

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:	16/02/2026	Time Survey completed:	13:18
Survey address:	Guildford GU2		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY5607261	07/07/2025
Probe	Agos Aria-6000 Antenna	1157	08/07/2025
Cabling	1.7m cable	1379	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:	12:30
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01683
174-230 MHz	0.01608
470-694 MHz	0.00736
700 MHz	0.02547
800 MHz	0.02679
900 MHz	0.01463
1400 MHz	0.00239
1800 MHz	0.00636
1900 MHz	0.00016
2100 MHz	0.03344
2300 MHz	0.00035
2600 MHz TDD	0.00031
2600 MHz FDD	0.00050
3.4 GHz	0.00294
3.8 GHz	0.00485
Others	0.13107
Total	0.28954

Location 2

Measurement time:	12:40
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01206
174-230 MHz	0.04139
470-694 MHz	0.00858
700 MHz	0.00754
800 MHz	0.01442
900 MHz	0.00212
1400 MHz	0.00455
1800 MHz	0.00234
1900 MHz	0.00017
2100 MHz	0.00221
2300 MHz	0.00036
2600 MHz TDD	0.00033
2600 MHz FDD	0.00105
3.4 GHz	0.00303
3.8 GHz	0.00517
Others	0.13880
Total	0.24410

Location 3

Measurement time:	12:49
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01496
174-230 MHz	0.01660
470-694 MHz	0.00790
700 MHz	0.00734
800 MHz	0.05516
900 MHz	0.06171
1400 MHz	0.01149
1800 MHz	0.00569
1900 MHz	0.00018
2100 MHz	0.01379
2300 MHz	0.00037
2600 MHz TDD	0.00034
2600 MHz FDD	0.00162
3.4 GHz	0.00572
3.8 GHz	0.00544
Others	0.14387
Total	0.35217

Location 4

Measurement time:	12:58
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.02410
174-230 MHz	0.09292
470-694 MHz	0.00842
700 MHz	0.01026
800 MHz	0.02366
900 MHz	0.01421
1400 MHz	0.01062
1800 MHz	0.00408
1900 MHz	0.00018
2100 MHz	0.00709
2300 MHz	0.00038
2600 MHz TDD	0.00035
2600 MHz FDD	0.00124
3.4 GHz	0.00354
3.8 GHz	0.00562
Others	0.15135
Total	0.35801

Location 5

Measurement time:	13:12
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01907
174-230 MHz	0.03387
470-694 MHz	0.00826
700 MHz	0.00994
800 MHz	0.01574
900 MHz	0.01687
1400 MHz	0.00186
1800 MHz	0.00568
1900 MHz	0.00019
2100 MHz	0.02474
2300 MHz	0.00040
2600 MHz TDD	0.00036
2600 MHz FDD	0.00058
3.4 GHz	0.00373
3.8 GHz	0.00558
Others	0.15006
Total	0.29692

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.