

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:	11:16
Survey address:	Hereford HR1		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072612	04/11/2024
Probe	Agos Aria-6000 Antenna	1117	28/11/2022
Cabling	1.7m cable	1319	28/11/2022

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:	10:26
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00826
174-230 MHz	0.00925
470-694 MHz	0.00756
700 MHz	0.00100
800 MHz	0.00066
900 MHz	0.00062
1400 MHz	0.00036
1800 MHz	0.02221
1900 MHz	0.00018
2100 MHz	0.02378
2300 MHz	0.00034
2600 MHz TDD	0.00029
2600 MHz FDD	0.00020
3.4 GHz	0.00181
3.8 GHz	0.00415
Others	0.12500
Total	0.20566

Location 2

Measurement time:	10:37
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00887
174-230 MHz	0.00991
470-694 MHz	0.00793
700 MHz	0.00108
800 MHz	0.00072
900 MHz	0.00059
1400 MHz	0.00039
1800 MHz	0.02248
1900 MHz	0.00019
2100 MHz	0.00506
2300 MHz	0.00037
2600 MHz TDD	0.00031
2600 MHz FDD	0.00019
3.4 GHz	0.00201
3.8 GHz	0.00460
Others	0.13519
Total	0.19989

Location 3

Measurement time:	10:50
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00927
174-230 MHz	0.01040
470-694 MHz	0.00832
700 MHz	0.00113
800 MHz	0.00086
900 MHz	0.00072
1400 MHz	0.00042
1800 MHz	0.02491
1900 MHz	0.00020
2100 MHz	0.01195
2300 MHz	0.00039
2600 MHz TDD	0.00033
2600 MHz FDD	0.00021
3.4 GHz	0.00215
3.8 GHz	0.00495
Others	0.14398
Total	0.22018

Location 4

Measurement time:	10:58
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00936
174-230 MHz	0.01071
470-694 MHz	0.00845
700 MHz	0.00114
800 MHz	0.00068
900 MHz	0.00063
1400 MHz	0.00042
1800 MHz	0.02953
1900 MHz	0.00020
2100 MHz	0.01012
2300 MHz	0.00040
2600 MHz TDD	0.00034
2600 MHz FDD	0.00019
3.4 GHz	0.00222
3.8 GHz	0.00509
Others	0.14713
Total	0.22662

Location 5

Measurement time:	11:10
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00984
174-230 MHz	0.01113
470-694 MHz	0.00877
700 MHz	0.00117
800 MHz	0.00077
900 MHz	0.00068
1400 MHz	0.00044
1800 MHz	0.03157
1900 MHz	0.00021
2100 MHz	0.02651
2300 MHz	0.00041
2600 MHz TDD	0.00036
2600 MHz FDD	0.00020
3.4 GHz	0.00231
3.8 GHz	0.00532
Others	0.15235
Total	0.25203

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.