

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:	03/12/2025	Time Survey completed:	11:55
Survey address:	Barnet EN5		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY58311497	28/08/2025
Probe	Agos Aria-6000 Antenna	ARIA-6000-1023	08/07/2025
Cabling	1.7m cable	1407	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:	11:19
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00690
174-230 MHz	0.00794
470-694 MHz	0.00628
700 MHz	0.00102
800 MHz	0.00355
900 MHz	0.02376
1400 MHz	0.00031
1800 MHz	0.00102
1900 MHz	0.00015
2100 MHz	0.00568
2300 MHz	0.00074
2600 MHz TDD	0.00027
2600 MHz FDD	0.00017
3.4 GHz	0.00151
3.8 GHz	0.00408
Others	0.10763
Total	0.17101

Location 2

Measurement time:	11:26
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00695
174-230 MHz	0.00789
470-694 MHz	0.00633
700 MHz	0.00127
800 MHz	0.00396
900 MHz	0.01612
1400 MHz	0.00031
1800 MHz	0.00128
1900 MHz	0.00015
2100 MHz	0.00459
2300 MHz	0.00090
2600 MHz TDD	0.00028
2600 MHz FDD	0.00015
3.4 GHz	0.00151
3.8 GHz	0.00466
Others	0.10699
Total	0.16333

Location 3

Measurement time:	11:34
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00691
174-230 MHz	0.00792
470-694 MHz	0.00630
700 MHz	0.00187
800 MHz	0.00402
900 MHz	0.01432
1400 MHz	0.00031
1800 MHz	0.00125
1900 MHz	0.00015
2100 MHz	0.00721
2300 MHz	0.00196
2600 MHz TDD	0.00027
2600 MHz FDD	0.00016
3.4 GHz	0.00150
3.8 GHz	0.00529
Others	0.10697
Total	0.16640

Location 4

Measurement time:	11:41
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00690
174-230 MHz	0.00789
470-694 MHz	0.00633
700 MHz	0.00309
800 MHz	0.00920
900 MHz	0.02497
1400 MHz	0.00031
1800 MHz	0.00119
1900 MHz	0.00015
2100 MHz	0.00938
2300 MHz	0.00169
2600 MHz TDD	0.00028
2600 MHz FDD	0.00077
3.4 GHz	0.00151
3.8 GHz	0.01113
Others	0.10772
Total	0.19250

Location 5

Measurement time:	11:49
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00693
174-230 MHz	0.00798
470-694 MHz	0.00640
700 MHz	0.00093
800 MHz	0.00382
900 MHz	0.02104
1400 MHz	0.00031
1800 MHz	0.00127
1900 MHz	0.00015
2100 MHz	0.00372
2300 MHz	0.00070
2600 MHz TDD	0.00028
2600 MHz FDD	0.00018
3.4 GHz	0.00154
3.8 GHz	0.00417
Others	0.10957
Total	0.16899

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.