

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:	01/10/2025	Time Survey completed:	12:01
Survey address:	Bedworth CV12		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072612	04/11/2024
Probe	Agos Aria-6000 Antenna	ARIA-6000-1117	08/07/2025
Cabling	1.7m cable	1319	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:	10:58
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00822
174-230 MHz	0.00937
470-694 MHz	0.00756
700 MHz	0.00102
800 MHz	0.00055
900 MHz	0.00054
1400 MHz	0.00037
1800 MHz	0.01949
1900 MHz	0.00018
2100 MHz	0.00340
2300 MHz	0.00034
2600 MHz TDD	0.00029
2600 MHz FDD	0.00016
3.4 GHz	0.00185
3.8 GHz	0.00425
Others	0.12708
Total	0.18469

Location 2

Measurement time:	11:09
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00880
174-230 MHz	0.00984
470-694 MHz	0.00788
700 MHz	0.00108
800 MHz	0.00058
900 MHz	0.00057
1400 MHz	0.00039
1800 MHz	0.04894
1900 MHz	0.00019
2100 MHz	0.01233
2300 MHz	0.00036
2600 MHz TDD	0.00031
2600 MHz FDD	0.00017
3.4 GHz	0.00198
3.8 GHz	0.00454
Others	0.13384
Total	0.23179

Location 3

Measurement time:	11:20
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00900
174-230 MHz	0.01033
470-694 MHz	0.00817
700 MHz	0.00112
800 MHz	0.00068
900 MHz	0.00067
1400 MHz	0.00041
1800 MHz	0.00062
1900 MHz	0.00019
2100 MHz	0.00050
2300 MHz	0.00038
2600 MHz TDD	0.00032
2600 MHz FDD	0.00018
3.4 GHz	0.00209
3.8 GHz	0.00480
Others	0.13971
Total	0.17918

Location 4

Measurement time:	11:30
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00925
174-230 MHz	0.01053
470-694 MHz	0.00831
700 MHz	0.00112
800 MHz	0.00060
900 MHz	0.00059
1400 MHz	0.00042
1800 MHz	0.02797
1900 MHz	0.00020
2100 MHz	0.00679
2300 MHz	0.00039
2600 MHz TDD	0.00033
2600 MHz FDD	0.00019
3.4 GHz	0.00215
3.8 GHz	0.00495
Others	0.14358
Total	0.21737

Location 5

Measurement time:	11:44
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00964
174-230 MHz	0.01103
470-694 MHz	0.00868
700 MHz	0.00116
800 MHz	0.00062
900 MHz	0.00061
1400 MHz	0.00044
1800 MHz	0.02482
1900 MHz	0.00021
2100 MHz	0.00449
2300 MHz	0.00041
2600 MHz TDD	0.00035
2600 MHz FDD	0.00020
3.4 GHz	0.00228
3.8 GHz	0.00527
Others	0.15191
Total	0.22212

Location 6

Measurement time:	11:55
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00989
174-230 MHz	0.01112
470-694 MHz	0.00879
700 MHz	0.00118
800 MHz	0.00063
900 MHz	0.00062
1400 MHz	0.00044
1800 MHz	0.02789
1900 MHz	0.00021
2100 MHz	0.00153
2300 MHz	0.00042
2600 MHz TDD	0.00035
2600 MHz FDD	0.00020
3.4 GHz	0.00236
3.8 GHz	0.00540
Others	0.15499
Total	0.22605

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.