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:	25/02/2025	**Time Survey completed:**	16:52
Survey address:	Blackpool FY1		

Measurement equipment		**Serial number**	**Calibration Date**
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072593	06/03/2024
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 420 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:	16:04
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01067
174-230 MHz	0.01164
470-694 MHz	0.00893
700 MHz	0.00123
800 MHz	0.02502
900 MHz	0.08583
1400 MHz	0.00137
1800 MHz	0.00508
1900 MHz	0.00021
2100 MHz	0.00843
2300 MHz	0.00045
2600 MHz TDD	0.00045
2600 MHz FDD	0.00339
3.4 GHz	0.00264
3.8 GHz	0.00588
Others	0.15241
Total	**0.32365**

Location 2

Measurement time:	16:11
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01376
174-230 MHz	0.01176
470-694 MHz	0.00899
700 MHz	0.00122
800 MHz	0.02704
900 MHz	0.07800
1400 MHz	0.00591
1800 MHz	0.00781
1900 MHz	0.00022
2100 MHz	0.00236
2300 MHz	0.00045
2600 MHz TDD	0.00043
2600 MHz FDD	0.00233
3.4 GHz	0.00253
3.8 GHz	0.00551
Others	0.15312
Total	**0.32144**

Location 3

Measurement time:	16:20
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01179
174-230 MHz	0.01197
470-694 MHz	0.00920
700 MHz	0.00126
800 MHz	0.09479
900 MHz	0.03491
1400 MHz	0.00764
1800 MHz	0.01152
1900 MHz	0.00022
2100 MHz	0.01073
2300 MHz	0.00046
2600 MHz TDD	0.00045
2600 MHz FDD	0.00641
3.4 GHz	0.00278
3.8 GHz	0.00568
Others	0.15620
Total	**0.36600**

Location 4

Measurement time:	16:29
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01026
174-230 MHz	0.01182
470-694 MHz	0.00917
700 MHz	0.00123
800 MHz	0.05015
900 MHz	0.06722
1400 MHz	0.00362
1800 MHz	0.00524
1900 MHz	0.00022
2100 MHz	0.01251
2300 MHz	0.00046
2600 MHz TDD	0.00047
2600 MHz FDD	0.00300
3.4 GHz	0.00243
3.8 GHz	0.00560
Others	0.15574
Total	**0.33914**

Location 5

Measurement time:	16:37
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01104
174-230 MHz	0.01173
470-694 MHz	0.00911
700 MHz	0.00122
800 MHz	0.03689
900 MHz	0.02526
1400 MHz	0.00132
1800 MHz	0.00580
1900 MHz	0.00022
2100 MHz	0.01583
2300 MHz	0.00045
2600 MHz TDD	0.00046
2600 MHz FDD	0.00186
3.4 GHz	0.00266
3.8 GHz	0.00573
Others	0.15502
Total	**0.28462**

Location 6

Measurement time:	16:46
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01079
174-230 MHz	0.01178
470-694 MHz	0.00911
700 MHz	0.00123
800 MHz	0.03482
900 MHz	0.04788
1400 MHz	0.00113
1800 MHz	0.00555
1900 MHz	0.00022
2100 MHz	0.01018
2300 MHz	0.00046
2600 MHz TDD	0.00045
2600 MHz FDD	0.00229
3.4 GHz	0.00270
3.8 GHz	0.00595
Others	0.15546
Total	**0.29999**

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.