

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:	14/04/2026	Time Survey completed:	14:32
Survey address:	Bedford MK42		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072605	25/03/2026
Probe	Agos Aria-6000 Antenna	ARIA-6000-1111	08/07/2025
Cabling	1.7m cable	1409	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:	13:42
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01481
174-230 MHz	0.01670
470-694 MHz	0.01229
700 MHz	0.01474
800 MHz	0.00524
900 MHz	0.00089
1400 MHz	0.00944
1800 MHz	0.00181
1900 MHz	0.00029
2100 MHz	0.00126
2300 MHz	0.00060
2600 MHz TDD	0.00052
2600 MHz FDD	0.00037
3.4 GHz	0.00493
3.8 GHz	0.00906
Others	0.23593
Total	0.32889

Location 2

Measurement time:	13:50
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01422
174-230 MHz	0.01606
470-694 MHz	0.01193
700 MHz	0.00582
800 MHz	0.00245
900 MHz	0.00084
1400 MHz	0.00599
1800 MHz	0.00209
1900 MHz	0.00028
2100 MHz	0.00311
2300 MHz	0.00058
2600 MHz TDD	0.00050
2600 MHz FDD	0.00035
3.4 GHz	0.00454
3.8 GHz	0.00862
Others	0.22689
Total	0.30429

Location 3

Measurement time:	13:57
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01383
174-230 MHz	0.01567
470-694 MHz	0.01153
700 MHz	0.02381
800 MHz	0.00430
900 MHz	0.00083
1400 MHz	0.00360
1800 MHz	0.00286
1900 MHz	0.00027
2100 MHz	0.00208
2300 MHz	0.00056
2600 MHz TDD	0.00048
2600 MHz FDD	0.00035
3.4 GHz	0.00524
3.8 GHz	0.00836
Others	0.22017
Total	0.31394

Location 4

Measurement time:	14:05
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01359
174-230 MHz	0.01527
470-694 MHz	0.01126
700 MHz	0.00498
800 MHz	0.00199
900 MHz	0.00085
1400 MHz	0.00388
1800 MHz	0.00312
1900 MHz	0.00026
2100 MHz	0.00263
2300 MHz	0.00055
2600 MHz TDD	0.00047
2600 MHz FDD	0.00036
3.4 GHz	0.00403
3.8 GHz	0.00806
Others	0.21437
Total	0.28568

Location 5

Measurement time:	14:14
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01334
174-230 MHz	0.01518
470-694 MHz	0.01118
700 MHz	0.05728
800 MHz	0.00646
900 MHz	0.00084
1400 MHz	0.00811
1800 MHz	0.00166
1900 MHz	0.00026
2100 MHz	0.00120
2300 MHz	0.00056
2600 MHz TDD	0.00047
2600 MHz FDD	0.00034
3.4 GHz	0.00463
3.8 GHz	0.00807
Others	0.21312
Total	0.34270

Location 6

Measurement time:	14:26
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01327
174-230 MHz	0.01521
470-694 MHz	0.01123
700 MHz	0.01452
800 MHz	0.00947
900 MHz	0.00082
1400 MHz	0.00973
1800 MHz	0.00189
1900 MHz	0.00026
2100 MHz	0.00141
2300 MHz	0.00055
2600 MHz TDD	0.00046
2600 MHz FDD	0.00033
3.4 GHz	0.00443
3.8 GHz	0.00799
Others	0.21177
Total	0.30336

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.