	5
Doncaster	2	2	0	6
TOTALS	590	484	104	330
AVERAGE	9.3	7.6	1.6	5.2

*Total includes carriage of BBC local radio services regulated under the BBC Charter.

Number of stations and reserved capacity

3.2 **The average number of programme services carried by a small-scale multiplex is 9.3**. We expect this number to gradually increase over time, as many of the multiplexes listed above have been on the air for less than a year. In general, the multiplexes that are longer established have more services broadcasting, as they gradually attract new services to their platform. In addition, we expect that many of the multiplexes for the south east of England that will be launching next year (particularly the London multiplexes) are likely be well-populated with services as these included several localities with very large populations in the context of small-scale multiplexes.

3.3 **The average ratio of DSP to C-DSP services on each multiplex is seven or eight DSP services to one or two C-DSP services.** C-DSP services have generally taken longer to appear on multiplexes, notwithstanding that radio stations can apply for a C-DSP licence as soon as a relevant multiplex licence is advertised by Ofcom. However, in practice relatively few stations have chosen to do this, meaning that multiplexes have typically launched without any C-DSP services on board, including some multiplexes operated by community radio services themselves. In addition, we have noted that some community-oriented services (including some analogue community radio simulcasts) have opted to broadcast on small-scale multiplexes on unreserved capacity under DSP licences rather than under C-DSP licences.

3.4 There are **104 C-DSP services** broadcasting on the multiplexes launched to date. As shown in the table above, most multiplexes have unused reserved capacity available for additional C-DSP services. As with DSP services, we would expect the take-up of reserved capacity to gradually increase over time, and capacity reservations were set by Ofcom with a view to encouraging the future growth of community radio services, rather than all slots being quickly filled shortly after launch. Small-scale multiplexes provide a route to digital broadcasting, not just for established analogue services, but also for new services that communities of interest wish to establish in the years ahead.

3.5 Naturally, given small-scale multiplexes vary significantly in population covered, the mean average figures disguise a very wide range of provision among the multiplexes. A couple of operators are, to date, only transmitting their own programme service on their multiplex, while the Manchester, Stockport, North Birmingham, Salisbury and Norwich multiplexes are each carrying 20 stations or more.

3.6 The most significant factors affecting the number of radio stations carried by a small-scale multiplex appear to be:

- How long the multiplex has been broadcasting;
- The ability and desire of the multiplex operator to attract, or provide itself, new programme services;
- The size of the population covered by the multiplex; and
- The existence of a diverse range of significant communities in the licence area (e.g. based on ethnicity).

3.7 The latter two factors mean that urban multiplexes covering large and diverse populations tend to carry significantly more radio stations than multiplexes serving other areas. As noted in Section 2, there have been a handful of multiplex licensees that have decided not to launch on the grounds of lack of commercial viability (due to changes in market conditions since application), and some licences have not been applied for at all. However, there are also examples of multiplexes that have been successfully established in less densely populated areas.

