

ICNIRP Measurement Report

This report presents the results of measurements of electromagnetic field emission levels in the vicinity of mobile base stations. Results are presented as percentages of the power density reference levels for general public exposure in the 1998 edition of the Guidelines published by the International Commission on Non-Ionizing Radiation Protection (ICNIRP)¹, with figures provided for individual frequency bands used for base station (downlink) transmissions as well as an overall figure for all other frequency bands between 30 MHz to 6 GHz. The total percentage equals the sum of all individual percentages.

The power density reference levels in the ICNIRP Guidelines are the root mean square (rms) values averaged over six minutes. In this report, we have measured the average E-field strength over a six-minute period in each measurement location.

We have applied a measurement threshold of 3dB above the system noise floor² of the measurement equipment, below which any E-field strength levels measured are deemed not sufficiently above the system noise floor to be valid. In the results tables below, measurement results are shown to a precision of four decimal places. Results which are not sufficiently above the system noise floor to record as a valid measurement are shown as a dash (-). Results which are too small to register to four decimal places are shown as 0.0000%.

Date of Survey:	06/11/2025	Time Survey completed:	16:33
Survey address:	Great Harwood BB6		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072593	06/08/2025
Probe	Agos Aria-6000 Antenna	AGOS-6000-1022	08/07/2025
Cabling	1.7m cable	1405	08/07/2025

¹ <https://www.icnirp.org/cms/upload/publications/ICNIRPemfgdl.pdf>

² The noise floor of the measurement equipment is the level of background noise that is present before detecting any external signals. In other words, it indicates the absolute minimum level of detectable signals.

Broadcast bands covered by this report

Frequency Band	Frequency Range	Technology*
	87.5-108 MHz	FM Radio
	174-230 MHz	DAB
	470-694 MHz	Digital TV

Mobile bands covered by this report

Frequency Band	Frequency Range	Technology*
700 MHz	738-788 MHz	4G, 5G
800 MHz	791-821 MHz	4G
900 MHz	925-960 MHz	2G, 3G, 4G
1400 MHz	1452-1492 MHz	4G (Supplementary downlink)
1800 MHz	1805-1880 MHz	2G, 4G
1900 MHz	1900-1920 MHz	4G
2100 MHz	2110-2170 MHz	3G, 4G
2300 MHz	2350-2390 MHz	4G
2600 MHz TDD	2570-2620 MHz	4G
2600 MHz FDD	2620-2690 MHz	4G
3.4 GHz	3410-3680 MHz	5G, 4G
3.8 GHz	3680-4200 MHz	Various
Others**		

* This is an indication of the type of technologies typically deployed in these bands; not all frequency bands and technologies may be in use at all locations. ** All other frequencies between 30 MHz and 6 GHz.

Survey locations

The survey was conducted within the area shown in the map below. Measurements were taken at six locations and are presented in the following pages of this report.



Location 1

Measurement time:	15:45
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00910
174-230 MHz	0.01021
470-694 MHz	0.00867
700 MHz	0.00153
800 MHz	0.02068
900 MHz	0.11951
1400 MHz	0.00061
1800 MHz	0.00082
1900 MHz	0.00019
2100 MHz	0.02621
2300 MHz	0.00041
2600 MHz TDD	0.00046
2600 MHz FDD	0.00283
3.4 GHz	0.00201
3.8 GHz	0.00429
Others	0.13211
Total	0.33964

Location 2

Measurement time:	15:54
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00953
174-230 MHz	0.01091
470-694 MHz	0.00873
700 MHz	0.00126
800 MHz	0.03610
900 MHz	0.13246
1400 MHz	0.00054
1800 MHz	0.00066
1900 MHz	0.00021
2100 MHz	0.03269
2300 MHz	0.00043
2600 MHz TDD	0.00052
2600 MHz FDD	0.00509
3.4 GHz	0.00218
3.8 GHz	0.00463
Others	0.14220
Total	0.38813

Location 3

Measurement time:	16:04
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01044
174-230 MHz	0.01132
470-694 MHz	0.00886
700 MHz	0.00136
800 MHz	0.01074
900 MHz	0.08010
1400 MHz	0.00049
1800 MHz	0.00069
1900 MHz	0.00022
2100 MHz	0.00503
2300 MHz	0.00046
2600 MHz TDD	0.00045
2600 MHz FDD	0.00081
3.4 GHz	0.00224
3.8 GHz	0.00494
Others	0.14989
Total	0.28802

Location 4

Measurement time:	16:12
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01037
174-230 MHz	0.01189
470-694 MHz	0.00924
700 MHz	0.00125
800 MHz	0.00610
900 MHz	0.08539
1400 MHz	0.00049
1800 MHz	0.00068
1900 MHz	0.00023
2100 MHz	0.00892
2300 MHz	0.00047
2600 MHz TDD	0.00049
2600 MHz FDD	0.00147
3.4 GHz	0.00237
3.8 GHz	0.00522
Others	0.15593
Total	0.30052

Location 5

Measurement time:	16:20
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01073
174-230 MHz	0.01225
470-694 MHz	0.01063
700 MHz	0.00134
800 MHz	0.01570
900 MHz	0.06367
1400 MHz	0.00058
1800 MHz	0.00076
1900 MHz	0.00023
2100 MHz	0.01763
2300 MHz	0.00050
2600 MHz TDD	0.00052
2600 MHz FDD	0.00210
3.4 GHz	0.00255
3.8 GHz	0.00540
Others	0.16015
Total	0.30472

Location 6

Measurement time:	16:27
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01104
174-230 MHz	0.01249
470-694 MHz	0.01062
700 MHz	0.00176
800 MHz	0.05600
900 MHz	0.09834
1400 MHz	0.00064
1800 MHz	0.00096
1900 MHz	0.00024
2100 MHz	0.02606
2300 MHz	0.00051
2600 MHz TDD	0.00057
2600 MHz FDD	0.00311
3.4 GHz	0.00260
3.8 GHz	0.00555
Others	0.16438
Total	0.39487

Disclaimer: The results detailed in this report apply only to the tests made at the reported time, using the test equipment detailed. They do not indicate that on another date an identical set of results would be achieved, due to changes in local environmental conditions or other factors which may or may not have an effect on the measurement results obtained at that future time.