

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:	22/04/2026	Time Survey completed:	14:31
Survey address:	Loughbrough LE12		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072608	19/02/2026
Probe	Agos Aria-6000 Antenna	AGOS-6000-1158	08/07/2025
Cabling	1.7m cable	1458	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 five locations and are presented in the following pages of this report.



Location 1

Measurement time:	12:56
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.02390
174-230 MHz	0.01565
470-694 MHz	0.01000
700 MHz	0.00126
800 MHz	0.00098
900 MHz	0.00070
1400 MHz	0.00048
1800 MHz	0.00860
1900 MHz	0.00026
2100 MHz	0.00069
2300 MHz	0.00045
2600 MHz TDD	0.00043
2600 MHz FDD	0.00017
3.4 GHz	0.00190
3.8 GHz	0.00452
Others	0.23481
Total	0.30481

Location 2

Measurement time:	13:22
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.02756
174-230 MHz	0.01808
470-694 MHz	0.01141
700 MHz	0.00138
800 MHz	0.00081
900 MHz	0.00089
1400 MHz	0.00057
1800 MHz	0.00166
1900 MHz	0.00030
2100 MHz	0.00084
2300 MHz	0.00053
2600 MHz TDD	0.00050
2600 MHz FDD	0.00020
3.4 GHz	0.00229
3.8 GHz	0.00545
Others	0.27344
Total	0.34595

Location 3

Measurement time:	13:45
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.03023
174-230 MHz	0.01965
470-694 MHz	0.01232
700 MHz	0.00148
800 MHz	0.00082
900 MHz	0.00072
1400 MHz	0.00062
1800 MHz	0.00102
1900 MHz	0.00033
2100 MHz	0.00084
2300 MHz	0.00058
2600 MHz TDD	0.00056
2600 MHz FDD	0.00023
3.4 GHz	0.00256
3.8 GHz	0.00610
Others	0.29970
Total	0.37775

Location 4

Measurement time:	14:06
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.03192
174-230 MHz	0.02106
470-694 MHz	0.01308
700 MHz	0.00156
800 MHz	0.00083
900 MHz	0.00075
1400 MHz	0.00066
1800 MHz	0.00112
1900 MHz	0.00035
2100 MHz	0.00088
2300 MHz	0.00061
2600 MHz TDD	0.00059
2600 MHz FDD	0.00025
3.4 GHz	0.00279
3.8 GHz	0.00662
Others	0.32167
Total	0.40475

Location 5

Measurement time:	14:25
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.03369
174-230 MHz	0.02185
470-694 MHz	0.01350
700 MHz	0.00170
800 MHz	0.00120
900 MHz	0.00088
1400 MHz	0.00068
1800 MHz	0.01005
1900 MHz	0.00037
2100 MHz	0.00099
2300 MHz	0.00064
2600 MHz TDD	0.00062
2600 MHz FDD	0.00026
3.4 GHz	0.00292
3.8 GHz	0.00695
Others	0.33479
Total	0.43110

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.