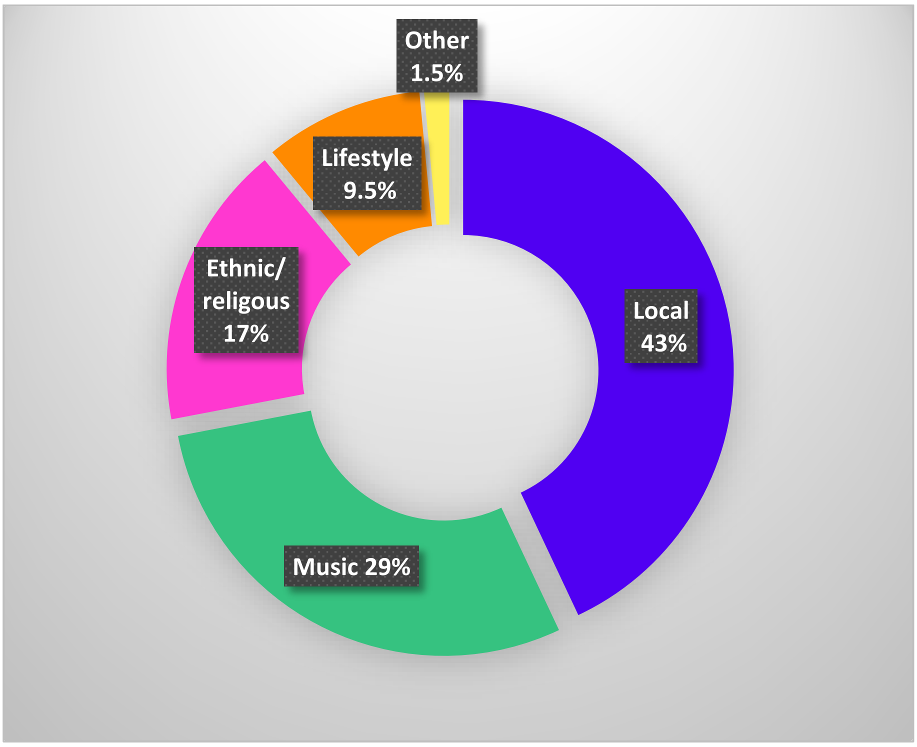
Range of services

3.8 The **number of programme services being transmitted** by the 63 small-scale multiplexes currently on-air is, taken together, **590.** However, many of these stations are broadcasting on more than one small-scale multiplex to achieve a greater potential audience reach. Counting such services only once, the **total number of unique programme services** collectively broadcast by small-scale DAB multiplexes is **292** (as at 2 September 2024).

3.9 Of these 292 unique programme services, **103 (35%) are simulcasts** of analogue (AM/FM) radio services (community, BBC or commercial), or simulcasts of services already broadcasting on local or national DAB multiplexes. This means that **189 stations on small-scale DAB are newcomers to terrestrial radio broadcasting**, having been created specifically for small-scale DAB or, in most cases, previously only available online. These stations constitute **65%** of the unique programme services broadcasting on small-scale DAB multiplexes.

3.10 To help better understand the types of content being broadcast by the launched small-scale DAB multiplexes, we have assigned each of the unique programme services into one the following categories:

Figure 2: Programme services by content type



Local services

3.11 This is the biggest category of radio stations being carried by the small-scale multiplexes, accounting for 43% of unique programme services (125 radio stations). These are generally targeted at a wide demographic of local listeners and include simulcasts of existing analogue community or small commercial stations; hospital radio services; stations holding a C-DSP licence containing community obligations; and commercial radio services with a local or regional focus holding a DSP licence. Among the many examples of local stations carried on small-scale DAB that are new to terrestrial broadcasting (i.e. stations not also broadcasting on FM or AM) are Blue Sky Radio covering parts of Staffordshire and Cheshire; Central Radio in Blackpool; Edge 1 and Edge 2 in Edinburgh; Rookwood Sound in Cardiff; Winchester Today; Salisbury Radio; Strawberry Radio in Stockport, and Radio Shields serving South Shields.

Specialist/themed music

3.12 The second biggest category, representing 29% of unique programme services (84 radio stations) is specialist or themed music stations. These may sometimes include local content, but are often broadcast across several small-scale multiplexes, and can play a significant role in expanding listener choice on the DAB platform. Examples include Cosoro Radio (Afrobeats); Frisk Radio (dance); Radio Caroline (album rock); Blue Dot Radio (soul/reggae/jazz); Radio Wigwam (indie music); WILD Country (country/Irish music); Boom Light (easy listening), and Panacea Radio (soul/funk).

Minority ethnic and/or religious

3.13 Accounting for 17% of unique programme services (49 radio stations), these are services targeted at minority ethnic communities and/or religious audiences, and can be community or commercially oriented. Examples of stations targeting particular local ethnic communities include Spice Radio (Newcastle), Ujima Radio (Bristol), Rajo Radio (Birmingham), Awaz FM (Glasgow) and Panjab Radio (various multiplexes). Faith-based services include Voice of Islam, Radio Maria, Cross Rhythms and Radio Seerah.

Lifestyle/ life-stage

3.14 Accounting for 9.5% unique programme services (28 radio stations), these stations target listeners who share a common lifestyle or interest, or are aimed at a relatively specific age demographic. They may or may not be locally-oriented. Examples include Gaydio, GlitterBeam, Fun Kids, Angel Radio and AllStar Youth Radio. This category also includes a number of student radio services such as Scratch Radio in Birmingham, and the BFBS radio stations serving various military bases.

