

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:	18/08/2025	Time Survey completed:	08:30
Survey address:	Preston PR2		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072599	22/02/2025
Probe	Agos Aria-6000 Antenna	6000-1022	08/07/2025
Cabling	1.7m cable	1462	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

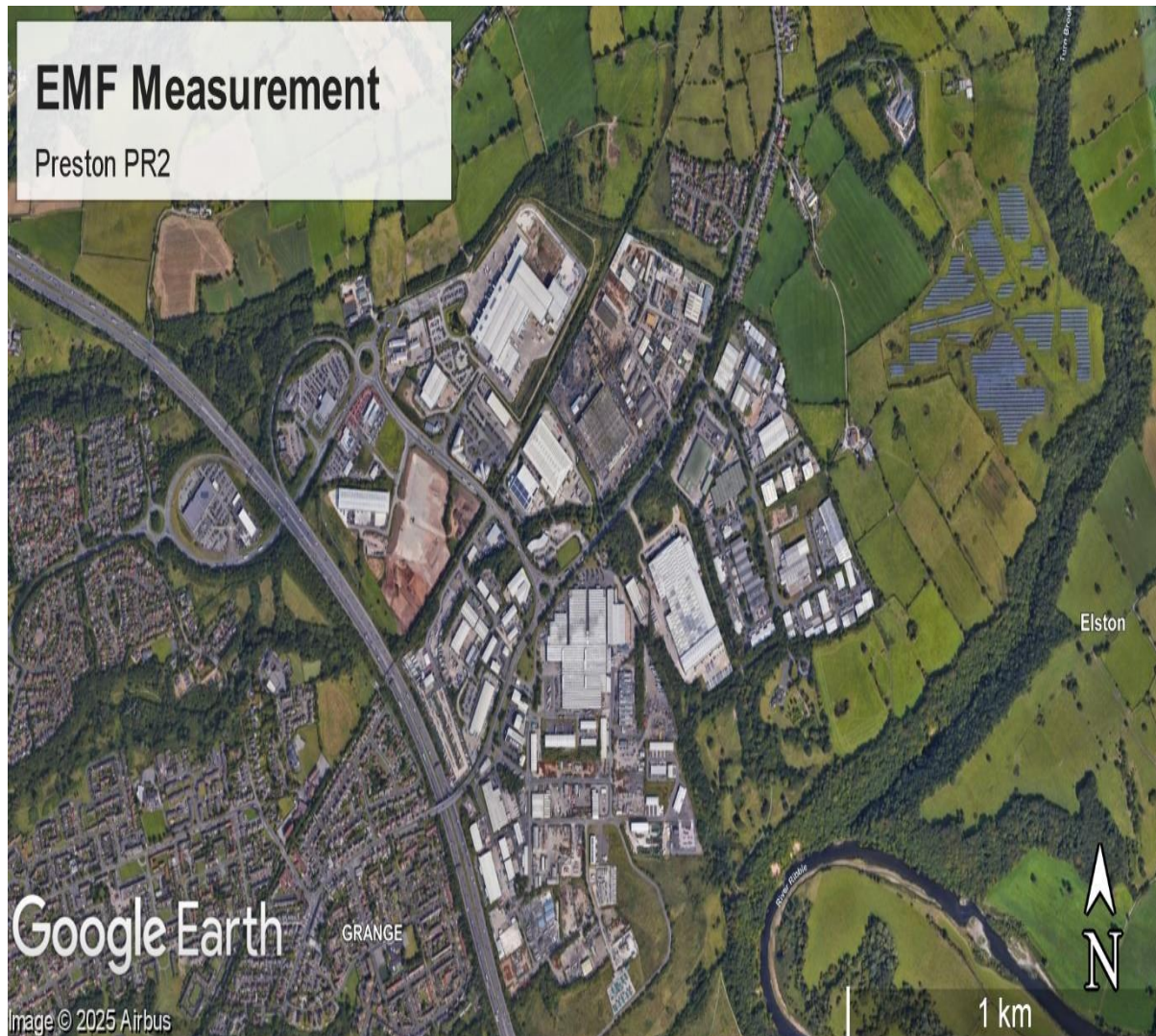
Mobile bands covered by this report

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:	07:41
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00975
174-230 MHz	0.01080
470-694 MHz	0.00876
700 MHz	0.00114
800 MHz	0.06152
900 MHz	0.04801
1400 MHz	0.00042
1800 MHz	0.00057
1900 MHz	0.00019
2100 MHz	0.00601
2300 MHz	0.00173
2600 MHz TDD	0.00035
2600 MHz FDD	0.00052
3.4 GHz	0.00244
3.8 GHz	0.00487
Others	0.14691
Total	0.30398

Location 2

Measurement time:	07:50
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01027
174-230 MHz	0.01149
470-694 MHz	0.00906
700 MHz	0.00120
800 MHz	0.04169
900 MHz	0.07586
1400 MHz	0.00044
1800 MHz	0.00061
1900 MHz	0.00021
2100 MHz	0.00436
2300 MHz	0.00367
2600 MHz TDD	0.00039
2600 MHz FDD	0.00119
3.4 GHz	0.00261
3.8 GHz	0.00530
Others	0.15708
Total	0.32545

Location 3

Measurement time:	07:59
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01088
174-230 MHz	0.01219
470-694 MHz	0.01080
700 MHz	0.00127
800 MHz	0.01973
900 MHz	0.04784
1400 MHz	0.00047
1800 MHz	0.00064
1900 MHz	0.00022
2100 MHz	0.00165
2300 MHz	0.00057
2600 MHz TDD	0.00040
2600 MHz FDD	0.00037
3.4 GHz	0.00271
3.8 GHz	0.00569
Others	0.16684
Total	0.28228

Location 4

Measurement time:	08:08
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01127
174-230 MHz	0.01268
470-694 MHz	0.01055
700 MHz	0.00130
800 MHz	0.00409
900 MHz	0.00582
1400 MHz	0.00049
1800 MHz	0.00067
1900 MHz	0.00023
2100 MHz	0.00346
2300 MHz	0.00113
2600 MHz TDD	0.00042
2600 MHz FDD	0.00051
3.4 GHz	0.00287
3.8 GHz	0.00597
Others	0.17319
Total	0.23465

Location 5

Measurement time:	08:18
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01165
174-230 MHz	0.01318
470-694 MHz	0.01012
700 MHz	0.00135
800 MHz	0.04959
900 MHz	0.11671
1400 MHz	0.00050
1800 MHz	0.00069
1900 MHz	0.00023
2100 MHz	0.01183
2300 MHz	0.00226
2600 MHz TDD	0.00045
2600 MHz FDD	0.00100
3.4 GHz	0.00305
3.8 GHz	0.00625
Others	0.18263
Total	0.41149

Location 6

Measurement time:	08:24
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01177
174-230 MHz	0.01348
470-694 MHz	0.01051
700 MHz	0.00140
800 MHz	0.09275
900 MHz	0.05547
1400 MHz	0.00052
1800 MHz	0.00071
1900 MHz	0.00024
2100 MHz	0.00755
2300 MHz	0.00177
2600 MHz TDD	0.00045
2600 MHz FDD	0.00067
3.4 GHz	0.00316
3.8 GHz	0.00647
Others	0.18652
Total	0.39345

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.