
Digital Switchover (DSO) Programme

Radio DSO Block 12A Switch London

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1 Switch London DSO narrative

The proposed block 12A allocations are shown below in figure 1.1

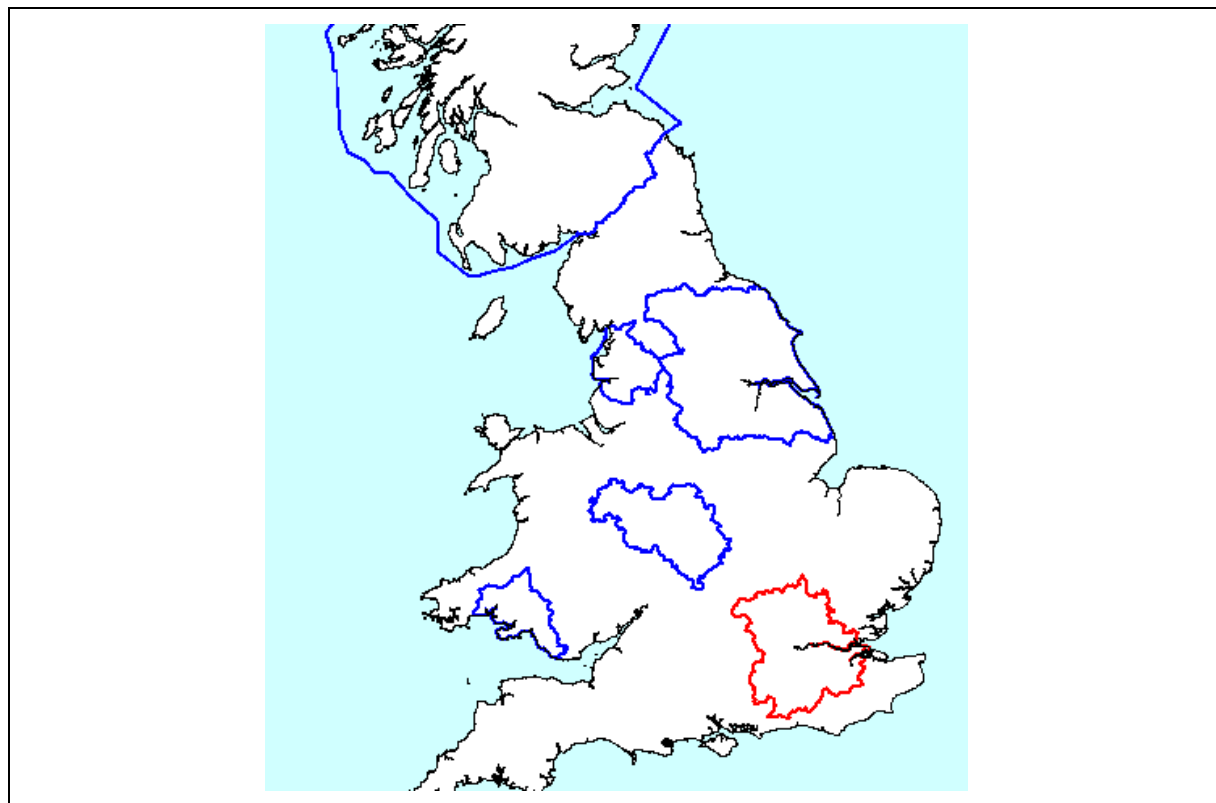


Figure 1.1: 12A block allocations

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

For this case it is the current on-air transmitters including nine low power fillers (one of which is BT Tower).

For case 2: Modified Network 1

This does not apply in this case as all the possible power increases have already been completed and there has been no requirement to modify existing antenna systems.

For case 3: Modified Network 2

An additional four transmitter sites have been added eight of which are low power fillers. In addition BT tower is changed from low power filler to full power site. The DAB coverage has been matched to that provided by Capital FM.

For case 4: Modified Network 3

A total of 31 transmitter sites have been utilised of which eight are low power filler sites.

