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**Digital Switchover (DSO) Programme**

**Radio DSO Block 10D Hertfordshire,  
Bedfordshire & Buckinghamshire**

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## Document Details

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## 1 Herts Beds & Bucks DSO narrative

The current allocation on 10B for Herts Beds & Bucks has not been implemented.

The proposed Block 10D allocations are shown below and comprise Plymouth, Somerset, Humberside, Wrexham & North Wales, Dumfries & Galloway and Inverness.

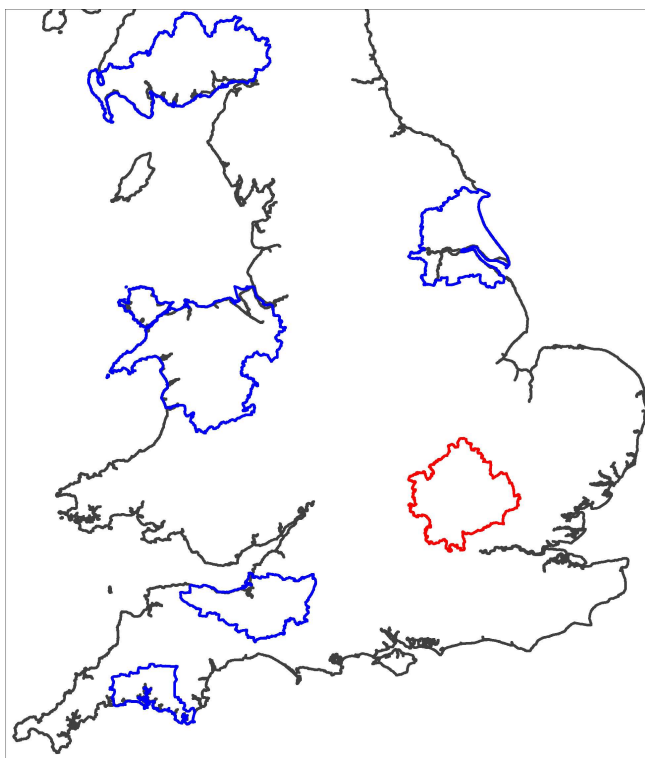


Figure 1.1: Proposed Block 10D allocations

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 proposed transmission characteristics are:

Site name	ERP	Site height m a.o.d.	Antenna height m.a.g.l	Antenna type
Bow Brickhill	2kW	169	55	Panels
Epping Green	2kW	122	102	Dipoles
Hemel Hempstead	4kW	137	79	Panels
Chepping Wycombe	0.6kW	142	60	Dipoles
Sandy Heath	4.9kW	55	167	Panels
Zouches Farm	2kW	207	62	Dipoles

Sandy Heath is assumed to be a modified version of the current national antenna shared by BBC and Digital One.

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

For case 2: Modified Network 1

Not applicable as this network is not yet in service.

For case 3: Modified Network 2

In this it was required to cover those areas currently served robustly by local FM services (BBC Local and Independent Heart Home Counties). To achieve this two additional sites are required. The coverage of the Modified Network 2 is shown in figure 2.2.

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). To achieve this coverage an additional 6 sites (a total of 14) will be required. This is shown in figure 2.3.

## **1.1 Outgoing interference and sensitivity to other co-block multiplexes**

There is some impact on the Humberside and North Wales & West Cheshire multiplexes from the DSO proposal contained within this document. The Plymouth multiplex is unaffected.

Herts, Beds & Bucks is slightly affected by co-block interference from the Somerset, Humberside and North Wales multiplexes.

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## 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 2

