



Digital Switchover (DSO) Programme

Radio DSO Block 11B Perth & Dundee

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1 Perth & Dundee DSO narrative

The current allocation on 11B for Perth and Dundee has been modified to exclude the southern part of Fife and include additional areas to the west of the existing editorial area.

The proposed Block 11B allocations are shown below and include Cumbria, Teesside, Huddersfield & Bradford, Shropshire, Leicestershire, Norfolk, Cornwall, Bournemouth and Sussex.

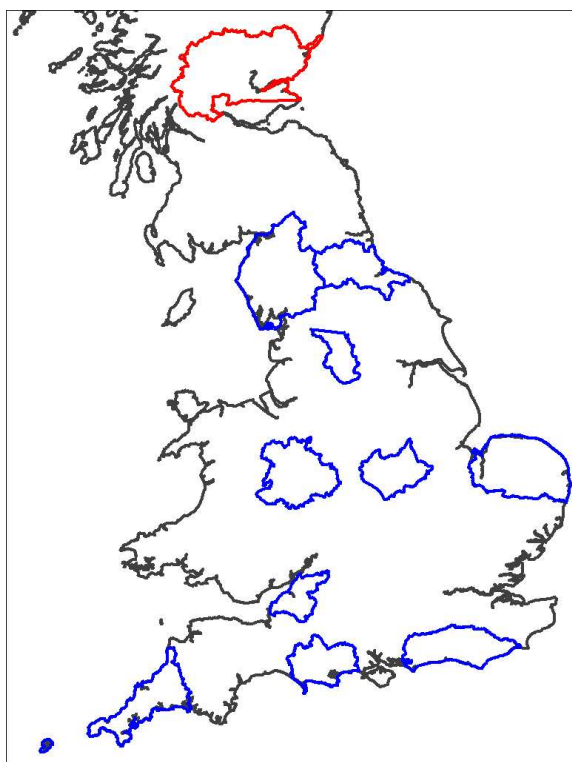


Figure 1.1: Proposed Block 11B allocations

In planning for each multiplex Ofcom have required coverage assessments:

- For each area four maps should be produced as follows:
 1. **Current Situation** - Map showing current actual coverage (or launch plans where a multiplex has not yet launched), including any transmitters which are required as part of the current licence, but which are not yet operational.
 2. **Modified Network 1** - Map showing the above, plus any improvements to existing infrastructure.
 3. **Modified Network 2** - Map of the above, plus additional smaller infill transmitters focused on areas where FM coverage is robust.
 4. **Modified Network 3** - Map of the above, plus additional transmitters to provide near universal coverage.

For case 1: Current situation

The current allocated transmission characteristics are:

Site name	ERP	Site height m a.o.d.	Antenna height a.g.l	Antenna type
Angus	3kW	313	211	Panels
Kirkton Mailer	1.48kW	178	47	Dipoles
Purin Hill	1.49kW	337	25	Cardioid & Yagi
Faire Mhor	1.5kW	480	24	Cardioids

The coverage for the existing situation is shown in figure 2.1.

For case 2: Modified Network 1

Two modifications are proposed to the existing network which will align coverage with the BBC network. Faire Mhor is replaced by Pitlochry and Purin Hill is replaced by Drumcarrow Craig. Coverage is shown in figure 2.2 the move to Pitlochry has a slight adverse affect on road coverage but improves indoor coverage. The move from Purin Hill produces gains and losses but is considered necessary as the editorial area now excludes southern Fife and Drumcarrow provides better coverage of the modified area.

For case 3: Modified Network 2

In this it was required to cover those areas currently served robustly by local FM services (BBC Regional and Independent Radio Tay). To achieve this seven additional sites are required including one whose main purpose is to improve coverage of the A9. The coverage of the Modified Network 2 is shown in figure 2.3.

For case 4: Modified Network 3

For this case it was required to 'fill' the multiplex to achieve near universal coverage (within practical planning limits). Modified network 2 achieves this requirement.