1.1 Outgoing interference and sensitivity to other co-block multiplexes

This multiplex is not unduly interference limited. There is some interaction between MXR West Midlands and this has required some upgrading of MXR West Midlands. All calculations have included these upgrades from MXR West Midlands. There is a small impact from MXR Yorkshire any changes made at MXR Yorkshire have been included. None of the other multiplexes are affected by Switch London nor do they affect Switch London.

There is significant overlap with all the surrounding multiplexes, this is due to the very large editorial area.

2 Coverage of the Multiplex

2.1 Coverage Maps

Coverage maps for the indoor DAB are presented with two colours:

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

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

Dark Blue = Mobile outdoor coverage (>99% locations at 99% time)

Figure 2.1 Case 1

Figure 2.2 Case 3

Figure 2.3 Case 4

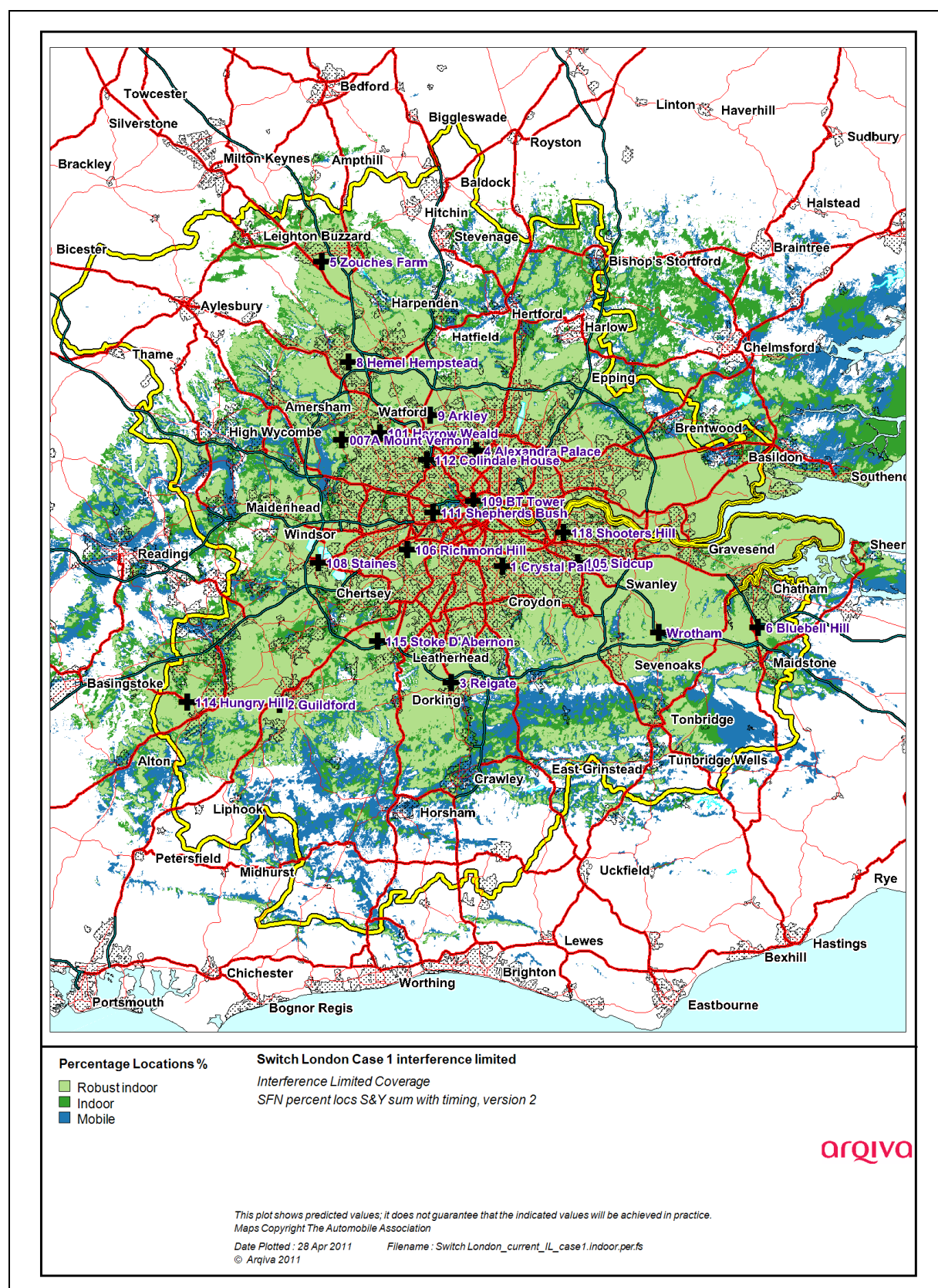


Figure 2.1: Case 1

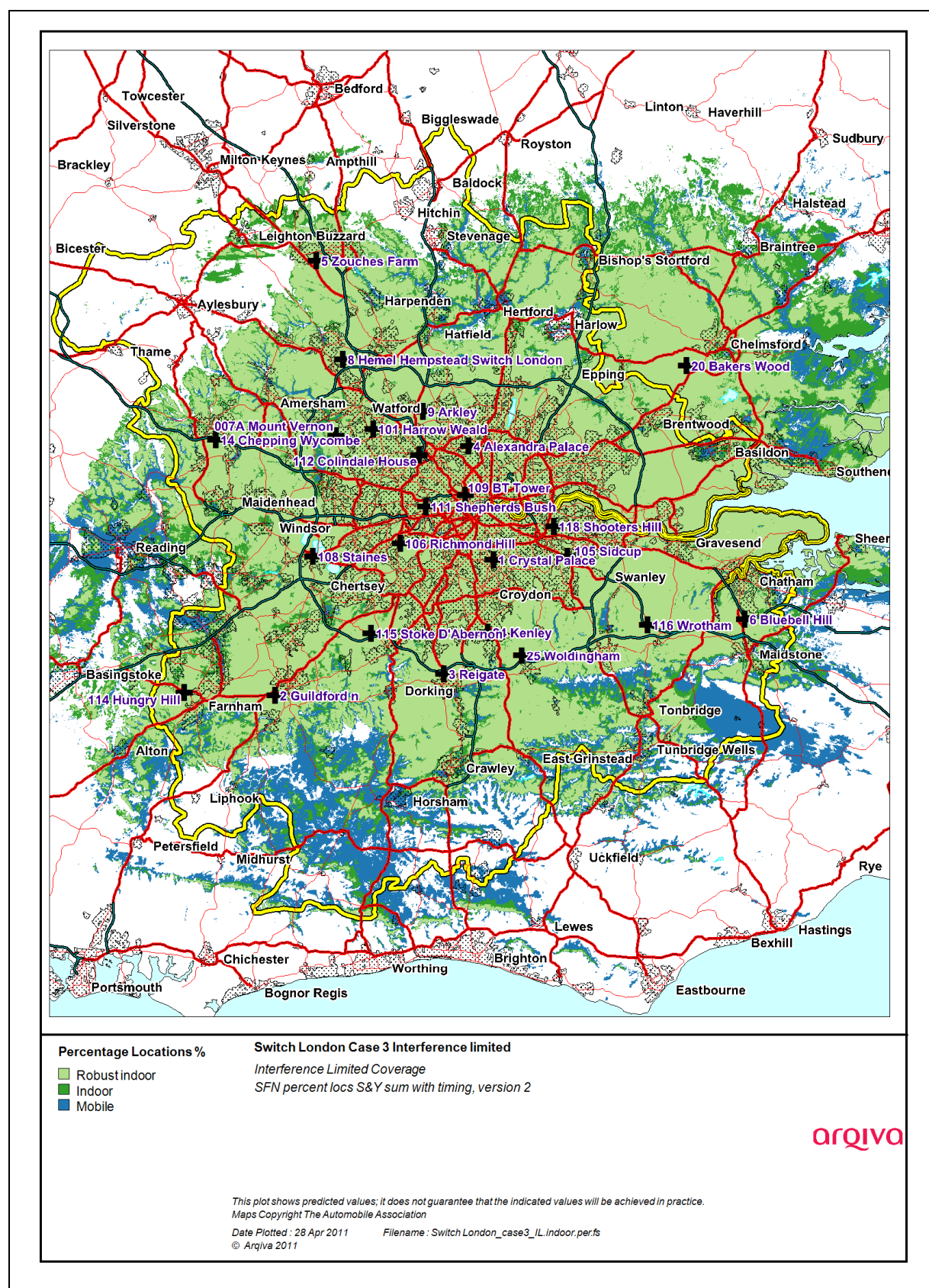


Figure 2.2 Case 3

