

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:	31/03/2026	Time Survey completed:	12:01
Survey address:	Lichfield WS14		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072608	03/07/2025
Probe	Agos Aria-6000 Antenna	1158	08/07/2025
Cabling	1.7m cable	1458	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 five locations and are presented in the following pages of this report.



Location 1

Measurement time:	10:31
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01276
174-230 MHz	0.01284
470-694 MHz	0.00993
700 MHz	0.00684
800 MHz	0.03572
900 MHz	0.00190
1400 MHz	0.00048
1800 MHz	0.00981
1900 MHz	0.00023
2100 MHz	0.00202
2300 MHz	0.00046
2600 MHz TDD	0.00041
2600 MHz FDD	0.00049
3.4 GHz	0.00198
3.8 GHz	0.00444
Others	0.15955
Total	0.25985

Location 2

Measurement time:	10:57
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.02412
174-230 MHz	0.01443
470-694 MHz	0.01103
700 MHz	0.00162
800 MHz	0.00164
900 MHz	0.00079
1400 MHz	0.00054
1800 MHz	0.00092
1900 MHz	0.00026
2100 MHz	0.00075
2300 MHz	0.00053
2600 MHz TDD	0.00046
2600 MHz FDD	0.00028
3.4 GHz	0.00218
3.8 GHz	0.00510
Others	0.18170
Total	0.24636

Location 3

Measurement time:	11:20
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01579
174-230 MHz	0.01583
470-694 MHz	0.01195
700 MHz	0.00160
800 MHz	0.00090
900 MHz	0.00086
1400 MHz	0.00059
1800 MHz	0.00087
1900 MHz	0.00028
2100 MHz	0.00077
2300 MHz	0.00058
2600 MHz TDD	0.00051
2600 MHz FDD	0.00022
3.4 GHz	0.00242
3.8 GHz	0.00570
Others	0.19860
Total	0.25748

Location 4

Measurement time:	11:36
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01934
174-230 MHz	0.01618
470-694 MHz	0.01237
700 MHz	0.00170
800 MHz	0.00149
900 MHz	0.00110
1400 MHz	0.00060
1800 MHz	0.00110
1900 MHz	0.00029
2100 MHz	0.00110
2300 MHz	0.00059
2600 MHz TDD	0.00052
2600 MHz FDD	0.00026
3.4 GHz	0.00249
3.8 GHz	0.00586
Others	0.20403
Total	0.26901

Location 5

Measurement time:	11:55
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01664
174-230 MHz	0.01639
470-694 MHz	0.01235
700 MHz	0.00522
800 MHz	0.01913
900 MHz	0.00172
1400 MHz	0.00061
1800 MHz	0.00629
1900 MHz	0.00029
2100 MHz	0.00167
2300 MHz	0.00060
2600 MHz TDD	0.00053
2600 MHz FDD	0.00058
3.4 GHz	0.00271
3.8 GHz	0.00605
Others	0.20746
Total	0.29825

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.