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:	22/12/2025	**Time Survey completed:**	11:09
Survey address:	Lostock Hall PR5		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	US55240265	31/10/2025
Probe	Agos Aria-6000 Antenna	AGOS-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:	10:13
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00756
174-230 MHz	0.00600
470-694 MHz	0.00472
700 MHz	0.00360
800 MHz	0.01333
900 MHz	0.02458
1400 MHz	0.00019
1800 MHz	0.00023
1900 MHz	0.00008
2100 MHz	0.00377
2300 MHz	0.00018
2600 MHz TDD	0.00020
2600 MHz FDD	0.00069
3.4 GHz	0.00093
3.8 GHz	0.00163
Others	0.07516
Total	**0.14285**

Location 2

Measurement time:	10:24
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00764
174-230 MHz	0.00636
470-694 MHz	0.00501
700 MHz	0.00110
800 MHz	0.00381
900 MHz	0.00494
1400 MHz	0.00020
1800 MHz	0.00027
1900 MHz	0.00009
2100 MHz	0.00252
2300 MHz	0.00020
2600 MHz TDD	0.00021
2600 MHz FDD	0.00049
3.4 GHz	0.00084
3.8 GHz	0.00179
Others	0.08024
Total	**0.11570**

Location 3

Measurement time:	10:33
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00940
174-230 MHz	0.00661
470-694 MHz	0.00524
700 MHz	0.00288
800 MHz	0.02247
900 MHz	0.01086
1400 MHz	0.00021
1800 MHz	0.00030
1900 MHz	0.00009
2100 MHz	0.00191
2300 MHz	0.00021
2600 MHz TDD	0.00023
2600 MHz FDD	0.00069
3.4 GHz	0.00088
3.8 GHz	0.00189
Others	0.08390
Total	**0.14779**

Location 4

Measurement time:	10:41
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00808
174-230 MHz	0.00683
470-694 MHz	0.00534
700 MHz	0.00810
800 MHz	0.03907
900 MHz	0.01837
1400 MHz	0.00022
1800 MHz	0.00026
1900 MHz	0.00009
2100 MHz	0.00443
2300 MHz	0.00022
2600 MHz TDD	0.00024
2600 MHz FDD	0.00092
3.4 GHz	0.00095
3.8 GHz	0.00196
Others	0.08581
Total	**0.18088**

Location 5

Measurement time:	10:48
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00779
174-230 MHz	0.00682
470-694 MHz	0.00537
700 MHz	0.01142
800 MHz	0.03546
900 MHz	0.05821
1400 MHz	0.00022
1800 MHz	0.00026
1900 MHz	0.00009
2100 MHz	0.00392
2300 MHz	0.00022
2600 MHz TDD	0.00028
2600 MHz FDD	0.00157
3.4 GHz	0.00097
3.8 GHz	0.00196
Others	0.08713
Total	**0.22169**

Location 6

Measurement time:	10:56
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00780
174-230 MHz	0.00690
470-694 MHz	0.00542
700 MHz	0.00512
800 MHz	0.02278
900 MHz	0.01582
1400 MHz	0.00022
1800 MHz	0.00027
1900 MHz	0.00009
2100 MHz	0.00367
2300 MHz	0.00022
2600 MHz TDD	0.00023
2600 MHz FDD	0.00059
3.4 GHz	0.00114
3.8 GHz	0.00199
Others	0.08736
Total	**0.15963**

Location 7

Measurement time:	11:03
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00883
174-230 MHz	0.00697
470-694 MHz	0.00552
700 MHz	0.00503
800 MHz	0.02261
900 MHz	0.01772
1400 MHz	0.00023
1800 MHz	0.00029
1900 MHz	0.00009
2100 MHz	0.00346
2300 MHz	0.00022
2600 MHz TDD	0.00023
2600 MHz FDD	0.00042
3.4 GHz	0.00105
3.8 GHz	0.00204
Others	0.08929
Total	**0.16402**

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.