
Digital Switchover (DSO) Programme

Radio DSO Block 10C North Yorkshire

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Ver	Date	Amendment
1.0	24/01/11	Draft version for review.
1.1		Initial release
2.0	14/02/11	Original Road km now divided by 10
3.0	03/05/11	Population (100%) changed to 407,932 households
4.0	27/05/11	Editorial Area change, High Hunsley & Bridlington Txs deleted – outside area; Maps, Tables, Text changes

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1 North Yorkshire DSO narrative

Block 10C for North Yorkshire is a new allocation. There are small overlaps with Teeside (11B), Bradford (11B) and Leeds (12D) – see Fig 1.1 below. The proposed Block 10C allocations, within UK, includes North Yorkshire, Gloucester, North Devon, Northampton, Surrey and Liverpool are shown Fig 1.2 overleaf.

It is difficult to serve the generally hilly and sparsely populated area in the west of the region; Settle and Skipton have been added in an effort to provide contiguous coverage on the A59/A65 Harrogate to Kendal road within Yorkshire – an endeavour which probably requires a further 4 transmitters to complete. Coverage elsewhere in the west is similarly hampered by the terrain.

The indoor and outdoor coverage (99% time interference protection) is unlikely to reach 90% population within the Editorial Area without significantly more transmitters.

