
Digital Switchover (DSO) Programme

Radio DSO Block 12C CE London

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1 CE London DSO narrative

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

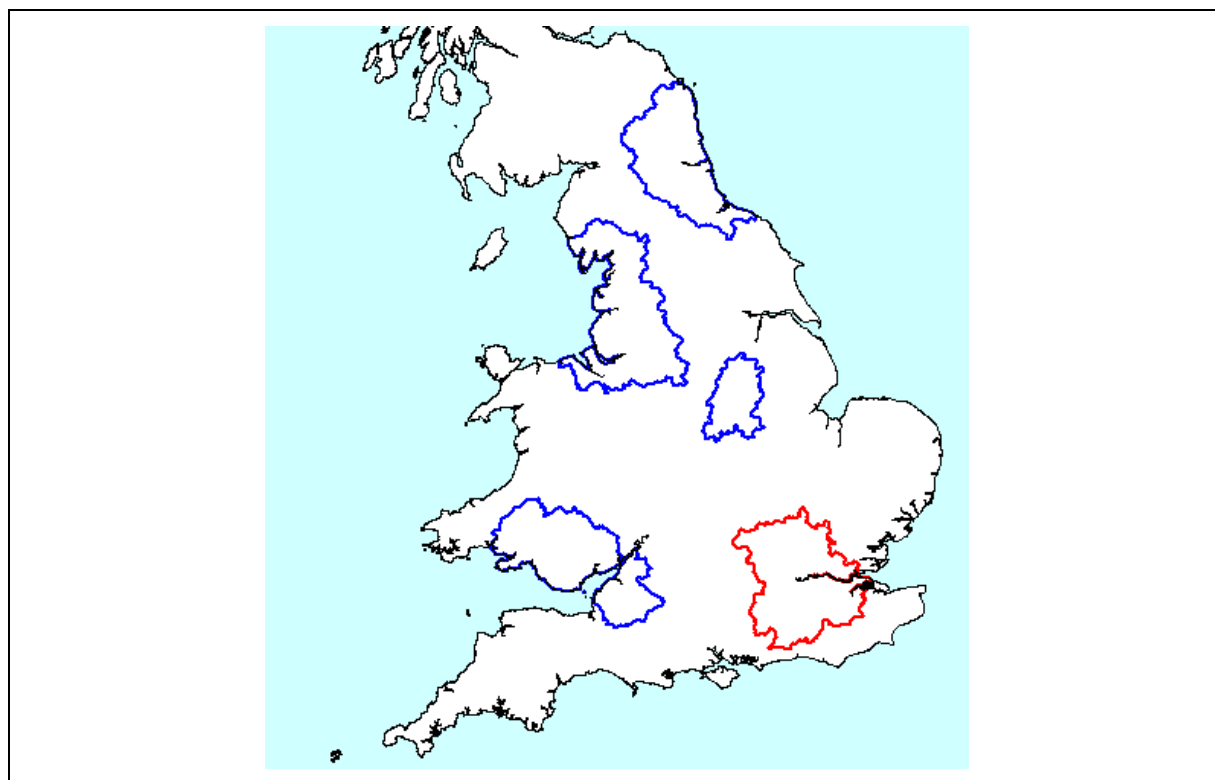


Figure 1.1: 12C block allocations

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 eight on-air transmitters including two low power filler sites and the recent power increases.

For case 2: Modified Network 1

In this case all the possible power increases have already been completed in addition the Reigate antenna system has been modified to a more 'omni' pattern, therefore case 2 is included for this London multiplex.

For case 3: Modified Network 2

An additional seven transmitter sites have been added. The DAB coverage has been matched to that provided by Capital FM.

For case 4: Modified Network 3

A total of 22 transmitter sites have been utilised of which two are low power filler sites. It should be noted that the road coverage drops slightly from Case 3 to case 4 this is due to intra-SFN interference and that a review of the relative timing of the SFN will be required to address this issue, due to time constraints it has not yet been possible to optimise the timing of this multiplex.

