

Small-scale DAB coverage change: Stirling & Falkirk

Statement on request to vary the licensed area of the Stirling & Falkirk small-scale radio multiplex

Statement

Published 21 February 2025

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1. Overview

- 1.1 A radio multiplex service is the means by which DAB digital radio stations are broadcast. This document sets out Ofcom's decision on a request to change the area to be served by the Stirling & Falkirk small-scale radio multiplex service.
- 1.2 Ofcom is required to consult before deciding whether to agree to such a request. We did so in a consultation that closed on 06 January 2025, and our decision takes account of consultation responses received. The overview section of this document is a simplified high-level summary only. The decision we have taken and our reasoning are set out in the full document below.

What we have decided – in brief

We have decided to exercise our discretion under section 54A(2) of the Broadcasting Act 1996 (as modified by the Small-scale Radio Multiplex and Community Digital Radio Order 2019) to approve an application from Central FM Limited to vary the small-scale radio multiplex licence for Stirling & Falkirk so as to change the area within which the service is required to be available.

2. Process for changing a radio multiplex licensing area

Licence areas for small-scale radio multiplexes

- 2.1 Small-scale radio multiplex licences are granted by Ofcom principally to enable the provision of community and local digital sound programme services on the DAB (Digital Audio Broadcasting) platform. The statutory basis for licensing small-scale radio multiplexes is the Broadcasting Act 1996, as modified by the Small-scale Radio Multiplex and Community Digital Radio Order 2019 (the "Broadcasting Act").
- 2.2 The holder of a small-scale radio multiplex licence is responsible for, among other things, delivering its service in accordance with a technical plan agreed by Ofcom prior to grant of the licence. The technical plan contains details of the transmitter site(s) from which the multiplex service is broadcast, and other technical details such as power levels and aerial patterns etc.
- 2.3 For small-scale radio multiplexes, the technical plan effectively defines the licensed area of the service. Ofcom publishes coverage maps showing the coverage and therefore extent of the licensed areas for such services. It should be noted these are indicative only, based on computer models rather than actual measurement, and on a defined predicted signal level deemed sufficient to qualify as "receivable". They are subject to some variation due to possible interference from other services and seek to estimate in-building coverage only. Nevertheless, such models provide a reasonable estimate of the coverage achieved by the technical plan appended to a licence.

Statutory framework for variations

- 2.4 Under section 54A(2) of the Broadcasting Act, Ofcom is able to vary a small-scale radio multiplex licence by
 - a) varying the frequency on which the licensed service is required to be provided,
 - b) reducing the area or locality in which the licensed service is required to be available, or
 - c) extending that area or locality to include an adjoining area or locality.
- 2.5 Section 54A(3) and (4) further specify that Ofcom must have received an application for the variation from the licence holder, and that this application must include a technical plan relating to the service proposed to be provided under the licence indicating, in particular
 - a) the area or locality 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.
- 2.6 Under section 54(5), before deciding whether to grant the application, OFCOM must publish a notice specifying
 - a) the proposed variation of the licence, and
 - b) a period in which representations may be made to OFCOM about the proposal.

2.7 Finally, section 54(7) states that Ofcom may vary a licence in accordance with an application, "only if they are satisfied that doing so would not unacceptably reduce the number of community or local digital sound programme services available to persons living in the area or locality for which, before the proposed variation, the small-scale radio multiplex service is required to be available."

