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:	27/03/2025	**Time Survey completed:**	12:48
Survey address:	Peartree DE23		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072606	04/06/2024
Probe	Agos Aria-6000 Antenna	ARIA-6000-1158	25/09/2023
Cabling	1.7m cable	1458	25/09/2023

[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 420 MHz and 6 GHz.*

Survey locations

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:	11:26
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01234
174-230 MHz	0.01385
470-694 MHz	0.01059
700 MHz	0.01749
800 MHz	0.01102
900 MHz	0.00076
1400 MHz	0.01481
1800 MHz	0.00239
1900 MHz	0.00025
2100 MHz	0.00265
2300 MHz	0.00050
2600 MHz TDD	0.00043
2600 MHz FDD	0.00077
3.4 GHz	0.00758
3.8 GHz	0.00494
Others	0.17105
Total	**0.27141**

Location 2

Measurement time:	11:44
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01401
174-230 MHz	0.01565
470-694 MHz	0.01188
700 MHz	0.00357
800 MHz	0.00484
900 MHz	0.00083
1400 MHz	0.00353
1800 MHz	0.00772
1900 MHz	0.00028
2100 MHz	0.00199
2300 MHz	0.00056
2600 MHz TDD	0.00049
2600 MHz FDD	0.00085
3.4 GHz	0.00271
3.8 GHz	0.00557
Others	0.19359
Total	**0.26807**

Location 3

Measurement time:	11:57
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01466
174-230 MHz	0.01615
470-694 MHz	0.01219
700 MHz	0.00170
800 MHz	0.00097
900 MHz	0.00086
1400 MHz	0.00064
1800 MHz	0.00090
1900 MHz	0.00029
2100 MHz	0.00079
2300 MHz	0.00059
2600 MHz TDD	0.00051
2600 MHz FDD	0.00023
3.4 GHz	0.00250
3.8 GHz	0.00582
Others	0.20318
Total	**0.26199**

Location 4

Measurement time:	12:30
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01625
174-230 MHz	0.01767
470-694 MHz	0.01331
700 MHz	0.00195
800 MHz	0.00117
900 MHz	0.00098
1400 MHz	0.00079
1800 MHz	0.00121
1900 MHz	0.00031
2100 MHz	0.00099
2300 MHz	0.00066
2600 MHz TDD	0.00057
2600 MHz FDD	0.00030
3.4 GHz	0.00280
3.8 GHz	0.00651
Others	0.22421
Total	**0.28968**

Location 5

Measurement time:	12:42
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01605
174-230 MHz	0.01775
470-694 MHz	0.01320
700 MHz	0.00941
800 MHz	0.00329
900 MHz	0.00094
1400 MHz	0.00424
1800 MHz	0.00208
1900 MHz	0.00032
2100 MHz	0.00160
2300 MHz	0.00065
2600 MHz TDD	0.00057
2600 MHz FDD	0.00069
3.4 GHz	0.00738
3.8 GHz	0.00678
Others	0.22455
Total	**0.30949**

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.