4. Multiplex planning and build

Technical plans

4.1 The technical (i.e. transmission) plans submitted by licence applicants set out their proposals for how they intend establishing and providing the multiplex service, and the resulting coverage the service will achieve. This information is a key input to our assessment of how well applications satisfy the statutory licence award criteria.

4.2 The quality and consistency of the technical plans contained in applications have generally improved since the first licensing round. Although Ofcom occasionally needs to clarify details (such as inconsistent transmitter location co-ordinates, powers or antenna details), applications generally now contain sufficient supporting evidence to allow us to carry out our technical assessments, and make decisions on an applicant's ability to launch their service.

4.3 Where we identify aspects of a technical plan that do not comply with the parameters set out in the licence advertisement, we try to find simple measures that would make the application compliant, but will take those adjustments into account as part of our assessment of the applicant's ability to launch the service, as well as any consequential impacts on coverage.

4.4 While we have not seen an overall fall in the proportion of applicants' technical plans needing mitigating measures, there is evidence that there has been an improvement in the coverage predictions made by applicants when preparing their applications. For example, in the first round of licensing, mitigations were required to deal with excessive overspill or overlap for eight of the 21 successful applicants, whereas only four of the successful applicants needed the same adjustment in Rounds Two, Three and Four combined.

4.5 However, Ofcom continues to have to include mitigations to reduce co-channel interference to multiplexes using the same frequency elsewhere, and to minimise the risk that listeners to other DAB radio services suffer lost reception due to coverage hole punching, or adjacent channel interference (ACI). These are more difficult characteristics to model and predict than purely coverage, and there is no indication that applications are improving in these aspects.

4.6 Where issues have been identified, Ofcom sets out details in the award letter to the successful applicant, who will then need to propose amendments to their original technical plan before they can build and launch their service.

Revision of technical plans

4.7 Following on from the above, Ofcom needs to agree a Final Technical Plan ('FTP') which the awardee must implement in full within 18 months of the licence award.

4.8 However, it has been our experience that almost all awardees have submitted an FTP that differs in some way from the technical plan originally proposed in their application (in fact, only 8% have been able to submit unchanged FTPs). Typical reasons for this have included:

- Adjustments to deal with issues identified by Ofcom with the original technical plan (see above);
- Failure to agree access to originally proposed sites (due to either legal or commercial reasons);
- Identifying alternative sites that deliver equivalent coverage more efficiently;
- Inability to obtain planning permission;
- Practical issues when building the transmitters (e.g. lack of space on a transmitter tower at the planned height); and
- Errors or shortcomings in the original design.

4.9 Revised FTPs require Ofcom to check all the coverage and interference aspects of the proposal. In many cases, the changes have been minor and have had only small impacts on predicted coverage. In 47% of licence areas, we have been able to agree the first revision of a FTP.

4.10 In 25% of licence areas, a second iteration of the FTP has been required, usually due to further changes proposed by the licensee, although sometimes Ofcom has been unable to accept the first revision and an adjusted re-submission has been necessary.

4.11 For the remaining 20% of licence areas, three or more iterations of the FTP have been required, usually due to the changes proposed having a significant impact on coverage, or causing interference elsewhere.

4.12 Each revision involves a considerable amount of resource to be expended by Ofcom, since we have to consider the implications of the changes against the original licence award. This places significant constraints on the plans we are able to accept, particularly in cases where the licence was contested.

4.13 FTPs that differ materially from what was contained in the original licence application therefore cause considerable amounts of extra work, and consequently may take some time to assess, with a potential knock-on effect to launch times. It is therefore critical that licence applicants include transmission proposals that they have a high degree of certainty they can deliver.

Transmitter sites and predicted coverage

4.14 As already noted, one of the most common changes between the technical plan included in an application and the FTP, is to the proposed transmitter sites.

4.15 The number of transmitter sites proposed by applicants has varied from one to eight, with two transmitters being most commonly proposed. The mean number of transmitters proposed across all rounds is 2.1 per licence area, with a small variation between rounds. Applicants in Round One proposed the most transmitters on average, where the mean average was 2.5 per area. For Rounds Two and Three, the mean number proposed declined to 2.0 and then 1.7 respectively, although in Round Four the number has again increased, to 2.2 per area.

