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:	12/12/2024	**Time Survey completed:**	14:41
Survey address:	Goole DN14		

Measurement equipment		**Serial number**	**Calibration Date**
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY50672594	06/11/2024
Probe	Agos Aria-6000 Antenna	6000-1024	30/03/2021
Cabling	1.7m cable	1383	12/11/2023

[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:	13:58
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00615
174-230 MHz	0.00733
470-694 MHz	0.00609
700 MHz	0.00995
800 MHz	0.01725
900 MHz	0.01533
1400 MHz	0.00138
1800 MHz	0.00278
1900 MHz	0.00013
2100 MHz	0.00338
2300 MHz	0.00227
2600 MHz TDD	0.00024
2600 MHz FDD	0.00012
3.4 GHz	0.00162
3.8 GHz	0.00334
Others	0.09768
Total	**0.17503**

Location 2

Measurement time:	14:05
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00657
174-230 MHz	0.00774
470-694 MHz	0.00639
700 MHz	0.01162
800 MHz	0.01916
900 MHz	0.03182
1400 MHz	0.00124
1800 MHz	0.00194
1900 MHz	0.00014
2100 MHz	0.00221
2300 MHz	0.00149
2600 MHz TDD	0.00026
2600 MHz FDD	0.00013
3.4 GHz	0.00183
3.8 GHz	0.00342
Others	0.10547
Total	**0.20142**

Location 3

Measurement time:	14:12
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00686
174-230 MHz	0.00809
470-694 MHz	0.00664
700 MHz	0.00577
800 MHz	0.00895
900 MHz	0.01005
1400 MHz	0.00058
1800 MHz	0.00099
1900 MHz	0.00014
2100 MHz	0.00212
2300 MHz	0.00131
2600 MHz TDD	0.00027
2600 MHz FDD	0.00014
3.4 GHz	0.00164
3.8 GHz	0.00360
Others	0.10641
Total	**0.16355**

Location 4

Measurement time:	14:21
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00721
174-230 MHz	0.00853
470-694 MHz	0.00691
700 MHz	0.00443
800 MHz	0.01414
900 MHz	0.01291
1400 MHz	0.00079
1800 MHz	0.00151
1900 MHz	0.00015
2100 MHz	0.00269
2300 MHz	0.00169
2600 MHz TDD	0.00029
2600 MHz FDD	0.00015
3.4 GHz	0.00215
3.8 GHz	0.00381
Others	0.11508
Total	**0.18244**

Location 5

Measurement time:	14:28
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00747
174-230 MHz	0.00883
470-694 MHz	0.00704
700 MHz	0.00675
800 MHz	0.02692
900 MHz	0.01778
1400 MHz	0.00174
1800 MHz	0.00583
1900 MHz	0.00015
2100 MHz	0.00410
2300 MHz	0.00304
2600 MHz TDD	0.00030
2600 MHz FDD	0.00015
3.4 GHz	0.00217
3.8 GHz	0.00402
Others	0.11932
Total	**0.21563**

Location 6

Measurement time:	14:35
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00754
174-230 MHz	0.00895
470-694 MHz	0.00720
700 MHz	0.00623
800 MHz	0.03138
900 MHz	0.02724
1400 MHz	0.00183
1800 MHz	0.00610
1900 MHz	0.00016
2100 MHz	0.00985
2300 MHz	0.00288
2600 MHz TDD	0.00030
2600 MHz FDD	0.00015
3.4 GHz	0.00235
3.8 GHz	0.00418
Others	0.11875
Total	**0.23508**

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.