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:	03/03/2025	**Time Survey completed:**	15:21
Survey address:	Blackpool FY4		

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 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:	14:11
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00930
174-230 MHz	0.01088
470-694 MHz	0.00834
700 MHz	0.00652
800 MHz	0.04014
900 MHz	0.01969
1400 MHz	0.00411
1800 MHz	0.00216
1900 MHz	0.00020
2100 MHz	0.02282
2300 MHz	0.00043
2600 MHz TDD	0.00042
2600 MHz FDD	0.00203
3.4 GHz	0.00246
3.8 GHz	0.00459
Others	0.13796
Total	**0.27206**

Location 2

Measurement time:	14:20
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00980
174-230 MHz	0.01111
470-694 MHz	0.00861
700 MHz	0.00270
800 MHz	0.02852
900 MHz	0.02240
1400 MHz	0.00454
1800 MHz	0.00173
1900 MHz	0.00021
2100 MHz	0.00380
2300 MHz	0.00043
2600 MHz TDD	0.00044
2600 MHz FDD	0.00185
3.4 GHz	0.00259
3.8 GHz	0.00484
Others	0.14457
Total	**0.24812**

Location 3

Measurement time:	14:31
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01015
174-230 MHz	0.01148
470-694 MHz	0.00889
700 MHz	0.00157
800 MHz	0.00340
900 MHz	0.00271
1400 MHz	0.00159
1800 MHz	0.00493
1900 MHz	0.00021
2100 MHz	0.00600
2300 MHz	0.00044
2600 MHz TDD	0.00045
2600 MHz FDD	0.00099
3.4 GHz	0.00254
3.8 GHz	0.00504
Others	0.14876
Total	**0.20915**

Location 4

Measurement time:	14:40
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01006
174-230 MHz	0.01156
470-694 MHz	0.00898
700 MHz	0.00181
800 MHz	0.02776
900 MHz	0.05623
1400 MHz	0.00561
1800 MHz	0.00072
1900 MHz	0.00021
2100 MHz	0.02758
2300 MHz	0.00046
2600 MHz TDD	0.00051
2600 MHz FDD	0.00325
3.4 GHz	0.00252
3.8 GHz	0.00516
Others	0.15334
Total	**0.31578**

Location 5

Measurement time:	14:49
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01029
174-230 MHz	0.01171
470-694 MHz	0.00917
700 MHz	0.00343
800 MHz	0.01356
900 MHz	0.01546
1400 MHz	0.00125
1800 MHz	0.05765
1900 MHz	0.00022
2100 MHz	0.00756
2300 MHz	0.00046
2600 MHz TDD	0.00044
2600 MHz FDD	0.00077
3.4 GHz	0.00254
3.8 GHz	0.00528
Others	0.15590
Total	**0.29570**

Location 6

Measurement time:	15:03
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01029
174-230 MHz	0.01191
470-694 MHz	0.00913
700 MHz	0.00287
800 MHz	0.02409
900 MHz	0.02458
1400 MHz	0.00248
1800 MHz	0.01451
1900 MHz	0.00022
2100 MHz	0.03549
2300 MHz	0.00047
2600 MHz TDD	0.00073
2600 MHz FDD	0.01018
3.4 GHz	0.00273
3.8 GHz	0.00529
Others	0.15545
Total	**0.31040**

Location 7

Measurement time:	15:15
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01041
174-230 MHz	0.01226
470-694 MHz	0.00930
700 MHz	0.00552
800 MHz	0.07229
900 MHz	0.01453
1400 MHz	0.00257
1800 MHz	0.00147
1900 MHz	0.00022
2100 MHz	0.01333
2300 MHz	0.00050
2600 MHz TDD	0.00048
2600 MHz FDD	0.00209
3.4 GHz	0.00319
3.8 GHz	0.00537
Others	0.15712
Total	**0.31065**

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.