1.1 Outgoing interference and sensitivity to other co-block multiplexes

There is a slight impact on the Cumbria and Teesside multiplexes. Other 11B multiplexes are unaffected.

Perth and Dundee is slightly affected by co-block interference from the Cumbria and Teesside multiplexes

2 Coverage of the Multiplex

2.1 Coverage Maps

Coverage maps for the DAB are presented with three colours:

Blue = Mobile coverage (99% locations at 99% time)

Dark Green = Indoor coverage (80-95% locations at 99% time)

Light Green = Robust indoor coverage (>95% locations at 99% time)

Figure 2-1 Current Situation

Figure 2-2 Modified Network 1

Figure 2-3 Modified Network 2

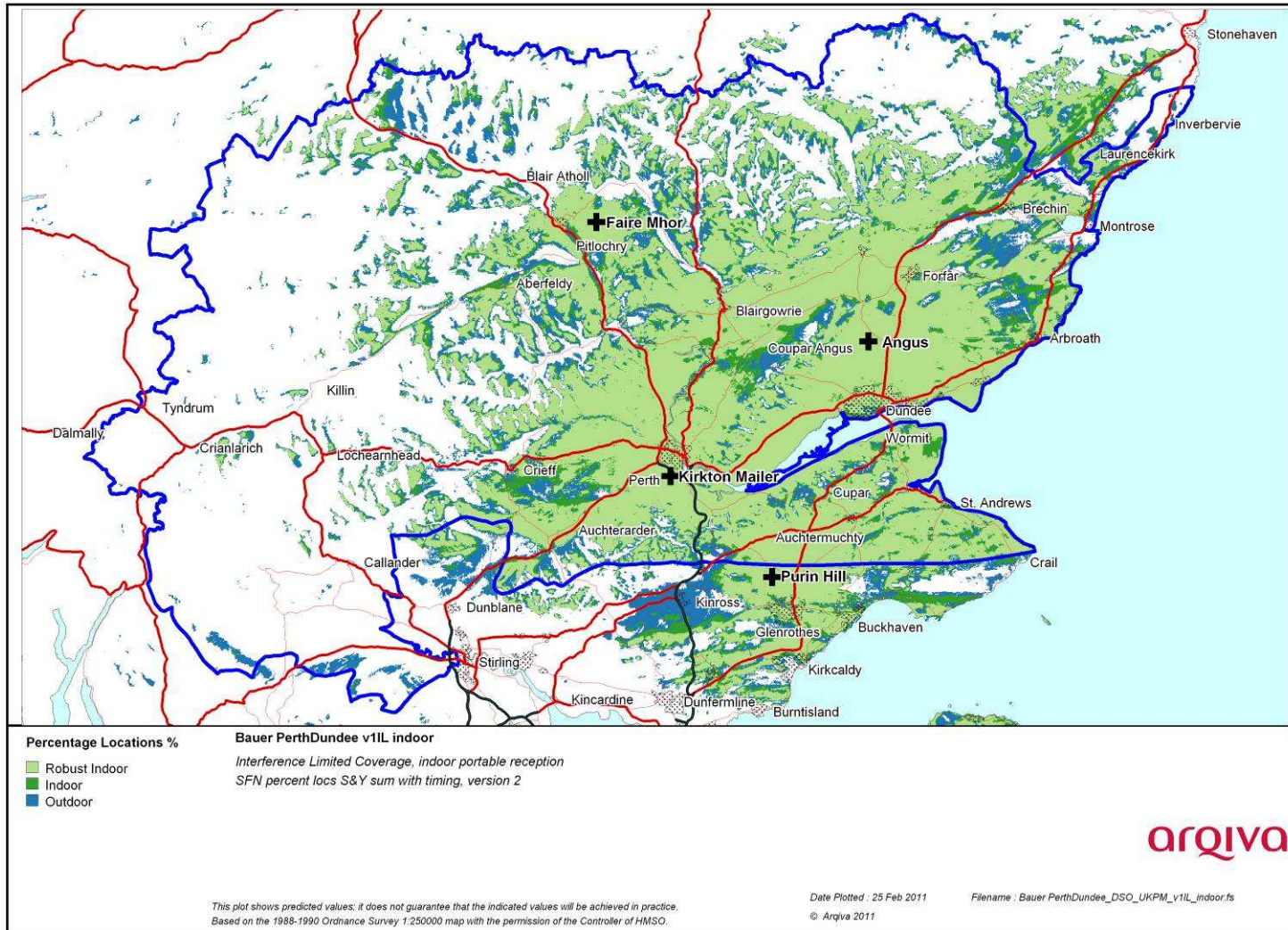


Figure 2-1. Current Situation

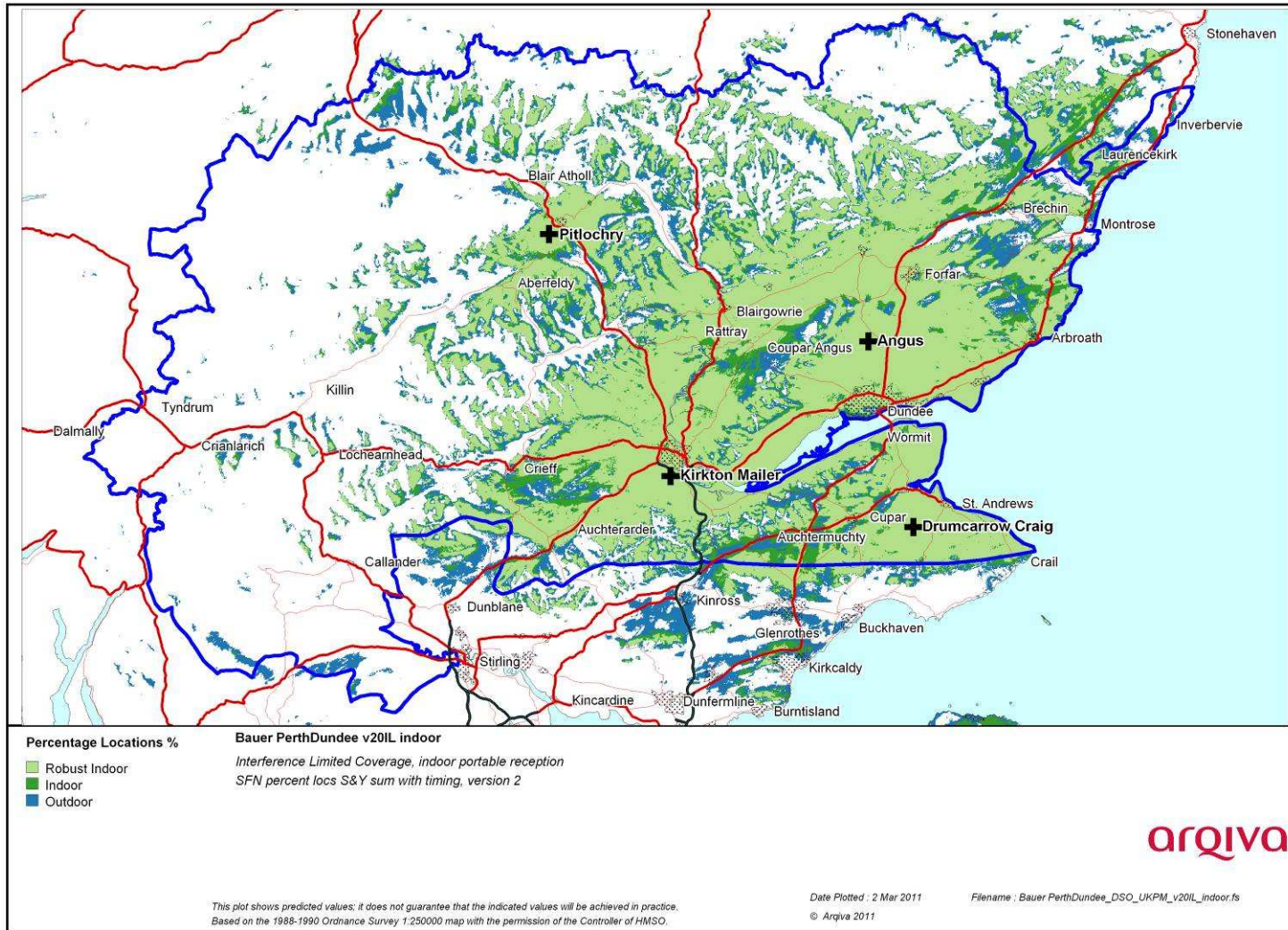


Figure 2-2 Modified Network 1

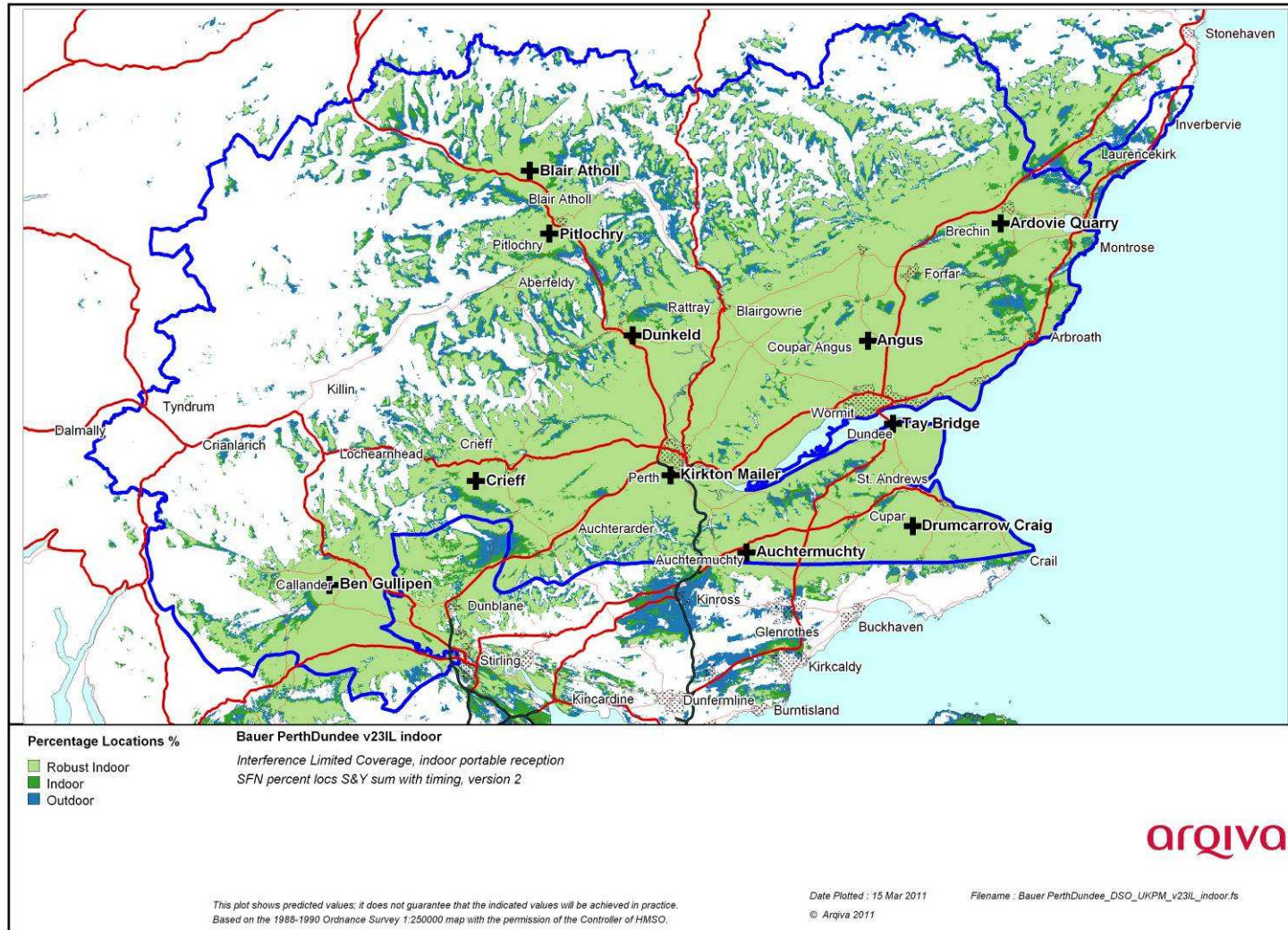


Figure 2-3 Modified Network 2

