

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:	17/06/2026	Time Survey completed:	10:48
Survey address:	Botley SO20		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072613	07/07/2025
Probe	Agos Aria-6000 Antenna	1157	08/07/2025
Cabling	1.7m cable	2064	15/11/2024

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:	09:53
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00889
174-230 MHz	0.00999
470-694 MHz	0.00766
700 MHz	0.00116
800 MHz	0.00064
900 MHz	0.00058
1400 MHz	0.00053
1800 MHz	0.00056
1900 MHz	0.00017
2100 MHz	0.00052
2300 MHz	0.00036
2600 MHz TDD	0.00033
2600 MHz FDD	0.00024
3.4 GHz	0.00210
3.8 GHz	0.00504
Others	0.13870
Total	0.17747

Location 2

Measurement time:	10:02
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00959
174-230 MHz	0.01097
470-694 MHz	0.00818
700 MHz	0.00140
800 MHz	0.00065
900 MHz	0.00061
1400 MHz	0.00091
1800 MHz	0.00068
1900 MHz	0.00019
2100 MHz	0.00053
2300 MHz	0.00040
2600 MHz TDD	0.00036
2600 MHz FDD	0.00027
3.4 GHz	0.00233
3.8 GHz	0.00553
Others	0.15111
Total	0.19369

Location 3

Measurement time:	10:11
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01017
174-230 MHz	0.01154
470-694 MHz	0.00867
700 MHz	0.00182
800 MHz	0.00078
900 MHz	0.00097
1400 MHz	0.00100
1800 MHz	0.00090
1900 MHz	0.00020
2100 MHz	0.00068
2300 MHz	0.00042
2600 MHz TDD	0.00038
2600 MHz FDD	0.00036
3.4 GHz	0.00254
3.8 GHz	0.00596
Others	0.16156
Total	0.20796

Location 4

Measurement time:	10:25
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01105
174-230 MHz	0.01240
470-694 MHz	0.00924
700 MHz	0.00123
800 MHz	0.00064
900 MHz	0.00063
1400 MHz	0.00047
1800 MHz	0.00063
1900 MHz	0.00021
2100 MHz	0.00057
2300 MHz	0.00046
2600 MHz TDD	0.00041
2600 MHz FDD	0.00024
3.4 GHz	0.00269
3.8 GHz	0.00652
Others	0.17438
Total	0.22176

Location 5

Measurement time:	10:34
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01143
174-230 MHz	0.01274
470-694 MHz	0.00948
700 MHz	0.00161
800 MHz	0.00074
900 MHz	0.00078
1400 MHz	0.00056
1800 MHz	0.00067
1900 MHz	0.00022
2100 MHz	0.00063
2300 MHz	0.00047
2600 MHz TDD	0.00043
2600 MHz FDD	0.00027
3.4 GHz	0.00280
3.8 GHz	0.00676
Others	0.17995
Total	0.22953

Location 6

Measurement time:	10:42
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01149
174-230 MHz	0.01295
470-694 MHz	0.00964
700 MHz	0.00136
800 MHz	0.00069
900 MHz	0.00071
1400 MHz	0.00076
1800 MHz	0.00072
1900 MHz	0.00022
2100 MHz	0.00069
2300 MHz	0.00048
2600 MHz TDD	0.00043
2600 MHz FDD	0.00032
3.4 GHz	0.00291
3.8 GHz	0.00687
Others	0.18329
Total	0.23354

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.