4.16 Comparing the number of transmitters delivered against the original licence application proposals, we have seen that a few licensees delivered fewer transmitters than originally proposed, while some have delivered more.

4.17 Predicted coverage delivered by the transmitters is quantified by predicting the number of adults (aged 15+) within the advertised licence area that are predicted to be able to receive a signal of a minimum defined standard[2], and expressing that number as a percentage of the total adult population in the advertised licence area.

4.18 For Rounds One to Three, the average coverage anticipated at licence award varied between 78.5% to 82%. In Round Four, the average anticipated coverage had fallen to 68.1%. This is likely to be because the licence areas advertised in Round Four contained a higher number of areas with more widely scattered populations than areas advertised in earlier rounds.

4.19 Looking at the projected coverage that licensees have been able to deliver in practice with their launched multiplexes, coverage for those licensed in the first three licensing rounds averaged between 74% and 78%, a typical reduction of two to four percentage points against what was originally anticipated. Licensees in Round Four actually provided a higher than anticipated coverage of 73.2%, an increase of slightly over five percentage points.

4.20 Viewed across all rounds, the average coverage being delivered by launched multiplexes is within 2% of what was anticipated at the licence award stage, being 76% (actual coverage) compared with 78% (anticipated at licence award).

Launch timelines

4.21 Under the small-scale DAB legislation, licensees are required to start providing their multiplex service within 18 months of licence award.

4.22 On average, it has taken awardees 15.1 months to launch their multiplexes, an average delay of 6.6 months on what was anticipated by applicants in their licence applications.

4.23 However, this (mean) average only tells only part of the story. Some multiplexes have launched very quickly, although only four have managed to launch within six months of licence award (namely Blackpool, Coventry, Leicester and Wolverhampton). The median time taken to launch a multiplex is 17.2 months, meaning that half of all multiplexes launched to date have done so within the last three weeks or so of the statutory 18-month window.

4.24 There are numerous reasons why multiplexes have taken longer to launch than anticipated. Some of the most common reasons have been:

- Difficulty in raising the necessary funding to buy equipment and sign site access agreements;
- Changes to the membership or ownership of the body that was awarded the licence;

[2] A predicted signal level of at least 63 dBμV/m at 10 metres above ground level

- Increases in transmission site costs (for example, finding the initially proposed site will cost more than expected once detailed plans are developed, and/or the need for a sizeable downpayment that may not have been anticipated at the application stage);
- Inability to move from an in-principle agreement to a formal legal agreement to use a transmission site in a timely manner. There have been several examples where a representative of an organisation has given in principle support to (for example) sharing a building's rooftop, but turning that into a formal agreement involving the organisation's property, commercial or legal teams has often taken a long time.

4.25 Some of these reasons may require the licence awardee to seek an alternative transmitter site, which have required them to re-start negotiations with another site owner, as well has having to revise their technical plan and obtain Ofcom's agreement to it.

4.26 Given that access to transmitter sites is a major driver of extended launch timescales, and accounts for the majority of changes to FTPs, we would encourage applicants for future licences to explore as fully as possible the timescales for finalising agreements with site landlords, and to understand all of the charges likely to be incurred. We would also encourage parties awarded a licence to commence work on gaining access to sites at an early stage to reduce the risk that they run out of time to launch within the required 18 months.

Post launch coverage change requests

4.27 Following launch, a small number of licensees have requested approval to make changes to their on-air network. These are set out in Table 6, below. Ofcom's policy on considering post-launch changes to coverage is set out in Section 7 of our Guidance Notes for Applicants and Licensees.

Table 6: Post-launch coverage change requests

Area	Nature of post-launch change request agreed by Ofcom
Basingstoke	Change of transmitter site due to commercial viability
Bradford*	Relocation of one transmitter site due to building redevelopment
Cambridge	Power increase to improve reception reliability in some areas
Cardiff	Power increase to improve reception reliability in some areas
Liverpool	Power increase to improve reception reliability in some areas
Warrington	Additional transmitter site and power increase to improve coverage
Winchester*	Change of transmitter site due to commercial viability

*Agreed after public consultation

5. Beyond Round Six

5.1 In our 2019 consultation on Licensing small-scale DAB we said that "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."

