

About this data: Mobile coverage, Parliamentary Constituency area

To create our [Connected Nations Summer 2023 update](#), Ofcom collected and analysed data from the four mobile network operators. This file contains mobile coverage information at parliamentary constituency level.

The data was collected as a snapshot in April 2023. [Our methodology](#) provides details of our approach to collecting and analysing mobile coverage data.

Due to variations in mobile performance over time, the file should not be regarded as a definitive and fixed view of the UK's mobile infrastructure. However, the information provided in this file may be useful in identifying variations in mobile performance by geography.

If you have any questions or feedback on the data, please contact us at open.data@ofcom.org.uk.

We are providing this data on an open basis via the [Open Government Licence](#), which gives users various freedoms about how they choose to use the data, subject to conditions.

The files are provided as a Comma Separated Values file, with double quote (") text delimiters where applicable.

Coverage availability

File name: 202305_mobile_pcon_with_5g_r01.csv

Total records in file: 1 header row, 650 data rows

File size on disk: 289 KB

Column headers and what they represent:

| Field | Label | Note |
|---------------------------------|--|--|
| parl_const | Parliamentary Constituency | Parliamentary Constituency Code, such as E14000530 |
| parl_const_name | Parliamentary Constituency name | |
| pixel_count | Number of 100m x 100m pixels in location | |
| prem_count | Number of premises in location | Based on the Connected Nations all premise base definition (Epoch 100) |
| ab_rd_count | Number of 100m x 100m pixels in location containing A or B road features | |
| mway_count | Number of 100m x 100m pixels in location containing motorway features | |
| mway_ard_count | Number of 100m x 100m pixels in location containing motorway or A road features | |
| 2G_prem_out_None | 2G services, premises (outdoor): no reliable signal (%) | Threshold: -81dBm |
| 2G_prem_out_At_least_one | 2G services, premises (outdoor): signal from at least one operator (1, 2 or 3 operators) (%) | Threshold: -81dBm |

Mobile coverage parliamentary constituency area data

| | | |
|--------------------------------|---|-------------------|
| 2G_prem_out_All | 2G services, premises (outdoor): signal from all operators (%) | Threshold: -81dBm |
| 2G_prem_in_None | 2G services, premises (indoor): no reliable signal (%) | Threshold: -71dBm |
| 2G_prem_in_At_least_one | 2G services, premises (indoor): signal from at least one operator (1, 2 or 3 operators) (%) | Threshold: -71dBm |
| 2G_prem_in_All | 2G services, premises (indoor): signal from all operators (%) | Threshold: -71dBm |
| 2G_geo_out_None | 2G services, geographic (outdoor): no reliable signal (%) | Threshold: -81dBm |
| 2G_geo_out_At_least_one | 2G services, geographic (outdoor): signal from at least one operator (1,2 or 3 operators) (%) | Threshold: -81dBm |
| 2G_geo_out_All | 2G services, geographic (outdoor): signal from all operators (%) | Threshold: -81dBm |
| 2G_abrd_in_None | 2G services, A and B roads: no reliable signal (%) | Threshold: -81dBm |
| 2G_abrd_in_At_least_one | 2G services, A and B roads: signal from at least one operator (1,2 or 3 operators) (%) | Threshold: -71dBm |
| 2G_abrd_in_All | 2G services, A and B roads: signal from all operators (%) | Threshold: -71dBm |
| 2G_mway_in_None | 2G services, motorways: no reliable signal (%) | Threshold: -71dBm |
| 2G_mway_in_At_least_one | 2G services, motorways: signal from at least one | Threshold: -71dBm |

Mobile coverage parliamentary constituency area data

| | | |
|------------------------------------|---|--------------------|
| | operator (1,2 or 3 operators) (%) | |
| 2G_mway_in_All | 2G services, motorways: signal from all operators (%) | Threshold: -71dBm |
| 2G_mway_ard_in_None | 2G services, motorways and A-roads: no reliable signal (%) | Threshold: -71dBm |
| 2G_mway_ard_in_At_least_one | 2G services, motorways and A-roads: signal from at least one operator (1, 2 or 3 operators) (%) | Threshold: -71dBm |
| 2G_mway_ard_in_All | 2G services, motorways and A-roads: signal from all operators (%) | Threshold: -71dBm |
| 3G_prem_out_None | 3G services, premises (outdoor): no reliable signal (%) | Threshold: -71dBm |
| 3G_prem_out_At_least_one | 3G services, premises (outdoor): signal from at least one operator (1, 2, 3 or 4 operators) (%) | Threshold: -100dBm |
| 3G_prem_out_All | 3G services, premises (outdoor): signal from all operators (%) | Threshold: -100dBm |
| 3G_prem_in_None | 3G services, premises (indoor): no reliable signal (%) | Threshold: -100dBm |
| 3G_prem_in_At_least_one | 3G services, premises (indoor): signal from at least one operator (1, 2, 3 or 4 operators) (%) | Threshold: -90dBm |
| 3G_prem_in_All | 3G services, premises (indoor): signal from all operators (%) | Threshold: -90dBm |

