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:	12/03/2025	**Time Survey completed:**	11:44
Survey address:	Carlisle CA3		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072592	06/03/2025
Probe	Agos Aria-6000 Antenna	6000-1022	22/01/2021
Cabling	1.7m cable	1462	18/01/2024

[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.

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:	10:47
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01131
174-230 MHz	0.00890
470-694 MHz	0.00746
700 MHz	0.06299
800 MHz	0.05218
900 MHz	0.03347
1400 MHz	0.01256
1800 MHz	0.00759
1900 MHz	0.00017
2100 MHz	0.00344
2300 MHz	0.00033
2600 MHz TDD	0.00031
2600 MHz FDD	0.00070
3.4 GHz	0.00204
3.8 GHz	0.00393
Others	0.11732
Total	**0.32468**

Location 2

Measurement time:	10:54
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00887
174-230 MHz	0.00930
470-694 MHz	0.00746
700 MHz	0.03418
800 MHz	0.09948
900 MHz	0.16253
1400 MHz	0.02247
1800 MHz	0.00929
1900 MHz	0.00017
2100 MHz	0.01566
2300 MHz	0.00034
2600 MHz TDD	0.00042
2600 MHz FDD	0.00483
3.4 GHz	0.00218
3.8 GHz	0.00476
Others	0.12466
Total	**0.50660**

Location 3

Measurement time:	11:03
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01343
174-230 MHz	0.00963
470-694 MHz	0.00779
700 MHz	0.00403
800 MHz	0.00492
900 MHz	0.01492
1400 MHz	0.00533
1800 MHz	0.00887
1900 MHz	0.00018
2100 MHz	0.00215
2300 MHz	0.00036
2600 MHz TDD	0.00036
2600 MHz FDD	0.00167
3.4 GHz	0.00219
3.8 GHz	0.00447
Others	0.12791
Total	**0.20821**

Location 4

Measurement time:	11:15
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01054
174-230 MHz	0.01019
470-694 MHz	0.01039
700 MHz	0.03369
800 MHz	0.03972
900 MHz	0.02871
1400 MHz	0.01588
1800 MHz	0.03817
1900 MHz	0.00019
2100 MHz	0.05224
2300 MHz	0.00038
2600 MHz TDD	0.00044
2600 MHz FDD	0.00839
3.4 GHz	0.00238
3.8 GHz	0.00480
Others	0.13519
Total	**0.39129**

Location 5

Measurement time:	11:23
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01309
174-230 MHz	0.01041
470-694 MHz	0.00881
700 MHz	0.02271
800 MHz	0.04502
900 MHz	0.06250
1400 MHz	0.01638
1800 MHz	0.01037
1900 MHz	0.00019
2100 MHz	0.01370
2300 MHz	0.00039
2600 MHz TDD	0.00039
2600 MHz FDD	0.00133
3.4 GHz	0.00234
3.8 GHz	0.00497
Others	0.13862
Total	**0.35120**

Location 6

Measurement time:	11:38
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01094
174-230 MHz	0.01043
470-694 MHz	0.00853
700 MHz	0.07256
800 MHz	0.06272
900 MHz	0.03847
1400 MHz	0.02349
1800 MHz	0.00951
1900 MHz	0.00020
2100 MHz	0.00534
2300 MHz	0.00040
2600 MHz TDD	0.00036
2600 MHz FDD	0.00070
3.4 GHz	0.00221
3.8 GHz	0.00508
Others	0.14044
Total	**0.39138**

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.