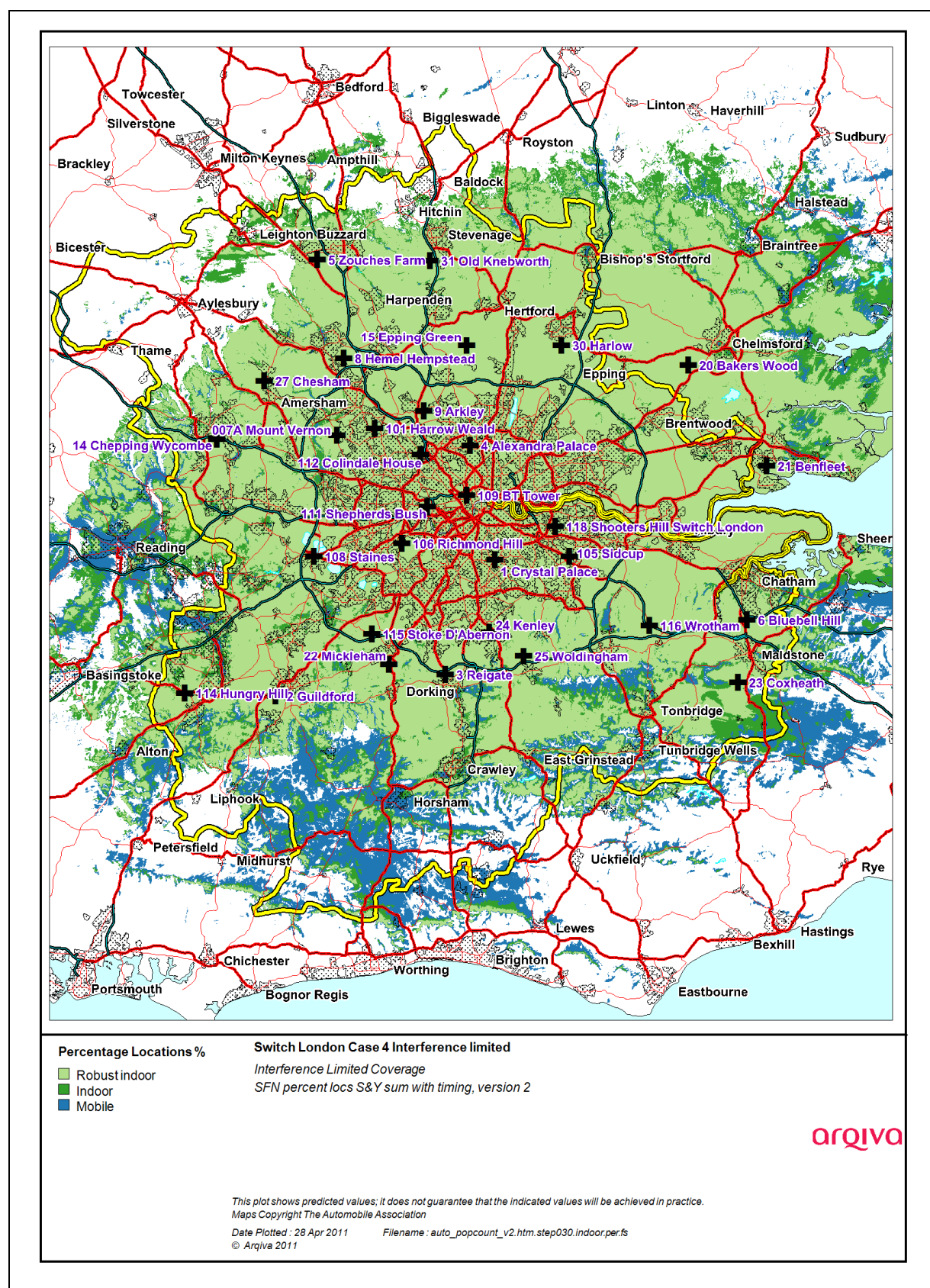


Figure 2.3 Case 4

2.2 Population Coverage tables within Editorial Area

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

: Total 5,499,904

Site scenario and incremental additional sites	Site Type	Individual Gross Interference Limited coverage within Editorial Area	Number of households within Editorial Area	Increase in number of households	Incremental percentage increase of population	Percentage of Editorial Area
Crystal Palace	Current on - air	-	2404934	-	-	43.73
BT Tower	Existing DAB site modified infrastructure	1965754 (35.74%)	3243624	838690	15.25	58.98
Wrotham	Current on - air	1100572 (20.01%)	3784400	540776	9.83	68.81
Epping Green	New Site	399421 (7.26%)	4082886	298486	5.43	74.24
Reigate	Current on - air	492785 (8.96%)	4313896	231010	4.20	78.44
Guildford	Current on - air	115403 (2.10%)	4469762	155866	2.83	81.27
Bluebell Hill	Current on - air	181011 (3.29%)	4613791	144029	2.62	83.89
Zouches Farm	Current on - air	99329 (1.81%)	4722521	108730	1.98	85.87
Alexandra Palace	Current on - air	1342880 (24.42%)	4796741	74220	1.35	87.21