Mobile coverage parliamentary constituency area data

| | | |
|------------------------------------|--|--------------------|
| 3G_geo_out_None | 3G services, geographic (outdoor): no reliable signal (%) | Threshold: -90dBm |
| 3G_geo_out_At_least_one | 3G services, geographic (outdoor): signal from at least one operator (1, 2, 3 or 4 operators) (%) | Threshold: -100dBm |
| 3G_geo_out_All | 3G services, geographic (outdoor): signal from all operators (%) | Threshold: -100dBm |
| 3G_abrd_in_None | 3G services, A and B roads: no reliable signal (%) | Threshold: -100dBm |
| 3G_abrd_in_At_least_one | 3G services, A and B roads: signal from at least one operator (1, 2, 3 or 4 operators) (%) | Threshold: -90dBm |
| 3G_abrd_in_All | 3G services, A and B roads: signal from all operators (%) | Threshold: -90dBm |
| 3G_mway_in_None | 3G services, motorways: no reliable signal (%) | Threshold: -90dBm |
| 3G_mway_in_At_least_one | 3G services, motorways: signal from at least one operator (1, 2, 3 or 4 operators) (%) | Threshold: -90dBm |
| 3G_mway_in_All | 3G services, motorways: signal from all operators (%) | Threshold: -90dBm |
| 3G_mway_ard_in_None | 3G services, motorways and A-roads: no reliable signal (%) | Threshold: -90dBm |
| 3G_mway_ard_in_At_least_one | 3G services, motorways and A-roads: signal from at least one operator (1, 2, 3 or 4 operators) (%) | Threshold: -90dBm |

Mobile coverage parliamentary constituency area data

| | | |
|---------------------------------|---|--------------------|
| 3G_mway_ard_in_All | 3G services, motorways and A-roads: signal from all operators (%) | Threshold: -90dBm |
| 4G_prem_out_None | 4G services, premises (outdoor): no reliable signal (%) | Threshold: -90dBm |
| 4G_prem_out_At_least_one | 4G services, premises (outdoor): signal from at least one operator (1, 2, 3 or 4 operators) (%) | Threshold: -105dBm |
| 4G_prem_out_All | 4G services, premises (outdoor): signal from all operators (%) | Threshold: -105dBm |
| 4G_prem_in_None | 4G services, premises (indoor): no reliable signal (%) | Threshold: -105dBm |
| 4G_prem_in_At_least_one | 4G services, premises (indoor): signal from at least one operator (1, 2, 3 or 4 operators) (%) | Threshold: -95dBm |
| 4G_prem_in_All | 4G services, premises (indoor): signal from all operators (%) | Threshold: -95dBm |
| 4G_geo_out_None | 4G services, geographic (outdoor): no reliable signal (%) | Threshold: -95dBm |
| 4G_geo_out_At_least_one | 4G services, geographic (outdoor): signal from at least one operator (1, 2, 3 or 4 operators) (%) | Threshold: -105dBm |
| 4G_geo_out_All | 4G services, geographic (outdoor): signal from all operators (%) | Threshold: -105dBm |
| 4G_abrd_in_None | 4G services, A and B roads: no reliable signal (%) | Threshold: -105dBm |