Policy framework for variations

- 2.8 Whilst the above sets out the statutory framework for variations, section 54A(2) provides Ofcom with a discretionary power. That is, we can give approval if the statutory conditions are met but we are not required to do so.
- 2.9 We first assess whether a requested change in transmission arrangements constitutes a frequency change, a reduction in the licensed area, or an extension of the licensed area to an adjoining area.
- 2.10 Where a request, if approved, would result in a change of frequency or a decrease in overall coverage of the multiplex service (as measured by adult population coverage), Ofcom will generally consider these to fall within the scope of section 54A and thus will need to be consulted upon before Ofcom can reach a decision.
- 2.11 Where a request, if approved, would result in an overall increase in coverage for the multiplex service (as measured by adult population coverage), Ofcom will determine whether it constitutes an extension of the area in which the licensed service is required to be available to include an adjoining area. We interpret 'adjoining area' in this context to mean an area of new coverage outside the existing licensed area which, whether measured in terms of the specific location(s), geographical size(s) or population coverage(s), could reasonably be considered to be material we recognise there is a difference between overspill coverage that is unavoidable and intentional extra coverage. We will also take account of whether that adjoining area is, or will potentially be, served by another small-scale radio multiplex service, and whether it was or wasn't part of the original area advertised by Ofcom.
- 2.12 If we determine that the proposed change in transmission arrangements would result in an extension of the licensed area to an adjoining area, the request will need to be consulted upon before Ofcom can reach a decision.
- 2.13 In circumstances where a change would result in an overall increase in coverage for the multiplex service but not constitute an extension of the licensed area to an adjoining area, we will nevertheless also consider whether any coverage which is lost as a result of the changes is of sufficient magnitude and/or significance such that a consultation would still be appropriate. In reaching this view, we will have regard to the extent of any coverage losses both in terms of the absolute numbers of people who are predicted to lose coverage of the multiplex service, but also in terms of the geographical location(s) where coverage is predicted to be lost. We are likely to attach greater weight to coverage losses in the core population centre(s) of the licensed area than to losses at the periphery of the licensed area, or where losses are dispersed across sparsely-populated areas.
- 2.14 For <u>all</u> requests to change transmission arrangements, Ofcom will not give its approval unless it is satisfied in relation to all the following technical requirements:
 - a) Overlap with any relevant local multiplex(es) remains not greater than 40% (in line with the policy intention of section 50(2A)(c) of the BA1996 to limit such overlaps).

- b) Any international constraints are adhered to.
- c) There is no significant increase in the level of interference to multiplexes elsewhere. 1

2.15 Ofcom will also consider:

- a) Whether the reason(s) for making the change is adequately supported by evidence. In particular, we would not normally approve a reduction in coverage unless continuing with the current technical plan is demonstrably not feasible, and feasibility cannot reasonably be achieved through less impactful means.
- b) Whether there is evidence the licensee has taken reasonable steps to minimise any adverse impacts from changes to its coverage, and that any changes in coverage involving coverage reduction or extension into the coverage area of neighbouring smallscale multiplexes are unavoidable. This should include an indication of all other sites that were investigated and any reasons for selecting a preferred site.
- c) Whether any increase of overlap (or new overlaps) with the coverage of other small-scale radio multiplex services is excessive. Whilst some overlap between small-scale multiplexes is inevitable, and changes to transmission arrangements may alter this overlap, in general we would consider this should represent no more than a small proportion of the other multiplex's coverage (if on-air) or polygon (if not yet launched, or yet to be advertised), and extending coverage to a material extent into a key population centre served by a launched or planned small scale multiplex service should be avoided.
- 2.16 In addition, for any variation requests which are subject to consultation, if we are satisfied in relation to the statutory criterion specified in paragraph 2.7 we will also have regard to the following additional criteria when determining whether to vary the licence:
 - a) whether the change in transmission arrangements would be calculated to maintain or promote the development of digital sound broadcasting otherwise than by satellite;
 - b) whether the licensee's proposed coverage plan is satisfactory;
 - c) whether the licensee has the ability to maintain the licensed service;
 - d) whether there are sufficient safeguards in place to protect the rights and interests of stations carried on the multiplex and the rights and interests of other multiplex operators (and the stations they carry); and
 - e) Any other factors that appear relevant to the particular case.

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¹ For on-air multiplexes elsewhere, this means no significant impact to their actual coverage. For polygon areas that have not yet been advertised, or small-scale multiplexes where a licence has been awarded but not yet granted, this means protecting the entire population in the polygon area as at initial assessment.