1.1 Outgoing interference and sensitivity to other co-block multiplexes

This multiplex is not unduly interference limited. There is some interaction between MXR Severn Estuary but this impact was minimal and did not require any changes to this multiplex as a result. The Nottinghamshire multiplex has a very slight impact the changes to CE London have a minimal impact on Nottinghamshire.

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 2

Figure 2.3 Case 3

Figure 2.4 Case 4

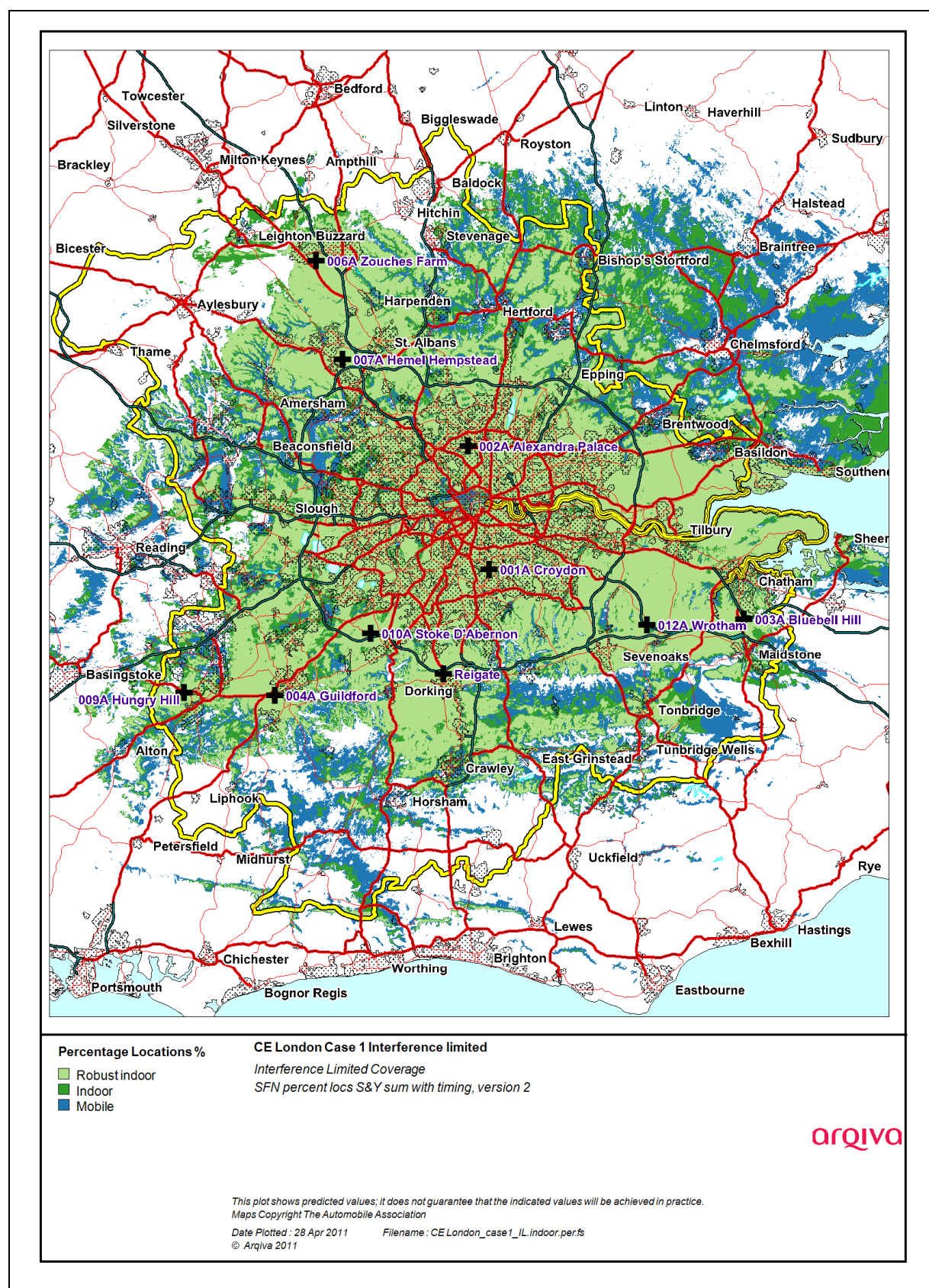


Figure 2.1: Case 1

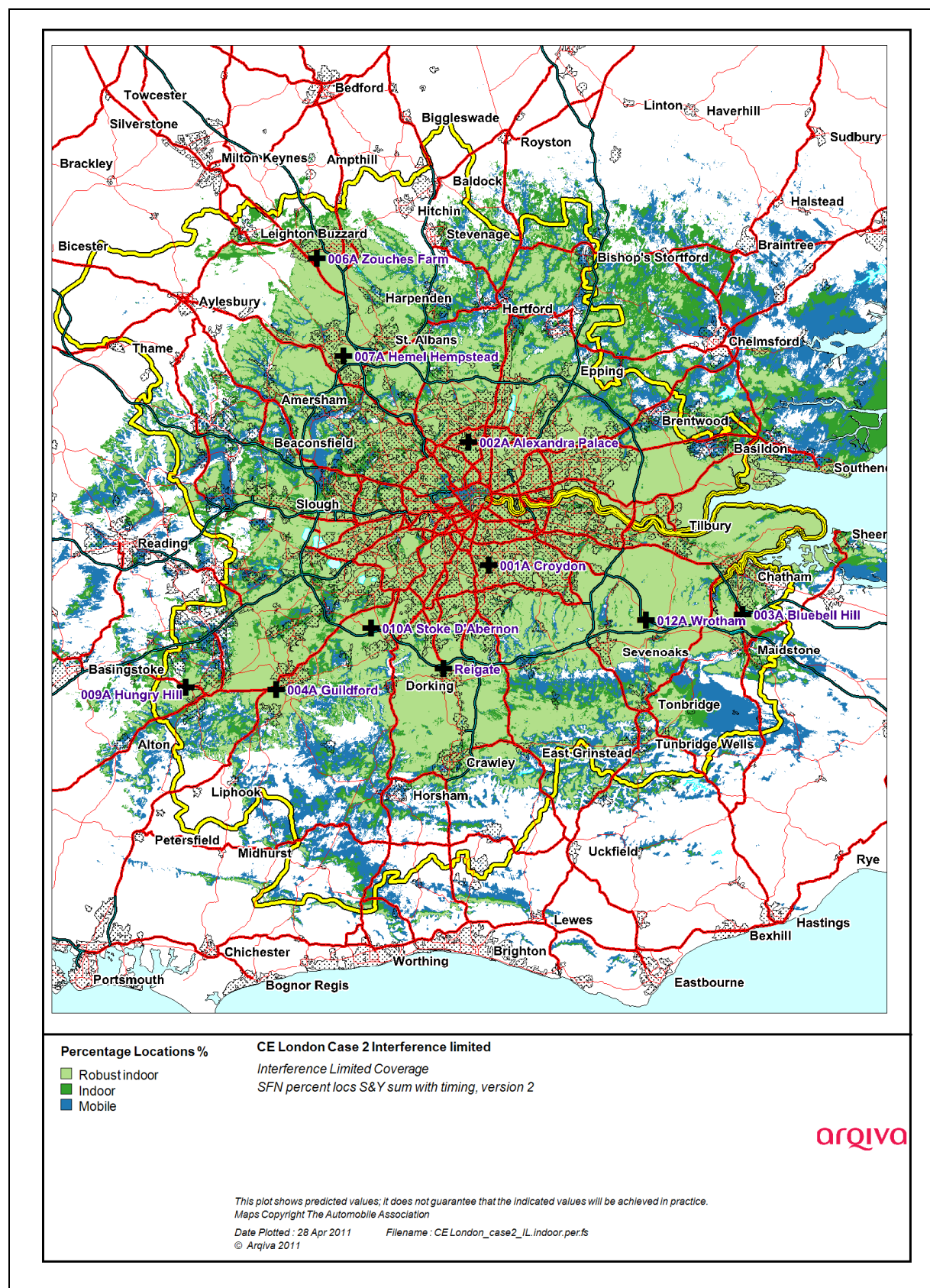


Figure 2.2 Case 2

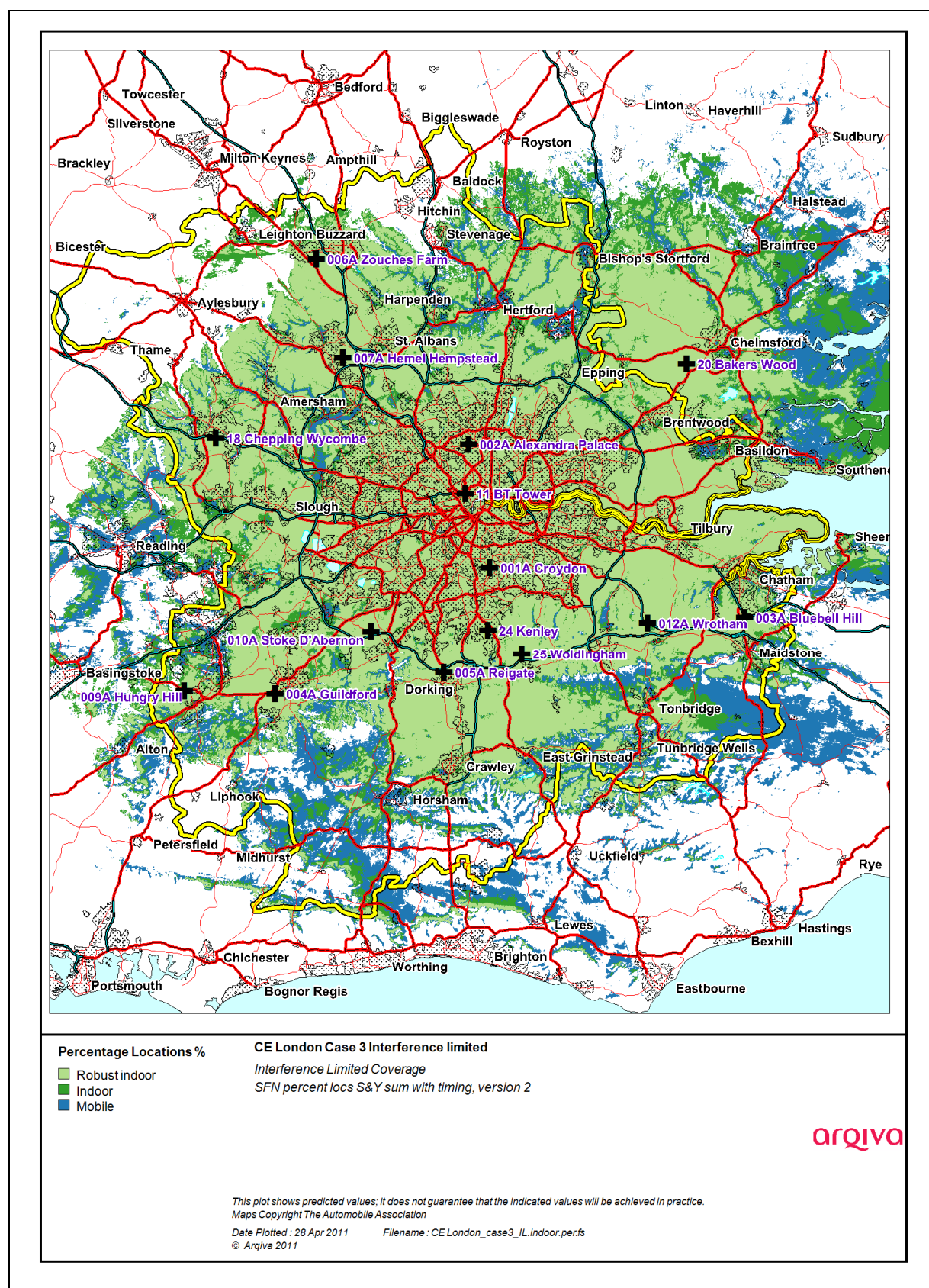


Figure 2.3 Case 3

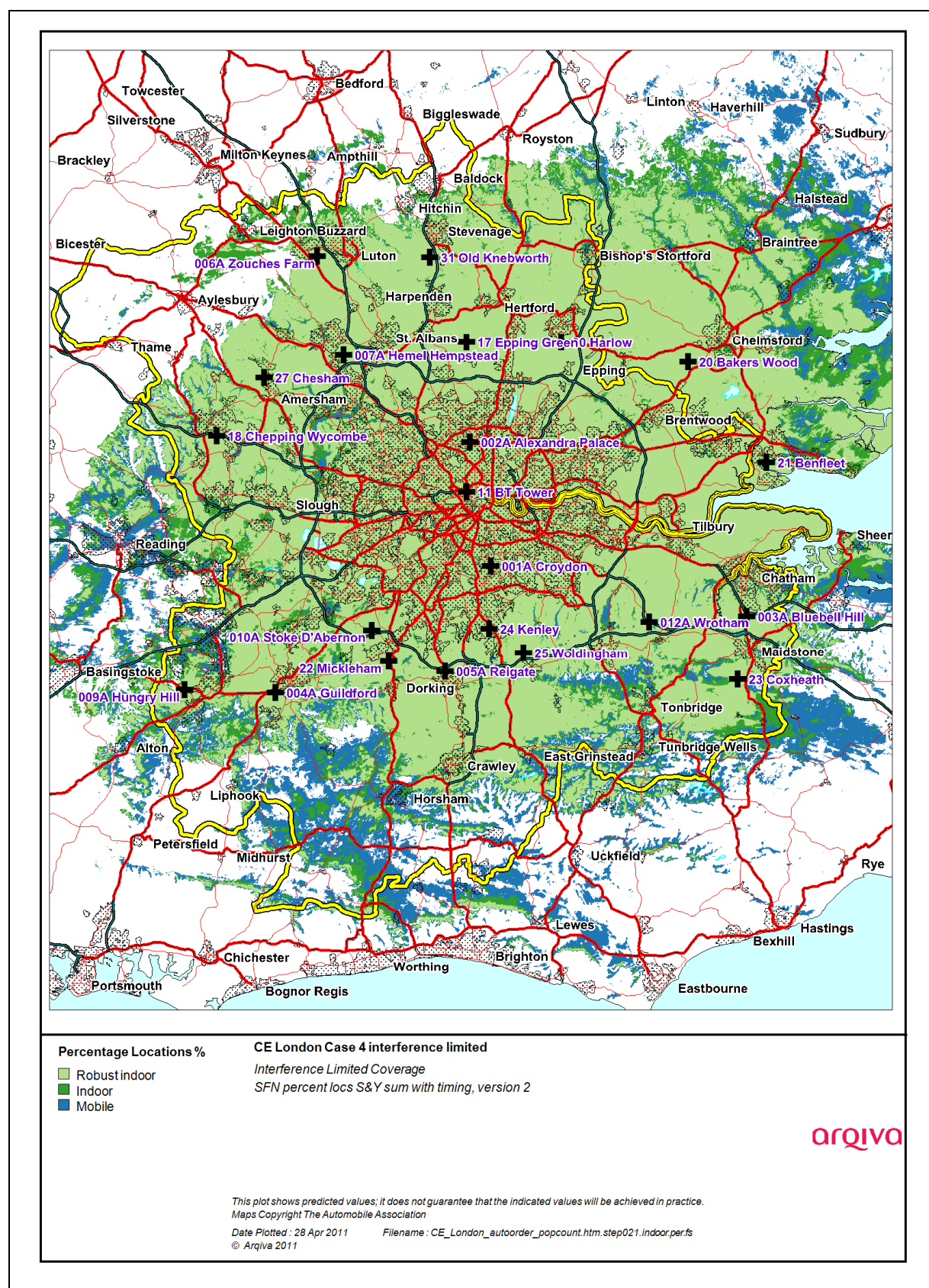


Figure 2.4 Case 4

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
Croydon	Existing site		2516471			45.75