5.2 Based on the evidence contained in this report, we consider that the roll-out of small-scale DAB across the UK has, to date, been successful in:

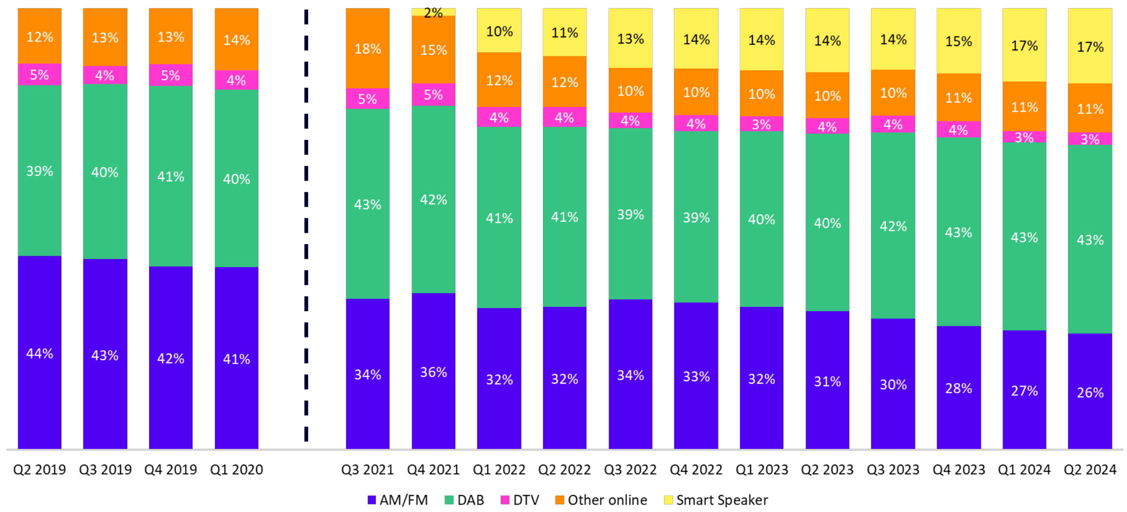
- Providing a pathway to digital radio for existing analogue community radio services;
- Providing access to digital terrestrial radio for all types of stations that are unable to secure or afford carriage on local DAB multiplexes. This has encouraged programming innovation and new entrants into the radio sector; and
- Providing increased choice on the DAB platform for listeners. This has included a significant increase in the availability of local 'grass roots' services, stations catering for minority ethnic communities, and stations delivering specialist music.

5.3 That said, we recognise that relatively few multiplexes have been able to translate the levels of demand and support from programme service providers indicated in their applications into real-world multiplex carriage. The wide variation in the number of radio stations carried by the multiplexes means that the extent of additional listener choice provided by small-scale DAB will vary greatly from area to area, with urban multiplexes generally able to offer listeners more stations.

5.4 In general, a combination of higher transmission costs and less demand from programme service providers mean that multiplex operators in less densely populated areas have found it harder to deliver financially viable multiplexes than operators in urban areas. Nevertheless, smaller multiplexes still provide benefits in terms of consumer choice and opportunities for both new and established services, and we have seen a number of multiplexes launch in less densely populated areas, such as Congleton & Leek, Glossop & Buxton, King's Lynn, Ludlow, and Newry. Our 'expressions of interest' exercise last year showed that there are potential multiplex operators in other less densely populated areas who are confident that they can launch financially sustainable multiplexes.

5.5 Finally, we note that the past five years have continued to see a significant migration of listeners away from analogue (AM/FM) radio to digital platforms, of which DAB remains the most popular, as shown in Figure 3 below:

Figure 3: Share of radio listening by platform 2019 - 2024



Source: RAJAR. Note: dotted line indicates suspension of fieldwork from the end of Q1 2020 until Q3 2021 due to the Covid-19 lockdowns. This led to subsequent changes in methodology, so comparison with previous quarters should be made with caution. DTV is digital television – respondents classify listening so it may include some IPTV.

5.6 According to Ofcom's Technology Tracker 2024, just under three in ten households had a DAB radio set in the home (27%) and 46% had one in the car, taking overall household ownership to 57%. This figure is likely to continue to grow as the percentage of cars on the road that are fitted with DAB sets increases (DAB has been required as standard on all passenger cars manufactured since December 2020).