3. The variation request

Proposed new technical plan

- 3.1 The licence to provide the Stirling & Falkirk small-scale multiplex was awarded to Central FM Limited in March 2023. The multiplex launched in November 2023.
- 3.2 Central FM Limited has applied to vary its licence on the basis that it would like to improve coverage within the originally advertised area to improve the commercial viability of the multiplex. Central FM Ltd has supplied Ofcom with details of various locations across the city of Stirling and the surrounding suburban area where it would like to improve coverage of the multiplex.
- 3.3 Annex 1 sets out a comparison between the current coverage and that which Ofcom assesses would be achieved by the revised technical plan proposed by the applicant. In brief, the revised technical plan proposes an increase in transmitter power which is predicted to provide a net increase in coverage of around 51,249 adults (aged 15+) compared to the currently licensed coverage area. None of the listeners who are currently served by the multiplex would lose coverage under the revised plan.
- 3.4 The revised technical plan would also result in an area of new coverage outside the existing licensed area, primarily in Dunfermline. Dunfermline is planned to be served by another small-scale radio multiplex service (Dunfermline & Kinross), and was not part of the original Stirling & Falkirk area advertised. The percentage of the population residing in the 'polygon' area we plan to advertise in relation to a future Dunfermline & Kinross multiplex that would also be served by the Stirling & Falkirk multiplex would increase from 11.6% to 27.7% an increase of 16.1 percentage points². We consider this to be material and therefore to constitute an extension to include an adjoining area.

Our preliminary view

- 3.5 As set out in paragraph 2.7, we cannot approve Central FM Limited's request unless we are satisfied that doing so would not unacceptably reduce the number of community or local digital sound programme services available in the area the Stirling & Falkirk small-scale multiplex currently serves.
- In our consultation published on 06 January, Ofcom's preliminary view was that we were satisfied on this point. This is primarily because we do not anticipate the change will result in households which currently have coverage losing it (there is not only a net coverage increase but no countervailing loss). However, we recognised that the increase in coverage could result in increased costs for the multiplex, and that any such increase in costs could result in higher costs for service providers. To this end, we said that we would particularly welcome responses to this consultation from current or prospective service providers.
- 3.7 As well as considering the request in relation to the above statutory criterion, we also have a number of policy criteria to take into account as set out in paragraphs 2.14 2.16 in

² Note that the actual population overlap will depend on the final technical plan of any future Dunfermline & Kinross licensee. However, given the locality has yet to be advertised, we have instead considered the overlap with the 'polygon' area we plan to advertise in due course.

- deciding whether to exercise our discretion to allow the variation. Of particular relevance to this request is whether any increase of overlap (or new overlap) with the coverage of other small-scale radio multiplex services is excessive.
- 3.8 Prior to publication of the consultation, we already determined that the extent of the new coverage in Dunfermline was sufficient in scale to constitute an extension to an adjoining area for the Stirling & Falkirk multiplex. However, in coming to a preliminary view on whether to approve Central FM Limited's request, we needed determine whether the impact of the extended coverage was acceptable.
- 3.9 As noted above, Ofcom has announced plans to advertise a small-scale multiplex licence covering Dunfermline & Kinross in Round Eight of our small-scale DAB licensing programme. Overlap into this planned small-scale multiplex may therefore be seen as impacting on the viability of such a service to the extent it means carriage on the Stirling & Falkirk multiplex represents an alternative to the proposed Dunfermline & Kinross multiplex.
- 3.10 Ofcom's preliminary view was that the overlapping coverage requested by the Stirling & Falkirk multiplex is not excessive. This is because the extended licence area would only provide partial coverage of the city of Dunfermline, and would provide no coverage at all in the other significant population centres in the Dunfermline & Kinross area we plan to advertise, notably Kinross and Cowdenbeath. As such, whilst the extent of coverage of Dunfermline is non-negligible, our provisional view was that it is not sufficiently substantial to make carriage on the Stirling & Falkirk multiplex a genuine alternative for services wishing to broadcast to population centres in the Dunfermline & Kinross area, or to materially impact on the viability of a service when a licence for the Dunfermline & Kinross area is advertised.
- 3.11 Ofcom provisionally considered that all the other technical requirements referred to in paragraphs 2.14 2.15 were met. For variation requests which are subject to consultation, we have further criteria to consider. These are listed in paragraph 2.16. We were provisionally satisfied in relation to these too. The overall increase in coverage which would result from the proposed change would bring the benefits of DAB to over 51,000 adults in this part of Scotland, and as the established operator of the local FM service for Stirling & Falkirk (Central FM), the licensee should be in a position to maintain the licensed service. We had no evidence that the rights and interests of stations carried on the multiplex will not be protected in the event this change is approved, but as set out in paragraph 3.6 we said we would welcome responses on this point.
- 3.12 On balance, having considered the matters in paragraphs 2.7 and 2.14 to 2.16, our preliminary view was that it would be appropriate to exercise our discretion to vary the Stirling & Falkirk licence in accordance with the request

