

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:	20/01/2026	Time Survey completed:	14:31
Survey address:	Luton LU2		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072605	19/03/2025
Probe	Agos Aria-6000 Antenna	ARIA-6000-1111	08/07/2025
Cabling	1.7m cable	1409	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 six locations and are presented in the following pages of this report.



Location 1

Measurement time:	13:48
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01258
174-230 MHz	0.01421
470-694 MHz	0.01042
700 MHz	0.02893
800 MHz	0.02532
900 MHz	0.00846
1400 MHz	0.00054
1800 MHz	0.00222
1900 MHz	0.00025
2100 MHz	0.00199
2300 MHz	0.00130
2600 MHz TDD	0.00044
2600 MHz FDD	0.00030
3.4 GHz	0.00488
3.8 GHz	0.01097
Others	0.20161
Total	0.32441

Location 2

Measurement time:	13:55
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01220
174-230 MHz	0.01389
470-694 MHz	0.01020
700 MHz	0.03672
800 MHz	0.01569
900 MHz	0.00825
1400 MHz	0.00052
1800 MHz	0.00416
1900 MHz	0.00024
2100 MHz	0.00494
2300 MHz	0.00513
2600 MHz TDD	0.00043
2600 MHz FDD	0.00029
3.4 GHz	0.00418
3.8 GHz	0.00847
Others	0.19560
Total	0.32093

Location 3

Measurement time:	14:03
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01206
174-230 MHz	0.01372
470-694 MHz	0.01012
700 MHz	0.01353
800 MHz	0.01514
900 MHz	0.01130
1400 MHz	0.00051
1800 MHz	0.00326
1900 MHz	0.00024
2100 MHz	0.00407
2300 MHz	0.00268
2600 MHz TDD	0.00043
2600 MHz FDD	0.00029
3.4 GHz	0.00473
3.8 GHz	0.00887
Others	0.19387
Total	0.29483

Location 4

Measurement time:	14:11
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01177
174-230 MHz	0.01338
470-694 MHz	0.00991
700 MHz	0.01793
800 MHz	0.02082
900 MHz	0.00805
1400 MHz	0.00049
1800 MHz	0.00180
1900 MHz	0.00023
2100 MHz	0.00334
2300 MHz	0.00451
2600 MHz TDD	0.00042
2600 MHz FDD	0.00028
3.4 GHz	0.00421
3.8 GHz	0.00792
Others	0.18947
Total	0.29454

Location 5

Measurement time:	14:18
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01154
174-230 MHz	0.01313
470-694 MHz	0.00978
700 MHz	0.01518
800 MHz	0.01053
900 MHz	0.01183
1400 MHz	0.00048
1800 MHz	0.00394
1900 MHz	0.00023
2100 MHz	0.00187
2300 MHz	0.00099
2600 MHz TDD	0.00041
2600 MHz FDD	0.00027
3.4 GHz	0.00364
3.8 GHz	0.00745
Others	0.18470
Total	0.27598

Location 6

Measurement time:	14:25
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01141
174-230 MHz	0.01291
470-694 MHz	0.00960
700 MHz	0.02755
800 MHz	0.02165
900 MHz	0.00750
1400 MHz	0.00049
1800 MHz	0.00288
1900 MHz	0.00022
2100 MHz	0.00221
2300 MHz	0.00103
2600 MHz TDD	0.00040
2600 MHz FDD	0.00027
3.4 GHz	0.00432
3.8 GHz	0.00808
Others	0.18118
Total	0.29172

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.