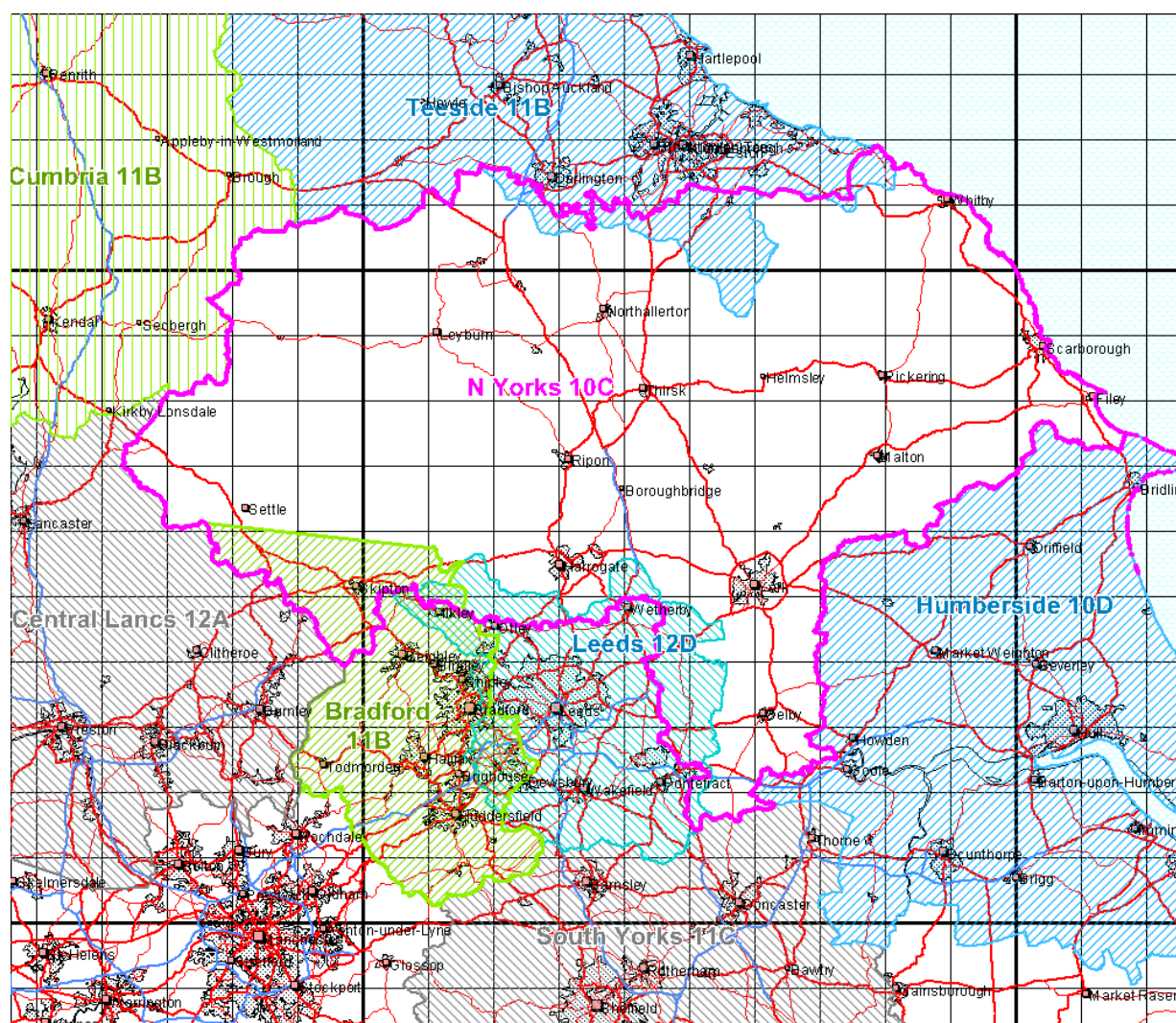


Figure 1.1; N Yorkshire (12D) and Adjacent Multiplexes

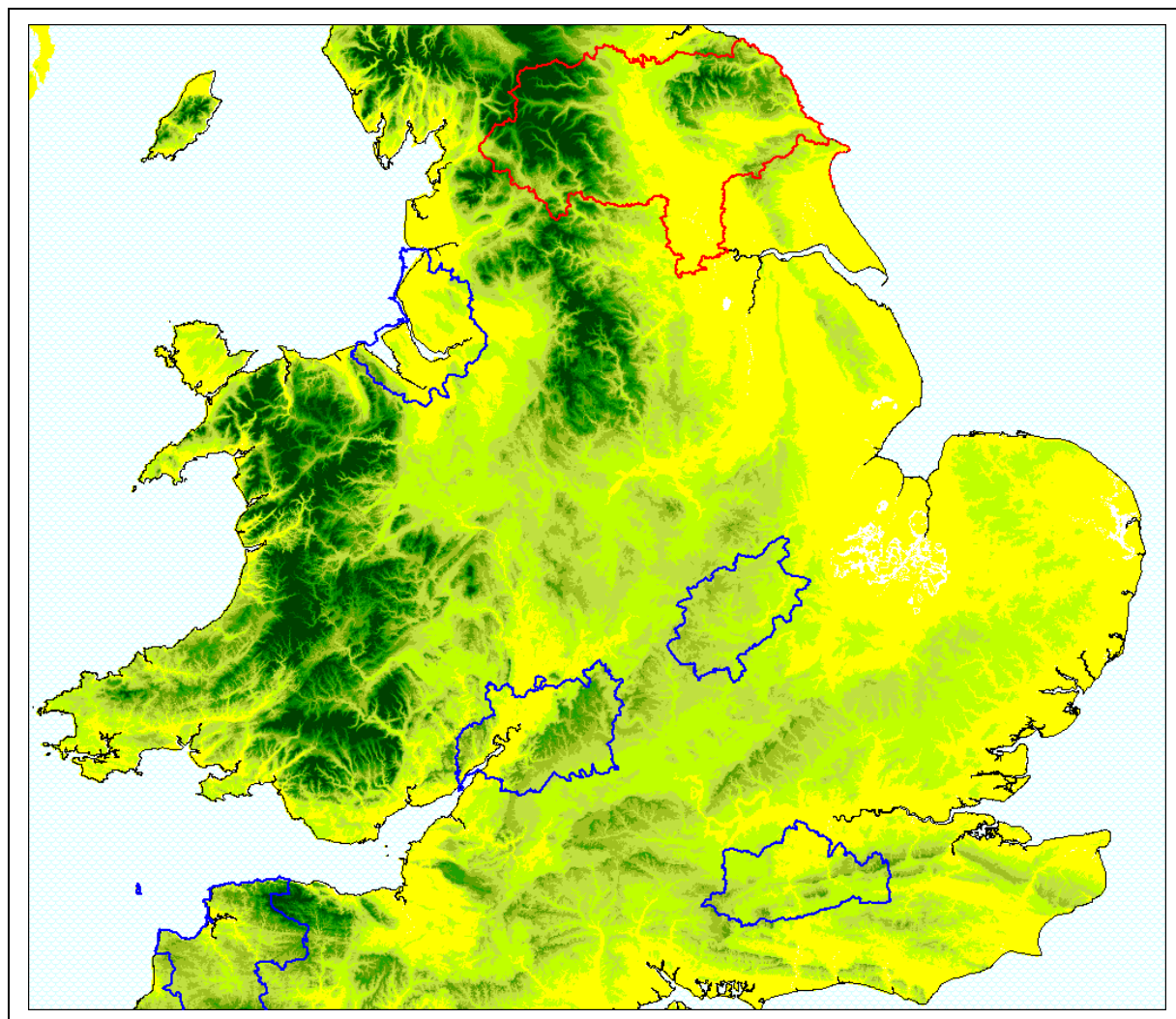


Figure 1.2: Proposed Block 10C allocations

In planning for each multiplex Ofcom have required coverage assessments:

- For each area four sets of maps should be produced as follows:
 1. **Current Situation** - Map showing current actual coverage (or launch plans where a multiplex hasn't 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

None

For case 2: Modified network 1

Not applicable

For case 3: Modified Network 2

In this it was required to cover areas where existing local FM provision (BBC York and Independents Minster FM and Stray FM) is robust. To achieve this, six sites were required; the coverage of the Modified Network 2 is shown in Figure 2.1 (indoor), Figure 2.2 (outdoor 99% time interference protected).

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 a further 3 sites will be required, bringing the total number to 9 sites. This is shown in figures 2.3 & 2.4

1.1 Incoming interference and sensitivity to other co-block multiplexes

South Yorkshire (10C) outdoor Coverage is affected by interference from co-block allocations; primarily from Liverpool (10C) and also Northampton (10C), and to a lesser degree from Gloucester (10C).

North Devon (10C) and Surrey (10C) have no affect upon coverage to South Yorkshire (10C)

1.2 Outgoing interference to other co-block multiplexes

Liverpool in is impacted by the South Yorkshire (10C) proposals contained in this document, although the Manchester (10B) multiplex serves much of the affected area. South Yorkshire (10C) impacts very slightly Gloucester (10C) and Northampton (10C) multiplexes.

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2 Coverage of the Multiplex

2.1 Coverage Maps

Coverage maps for the DAB are generally presented with three colours unless otherwise stated:

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 Modified Network 2

Figure 2-2 Modified Network 2 – Outdoor Only 1% Time Interference

Figure 2-4 Modified Network 3

Figure 2-5 Modified Network 3 Outdoor Only 1% Time Interference

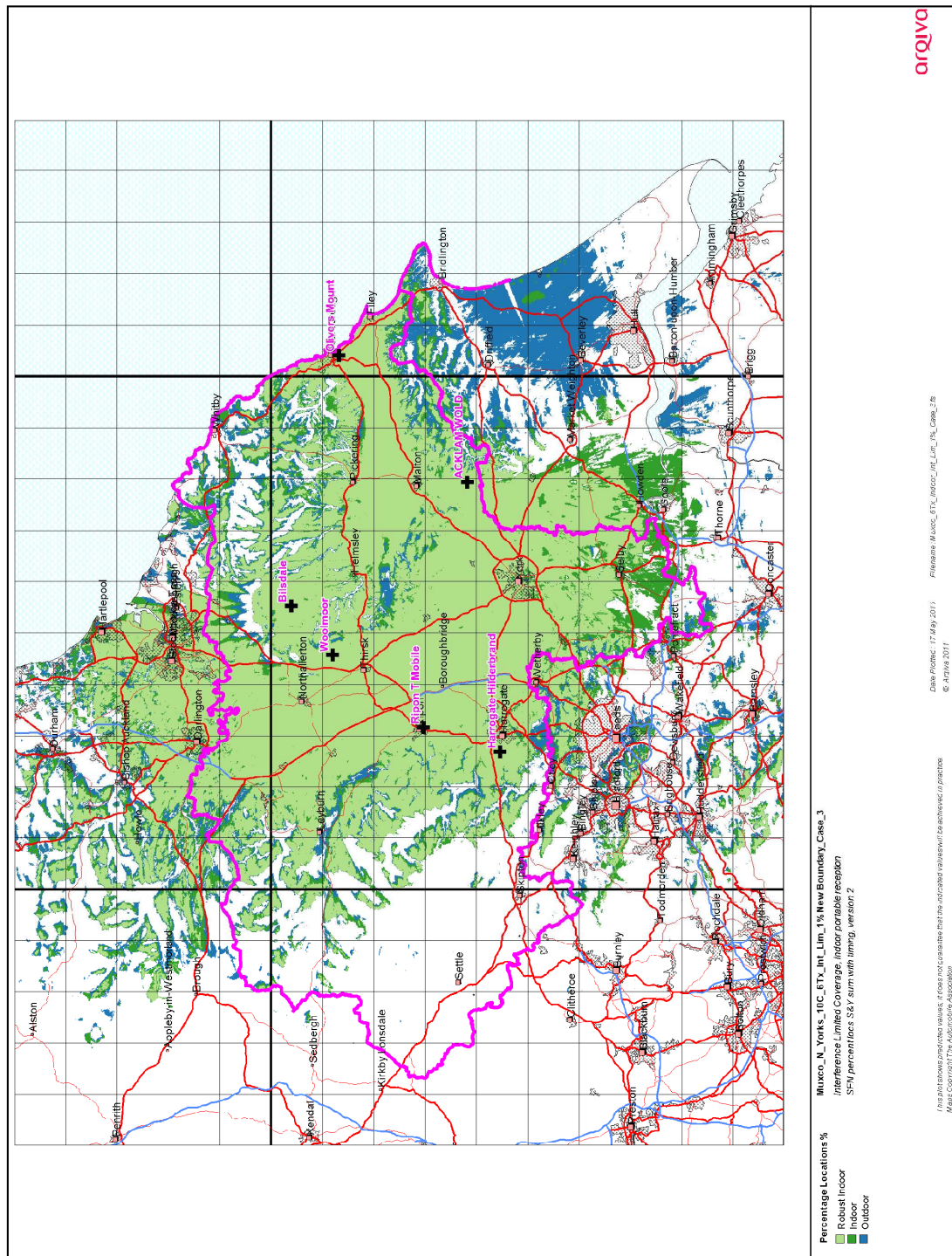


Figure 2-1. Modified Network 2

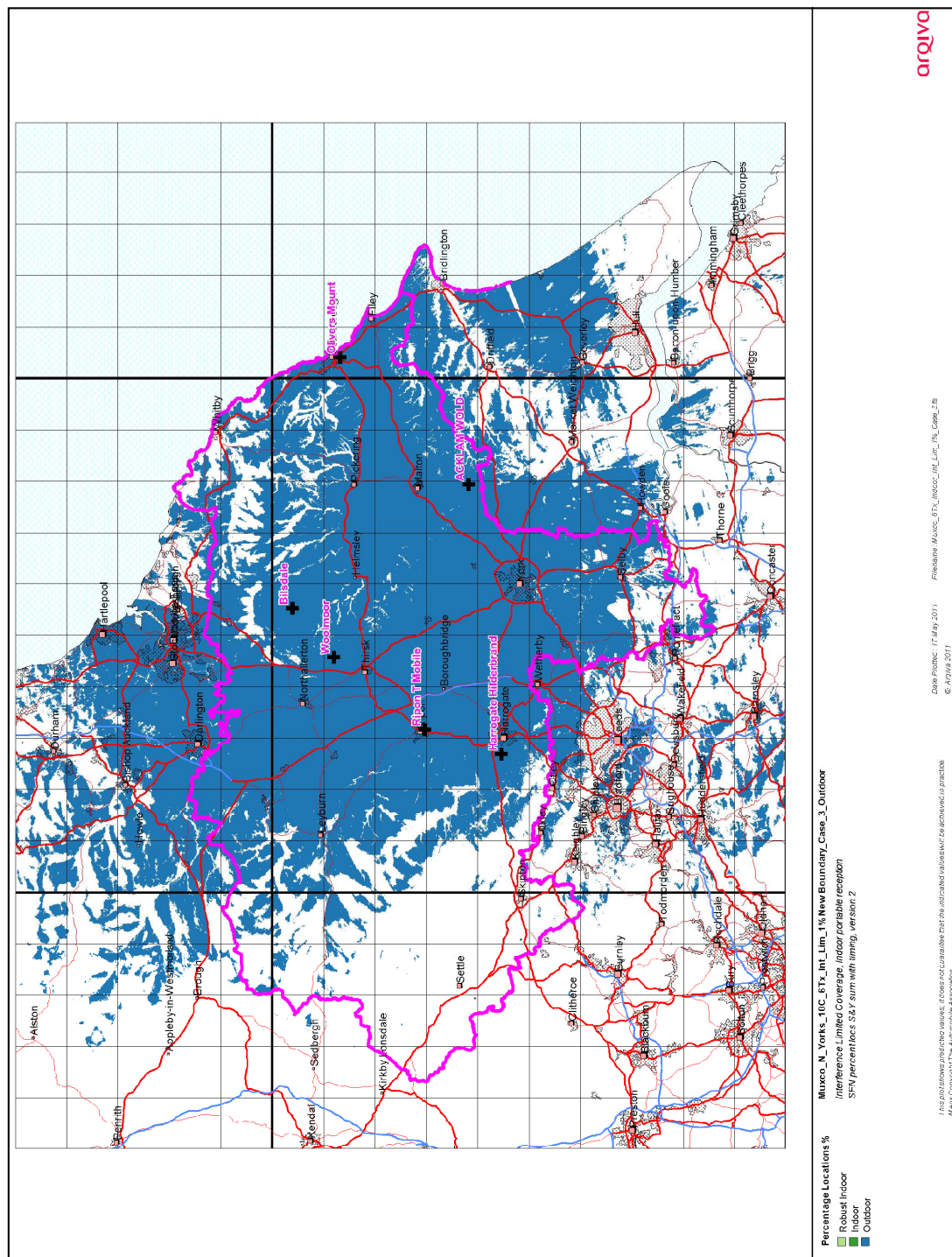


Figure 2-2. Modified Network 2- Outdoor Only 1% Time Interference

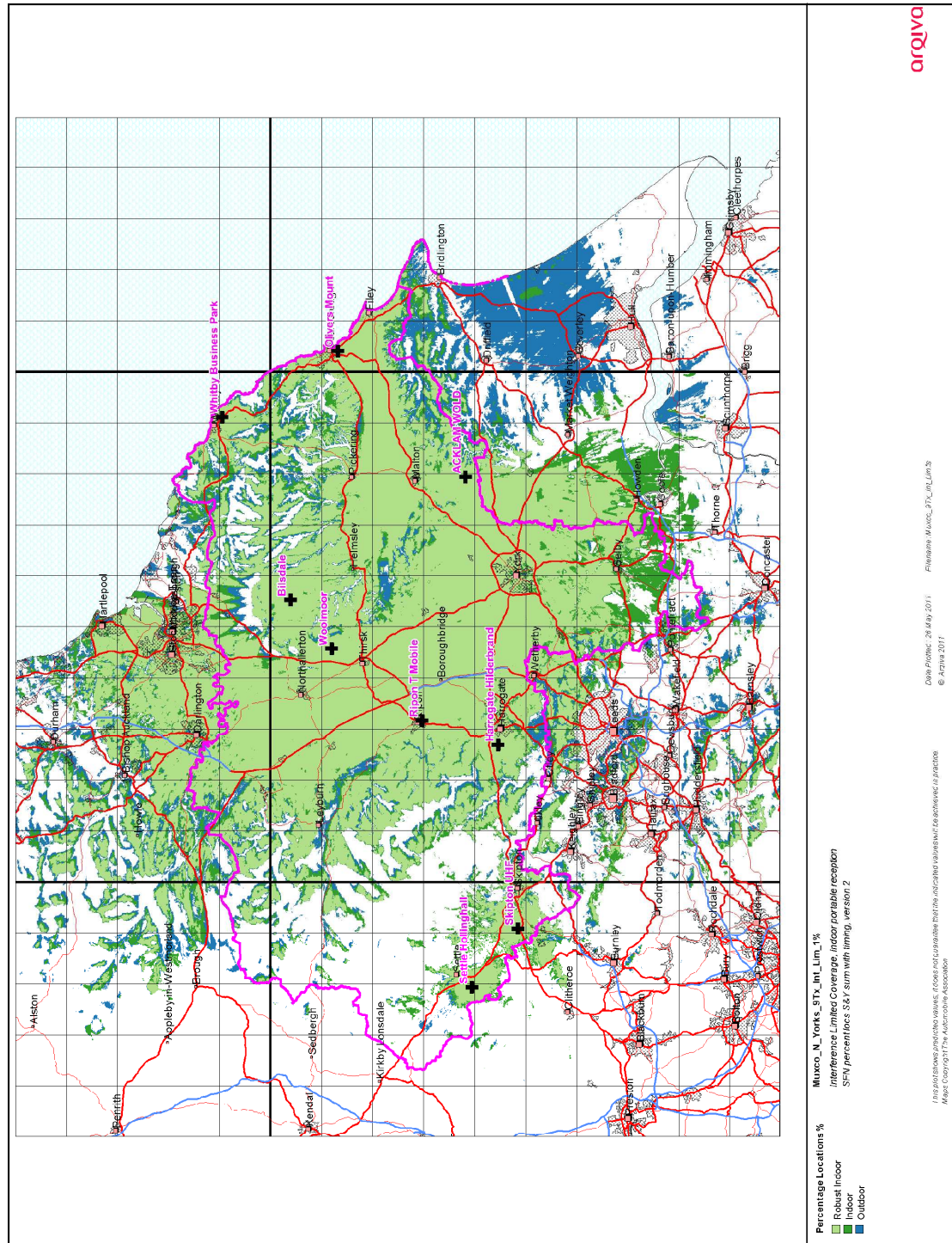


Figure 2-4. Modified Network 3

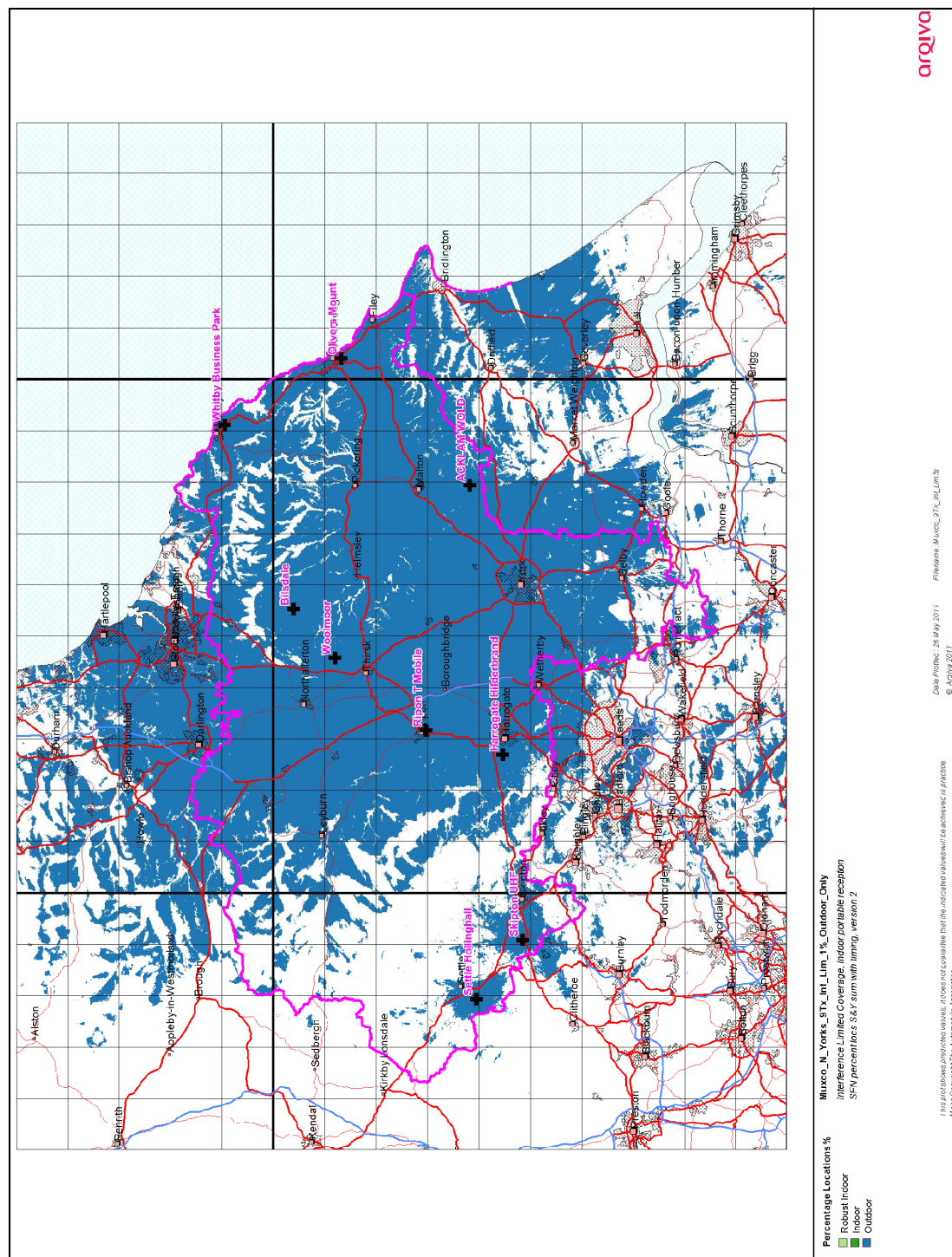


Figure 2-5. Modified Network 3 – Outdoor Only 1% Time Interference

2.2 Population Coverage tables within Editorial Area

Table 2-1 Population coverage proportional indoor: Total 361,155 households