BT Tower	Existing DAB modified infrastructure	1988289 (36.15%)	3312777	796306	14.48	60.23
Wrotham	Existing site	840688 (15.29%)	3752191	439413	7.99	68.22
Epping Green	New Site	418418 (7.61%)	4074539	322348	5.86	74.08
Reigate	Existing site but modified	368534 (6.70%)	4321174	246636	4.48	78.57
Zouches Farm	Existing site	122168 (2.22%)	4462940	141766	2.58	81.15
Alexandra Palace	Existing site	1237710 (22.50%)	4551591	88650	1.61	82.76
Bluebell Hill	Existing site	137234 (2.50%)	4670172	118581	2.16	84.91
Chepping Wycombe	New Site	82692 (1.50%)	4768628	98456	1.79	86.70
Guildford	Existing site	89143 (1.62%)	4868093	99465	1.81	88.51
Hemel Hempstead	Existing site	136998 (2.49%)	4910264	42170	0.77	89.28
Benfleet	Existing DAB site	129088 (2.35%)	4967330	57066	1.04	90.32
Woldingham	New Site	143116 (2.60%)	5003654	36325	0.66	90.98
Coxheath	New Site	39676 (0.72%)	5022818	19163	0.35	91.33

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
Harlow	New Site	67301 (1.22%)	5031992	9174	0.17	91.49
Stoke D'Abernon	Existing site low power filler	26980 (0.49%)	5040946	8954	0.16	91.66
Bakers Wood	Existing DAB site	17115 (0.31%)	5051636	10689	0.19	91.85
Kenley	New Site	195900 (3.56%)	5063472	11836	0.22	92.06
Chesham	New Site	20495 (0.37%)	5078978	15506	0.28	92.35
Hungry Hill	Existing site low power filler	14403 (0.26%)	5108861	29882	0.54	92.89
Old Knebworth	New Site	35825 (0.65%)	5117538	8677	0.16	93.05
Mickleham	New Site	8024 (0.15%)	5124093	6555	0.12	93.17

Case 1	-	Yellow =	Current
Case 2	-	Purple + Yellow=	Modified Network 1
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 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
