

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:	28/04/2026	Time Survey completed:	15:39
Survey address:	Northampton NN3		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072591	11/12/2026
Probe	Agos Aria-6000 Antenna	AGOS-6000-1023	08/07/2025
Cabling	1.7m cable	1188	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:	14:22
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01860
174-230 MHz	0.02088
470-694 MHz	0.01611
700 MHz	0.00587
800 MHz	0.01931
900 MHz	0.00839
1400 MHz	0.03146
1800 MHz	0.02375
1900 MHz	0.00042
2100 MHz	0.01257
2300 MHz	0.00173
2600 MHz TDD	0.00074
2600 MHz FDD	0.00160
3.4 GHz	0.00799
3.8 GHz	0.00966
Others	0.26669
Total	0.44577

Location 2

Measurement time:	14:34
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01793
174-230 MHz	0.02000
470-694 MHz	0.01548
700 MHz	0.00321
800 MHz	0.00749
900 MHz	0.01100
1400 MHz	0.01052
1800 MHz	0.00689
1900 MHz	0.00039
2100 MHz	0.00552
2300 MHz	0.00257
2600 MHz TDD	0.00073
2600 MHz FDD	0.00244
3.4 GHz	0.00422
3.8 GHz	0.00917
Others	0.25606
Total	0.37362

Location 3

Measurement time:	15:07
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01746
174-230 MHz	0.01967
470-694 MHz	0.01522
700 MHz	0.00899
800 MHz	0.03918
900 MHz	0.01558
1400 MHz	0.00922
1800 MHz	0.02467
1900 MHz	0.00038
2100 MHz	0.01061
2300 MHz	0.00239
2600 MHz TDD	0.00070
2600 MHz FDD	0.00769
3.4 GHz	0.00523
3.8 GHz	0.00856
Others	0.25065
Total	0.43621

Location 4

Measurement time:	15:21
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01722
174-230 MHz	0.01910
470-694 MHz	0.01482
700 MHz	0.00336
800 MHz	0.00521
900 MHz	0.01824
1400 MHz	0.00557
1800 MHz	0.00311
1900 MHz	0.00037
2100 MHz	0.00427
2300 MHz	0.00168
2600 MHz TDD	0.00069
2600 MHz FDD	0.00118
3.4 GHz	0.00372
3.8 GHz	0.00803
Others	0.24320
Total	0.34977

Location 5

Measurement time:	15:33
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01715
174-230 MHz	0.01908
470-694 MHz	0.01473
700 MHz	0.01897
800 MHz	0.07757
900 MHz	0.01235
1400 MHz	0.02314
1800 MHz	0.01982
1900 MHz	0.00037
2100 MHz	0.02130
2300 MHz	0.00240
2600 MHz TDD	0.00069
2600 MHz FDD	0.00422
3.4 GHz	0.00538
3.8 GHz	0.00935
Others	0.24287
Total	0.48940

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.