Figure 2-3 Modified Network 3

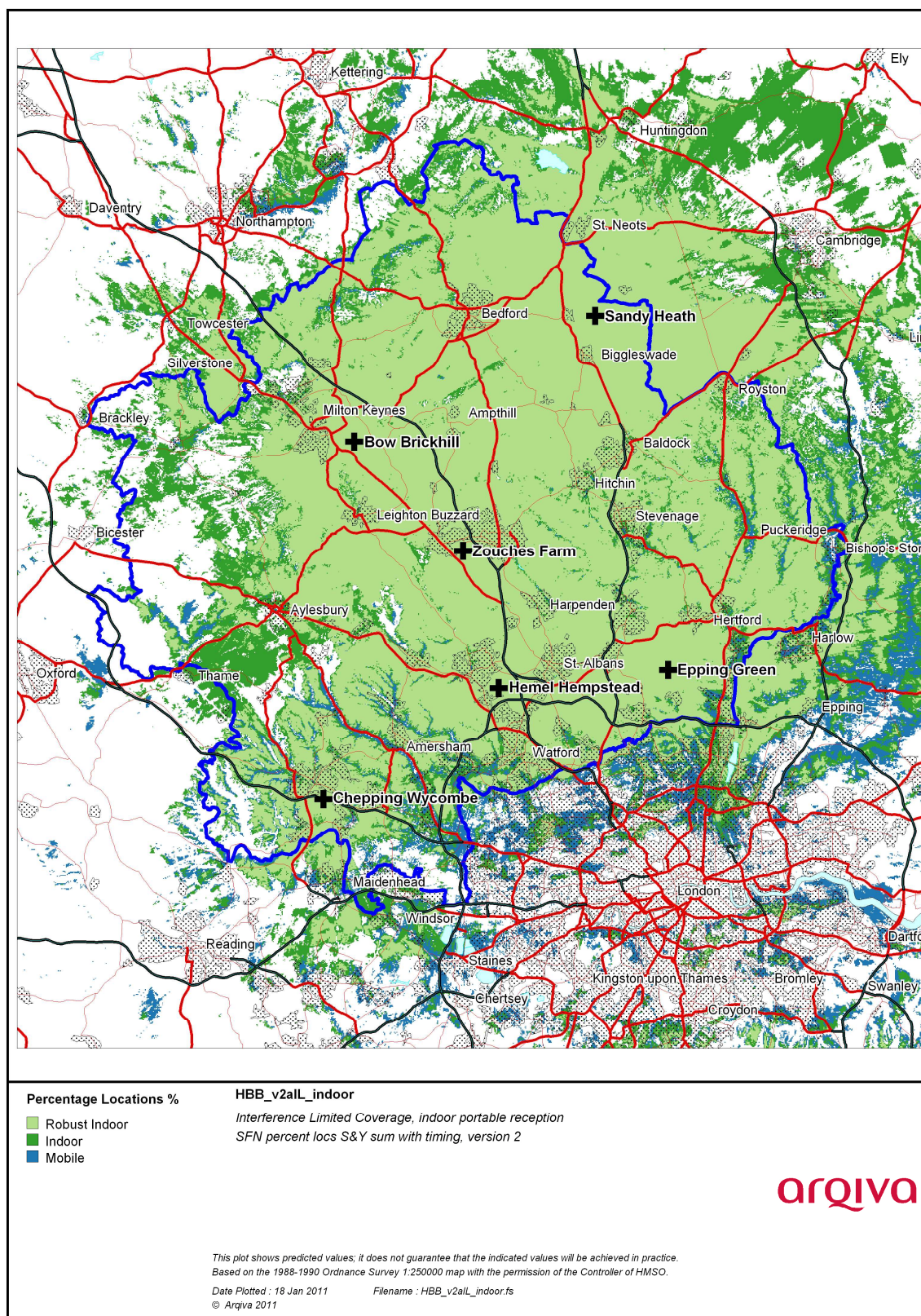


Figure 2-1. Current Situation



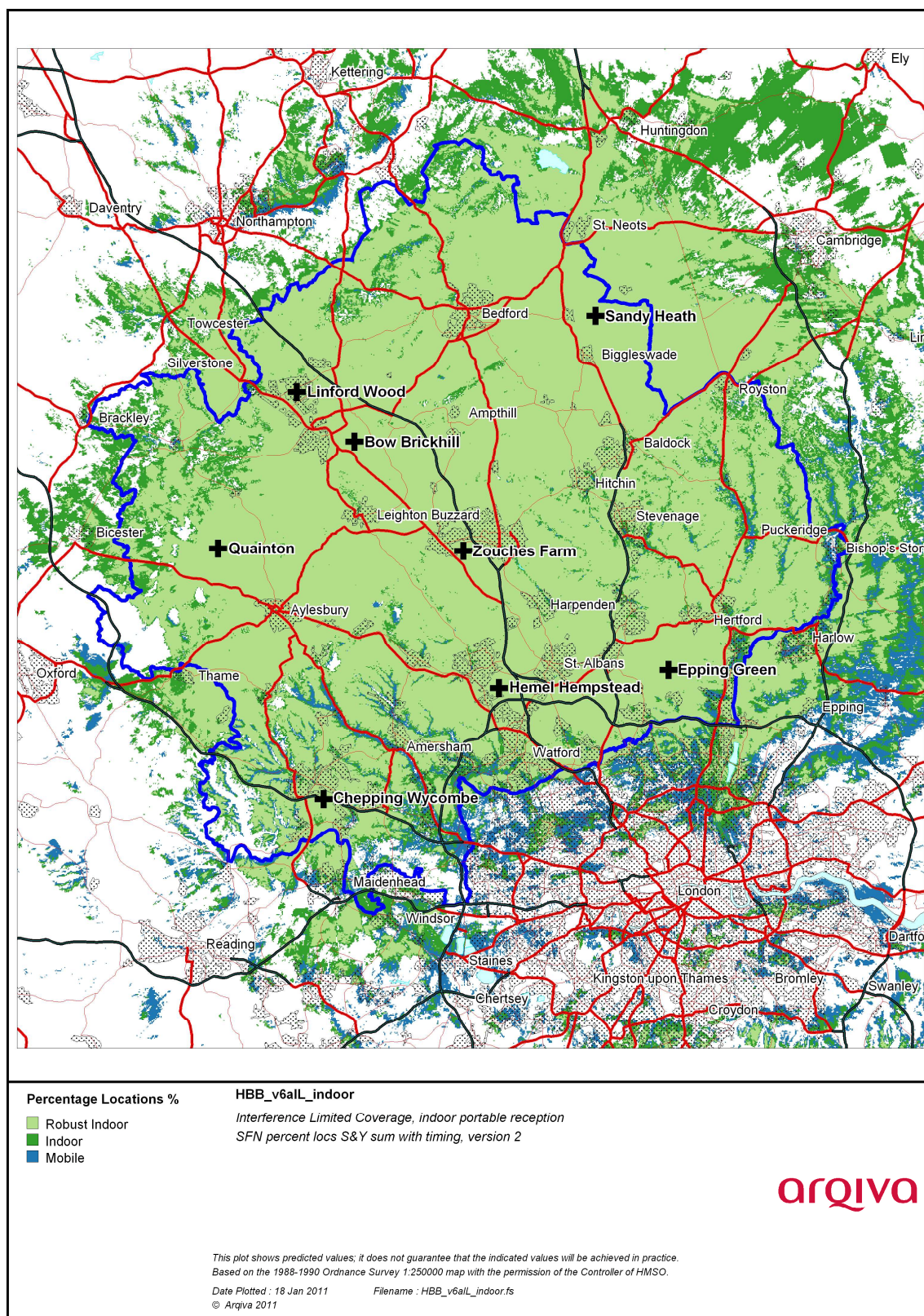


Figure 2-2. Modified Network 2



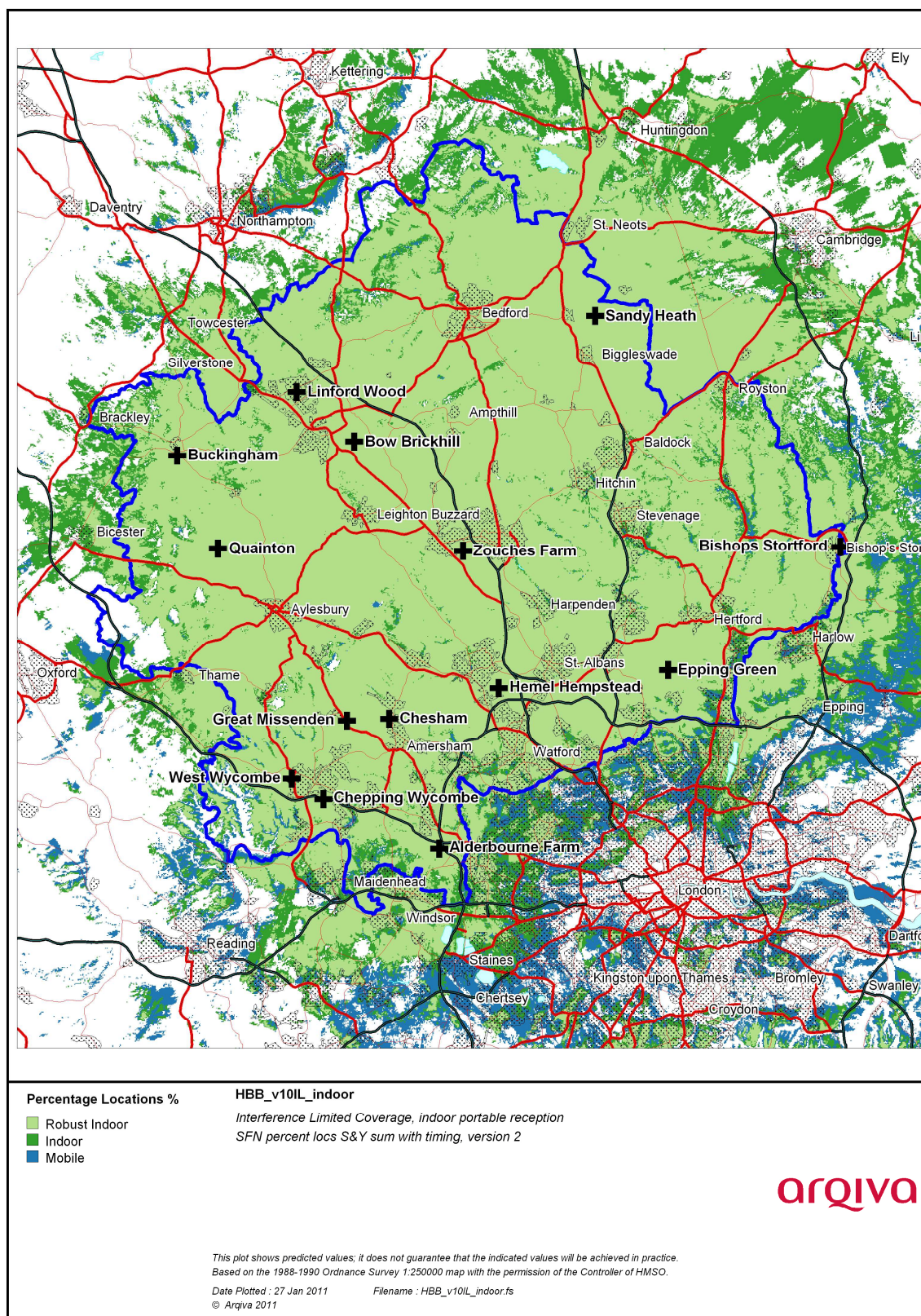


Figure 2-3. Modified Network 3

## Population Coverage tables within Editorial Area

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

: Total 1,033,017

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 (6 tx)	Shared Existing Infrastructure	915,600 (88.6%)	970,611	-	-	88.6%
Hemel Hempstead	Current	217,089 (24.7%)	-	-	-	-
Epping Green	Current	350,404 (21.0%)	-	-	-	-
Sandy Heath	Current	158,103 (15.3%)	-	-	-	-
Zouches Farm	Current	162,076 (15.7%)	-	-	-	-
Bow Brickhill	Current	163,611 (15.8%)	-	-	-	-
Chepping Wycombe	Current	67,225 (6.5%)	-	-	-	-
