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 floor[2] 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:	31/10/2025	**Time Survey completed:**	11:57
Survey address:	Sheffield S35		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY50672594	04/11/2024
Probe	Agos Aria-6000 Antenna	Aria-6000-1156	08/07/2025
Cabling	1.7m cable	1378	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:	11:01
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00754
174-230 MHz	0.00893
470-694 MHz	0.00719
700 MHz	0.00581
800 MHz	0.02553
900 MHz	0.00328
1400 MHz	0.00833
1800 MHz	0.00383
1900 MHz	0.00016
2100 MHz	0.00211
2300 MHz	0.00054
2600 MHz TDD	0.00031
2600 MHz FDD	0.00025
3.4 GHz	0.00258
3.8 GHz	0.00407
Others	0.11843
Total	**0.19890**

Location 2

Measurement time:	11:11
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00792
174-230 MHz	0.00945
470-694 MHz	0.00754
700 MHz	0.00631
800 MHz	0.02309
900 MHz	0.00204
1400 MHz	0.00540
1800 MHz	0.00814
1900 MHz	0.00017
2100 MHz	0.00418
2300 MHz	0.00048
2600 MHz TDD	0.00033
2600 MHz FDD	0.00029
3.4 GHz	0.00230
3.8 GHz	0.00432
Others	0.12535
Total	**0.20729**

Location 3

Measurement time:	11:21
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00830
174-230 MHz	0.00976
470-694 MHz	0.00778
700 MHz	0.01654
800 MHz	0.04469
900 MHz	0.00993
1400 MHz	0.01275
1800 MHz	0.01299
1900 MHz	0.00018
2100 MHz	0.00970
2300 MHz	0.00066
2600 MHz TDD	0.00035
2600 MHz FDD	0.00039
3.4 GHz	0.00269
3.8 GHz	0.00459
Others	0.13099
Total	**0.27229**

Location 4

Measurement time:	11:30
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00853
174-230 MHz	0.01014
470-694 MHz	0.00792
700 MHz	0.00352
800 MHz	0.01116
900 MHz	0.00475
1400 MHz	0.00678
1800 MHz	0.00656
1900 MHz	0.00018
2100 MHz	0.00484
2300 MHz	0.00069
2600 MHz TDD	0.00035
2600 MHz FDD	0.00026
3.4 GHz	0.00270
3.8 GHz	0.00474
Others	0.13443
Total	**0.20755**

Location 5

Measurement time:	11:39
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00876
174-230 MHz	0.01037
470-694 MHz	0.00813
700 MHz	0.00952
800 MHz	0.02080
900 MHz	0.02332
1400 MHz	0.00332
1800 MHz	0.00185
1900 MHz	0.00018
2100 MHz	0.00664
2300 MHz	0.00256
2600 MHz TDD	0.00040
2600 MHz FDD	0.00098
3.4 GHz	0.00294
3.8 GHz	0.00511
Others	0.13806
Total	**0.24295**

Location 6

Measurement time:	11:51
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00896
174-230 MHz	0.01062
470-694 MHz	0.00830
700 MHz	0.00425
800 MHz	0.01495
900 MHz	0.00395
1400 MHz	0.00579
1800 MHz	0.00374
1900 MHz	0.00019
2100 MHz	0.00242
2300 MHz	0.00062
2600 MHz TDD	0.00038
2600 MHz FDD	0.00035
3.4 GHz	0.00311
3.8 GHz	0.00498
Others	0.14208
Total	**0.21468**

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.