

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:	16/10/2025	Time Survey completed:	12:41
Survey address:	Bracknell RG12		

	Measurement equipment	Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	US55240262	18/06/2025
Probe	Agos Aria-6000 Antenna	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 six 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	0.00690
174-230 MHz	0.02015
470-694 MHz	0.00506
700 MHz	0.00124
800 MHz	0.00677
900 MHz	0.00537
1400 MHz	0.00175
1800 MHz	0.00283
1900 MHz	0.00009
2100 MHz	0.00084
2300 MHz	0.00022
2600 MHz TDD	0.00021
2600 MHz FDD	0.00041
3.4 GHz	0.00235
3.8 GHz	0.00164
Others	0.07888
Total	0.13471

Location 2

Measurement time:	11:46
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00696
174-230 MHz	0.02084
470-694 MHz	0.00512
700 MHz	0.00145
800 MHz	0.00322
900 MHz	0.00168
1400 MHz	0.00102
1800 MHz	0.00368
1900 MHz	0.00009
2100 MHz	0.00058
2300 MHz	0.00022
2600 MHz TDD	0.00021
2600 MHz FDD	0.00045
3.4 GHz	0.00213
3.8 GHz	0.00166
Others	0.08010
Total	0.12942

Location 3

Measurement time:	11:56
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00711
174-230 MHz	0.54328
470-694 MHz	0.00518
700 MHz	0.00221
800 MHz	0.00768
900 MHz	0.00095
1400 MHz	0.00055
1800 MHz	0.00094
1900 MHz	0.00009
2100 MHz	0.00042
2300 MHz	0.00022
2600 MHz TDD	0.00021
2600 MHz FDD	0.00023
3.4 GHz	0.00117
3.8 GHz	0.00168
Others	0.09140
Total	0.66333

Location 4

Measurement time:	12:06
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00705
174-230 MHz	0.02688
470-694 MHz	0.00524
700 MHz	0.00105
800 MHz	0.01295
900 MHz	0.00697
1400 MHz	0.00081
1800 MHz	0.00045
1900 MHz	0.00009
2100 MHz	0.00032
2300 MHz	0.00022
2600 MHz TDD	0.00021
2600 MHz FDD	0.00013
3.4 GHz	0.00079
3.8 GHz	0.00169
Others	0.08118
Total	0.14605

Location 5

Measurement time:	12:19
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00701
174-230 MHz	0.34743
470-694 MHz	0.00519
700 MHz	0.00077
800 MHz	0.01721
900 MHz	0.00379
1400 MHz	0.00097
1800 MHz	0.00084
1900 MHz	0.00009
2100 MHz	0.00051
2300 MHz	0.00023
2600 MHz TDD	0.00021
2600 MHz FDD	0.00024
3.4 GHz	0.00186
3.8 GHz	0.00170
Others	0.08905
Total	0.47709

Location 6

Measurement time:	12:35
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00706
174-230 MHz	0.10344
470-694 MHz	0.00521
700 MHz	0.00162
800 MHz	0.00944
900 MHz	0.01164
1400 MHz	0.00164
1800 MHz	0.00726
1900 MHz	0.00009
2100 MHz	0.00139
2300 MHz	0.00023
2600 MHz TDD	0.00022
2600 MHz FDD	0.00086
3.4 GHz	0.00223
3.8 GHz	0.00172
Others	0.08490
Total	0.23894

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.