

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:	28/01/2025	Time Survey completed:	13:57
Survey address:	Salford M6		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072602	14/04/2024
Probe	Agos Aria-6000 Antenna	ARIA-6000	25/09/2023
Cabling	1.7m cable	1459	25/09/2023

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:	13:07
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01384
174-230 MHz	0.01519
470-694 MHz	0.01191
700 MHz	0.03432
800 MHz	0.00795
900 MHz	0.00085
1400 MHz	0.00216
1800 MHz	0.00236
1900 MHz	0.00027
2100 MHz	0.00333
2300 MHz	0.00057
2600 MHz TDD	0.00048
2600 MHz FDD	0.00020
3.4 GHz	0.00402
3.8 GHz	0.00477
Others	0.18712
Total	0.28933

Location 2

Measurement time:	13:15
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01417
174-230 MHz	0.01551
470-694 MHz	0.01206
700 MHz	0.01292
800 MHz	0.00294
900 MHz	0.00086
1400 MHz	0.00542
1800 MHz	0.00443
1900 MHz	0.00027
2100 MHz	0.00362
2300 MHz	0.00057
2600 MHz TDD	0.00049
2600 MHz FDD	0.00019
3.4 GHz	0.00323
3.8 GHz	0.00485
Others	0.19006
Total	0.27159

Location 3

Measurement time:	13:24
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01392
174-230 MHz	0.01553
470-694 MHz	0.01212
700 MHz	0.01157
800 MHz	0.00537
900 MHz	0.00090
1400 MHz	0.00596
1800 MHz	0.00774
1900 MHz	0.00027
2100 MHz	0.00913
2300 MHz	0.00058
2600 MHz TDD	0.00049
2600 MHz FDD	0.00021
3.4 GHz	0.00291
3.8 GHz	0.00486
Others	0.19031
Total	0.28188

Location 4

Measurement time:	13:32
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01402
174-230 MHz	0.01528
470-694 MHz	0.01197
700 MHz	0.00852
800 MHz	0.00217
900 MHz	0.00085
1400 MHz	0.00557
1800 MHz	0.00362
1900 MHz	0.00027
2100 MHz	0.00327
2300 MHz	0.00058
2600 MHz TDD	0.00048
2600 MHz FDD	0.00020
3.4 GHz	0.00324
3.8 GHz	0.00478
Others	0.19201
Total	0.26683

Location 5

Measurement time:	13:41
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01384
174-230 MHz	0.01520
470-694 MHz	0.01208
700 MHz	0.00978
800 MHz	0.00257
900 MHz	0.00085
1400 MHz	0.00946
1800 MHz	0.00759
1900 MHz	0.00027
2100 MHz	0.00918
2300 MHz	0.00056
2600 MHz TDD	0.00049
2600 MHz FDD	0.00026
3.4 GHz	0.00308
3.8 GHz	0.00476
Others	0.19633
Total	0.28629

Location 6

Measurement time:	13:51
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01375
174-230 MHz	0.01544
470-694 MHz	0.01193
700 MHz	0.02383
800 MHz	0.00897
900 MHz	0.00087
1400 MHz	0.00277
1800 MHz	0.00312
1900 MHz	0.00027
2100 MHz	0.00254
2300 MHz	0.00056
2600 MHz TDD	0.00048
2600 MHz FDD	0.00020
3.4 GHz	0.00419
3.8 GHz	0.00478
Others	0.18891
Total	0.28263

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.