Mobile coverage parliamentary constituency area data

| | | |
|------------------------------------|--|---|
| 4G_abrd_in_At_least_one | 4G services, A and B roads: signal from at least one operator (1, 2, 3 or 4 operators) (%) | Threshold: -95dBm |
| 4G_abrd_in_All | 4G services, A and B roads: signal from all operators (%) | Threshold: -95dBm |
| 4G_mway_in_None | 4G services, motorways: no reliable signal (%) | Threshold: -95dBm |
| 4G_mway_in_At_least_one | 4G services, motorways: signal from at least one operator (1, 2, 3 or 4 operators) (%) | Threshold: -95dBm |
| 4G_mway_in_All | 4G services, motorways: signal from all operators (%) | Threshold: -95dBm |
| 4G_mway_ard_in_None | 4G services, motorways and A-roads: no reliable signal (%) | Threshold: -95dBm |
| 4G_mway_ard_in_At_least_one | 4G services, motorways and A-roads: signal from at least one operator (1, 2, 3 or 4 operators) (%) | Threshold: -95dBm |
| 4G_mway_ard_in_All | 4G services, motorways and A-roads: signal from all operators (%) | Threshold: -95dBm |
| Voice_prem_out_None | Voice services, premises (outdoor): no reliable signal (%) | Threshold: -95dBm |
| Voice_prem_out_At_least_one | Voice services, premises (outdoor): signal from at least one operator (1, 2, 3 or 4 operators) (%) | See below for 2G, 3G, 4G threshold levels |
| Voice_prem_out_All | Voice services, premises (outdoor): signal from all operators (%) | See below for 2G, 3G, 4G threshold levels |

Mobile coverage parliamentary constituency area data

| | | |
|-----------------------------------|--|---|
| Voice_prem_in_None | Voice services, premises (indoor): no reliable signal (%) | See below for 2G, 3G, 4G threshold levels |
| Voice_prem_in_At_least_one | Voice services, premises (indoor): signal from at least one operator (1, 2, 3 or 4 operators) (%) | See below for 2G, 3G, 4G threshold levels |
| Voice_prem_in_All | Voice services, premises (indoor): signal from all operators (%) | See below for 2G, 3G, 4G threshold levels |
| Voice_geo_out_None | Voice services, geographic (outdoor): no reliable signal (%) | See below for 2G, 3G, 4G threshold levels |
| Voice_geo_out_At_least_one | Voice services, geographic (outdoor): signal from at least one operator (1, 2, 3 or 4 operators) (%) | See below for 2G, 3G, 4G threshold levels |
| Voice_geo_out_All | Voice services, geographic (outdoor): signal from all operators (%) | See below for 2G, 3G, 4G threshold levels |
| Voice_abrd_in_None | Voice services, A and B roads: no reliable signal (%) | See below for 2G, 3G, 4G threshold levels |
| Voice_abrd_in_At_least_one | Voice services, A and B roads: signal from at least one operator (1, 2, 3 or 4 operators) (%) | See below for 2G, 3G, 4G threshold levels |
| Voice_abrd_in_All | Voice services, A and B roads: signal from all operators (%) | See below for 2G, 3G, 4G threshold levels |
| Voice_mway_in_None | Voice services, motorways: no reliable signal (%) | See below for 2G, 3G, 4G threshold levels |
| Voice_mway_in_At_least_one | Voice services, motorways: signal from | See below for 2G, 3G, 4G threshold levels |

Mobile coverage parliamentary constituency area data

| | | |
|---------------------------------------|---|---|
| | at least one operator (1, 2, 3 or 4 operators) (%) | |
| Voice_mway_in_All | Voice services, motorways: signal from all operators (%) | See below for 2G, 3G, 4G threshold levels |
| Voice_mway_ard_in_None | Voice services, motorways and A-roads: no reliable signal (%) | See below for 2G, 3G, 4G threshold levels |
| Voice_mway_ard_in_At_least_one | Voice services, motorways and A-roads: signal from at least one operator (1, 2, 3 or 4 operators) (%) | See below for 2G, 3G, 4G threshold levels |
| Voice_mway_ard_in_All | Voice services, motorways and A-roads: signal from all operators (%) | See below for 2G, 3G, 4G threshold levels |
| Data_prem_out_None | Data services, premises (outdoor): no reliable signal (%) | See below for 2G, 3G, 4G threshold levels |
| Data_prem_out_At_least_one | Data services, premises (outdoor): signal from at least one operator (1, 2, 3 or 4 operators) (%) | See below for 3G, 4G threshold levels |
| Data_prem_out_All | Data services, premises (outdoor): signal from all operators (%) | See below for 3G, 4G threshold levels |
| Data_prem_in_None | Data services, premises (indoor): no reliable signal (%) | See below for 3G, 4G threshold levels |
| Data_prem_in_At_least_one | Data services, premises (indoor): signal from at least one operator (1, 2, 3 or 4 operators) (%) | See below for 3G, 4G threshold levels |
| Data_prem_in_All | Data services, premises (indoor): signal from all operators (%) | See below for 3G, 4G threshold levels |

