

# 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)<sup>1</sup>, 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<sup>2</sup> 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%.

<b>Date of Survey:</b>	23/10/2025	<b>Time Survey completed:</b>	11:56
<b>Survey address:</b>	Harlow CM20		

Measurement equipment		Serial number	Calibration Date
<b>Meter</b>	Keysight Fieldfox N9915A Spectrum Analyser	MY58311497	28/08/2025
<b>Probe</b>	Agos Aria-6000 Antenna	ARIA-6000-1023	08/07/2025
<b>Cabling</b>	1.7m cable	1407	08/07/2025

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

<sup>2</sup> 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

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



## Location 1

Measurement time:	11:10
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00576
174-230 MHz	0.00662
470-694 MHz	0.00542
700 MHz	0.00777
800 MHz	0.00075
900 MHz	0.00055
1400 MHz	0.00834
1800 MHz	0.00329
1900 MHz	0.00012
2100 MHz	0.00843
2300 MHz	0.00039
2600 MHz TDD	0.00022
2600 MHz FDD	0.00039
3.4 GHz	0.00403
3.8 GHz	0.00300
Others	0.08790
<b>Total</b>	<b>0.14296</b>

## Location 2

Measurement time:	11:26
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00621
174-230 MHz	0.00709
470-694 MHz	0.00571
700 MHz	0.00906
800 MHz	0.00168
900 MHz	0.00062
1400 MHz	0.01454
1800 MHz	0.00239
1900 MHz	0.00013
2100 MHz	0.00256
2300 MHz	0.00037
2600 MHz TDD	0.00024
2600 MHz FDD	0.00025
3.4 GHz	0.00198
3.8 GHz	0.00326
Others	0.09390
<b>Total</b>	<b>0.14999</b>

### Location 3

Measurement time:	11:33
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00627
174-230 MHz	0.00718
470-694 MHz	0.00578
700 MHz	0.01780
800 MHz	0.00240
900 MHz	0.00060
1400 MHz	0.00630
1800 MHz	0.00158
1900 MHz	0.00013
2100 MHz	0.00110
2300 MHz	0.00032
2600 MHz TDD	0.00025
2600 MHz FDD	0.00023
3.4 GHz	0.00174
3.8 GHz	0.00328
Others	0.09529
<b>Total</b>	<b>0.15026</b>

#### Location 4

Measurement time:	11:42
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00623
174-230 MHz	0.00714
470-694 MHz	0.00577
700 MHz	0.00922
800 MHz	0.00256
900 MHz	0.00053
1400 MHz	0.00597
1800 MHz	0.00337
1900 MHz	0.00013
2100 MHz	0.00461
2300 MHz	0.00031
2600 MHz TDD	0.00024
2600 MHz FDD	0.00037
3.4 GHz	0.00191
3.8 GHz	0.00325
Others	0.09498
<b>Total</b>	<b>0.14659</b>

#### Location 5

Measurement time:	11:50
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00619
174-230 MHz	0.00710
470-694 MHz	0.00576
700 MHz	0.01068
800 MHz	0.00152
900 MHz	0.00056
1400 MHz	0.00636
1800 MHz	0.00276
1900 MHz	0.00013
2100 MHz	0.00376
2300 MHz	0.00038
2600 MHz TDD	0.00024
2600 MHz FDD	0.00035
3.4 GHz	0.00291
3.8 GHz	0.00325
Others	0.09499
<b>Total</b>	<b>0.14696</b>

*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.*