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:	10/10/2025	**Time Survey completed:**	11:57
Survey address:	Euxton, Chorley PR7		

Measurement equipment			**Serial number**	**Calibration Date**
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072593	06/08/2025	
Probe	Agos Aria-6000 Antenna	AGOS-6000-1022	08/07/2025	
Cabling	1.7m cable	1462	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:	11:08
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01029
174-230 MHz	0.01076
470-694 MHz	0.00847
700 MHz	0.00543
800 MHz	0.02025
900 MHz	0.12431
1400 MHz	0.00383
1800 MHz	0.00412
1900 MHz	0.00020
2100 MHz	0.00352
2300 MHz	0.00072
2600 MHz TDD	0.00041
2600 MHz FDD	0.00089
3.4 GHz	0.00231
3.8 GHz	0.00459
Others	0.14015
Total	**0.34026**

Location 2

Measurement time:	11:17
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01029
174-230 MHz	0.01136
470-694 MHz	0.00912
700 MHz	0.00743
800 MHz	0.01518
900 MHz	0.11667
1400 MHz	0.00375
1800 MHz	0.00437
1900 MHz	0.00021
2100 MHz	0.00688
2300 MHz	0.00066
2600 MHz TDD	0.00044
2600 MHz FDD	0.00195
3.4 GHz	0.00268
3.8 GHz	0.00487
Others	0.14784
Total	**0.34370**

Location 3

Measurement time:	11:27
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01024
174-230 MHz	0.01167
470-694 MHz	0.00911
700 MHz	0.00432
800 MHz	0.01325
900 MHz	0.09858
1400 MHz	0.00368
1800 MHz	0.00134
1900 MHz	0.00022
2100 MHz	0.00400
2300 MHz	0.00073
2600 MHz TDD	0.00046
2600 MHz FDD	0.00070
3.4 GHz	0.00258
3.8 GHz	0.00529
Others	0.15409
Total	**0.32028**

Location 4

Measurement time:	11:35
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01082
174-230 MHz	0.01232
470-694 MHz	0.01047
700 MHz	0.00195
800 MHz	0.00216
900 MHz	0.00197
1400 MHz	0.00152
1800 MHz	0.00072
1900 MHz	0.00023
2100 MHz	0.00337
2300 MHz	0.00128
2600 MHz TDD	0.00047
2600 MHz FDD	0.00059
3.4 GHz	0.00248
3.8 GHz	0.00528
Others	0.15641
Total	**0.21205**

Location 5

Measurement time:	11:43
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01078
174-230 MHz	0.01213
470-694 MHz	0.00923
700 MHz	0.00396
800 MHz	0.01449
900 MHz	0.04512
1400 MHz	0.00636
1800 MHz	0.00183
1900 MHz	0.00023
2100 MHz	0.00631
2300 MHz	0.00118
2600 MHz TDD	0.00047
2600 MHz FDD	0.00061
3.4 GHz	0.00256
3.8 GHz	0.00531
Others	0.15694
Total	**0.27751**

Location 6

Measurement time:	11:51
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01125
174-230 MHz	0.01212
470-694 MHz	0.00948
700 MHz	0.00500
800 MHz	0.03197
900 MHz	0.10622
1400 MHz	0.00388
1800 MHz	0.00287
1900 MHz	0.00023
2100 MHz	0.00348
2300 MHz	0.00073
2600 MHz TDD	0.00048
2600 MHz FDD	0.00084
3.4 GHz	0.00260
3.8 GHz	0.00541
Others	0.16001
Total	**0.35656**

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.