Consultation responses and Ofcom assessment

- Ofcom received four responses to the consultation. Of these, one supported our preliminary view to allow the change, and one was opposed to it. The other two responses were neutral in principle about the plan to extend the coverage of the multiplex, but expressed concerns about potential interference to other users of the spectrum.
- 3.14 In supporting the coverage change request from Central FM Limited, Radio West Fife a local online community/ hospital radio service agreed with Ofcom's preliminary view that the granting of this coverage extension would probably not impact the viability of the yet-

to-be-advertised Dunfermline and Kinross multiplex (for which it noted there appeared to be limited interest) and that "an existing, operating multiplex provides an improved provision of DAB coverage for both the public and for stations that may want to exercise the option to utilise that multiplex".

- 3.15 Radio West Fife did suggest, however, that Ofcom should ensure that the level of reserved capacity for C-DSP services on the Stirling & Falkirk multiplex (currently for a minimum of four such stations) should be maintained or perhaps even increased, given there may be interested parties from the enhanced coverage area who may wish to apply for C-DSP licences as a result of the coverage extension.
- 3.16 On the above point, the legal framework for small-scale DAB multiplexes does not allow Ofcom to impose an increase in the level of reserved capacity during the licence term of the multiplex. We note that there are currently two C-DSP services on the Stirling & Falkirk multiplex, so there remains space on reserved capacity for further community services.
- 3.17 C.I. Broadcasting Limited, a company which has been involved in applications for a number of small-scale DAB multiplex licences in Scotland, considered that Ofcom should only permit the power increase at the Central FM Stirling studio transmitter site. It argued that the power increase at the Earl's Hill transmitter site should be rejected on the grounds that it would cause "significant overspill" into the proposed Dunfermline & Kinross small-scale DAB licence area and would "effectively remove 51,000 people" from that potential future licence area, making it "marginal for viability".
- 3.18 To clarify the scale of impact, Ofcom notes that the figure of approximately 51,000 relates to the <u>total</u> estimated population coverage increase for the Stirling & Falkirk multiplex that would result from the increase in transmitter power, some within the Stirling & Falkirk advertised area and some in adjacent areas. The increase in population coverage in the area that we have previously said we plan to advertise for Dunfermline & Kinross is 31,697 (up from the current 13, 231). We also note that allowing the change would not "remove" people from a potential Dunfermline & Kinross multiplex, as the affected area would remain within the advertised area for the further multiplex and that population would be capable of being covered by both multiplexes. Finally, Ofcom notes that C.I. Broadcasting did not provide any evidence to verify its point about commercial viability.
- 3.19 C.I. Broadcasting also challenged Central FM's view, summarised in the consultation, that the extension of coverage would improve the commercial viability of the Stirling & Falkirk multiplex. It argued that "under the current and future [transmission] proposals the Stirling and Falkirk SSDAB multiplex will never be viable on a stand-alone basis under it's [sic] current transmission cost basis." C.I. Broadcasting also said if the power increases were approved by Ofcom, "this will give Central FM an excuse to raise their carriage rates again to further discourage radio stations to seek carriage upon this multiplex, and thus reinforcing their local commercial broadcasting monopoly."
- 3.20 In relation to viability, it is not Ofcom's role to comment on future prospects for particular multiplexes but, all other things being equal, we note an increase in coverage through power increases rather than additional sites would tend to increase the attractiveness of the multiplex to stations seeking carriage as set out by Central FM in its application. In relation to the potential for exclusionary carriage rates, we note that all multiplex operators are able to set rates based on their own commercial strategy, but that this remains constrained by the obligation in all licences to act in a manner consistent with fair and effective competition. We also note that the Stirling & Falkirk multiplex currently carries