Further small-scale DAB licensing

5.7 In light of the above, we plan to advertise the following areas in a **Round Seven** of small-scale multiplex licensing towards the end of 2024 or early 2025:

- Arbroath, Carnoustie & Montrose
- Berkshire & South Oxfordshire
- Bridgwater
- Bromsgrove, Kidderminster & Redditch
- Cirencester
- Ely & March
- Enniskillen
- Exmouth & Dawlish
- Gloucester
- Lancaster
- Llanelli
- Loughborough & Coalville

- Market Harborough
- Malton
- Midlothian
- Moray Coast South
- Newark-on-Trent
- North Norfolk
- North Somerset
- Oban
- Ringwood, Verwood & Fordingbridge
- Rugby & Daventry
- Stockton-on-Tees
- Wellingborough
- West Somerset & Lynton
- Western Isles
- Weston-super-Mare
- Witney
- Worcester

5.8 The above are all 'polygon' areas that were initially identified in our Licensing small-scale DAB statement in 2020, and were selected for advertisement using the factors set out in that statement.

5.9 Following expressions of interest we have received, Round Seven will also include the following re-advertisements for previously awarded licences, or previously advertised licence areas which did not attract any applicants:

- Ards Peninsula
- Taunton
- Wakefield & Castleford[3]

5.10 Ofcom's 2020 statement envisaged the small-scale DAB programme consisting of eight rounds of licensing and, consistent with that and the degree of progress set out in this report, we aim to conclude the current licensing programme with **Round Eight**. As with Round Seven, this will include licences for areas in our original statement that have not yet been advertised, as well as a small number of previously advertised licence areas which did not attract applications but for which there have been subsequent expressions of interest in applying, and where spectrum remains available.

[3] In light of representations received from the previous awardee of this licence, the re-advertised Wakefield & Castleford licence area will no longer cover Dewsbury.

5.11 Given that one of the criteria used to prioritise areas for licence advertisement has been levels of expressed demand, we anticipate there may be a lower level of demand for licences in Round Eight than in previous rounds. However, we consider it fair to offer the opportunity to apply for licence areas that were included in the 2020 statement, and evidence from the licensing programme to date indicates that there is a level of demand sufficient to justify doing so.

5.12 We expect to be able to confirm the Round Eight areas in the first half of next year. The actual date of advertisement will depend upon the number of applications we receive for Round Seven.

5.13 Whilst we plan for Round Eight to be the last within the current licensing programme, that does not mean we are ruling out additional small-scale multiplex licences being advertised, or re-advertised, in future based on expressed demand. These would, however, be more likely to take the form of one-off advertisements for a single licence, or a handful of licences, and would need to be considered alongside Ofcom's other licensing priorities.

5.14 Beyond the licensing of new multiplexes, we are also aware that some services will wish to make their coverage more robust within their licence area, and/or may want to extend their coverage into other unserved local areas, where this is consistent with the small-scale DAB legislation (in particular, the 40% limit on the overlap with existing local DAB multiplexes). We will consider the extent to which this is required at the end of the formal licensing programme.

FM licensing

5.15 We have received representations from some radio station operators who have told us they would strongly prefer FM transmission to small-scale DAB. However, for the policy reasons set out at the start of this chapter, and because small-scale DAB will ultimately offer audiences more stations, more efficiently, and in more locations, than FM ever could, we believe our focus should continue to be on small-scale DAB licensing, at least until the completion of Round Eight, before we consider the possibility of further FM licensing in areas where there is demand.

Local DAB licensing

5.16 We are also aware that there are some in the radio industry who would like to see Ofcom instead prioritise the advertisement of additional local DAB multiplexes, which have much bigger coverage areas than small-scale DAB multiplexes.

5.17 Ofcom's view is that the licensing of further local radio multiplexes would be unlikely to achieve, on a consistent basis, many of the key benefits of small-scale DAB outlined at the start of this section, such as being able to migrate analogue community radio services onto digital radio, and providing affordable opportunities to new entrants. We therefore believe that - for the time being - our focus should remain on small-scale DAB licensing, at least until the completion of Round Eight, before we consider the possibility of further local DAB multiplex licensing in areas where there is both demand and available frequencies.