

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 floor² 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:	18/03/2025	Time Survey completed:	13:08
Survey address:	Leyland PR25		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072593	06/03/2025
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 six locations and are presented in the following pages of this report.



Location 1

Measurement time:	12:08
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00764
174-230 MHz	0.00878
470-694 MHz	0.00705
700 MHz	0.00799
800 MHz	0.05751
900 MHz	0.02238
1400 MHz	0.01439
1800 MHz	0.02061
1900 MHz	0.00016
2100 MHz	0.05097
2300 MHz	0.00032
2600 MHz TDD	0.00077
2600 MHz FDD	0.00131
3.4 GHz	0.00252
3.8 GHz	0.00377
Others	0.11313
Total	0.31931

Location 2

Measurement time:	12:18
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00977
174-230 MHz	0.00981
470-694 MHz	0.00775
700 MHz	0.02199
800 MHz	0.10843
900 MHz	0.05158
1400 MHz	0.01067
1800 MHz	0.01888
1900 MHz	0.00018
2100 MHz	0.04238
2300 MHz	0.00035
2600 MHz TDD	0.00168
2600 MHz FDD	0.00976
3.4 GHz	0.00825
3.8 GHz	0.00425
Others	0.12628
Total	0.43201

Location 3

Measurement time:	12:32
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00925
174-230 MHz	0.01032
470-694 MHz	0.00807
700 MHz	0.00132
800 MHz	0.00158
900 MHz	0.00125
1400 MHz	0.00335
1800 MHz	0.00489
1900 MHz	0.00019
2100 MHz	0.00249
2300 MHz	0.00038
2600 MHz TDD	0.00038
2600 MHz FDD	0.00037
3.4 GHz	0.00318
3.8 GHz	0.00453
Others	0.13516
Total	0.18674

Location 4

Measurement time:	12:46
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00964
174-230 MHz	0.01077
470-694 MHz	0.00867
700 MHz	0.00151
800 MHz	0.00602
900 MHz	0.00377
1400 MHz	0.00421
1800 MHz	0.00173
1900 MHz	0.00021
2100 MHz	0.00178
2300 MHz	0.00041
2600 MHz TDD	0.00041
2600 MHz FDD	0.00027
3.4 GHz	0.00228
3.8 GHz	0.00484
Others	0.14384
Total	0.20035

Location 5

Measurement time:	12:55
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01005
174-230 MHz	0.01122
470-694 MHz	0.00873
700 MHz	0.00872
800 MHz	0.04907
900 MHz	0.01183
1400 MHz	0.01614
1800 MHz	0.00705
1900 MHz	0.00021
2100 MHz	0.02194
2300 MHz	0.00042
2600 MHz TDD	0.00085
2600 MHz FDD	0.00224
3.4 GHz	0.00368
3.8 GHz	0.00526
Others	0.15015
Total	0.30756

Location 6

Measurement time:	13:02
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01020
174-230 MHz	0.01134
470-694 MHz	0.00883
700 MHz	0.00586
800 MHz	0.04368
900 MHz	0.01819
1400 MHz	0.01610
1800 MHz	0.01641
1900 MHz	0.00021
2100 MHz	0.03533
2300 MHz	0.00044
2600 MHz TDD	0.00112
2600 MHz FDD	0.00251
3.4 GHz	0.00342
3.8 GHz	0.00534
Others	0.15299
Total	0.33198

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.