

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 420 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:	18/03/2024	Time Survey completed:	12:50
Survey address:	Cumbernauld G67		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY57271744	18/01/2025
Probe	Agos Aria-6000 Antenna	1089	31/12/2024
Cabling	1.7m cable	1274	31/12/2024

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.

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



Location 1

Measurement time:	12:06
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
700 MHz	0.01765
800 MHz	0.01571
900 MHz	0.00472
1400 MHz	0.00212
1800 MHz	0.00659
1900 MHz	0.00023
2100 MHz	0.00509
2300 MHz	0.00047
2600 MHz TDD	0.00037
2600 MHz FDD	0.00060
3.4 GHz	0.00305
3.8 GHz	0.00309
Others	0.06144
Total	0.12111

Location 2

Measurement time:	12:14
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
700 MHz	0.00723
800 MHz	0.00551
900 MHz	0.05032
1400 MHz	0.00244
1800 MHz	0.00896
1900 MHz	0.00023
2100 MHz	0.00801
2300 MHz	0.00048
2600 MHz TDD	0.00037
2600 MHz FDD	0.00068
3.4 GHz	0.00269
3.8 GHz	0.00316
Others	0.06281
Total	0.15288

Location 3

Measurement time:	12:21
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
700 MHz	0.00731
800 MHz	0.01112
900 MHz	0.00665
1400 MHz	0.00155
1800 MHz	0.00148
1900 MHz	0.00023
2100 MHz	0.00236
2300 MHz	0.00049
2600 MHz TDD	0.00037
2600 MHz FDD	0.00026
3.4 GHz	0.00250
3.8 GHz	0.00323
Others	0.06399
Total	0.10154

Location 4

Measurement time:	12:28
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
700 MHz	0.00285
800 MHz	0.00515
900 MHz	0.00461
1400 MHz	0.00079
1800 MHz	0.00135
1900 MHz	0.00023
2100 MHz	0.00166
2300 MHz	0.00049
2600 MHz TDD	0.00038
2600 MHz FDD	0.00018
3.4 GHz	0.00218
3.8 GHz	0.00324
Others	0.06358
Total	0.08669

Location 5

Measurement time:	12:36
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
700 MHz	0.01219
800 MHz	0.01654
900 MHz	0.01477
1400 MHz	0.00291
1800 MHz	0.00365
1900 MHz	0.00024
2100 MHz	0.01422
2300 MHz	0.00050
2600 MHz TDD	0.00038
2600 MHz FDD	0.00027
3.4 GHz	0.00235
3.8 GHz	0.00332
Others	0.06542
Total	0.13677

Location 6

Measurement time:	12:44
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
700 MHz	0.02125
800 MHz	0.01270
900 MHz	0.00375
1400 MHz	0.00513
1800 MHz	0.00676
1900 MHz	0.00024
2100 MHz	0.00324
2300 MHz	0.00050
2600 MHz TDD	0.00038
2600 MHz FDD	0.00050
3.4 GHz	0.00235
3.8 GHz	0.00330
Others	0.06509
Total	0.12519

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.