

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:	11/12/2025	Time Survey completed:	14:19
Survey address:	Newport NP10		

	Measurement equipment	Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072611	12/02/2025
Probe	Agos Aria-6000 Antenna	Aria-6000-1117	08/07/2025
Cabling	1.7m cable	1460	20/11/2025

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:	13:38
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01176
174-230 MHz	0.01370
470-694 MHz	0.01011
700 MHz	0.00139
800 MHz	0.07465
900 MHz	0.05415
1400 MHz	0.00057
1800 MHz	0.00074
1900 MHz	0.00025
2100 MHz	0.01857
2300 MHz	0.00058
2600 MHz TDD	0.00050
2600 MHz FDD	0.00025
3.4 GHz	0.00280
3.8 GHz	0.00689
Others	0.18489
Total	0.38181

Location 2

Measurement time:	13:46
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01173
174-230 MHz	0.01364
470-694 MHz	0.01012
700 MHz	0.00137
800 MHz	0.06306
900 MHz	0.03482
1400 MHz	0.00057
1800 MHz	0.00139
1900 MHz	0.00026
2100 MHz	0.02323
2300 MHz	0.00058
2600 MHz TDD	0.00050
2600 MHz FDD	0.00030
3.4 GHz	0.00282
3.8 GHz	0.00687
Others	0.18511
Total	0.35638

Location 3

Measurement time:	13:55
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01182
174-230 MHz	0.01353
470-694 MHz	0.01024
700 MHz	0.00138
800 MHz	0.05054
900 MHz	0.01427
1400 MHz	0.00057
1800 MHz	0.00074
1900 MHz	0.00025
2100 MHz	0.00382
2300 MHz	0.00058
2600 MHz TDD	0.00049
2600 MHz FDD	0.00025
3.4 GHz	0.00281
3.8 GHz	0.00687
Others	0.18583
Total	0.30398

Location 4

Measurement time:	14:05
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01165
174-230 MHz	0.01342
470-694 MHz	0.01008
700 MHz	0.00134
800 MHz	0.05540
900 MHz	0.06884
1400 MHz	0.00055
1800 MHz	0.00073
1900 MHz	0.00025
2100 MHz	0.01638
2300 MHz	0.00057
2600 MHz TDD	0.00049
2600 MHz FDD	0.00025
3.4 GHz	0.00277
3.8 GHz	0.00677
Others	0.18275
Total	0.37224

Location 5

Measurement time:	14:13
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01170
174-230 MHz	0.01362
470-694 MHz	0.01004
700 MHz	0.00135
800 MHz	0.07323
900 MHz	0.05529
1400 MHz	0.00056
1800 MHz	0.00073
1900 MHz	0.00025
2100 MHz	0.01141
2300 MHz	0.00057
2600 MHz TDD	0.00048
2600 MHz FDD	0.00025
3.4 GHz	0.00274
3.8 GHz	0.00671
Others	0.18236
Total	0.37130

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.