Croydon	Existing site	1957.7			39.68
BT Tower	Existing DAB modified infrastructure	2496.8	539.1	10.93	50.61
Wrotham	Existing site	3171.3	674.5	13.67	64.28
Epping Green	New Site	3531.5	360.2	7.30	71.58
Reigate	Existing site but modified	3914.1	382.6	7.76	79.33
Zouches Farm	Existing site	4025.4	111.4	2.26	81.59
Alexandra Palace	Existing site	4092.1	66.7	1.35	82.94
Bluebell Hill	Existing site	4167.0	74.9	1.52	84.46
Chepping Wycombe	New Site	4245.9	78.9	1.60	86.06
Guildford	Existing site	4381.6	135.7	2.75	88.81
Hemel Hempstead	Existing site	4397.0	15.4	0.31	89.12
Benfleet	Existing DAB site	4413.2	16.2	0.33	89.45
Woldingham	New Site	4463.6	50.3	1.02	90.47
Coxheath	New Site	4475.6	12.0	0.24	90.71
Harlow	New Site	4477.7	2.1	0.04	90.76
Stoke D'Abernon	Existing site low power filler	4483.0	5.3	0.11	90.86
Bakers Wood	Existing DAB site	4481.6	-1.4	-0.03	90.84

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
Kenley	New Site	4484.6	3.0	0.06	90.90
Chesham	New Site	4491.3	6.7	0.13	91.03
Hungry Hill	Existing site low power filler	4527.5	36.3	0.74	91.77
Old Knebworth	New Site	4540.3	12.7	0.26	92.03
Mickleham	New Site	4550.0	9.7	0.20	92.22

Case 1	-	Yellow =	Current
Case 2	-	Purple + Yellow=	Modified Network 1
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 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	4,511,590.2 (82.03%)	4506 (91.33%)
2	4,530,584.5 (82.38%)	4,479 (90.79%)
3	4,935,317.7 (89.73%)	4,587 (92.98%)
3 Greater London boundary only	3,235,778 (99.16%)	1,805 (99.68%)
4	5,124,093 (93.17%)	4,550 (92.22%)

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 sites required to replicate robust FM within the Greater London boundary.