

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:	12/05/2026	Time Survey completed:	13:15
Survey address:	Freshwater PO4		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072613	08/07/2025
Probe	Agos Aria-6000 Antenna	ARIA-6000-1157	08/07/2025
Cabling	1.7m cable	2064	15/11/2025

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 five locations and are presented in the following pages of this report.



Location 1

Measurement time:	12:39
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01092
174-230 MHz	0.01231
470-694 MHz	0.00920
700 MHz	0.00122
800 MHz	0.00138
900 MHz	0.00125
1400 MHz	0.00045
1800 MHz	0.00062
1900 MHz	0.00021
2100 MHz	0.00062
2300 MHz	0.00044
2600 MHz TDD	0.00040
2600 MHz FDD	0.00024
3.4 GHz	0.00264
3.8 GHz	0.00635
Others	0.17197
Total	0.22022

Location 2

Measurement time:	12:46
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01122
174-230 MHz	0.01268
470-694 MHz	0.00944
700 MHz	0.00125
800 MHz	0.00070
900 MHz	0.00067
1400 MHz	0.00046
1800 MHz	0.00064
1900 MHz	0.00022
2100 MHz	0.00059
2300 MHz	0.00046
2600 MHz TDD	0.00042
2600 MHz FDD	0.00025
3.4 GHz	0.00274
3.8 GHz	0.00662
Others	0.17754
Total	0.22591

Location 3

Measurement time:	12:53
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01162
174-230 MHz	0.01302
470-694 MHz	0.00967
700 MHz	0.00128
800 MHz	0.00075
900 MHz	0.00076
1400 MHz	0.00047
1800 MHz	0.00066
1900 MHz	0.00022
2100 MHz	0.00062
2300 MHz	0.00047
2600 MHz TDD	0.00043
2600 MHz FDD	0.00026
3.4 GHz	0.00283
3.8 GHz	0.00684
Others	0.18331
Total	0.23321

Location 4

Measurement time:	13:00
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01193
174-230 MHz	0.01329
470-694 MHz	0.00984
700 MHz	0.00131
800 MHz	0.00105
900 MHz	0.00123
1400 MHz	0.00048
1800 MHz	0.00067
1900 MHz	0.00023
2100 MHz	0.00064
2300 MHz	0.00048
2600 MHz TDD	0.00044
2600 MHz FDD	0.00026
3.4 GHz	0.00292
3.8 GHz	0.00702
Others	0.18840
Total	0.24019

Location 5

Measurement time:	13:09
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01209
174-230 MHz	0.01371
470-694 MHz	0.01005
700 MHz	0.00134
800 MHz	0.00091
900 MHz	0.00111
1400 MHz	0.00049
1800 MHz	0.00068
1900 MHz	0.00024
2100 MHz	0.00070
2300 MHz	0.00050
2600 MHz TDD	0.00045
2600 MHz FDD	0.00027
3.4 GHz	0.00299
3.8 GHz	0.00722
Others	0.19271
Total	0.24546

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.