

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:	07/05/2026	Time Survey completed:	11:47
Survey address:	Ballymena BT43		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY57271743	22/12/2025
Probe	Agos Aria-6000 Antenna	AGOS-6000-1112	08/07/2025
Cabling	1.7m cable	1314	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:	10:50
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00842
174-230 MHz	0.00966
470-694 MHz	0.00795
700 MHz	0.00211
800 MHz	0.00436
900 MHz	0.00057
1400 MHz	0.00037
1800 MHz	0.00111
1900 MHz	0.00016
2100 MHz	0.00117
2300 MHz	0.00035
2600 MHz TDD	0.00027
2600 MHz FDD	0.00011
3.4 GHz	0.00119
3.8 GHz	0.00289
Others	0.11384
Total	0.15451

Location 2

Measurement time:	11:01
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00899
174-230 MHz	0.01046
470-694 MHz	0.00854
700 MHz	0.00656
800 MHz	0.03011
900 MHz	0.00178
1400 MHz	0.00040
1800 MHz	0.00536
1900 MHz	0.00017
2100 MHz	0.00160
2300 MHz	0.00038
2600 MHz TDD	0.00030
2600 MHz FDD	0.00013
3.4 GHz	0.00134
3.8 GHz	0.00327
Others	0.12437
Total	0.20376

Location 3

Measurement time:	11:12
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00976
174-230 MHz	0.01124
470-694 MHz	0.00896
700 MHz	0.00385
800 MHz	0.01235
900 MHz	0.00099
1400 MHz	0.00043
1800 MHz	0.00253
1900 MHz	0.00018
2100 MHz	0.00091
2300 MHz	0.00041
2600 MHz TDD	0.00031
2600 MHz FDD	0.00013
3.4 GHz	0.00145
3.8 GHz	0.00351
Others	0.13312
Total	0.19013

Location 4

Measurement time:	11:22
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01010
174-230 MHz	0.01163
470-694 MHz	0.00928
700 MHz	0.00442
800 MHz	0.01770
900 MHz	0.00153
1400 MHz	0.00045
1800 MHz	0.01219
1900 MHz	0.00019
2100 MHz	0.00132
2300 MHz	0.00043
2600 MHz TDD	0.00037
2600 MHz FDD	0.00014
3.4 GHz	0.00153
3.8 GHz	0.00371
Others	0.13879
Total	0.21376

Location 5

Measurement time:	11:31
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01036
174-230 MHz	0.01191
470-694 MHz	0.00952
700 MHz	0.00221
800 MHz	0.00623
900 MHz	0.00133
1400 MHz	0.00045
1800 MHz	0.00865
1900 MHz	0.00020
2100 MHz	0.00177
2300 MHz	0.00044
2600 MHz TDD	0.00043
2600 MHz FDD	0.00015
3.4 GHz	0.00159
3.8 GHz	0.00386
Others	0.14274
Total	0.20184

Location 6

Measurement time:	11:41
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01057
174-230 MHz	0.01221
470-694 MHz	0.00975
700 MHz	0.00402
800 MHz	0.01546
900 MHz	0.00095
1400 MHz	0.00047
1800 MHz	0.00449
1900 MHz	0.00020
2100 MHz	0.00182
2300 MHz	0.00045
2600 MHz TDD	0.00035
2600 MHz FDD	0.00015
3.4 GHz	0.00164
3.8 GHz	0.00397
Others	0.14647
Total	0.21298

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.