- four other programme services (none of which are owned by Central FM Limited) in addition to Central FM's own station.
- 3.21 C.I. Broadcasting also noted that, following the revocation by Ofcom last year of the award to the company of a small-scale multiplex licence award for East Fife as a result of it confirming it was unable to launch within the 18 month statutory period, it had written to Ofcom to suggesting Dunfermline & Kinross should be advertised in due course as part of a larger South West Fife licence. That request is outside the scope of the current consultation and Ofcom's practice is to consider specific requests for alterations to advertised areas ahead of publication of advertisements (which would be Round Eight of licensing in this case).
- 3.22 Two respondents expressed concerns about potential interference to other users of the spectrum. Bauer Digital Radio Ltd said it had no objection to the coverage extension in principle, but it was concerned about the possibility of Adjacent Channel Interference ('ACI') affecting the local DAB multiplexes it owns that cover Glasgow, Dundee and Edinburgh.
- 3.23 In the course of considering the proposed change, we have assessed the risk of the increased transmitter power causing problems for reception of other multiplexes in the vicinity of the Stirling and Falkirk small-scale DAB transmitters. The assessment we carry out for post-launch changes to a licensee's transmission arrangements is carried out in the same way as if the licensee is proposing a new transmission site. If our analysis suggests an impact above the thresholds we have previously consulted upon, then the licensee would be required to undertake some mitigating action. In this case, the predicted impact to reception of other multiplexes was below our significance thresholds even at the higher power, so no mitigating action was deemed necessary.
- 3.24 The Federation of Communication Services said it noted the benefits of increased coverage which would result from the proposal to vary the coverage area of the Stirling & Falkirk multiplex but it was concerned that the consultation did not assess whether the impact of raising the power levels might result in "harmful interference to other systems that may deployed in neighbouring radio spectrum assignments, and which provide vital services upon which citizens rely."
- 3.25 The risk of any new service causing interference to another user on the same or nearby transmission site depends upon a number of factors, such as transmit power, the level of received signals, frequency separation, as well as the physical separation of antennas on the structure. Some key inputs to predictive modelling (such as the coupling between the one user and another's antennas) are very difficult to determine theoretically. This limits the value of making any such assessment in advance, and we do not therefore carry out an assessment of the likelihood of one licensee's causing interference to another user sharing the transmission site. To date, we are aware of only a very small number of cases of interference from DAB to other users occurring.
- 3.26 Ofcom can investigate complaints of interference that are reported to us, and we expect any party launching a new service that is found to cause interference to other users to work with the affected parties to resolve the issue. We would also take enforcement action against any licensee that is found to be operating their If any licensee is found to be operating outside their licensed parameters.
- 3.27 For the above reasons, whilst noting the responses are based on legitimate concerns over potential impact, Ofcom does not consider they provide grounds for departing from our preliminary view in this particular case.

Ofcom's reasoning and decision

- 3.28 Ofcom has considered the views set out in the consultation responses and set out our responses above. We do not consider the responses provide sufficient basis for us to depart from our preliminary view for the reasons set out.
- 3.29 We have therefore decided, for the reasons set out above, to exercise our discretion under section 54A(2) of the Broadcasting Act 1996 (as modified by the Small-scale Radio Multiplex and Community Digital Radio Order 2019) to approve the application from Central FM Limited to vary the small-scale radio multiplex licence for Stirling & Falkirk so as to change the area within which the service is required to be available.

The overview section in Section 1 of this document is a simplified high-level summary only. The decision we have taken is set out in the full document.