2.2 Population Coverage tables within Editorial Area

Table 2-1. Population coverage proportional indoor 1% time interference

: Total 228,042

Site scenario and incremental additional sites	Site type	Individual gross interference limited coverage within editorial area	Total number of households within editorial area	Incremental increase in number of households	Incremental percentage increase of population	Percentage of editorial area
Current (4 tx)	Shared Existing Infrastructure	184,584 (80.9%)	184,584	-	-	80.9%
Angus	Current	126,151 (55.3%)				
Kirkton Mailer	Current	40,148 (17.6%)				
Drumcarrow Craig	Shared Existing Infrastructure	35,662 (15.6%)				
Pitlochry	Shared Existing Infrastructure	3,158 (1.4%)	185,410			81.3%
Tay Bridge	Existing site new antenna	83,171 (36.5%)	195,635	10,225	4.5%	85.8%
Ardovie Quarry	New site	13,593 (6.0%)	203,607	7,972	3.5%	89.3%
Ben Gullipen	Existing site new antenna	4,762 (2.1%)	208,494	4,887	2.1%	91.4%
Crieff	Existing site new antenna	7,421 (3.3%)	213,017	4,523	2.0%	93.4%
Auchtermuchty	Existing site new antenna	4,922 (2.2%)	215,909	2,892	1.3%	94.7%
Dunkeld	Existing site new antenna	19,436 (8.5%)	217,645	1,736	0.8%	95.4%
Blair Atholl	Existing site new antenna	484 (0.2%)	218,118	473	0.2%	95.7%

Case 1	-	Yellow =	Current coverage
Case 2	-	Yellow + Purple	Modified Network 1
Case 3	-	Yellow + Purple + Orange=	Modified Network 2
Case 4	-	Not Applicable	Modified network 3

Table 2-2. Road coverage 99% location 99%T: Total roads 1,194 km

Site scenario and incremental additional sites	Site Type	Total road length In km	Increase in road length in km	Incremental percentage of road length	Percentage of roads within editorial area
Current (4 tx)	Shared Existing Infrastructure	763	-	-	63.9%
Drumcarrow Craig	Shared Existing Infrastructure				
Pitlochry	Shared Existing Infrastructure	749			62.7%
Tay Bridge	Existing site new antenna	753	3	0.3%	63.0%
Ardovie Quarry	New site	778	26	2.1%	65.1%
Ben Gullipen	Existing site new antenna	873	95	7.9%	73.0%
Crieff	Existing site new antenna	900	27	2.3%	75.3%
Auchtermuchty	Existing site new antenna	905	5	0.4%	75.7%
Dunkeld	Existing site new antenna	933	28	2.3%	78.1%
Blair Atholl	Existing site new antenna	954	21	1.8%	79.8%

Case 1	-	Yellow =	Current coverage
Case 2	-	Yellow + Purple	Modified Network 1
Case 3	-	Yellow + Purple + Orange=	Modified Network 2
Case 4	-	Not Applicable	Modified network 3

Table 2-3. Summary of Coverage within Editorial Area for each case 99% time Interference

Case	Indoor Households & (percentage coverage)	Mobile Coverage km & percentage coverage) 99% locations
1	184,584 (80.9%)	763 (63.9%)
2	185,410 (81.3%)	749 (62.7%)
3	218,118 (95.7%)	954 (79.8%)
4	n/a	n/a