

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:	22/06/2026	Time Survey completed:	11:28
Survey address:	Alton GU34		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072613	07/07/2025
Probe	Agos Aria-6000 Antenna	AGOS-6000-1157	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:	10:41
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01005
174-230 MHz	0.01118
470-694 MHz	0.00841
700 MHz	0.00121
800 MHz	0.00131
900 MHz	0.00122
1400 MHz	0.00041
1800 MHz	0.00092
1900 MHz	0.00019
2100 MHz	0.00066
2300 MHz	0.00041
2600 MHz TDD	0.00037
2600 MHz FDD	0.00021
3.4 GHz	0.00238
3.8 GHz	0.00575
Others	0.15584
Total	0.20052

Location 2

Measurement time:	10:49
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01070
174-230 MHz	0.01213
470-694 MHz	0.00907
700 MHz	0.00165
800 MHz	0.00301
900 MHz	0.00121
1400 MHz	0.00044
1800 MHz	0.00064
1900 MHz	0.00021
2100 MHz	0.00066
2300 MHz	0.00044
2600 MHz TDD	0.00040
2600 MHz FDD	0.00024
3.4 GHz	0.00263
3.8 GHz	0.00637
Others	0.17084
Total	0.22063

Location 3

Measurement time:	10:57
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01170
174-230 MHz	0.01321
470-694 MHz	0.00983
700 MHz	0.00142
800 MHz	0.00126
900 MHz	0.00143
1400 MHz	0.00048
1800 MHz	0.00072
1900 MHz	0.00023
2100 MHz	0.00093
2300 MHz	0.00049
2600 MHz TDD	0.00044
2600 MHz FDD	0.00027
3.4 GHz	0.00292
3.8 GHz	0.00707
Others	0.18766
Total	0.24005

Location 4

Measurement time:	11:06
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01274
174-230 MHz	0.01433
470-694 MHz	0.01053
700 MHz	0.00141
800 MHz	0.00079
900 MHz	0.00082
1400 MHz	0.00052
1800 MHz	0.00074
1900 MHz	0.00025
2100 MHz	0.00073
2300 MHz	0.00053
2600 MHz TDD	0.00048
2600 MHz FDD	0.00029
3.4 GHz	0.00322
3.8 GHz	0.00776
Others	0.20475
Total	0.25989

Location 5

Measurement time:	11:14
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01340
174-230 MHz	0.01489
470-694 MHz	0.01099
700 MHz	0.00149
800 MHz	0.00086
900 MHz	0.00087
1400 MHz	0.00054
1800 MHz	0.00078
1900 MHz	0.00026
2100 MHz	0.00074
2300 MHz	0.00055
2600 MHz TDD	0.00050
2600 MHz FDD	0.00030
3.4 GHz	0.00339
3.8 GHz	0.00819
Others	0.21485
Total	0.27261

Location 6

Measurement time:	11:22
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01370
174-230 MHz	0.01536
470-694 MHz	0.01123
700 MHz	0.00155
800 MHz	0.00095
900 MHz	0.00124
1400 MHz	0.00056
1800 MHz	0.00137
1900 MHz	0.00026
2100 MHz	0.00092
2300 MHz	0.00056
2600 MHz TDD	0.00051
2600 MHz FDD	0.00031
3.4 GHz	0.00349
3.8 GHz	0.00844
Others	0.22040
Total	0.28087

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.