

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:	24/11/2025	Time Survey completed:	15:50
Survey address:	Harpurhey M9		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	US55240265	31/10/2025
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:	14:56
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00887
174-230 MHz	0.00826
470-694 MHz	0.00636
700 MHz	0.00861
800 MHz	0.10700
900 MHz	0.06214
1400 MHz	0.00030
1800 MHz	0.00241
1900 MHz	0.00011
2100 MHz	0.00882
2300 MHz	0.00594
2600 MHz TDD	0.00033
2600 MHz FDD	0.00390
3.4 GHz	0.00104
3.8 GHz	0.00337
Others	0.10627
Total	0.33372

Location 2

Measurement time:	15:08
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00940
174-230 MHz	0.00807
470-694 MHz	0.00651
700 MHz	0.00964
800 MHz	0.08823
900 MHz	0.05334
1400 MHz	0.00069
1800 MHz	0.00547
1900 MHz	0.00011
2100 MHz	0.01621
2300 MHz	0.00732
2600 MHz TDD	0.00042
2600 MHz FDD	0.00997
3.4 GHz	0.00112
3.8 GHz	0.00393
Others	0.10323
Total	0.32366

Location 3

Measurement time:	15:16
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00906
174-230 MHz	0.00803
470-694 MHz	0.00627
700 MHz	0.00895
800 MHz	0.00764
900 MHz	0.00790
1400 MHz	0.00032
1800 MHz	0.00250
1900 MHz	0.00011
2100 MHz	0.00490
2300 MHz	0.00387
2600 MHz TDD	0.00026
2600 MHz FDD	0.00059
3.4 GHz	0.00102
3.8 GHz	0.00332
Others	0.10263
Total	0.16736

Location 4

Measurement time:	15:24
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00885
174-230 MHz	0.00800
470-694 MHz	0.00631
700 MHz	0.01335
800 MHz	0.02038
900 MHz	0.01267
1400 MHz	0.00031
1800 MHz	0.00836
1900 MHz	0.00011
2100 MHz	0.00593
2300 MHz	0.00397
2600 MHz TDD	0.00026
2600 MHz FDD	0.00133
3.4 GHz	0.00100
3.8 GHz	0.00349
Others	0.10127
Total	0.19559

Location 5

Measurement time:	15:33
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00866
174-230 MHz	0.00783
470-694 MHz	0.00707
700 MHz	0.00409
800 MHz	0.01779
900 MHz	0.00649
1400 MHz	0.00035
1800 MHz	0.01568
1900 MHz	0.00011
2100 MHz	0.01062
2300 MHz	0.00555
2600 MHz TDD	0.00025
2600 MHz FDD	0.00148
3.4 GHz	0.00101
3.8 GHz	0.00258
Others	0.09895
Total	0.18852

Location 6

Measurement time:	15:44
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00861
174-230 MHz	0.00775
470-694 MHz	0.00610
700 MHz	0.01062
800 MHz	0.06899
900 MHz	0.07107
1400 MHz	0.00029
1800 MHz	0.00300
1900 MHz	0.00011
2100 MHz	0.01627
2300 MHz	0.00810
2600 MHz TDD	0.00032
2600 MHz FDD	0.00343
3.4 GHz	0.00097
3.8 GHz	0.00305
Others	0.10058
Total	0.30926

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.