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 (%)
Bilsdale	New - Existing in use Infrastructure	130,867 (36.24%)	130,867	130,867	36.24	36.24
Acklam Wold	New - Existing, in use, Infrastructure	94,733 (26.23%)	226,910	96,043	26.59	62.83
Olivers Mount	New - Existing, in use, Infrastructure	41,706 (11.55%)	269,270	42,360	11.73	74.56
Harrogate Hilderbrand	New	45,031 (12.47%)	290,385	21,115	5.84	80.40
Skipton UHF	New	9,257 (2.56%)	299,821	9,436	2.62	83.02
Whitby Business Park	New – Existing in-use infrastructure	9,155 (2.53%)	308,951	9,130	2.53	85.55
Settle Hollinghall	New	3,104 (0.86%)	312,172	3,221	0.89	86.44
Ripon T-Mobile	New	10,460 (2.90%)	313,500	1,328	0.36	86.80
Woolmoor	New	38,447 (10.65%)	316,096	2,596	0.72	87.52

Case 1		Light yellow	Existing Network – Not applicable
Case 2	-	Purple	Modified Network 1 – Not applicable
Case 3	-	Purple + Blue	Modified Network 2
Case 4	-	Purple + Blue + Green	Modified Network 3

Table 2-2. Road coverage 99% Locations and 99% Time: Total roads 1,196.3 km

Site Scenario and Incremental Additional Sites	Site Type	Total Road Length (km)	Increase in Road Length (km)	Incremental Percentage of Road Length (%)	Percentage of Roads within Editorial Area (%)
Bilsdale	New - Existing in use Infrastructure	650.9	650.9	54.4	54.4
Acklam Wold	New - Existing, in use, Infrastructure	807.3	156.4	13.1	67.5
Olivers Mount	New - Existing, in use, Infrastructure	880.2	72.9	6.1	73.6
Harrogate Hilderbrand	New	926.2	46.0	3.8	77.4
Skipton UHF	New	974.8	48.6	4.1	81.5
Whitby Business Park	New – Existing in-use infrastructure	989.7	14.9	1.2	82.7
Settle Hollinghall	New	1,008.9	19.2	1.6	84.3
Ripon T-Mobile	New	1,013.2	4.3	0.4	84.7
Woolmoor	New	1,026.0	12.8	1.1	85.8

Case 1		Light yellow	Existing Network - Not Applicable
Case 2	-	Purple	Modified Network 1- Not Applicable
Case 3	-	Purple + Blue	Modified Network 2
Case 4	-	Purple + Blue + Green	Modified Network 3

Table 2-4. 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	n/a	n/a
2	n/a	n/a
3	294,442 (81.52%)	943.1 (78.84%)
4	316,096 (87.52%)	1,026.0 (85.8%)

Case 1		Light yellow	Existing Network - Not Applicable
Case 2	-	Purple	Modified Network 1- Not Applicable
Case 3	-	Purple + Blue	Modified Network 2
Case 4	-	Purple + Blue + Green	Modified Network 3