Chepping Wycombe	New Site	80154 (1.46%)	4876112	79371	1.44	88.66
Hemel Hempstead	Current on - air	129199 (2.35%)	4923710	47598	0.87	89.52
Benfleet	Existing DAB infrastructure	122839 (2.23%)	4968366	44655	0.81	90.34
Hungry Hill	Current low power filler	52630 (0.96%)	5029465	61100	1.11	91.45
Woldingham	New Site	135645 (2.47%)	5076326	46861	0.85	92.30
Mount Vernon	Current on - air	46389 (0.84%)	5083229	6903	0.13	92.42
Harlow	New Site	64700 (1.18%)	5092985	9756	0.18	92.60

Site scenario and incremental additional sites	Site Type	Individual Gross Interference Limited coverage within Editorial Area	Number of households within Editorial Area	Increase in number of households	Incremental percentage increase of population	Percentage of Editorial Area
Kenley	New Site	187217 (3.40%)	5104398	11413	0.21	92.81
Coxheath	New Site	39429 (0.72%)	5121175	16777	0.31	93.11
Bakers Wood	Existing DAB site modified infrastructure	16574 (0.30%)	5129214	8038	0.15	93.26
Arkley	Current on - air	70299 (1.28%)	5134204	4990	0.09	93.35
Chesham	New Site	19250 (0.35%)	5147070	12867	0.23	93.58
