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:	20/01/2026	**Time Survey completed:**	12:57
Survey address:	Carlisle CA3		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	US55240265	31/10/2025
Probe	Agos Aria-6000 Antenna	ARIA-6000-1022	08/07/2025
Cabling	1.7m cable	1405	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 seven locations and are presented in the following pages of this report.

Location 1

Measurement time:	11:38
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.02753
174-230 MHz	0.00679
470-694 MHz	0.00546
700 MHz	0.00335
800 MHz	0.01071
900 MHz	0.00508
1400 MHz	0.00988
1800 MHz	0.01020
1900 MHz	0.00009
2100 MHz	0.00364
2300 MHz	0.00072
2600 MHz TDD	0.00051
2600 MHz FDD	0.00032
3.4 GHz	0.00112
3.8 GHz	0.00206
Others	0.08629
Total	**0.17374**

Location 2

Measurement time:	11:47
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.63655
174-230 MHz	0.00690
470-694 MHz	0.00548
700 MHz	0.00121
800 MHz	0.00248
900 MHz	0.00285
1400 MHz	0.00611
1800 MHz	0.00341
1900 MHz	0.00009
2100 MHz	0.00215
2300 MHz	0.00032
2600 MHz TDD	0.00031
2600 MHz FDD	0.00024
3.4 GHz	0.00160
3.8 GHz	0.00222
Others	0.08941
Total	**0.76133**

Location 3

Measurement time:	11:57
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.18459
174-230 MHz	0.00716
470-694 MHz	0.00565
700 MHz	0.00300
800 MHz	0.00481
900 MHz	0.00839
1400 MHz	0.00407
1800 MHz	0.00399
1900 MHz	0.00010
2100 MHz	0.00274
2300 MHz	0.00082
2600 MHz TDD	0.00079
2600 MHz FDD	0.00072
3.4 GHz	0.00202
3.8 GHz	0.00262
Others	0.09232
Total	**0.32378**

Location 4

Measurement time:	12:09
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.09007
174-230 MHz	0.00734
470-694 MHz	0.00580
700 MHz	0.00349
800 MHz	0.00759
900 MHz	0.00930
1400 MHz	0.00749
1800 MHz	0.02140
1900 MHz	0.00010
2100 MHz	0.02830
2300 MHz	0.00500
2600 MHz TDD	0.00356
2600 MHz FDD	0.00369
3.4 GHz	0.00345
3.8 GHz	0.00308
Others	0.09475
Total	**0.29442**

Location 5

Measurement time:	12:31
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.20361
174-230 MHz	0.00734
470-694 MHz	0.00583
700 MHz	0.01810
800 MHz	0.04309
900 MHz	0.05082
1400 MHz	0.02929
1800 MHz	0.02282
1900 MHz	0.00010
2100 MHz	0.02436
2300 MHz	0.00076
2600 MHz TDD	0.00041
2600 MHz FDD	0.00079
3.4 GHz	0.00298
3.8 GHz	0.00282
Others	0.09899
Total	**0.51210**

Location 6

Measurement time:	12:40
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.32673
174-230 MHz	0.00750
470-694 MHz	0.00587
700 MHz	0.00472
800 MHz	0.00887
900 MHz	0.00225
1400 MHz	0.00442
1800 MHz	0.00683
1900 MHz	0.00010
2100 MHz	0.00550
2300 MHz	0.00069
2600 MHz TDD	0.00041
2600 MHz FDD	0.00031
3.4 GHz	0.00174
3.8 GHz	0.00241
Others	0.09589
Total	**0.47424**

Location 7

Measurement time:	12:51
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.09060
174-230 MHz	0.00740
470-694 MHz	0.00601
700 MHz	0.00510
800 MHz	0.01530
900 MHz	0.00733
1400 MHz	0.01150
1800 MHz	0.01079
1900 MHz	0.00010
2100 MHz	0.00465
2300 MHz	0.00075
2600 MHz TDD	0.00045
2600 MHz FDD	0.00037
3.4 GHz	0.00167
3.8 GHz	0.00239
Others	0.09667
Total	**0.26109**

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.