

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:	12/08/2025	Time Survey completed:	12:49
Survey address:	Craigavon BT63		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9950A Spectrum Analyser	US55240264	30/01/2025
Probe	Agos Aria-6000 Antenna	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:	11:57
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01031
174-230 MHz	0.00956
470-694 MHz	0.00746
700 MHz	0.00549
800 MHz	0.04084
900 MHz	0.02659
1400 MHz	0.00034
1800 MHz	0.00042
1900 MHz	0.00015
2100 MHz	0.00218
2300 MHz	0.00035
2600 MHz TDD	0.00118
2600 MHz FDD	0.00018
3.4 GHz	0.00150
3.8 GHz	0.00412
Others	0.13237
Total	0.24305

Location 2

Measurement time:	12:07
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01047
174-230 MHz	0.00987
470-694 MHz	0.00767
700 MHz	0.00309
800 MHz	0.00417
900 MHz	0.00426
1400 MHz	0.00035
1800 MHz	0.00043
1900 MHz	0.00015
2100 MHz	0.00366
2300 MHz	0.00037
2600 MHz TDD	0.00074
2600 MHz FDD	0.00019
3.4 GHz	0.00155
3.8 GHz	0.00414
Others	0.13594
Total	0.18704

Location 3

Measurement time:	12:16
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01042
174-230 MHz	0.00999
470-694 MHz	0.00782
700 MHz	0.00128
800 MHz	0.00701
900 MHz	0.00105
1400 MHz	0.00035
1800 MHz	0.00044
1900 MHz	0.00015
2100 MHz	0.00280
2300 MHz	0.00037
2600 MHz TDD	0.00054
2600 MHz FDD	0.00019
3.4 GHz	0.00159
3.8 GHz	0.00402
Others	0.13850
Total	0.18652

Location 4

Measurement time:	12:25
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01079
174-230 MHz	0.01022
470-694 MHz	0.00813
700 MHz	0.01029
800 MHz	0.05537
900 MHz	0.04922
1400 MHz	0.00036
1800 MHz	0.00045
1900 MHz	0.00016
2100 MHz	0.00211
2300 MHz	0.00038
2600 MHz TDD	0.00077
2600 MHz FDD	0.00020
3.4 GHz	0.00164
3.8 GHz	0.00455
Others	0.14161
Total	0.29625

Location 5

Measurement time:	12:36
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01075
174-230 MHz	0.01014
470-694 MHz	0.00791
700 MHz	0.01513
800 MHz	0.01822
900 MHz	0.01599
1400 MHz	0.00036
1800 MHz	0.00047
1900 MHz	0.00016
2100 MHz	0.00477
2300 MHz	0.00037
2600 MHz TDD	0.00117
2600 MHz FDD	0.00020
3.4 GHz	0.00161
3.8 GHz	0.00522
Others	0.14124
Total	0.23371

Location 6

Measurement time:	12:43
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01069
174-230 MHz	0.00996
470-694 MHz	0.00777
700 MHz	0.00715
800 MHz	0.02851
900 MHz	0.03138
1400 MHz	0.00035
1800 MHz	0.00045
1900 MHz	0.00015
2100 MHz	0.00254
2300 MHz	0.00037
2600 MHz TDD	0.00220
2600 MHz FDD	0.00019
3.4 GHz	0.00158
3.8 GHz	0.00483
Others	0.13817
Total	0.24629

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.