Old Knebworth	New Site	33130 (0.60%)	5157206	10136	0.18	93.77
Stoke D'Abernon	Current low power filler	22515 (0.41%)	5161461	4256	0.08	93.85
Harrow Weald	Current low power filler	29475 (0.54%)	5161916	454	0.01	93.85
Staines	Current low power filler	18761 (0.34%)	5162302	387	0.01	93.86
Richmond Hill	Current on - air	20594 (0.37%)	5162523	221	0.00	93.87
Mickleham	New Site	7691 (0.14%)	5169294	6771	0.12	93.99
Shooters Hill	Current low power filler	71541 (1.30%)	5170077	783	0.01	94.00
Colindale House	Current low power filler	30680 (0.56%)	5170093	16	0.00	94.00
Sidcup	Current low power filler	26453 (0.48%)	5170182	89	0.00	94.00
Shepherds Bush	Current low power filler	33598 (0.61%)	5170727	545	0.01	94.01

Case 1	-	Yellow =	Current
Case 2	-	Purple + Yellow =	Modified Network 1 (N/A)
Case 3	-	Purple + Dark Blue + Yellow + Orange =	Modified Network 2
Case 4	-	Purple + Dark Blue + Yellow + Orange + green =	Modified network 3

Dark Blue shading refers to case 3 BUT only those additional sites required to replicate robust FM within the Greater London boundary.

