

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:	16/09/2025	Time Survey completed:	13:03
Survey address:	Hereford HR2		

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 five locations and are presented in the following pages of this report.



Location 1

Measurement time:	12:12
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00890
174-230 MHz	0.01033
470-694 MHz	0.00814
700 MHz	0.00377
800 MHz	0.01548
900 MHz	0.00066
1400 MHz	0.00234
1800 MHz	0.00575
1900 MHz	0.00019
2100 MHz	0.00242
2300 MHz	0.00038
2600 MHz TDD	0.00032
2600 MHz FDD	0.00018
3.4 GHz	0.00273
3.8 GHz	0.00477
Others	0.13921
Total	0.20557

Location 2

Measurement time:	12:23
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00950
174-230 MHz	0.01083
470-694 MHz	0.00857
700 MHz	0.00313
800 MHz	0.00652
900 MHz	0.00064
1400 MHz	0.00408
1800 MHz	0.01546
1900 MHz	0.00020
2100 MHz	0.00376
2300 MHz	0.00040
2600 MHz TDD	0.00034
2600 MHz FDD	0.00020
3.4 GHz	0.00294
3.8 GHz	0.00514
Others	0.14800
Total	0.21972

Location 3

Measurement time:	12:31
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00970
174-230 MHz	0.01120
470-694 MHz	0.00874
700 MHz	0.00314
800 MHz	0.00719
900 MHz	0.00077
1400 MHz	0.00523
1800 MHz	0.03434
1900 MHz	0.00021
2100 MHz	0.00671
2300 MHz	0.00041
2600 MHz TDD	0.00035
2600 MHz FDD	0.00020
3.4 GHz	0.00332
3.8 GHz	0.00533
Others	0.15280
Total	0.24965

Location 4

Measurement time:	12:41
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01007
174-230 MHz	0.01123
470-694 MHz	0.00898
700 MHz	0.00345
800 MHz	0.02777
900 MHz	0.00157
1400 MHz	0.00563
1800 MHz	0.01738
1900 MHz	0.00021
2100 MHz	0.00460
2300 MHz	0.00042
2600 MHz TDD	0.00036
2600 MHz FDD	0.00021
3.4 GHz	0.00337
3.8 GHz	0.00548
Others	0.15728
Total	0.25801

Location 5

Measurement time:	12:57
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01028
174-230 MHz	0.01176
470-694 MHz	0.00922
700 MHz	0.00361
800 MHz	0.01413
900 MHz	0.00092
1400 MHz	0.00332
1800 MHz	0.00770
1900 MHz	0.00022
2100 MHz	0.00291
2300 MHz	0.00044
2600 MHz TDD	0.00038
2600 MHz FDD	0.00022
3.4 GHz	0.00344
3.8 GHz	0.00575
Others	0.16288
Total	0.23719

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.