A1. Proposed change

- A1.1 The licensee is proposing a power increase from 260W to 490W for the existing transmitter at Earl's Hill and from 50W to 140W for the existing transmitter located at Central FM's studio.
- A1.2 A summary of the currently licensed and proposed coverages is given below, together with a comparison of the coverage provided by each plan, and population counts of the adults (aged 15+) within the areas.
- A1.3 The coverage maps indicate where the small-scale radio multiplex service should be receivable on a DAB digital radio within a typical domestic building³.
- A1.4 However, please note the following caveats:
 - The maps are based on computer predictions rather than actual measurements, so is indicative only.
 - 'Receivable' is based on the defined signal level required by a receiver that meets the
 minimum receiver specification (available here: Minimum specifications for DAB and
 DAB+ personal and domestic digital radio receivers: Digital radio action plan report GOV.UK (www.gov.uk), although that level may not be adequate for receivers built to a
 poorer sensitivity, or be sufficient in every location.
 - The maps do not take account of any interference from other DAB digital radio services. The likelihood of any such interference will increase as more DAB services are launched, but Ofcom will seek to reduce the impact as far as is reasonably practicable.
 - The maps do not show where reception outside homes (e.g. along roads) may be possible.

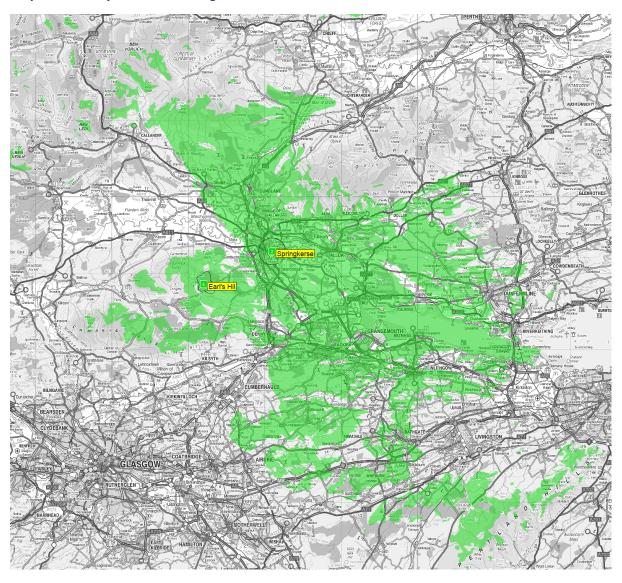
Coverage required by current licence

Currently licensed transmitter details

Site **Power** Aerial Site name NGR **Aerial Pattern** height (W) height Earl's Hill -NS 72015 North 422 260 24 88542 Tower Central FM NS 80972 Omnidirectional 11 50 12 Studio 92861

 $^{^3}$ The areas classed as served are where we predict a field strength of at least $63dB\mu V/m$ at 10m above ground level, which corresponds to providing a service at 80% location probability and 50% time availability, as set out in our Technical policy guidance for DAB multiplex licensees (ofcom.org.uk)