Mobile coverage parliamentary constituency area data

| | | |
|--------------------------------------|--|---------------------------------------|
| Data_geo_out_None | Data services, geographic (outdoor): no reliable signal (%) | See below for 3G, 4G threshold levels |
| Data_geo_out_At_least_one | Data services, geographic (outdoor): signal from at least one operator (1, 2, 3 or 4 operators) (%) | See below for 3G, 4G threshold levels |
| Data_geo_out_All | Data services, geographic (outdoor): signal from all operators (%) | See below for 3G, 4G threshold levels |
| Data_abrd_in_None | Data services, A and B roads: no reliable signal (%) | See below for 3G, 4G threshold levels |
| Data_abrd_in_At_least_one | Data services, A and B roads: signal from at least one operator (1, 2, 3 or 4 operators) (%) | See below for 3G, 4G threshold levels |
| Data_abrd_in_All | Data services, A and B roads: signal from all operators (%) | See below for 3G, 4G threshold levels |
| Data_mway_in_None | Data services, motorways: no reliable signal (%) | See below for 3G, 4G threshold levels |
| Data_mway_in_At_least_one | Data services, motorways: signal from at least one operator (1, 2, 3 or 4 operators) (%) | See below for 3G, 4G threshold levels |
| Data_mway_in_All | Data services, motorways: signal from all operators (%) | See below for 3G, 4G threshold levels |
| Data_mway_ard_in_None | Data services, motorways and A-roads: no reliable signal (%) | See below for 3G, 4G threshold levels |
| Data_mway_ard_in_At_least_one | Data services, motorways and A-roads: signal from at least one operator (1, 2, 3 or 4 operators) (%) | See below for 3G, 4G threshold levels |

Mobile coverage parliamentary constituency area data

| | | |
|--|---|---------------------------------------|
| Data_mway_ard_in_All | Data services, motorways and A-roads: signal from all operators (%) | See below for 3G, 4G threshold levels |
| 5G_high_confidence_prem_out_None | 5G services, premises (outdoor): no reliable signal (%) | Threshold: -110dBm |
| 5G_high_confidence_prem_out_At_least_one | 5G services, premises (outdoor): signal from at least one operator (1, 2, 3 or 4 operators) (%) | Threshold: -110dBm |
| 5G_high_confidence_prem_out_All | 5G services, premises (outdoor): signal from all operators (%) | Threshold: -110dBm |
| 5G_high_confidence_geo_out_None | 5G services, geographic (outdoor): no reliable signal (%) | Threshold: -110dBm |
| 5G_high_confidence_geo_out_At_least_one | 5G services, geographic (outdoor): signal from at least one operator (1, 2, 3 or 4 operators) (%) | Threshold: -110dBm |
| 5G_high_confidence_geo_out_All | 5G services, geographic (outdoor): signal from all operators (%) | Threshold: -110dBm |
| 5G_very_high_confidence_prem_out_None | 5G services, premises (outdoor): no reliable signal (%) | Threshold: -100dBm |
| 5G_very_high_confidence_prem_out_At_least_one | 5G services, premises (outdoor): signal from at least one operator (1, 2, 3 or 4 operators) (%) | Threshold: -100dBm |
| 5G_very_high_confidence_prem_out_All | 5G services, premises (outdoor): signal from all operators (%) | Threshold: -100dBm |
| 5G_very_high_confidence_geo_out_None | 5G services, geographic (outdoor): no reliable signal (%) | Threshold: -100dBm |

Mobile coverage parliamentary constituency area data

| | | |
|---|---|--------------------|
| 5G_very_high_confidence_geo_out_At_least_one | 5G services, geographic (outdoor): signal from at least one operator (1, 2, 3 or 4 operators) (%) | Threshold: -100dBm |
| 5G_very_high_confidence_geo_out_All | 5G services, geographic (outdoor): signal from all operators (%) | Threshold: -100dBm |

Signal thresholds

We use the following signal strength thresholds when estimating coverage:

| Service | | Metric | Outdoor | Indoor and in-car |
|------------------------------|----|------------|---------|-------------------|
| 2G | | RxLev | -81dBm | -71dBm |
| 3G | | RSCP CPiCH | -100dBm | -90dBm |
| 4G (voice and enhanced data) | | RSRP | -105dBm | -95dBm |
| Voice | 2G | RxLev | -81dBm | -71dBm |
| | 3G | RSCP CPiCH | -100dBm | -90dBm |
| | 4G | RSRP | -105dBm | -95dBm |
| Data (basic) | 3G | RSCP CPiCH | -100dBm | -90dBm |
| | 4G | RSRP | -115dBm | -105dBm |
| 5G high confidence | | SS-RSRP | -110dBm | N/A |
| 5G very high confidence | | SS-RSRP | -100dbm | N/A |