

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:	24/07/2025	Time Survey completed:	12:30
Survey address:	Teddington TW11		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9950A Spectrum Analyser	US55240262	18/06/2025
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:	11:23
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00689
174-230 MHz	0.00649
470-694 MHz	0.00515
700 MHz	0.00128
800 MHz	0.00121
900 MHz	0.00248
1400 MHz	0.00216
1800 MHz	0.00229
1900 MHz	0.00009
2100 MHz	0.00193
2300 MHz	0.00072
2600 MHz TDD	0.00022
2600 MHz FDD	0.00532
3.4 GHz	0.00169
3.8 GHz	0.00230
Others	0.07977
Total	0.11999

Location 2

Measurement time:	11:33
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00714
174-230 MHz	0.00678
470-694 MHz	0.00532
700 MHz	0.00087
800 MHz	0.00096
900 MHz	0.00287
1400 MHz	0.00258
1800 MHz	0.00479
1900 MHz	0.00010
2100 MHz	0.00161
2300 MHz	0.00161
2600 MHz TDD	0.00023
2600 MHz FDD	0.00824
3.4 GHz	0.00407
3.8 GHz	0.00228
Others	0.08266
Total	0.13211

Location 3

Measurement time:	12:00
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00757
174-230 MHz	0.00712
470-694 MHz	0.00560
700 MHz	0.00130
800 MHz	0.00106
900 MHz	0.00775
1400 MHz	0.00232
1800 MHz	0.00312
1900 MHz	0.00010
2100 MHz	0.00182
2300 MHz	0.00050
2600 MHz TDD	0.00026
2600 MHz FDD	0.00095
3.4 GHz	0.00161
3.8 GHz	0.00259
Others	0.08850
Total	0.13217

Location 4

Measurement time:	12:11
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00761
174-230 MHz	0.00708
470-694 MHz	0.00561
700 MHz	0.00085
800 MHz	0.00111
900 MHz	0.00339
1400 MHz	0.00046
1800 MHz	0.00036
1900 MHz	0.00010
2100 MHz	0.00047
2300 MHz	0.00028
2600 MHz TDD	0.00024
2600 MHz FDD	0.00014
3.4 GHz	0.00117
3.8 GHz	0.00201
Others	0.08850
Total	0.11938

Location 5

Measurement time:	12:24
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00756
174-230 MHz	0.00715
470-694 MHz	0.00565
700 MHz	0.00216
800 MHz	0.00289
900 MHz	0.00430
1400 MHz	0.00521
1800 MHz	0.00381
1900 MHz	0.00010
2100 MHz	0.00226
2300 MHz	0.00131
2600 MHz TDD	0.00024
2600 MHz FDD	0.01804
3.4 GHz	0.00210
3.8 GHz	0.00320
Others	0.08877
Total	0.15474

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.