Map of currently licensed coverage

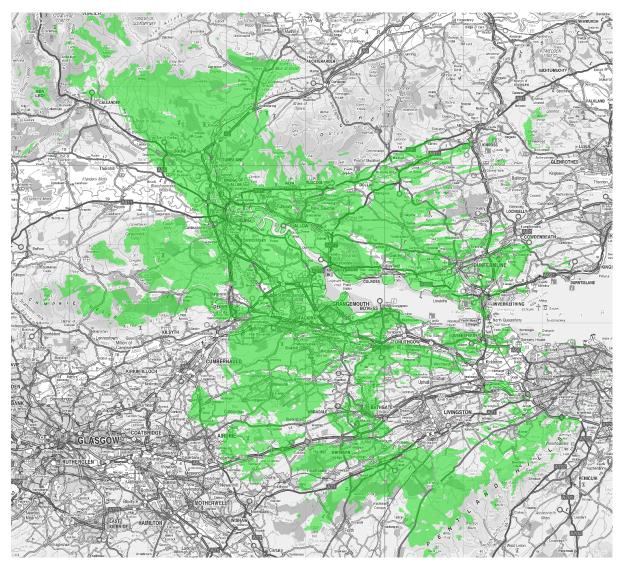


Coverage proposed by the licensee

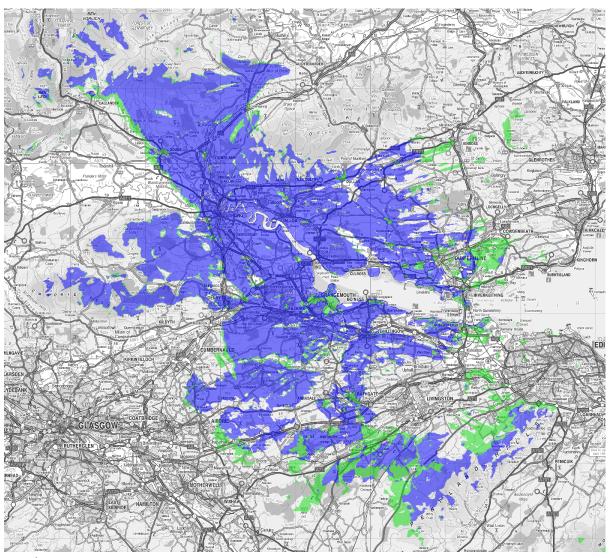
Proposed transmitter details

Site name	NGR	Site height	Power (W)	Aerial height	Aerial Pattern
Earl's Hill – North Tower	NS 72015 88542	422	490	24	
Central FM studio	NS 80972 92861	11	140	12	Omnidirectional

Map of proposed coverage



Comparison of coverage



Map key:

Blue = retained coverage Red = areas served only by currently licensed coverage Green = areas served only by the proposed coverage plan

Coverage shown is for predicted indoor coverage ($63dB\mu V/m$ at 10m above ground level)

Coverage summary table (adults 15+)

Population served by currently licensed coverage	229,123
Population served by proposed coverage	280,372
Net population change	51,249
Population retained (blue areas)	229,123
Population gained (green areas)	51,249
Population lost (red areas)	0

A2. Impact assessments

Impact assessment

- A2.1 Section 7 of the Communications Act 2003 requires that, where we are proposing to do anything for the purposes of, or in connection with, the carrying out of our functions, and it appears to us that the proposal is important, we are required to carry out and publish an assessment of the likely impact of implementing the proposal, or a statement setting out our reasons for thinking that it is unnecessary to carry out such an assessment.
- A2.2 In deciding to approve the request, we do not consider it will have any adverse impact on citizens and consumers. Rather, the increased transmitter power and extended coverage area should improve the reception and availability of digital sound programme services in the Stirling and Falkirk area. Importantly, we noted that no existing listeners to services broadcasting on the multiplex will be disenfranchised, since there will be no losses of coverage.
- A2.3 There is some potential for the extension to impact on the business case for establishing a neighbouring multiplex at a later date. This is because some households will gain coverage in that planned area. However, our view was that the extended coverage area will not have a significant negative impacts upon the establishment, or viability, of a small-scale radio multiplex in the neighbouring Dunfermline and Kinross area when the area comes to be advertised later this year.

Equality impact assessment

- A2.4 Section 149 of the Equality Act 2010 (the 2010 Act) imposes a duty on Ofcom, when carrying out its functions, to have due regard to the need to eliminate discrimination, harassment, victimisation and other prohibited conduct related to protected characteristics under the 2010 Act. 12 The 2010 Act also requires Ofcom to have due regard to the need to advance equality of opportunity and foster good relations between persons who share specified protected characteristics and persons who do not.
- A2.5 As noted above, in approving the request, we did not consider that the planned changes will have an adverse impact on any of the citizens and consumers in the area. This is because no coverage will be lost as a result of the changes, and therefore the issue of whether there will be a different impact for different groups does not arise. We have considered whether the change may impede the establishment of a neighbouring multiplex in future, with an impact on ability to establish radio services advancing equality of opportunity and fostering good relations. However, we are satisfied that the extended coverage area will not have a material impact upon the establishment, or viability, of a small-scale radio multiplex in the neighbouring Dunfermline and Kinross area when that area comes to be advertised later this year.