Table 2-2. Road coverage 99% location 99%T: Total roads 4933.7 km

Site scenario and incremental additional sites	Site Type	Total road length in km	Increase in number of road length in km	Incremental percentage increase of road length	Percentage of roads within the editorial area
Crystal Palace	Current on - air	1825.8	-	-	37.01
BT Tower	Existing DAB site modified infrastructure	2344.9	519.1	10.52	47.53
Wrotham	Current on - air	3215.4	870.5	17.64	65.17
Epping Green	New Site	3547.0	331.7	6.72	71.89
Reigate	Current on - air	3864.4	317.3	6.43	78.33
Guildford	Current on - air	4105.7	241.3	4.89	83.22
Bluebell Hill	Current on - air	4215.9	110.2	2.23	85.45
Zouches Farm	Current on - air	4287.0	71.1	1.44	86.89
Alexandra Palace	Current on - air	4336.9	49.9	1.01	87.90
Chepping Wycombe	New Site	4389.7	52.8	1.07	88.97
Hemel Hempstead	Current on - air	4420.3	30.6	0.62	89.59
Benfleet	Existing DAB infrastructure	4431.8	11.5	0.23	89.83
Hungry Hill	Current low power filler	4469.2	37.4	0.76	90.58
Woldingham	New Site	4517.2	48.1	0.97	91.56
Mount Vernon	Current on - air	4517.8	0.6	0.01	91.57
Harlow	New Site	4522.6	4.8	0.10	91.67
Kenley	New Site	4525.2	2.6	0.05	91.72
Coxheath	New Site	4537.9	12.7	0.26	91.98

Site scenario and incremental additional sites	Site Type	Total road length in km	Increase in number of road length in km	Incremental percentage increase of road length	Percentage of roads within the editorial area
Bakers Wood	Existing DAB site modified infrastructure	4538.8	1.0	0.02	92.00
Arkley	Current on - air	4541.3	2.5	0.05	92.05
Chesham	New Site	4546.0	4.7	0.10	92.14
Old Knebworth	New Site	4560.0	14.0	0.28	92.43
Stoke D'Abernon	Current low power filler	4563.3	3.3	0.07	92.49
Harrow Weald	Current low power filler	4563.3	0.0	0.00	92.49
Staines	Current low power filler	4563.6	0.3	0.01	92.50
Richmond Hill	Current on - air	4563.9	0.3	0.01	92.50
Mickleham	New Site	4573.7	9.8	0.20	92.70
Shooters Hill	Current low power filler	4573.7	0.0	0.00	92.70
Colindale House	Current low power filler	4573.7	0.0	0.00	92.70
Sidcup	Current low power filler	4573.7	0.0	0.00	92.70
Shepherds Bush	Current low power filler	4573.7	0.0	0.00	92.70

Case 1	-	Yellow =	Current
Case 2	-	Purple + Yellow=	Modified Network 1 (N/A)
Case 3	-	Purple+ Dark Blue + Yellow +Orange=	Modified Network 2
Case 4	-	Purple +Dark Blue+ Yellow +Orange + green =	Modified network 3

Dark Blue shading refers to case 3 BUT only those additional sites required to replicate robust FM within the Greater London boundary.

Table 2-3. Summary of Coverage within Editorial Area for each case

Case	Indoor Households & (percentage coverage) <i>proportional 99% Time Interference Protection</i>	Mobile Coverage km & percentage coverage) <i>99% Locations & 99% Time Interference Protection</i>
1	4639035 (84.35%)	4427 (89.72%)
2		
3	4998951 (90.89%)	4591 (93.05%)
3. Greater London Boundary	3247764 (99.53%)	1806 (99.74%)
4	5170727 (94.01%)	4574 (92.70%)

Case 1	-	Yellow =	Original licence application
Case 2	-	Purple + Yellow=	Modified Network 1 (N/A)
Case 3	-	Purple+ Dark Blue + Yellow +Orange=	Modified Network 2
Case 4	-	Purple + Yellow +Orange + green =	Modified network 3

Dark Blue shading refers to case 3 BUT only those additional sites required to replicate robust FM within the Greater London boundary.