Quainton	Existing site new antenna	62,806 (6.1%)	946,960	31,360	3.1%	91.7%
Aldbourn Farm	New Site	11,385 (1.1%)	966,011	19,051	1.8%	93.5%
Bishops Stortford	Existing site new antenna	16,984 (1.6%)	977,515	11,504	1.1%	94.6%
Linford Wood	New Site	57,112 (3.9%)	988,647	11,132	1.1%	95.7%
Chesham	New Site	69,853 (2.0%)	997,766	9,119	0.9%	96.6%
Buckingham	New Site	7,175 (0.7%)	1,001,825	4,059	0.4%	97.0%
Great Missenden	Existing site new antenna	29,711 (2.9%)	1,005,594	3,769	0.3%	97.3%
West Wycombe	Existing site new antenna	49,801 (4.8%)	1,007,741	2,147	0.2%	97.6%

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

Table 2-2. Road coverage 99% location 99%T: Total roads 1,480 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 (6 tx)	Shared Existing Infrastructure	1,324	-	-	89.5%
Quinton	Existing site new antenna	1,396	72	4.9%	94.4%
Aldbourn Farm	New Site	1,414	18	1.2%	95.6%
Bishops Stortford	Existing site new antenna	1,416	2	0.1%	95.7%
Linford Wood	New Site	1,427	11	0.7%	96.4%
Chesham	New Site	1,428	2	0.1%	96.5%
Buckingham	New Site	1,443	14	1.0%	97.5%
Great Missenden	Existing site new antenna	1,447	4	0.3%	97.8%
West Wycombe	Existing site new antenna	1,448	1	0.0%	97.8%

Case 1	-	Yellow =	Current or planned coverage
Case 2	-	Not Applicable	Modified Network 1
Case 3	-	Yellow +Orange=	Modified Network 2
Case 4	-	Yellow + Orange + Green=	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	915,600 (88.6%)	1,324 (89.5%)
2	n/a	n/a
3	958,173 (92.8%)	1,407 (95.1%)
4	1,007,741 (97.6%)	1,448 (97.8%)

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