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 floor[2] 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:	20/10/2025	**Time Survey completed:**	12:20
Survey address:	Leeds LS2		

Measurement equipment			**Serial number**	**Calibration Date**
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072594	04/11/2024	
Probe	Agos Aria-6000 Antenna	ARIA-6000-1156	08/07/2025	
Cabling	1.7m cable	1378	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 seven locations and are presented in the following pages of this report.

Location 1

Measurement time:	11:20
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00800
174-230 MHz	0.00951
470-694 MHz	0.00761
700 MHz	0.05406
800 MHz	0.01621
900 MHz	0.00226
1400 MHz	0.01083
1800 MHz	0.00458
1900 MHz	0.00017
2100 MHz	0.00603
2300 MHz	0.00093
2600 MHz TDD	0.00033
2600 MHz FDD	0.00042
3.4 GHz	0.00732
3.8 GHz	0.00442
Others	0.12625
Total	**0.25894**

Location 2

Measurement time:	11:28
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00844
174-230 MHz	0.00979
470-694 MHz	0.00788
700 MHz	0.02483
800 MHz	0.01214
900 MHz	0.01633
1400 MHz	0.04577
1800 MHz	0.01298
1900 MHz	0.00017
2100 MHz	0.01665
2300 MHz	0.00374
2600 MHz TDD	0.00042
2600 MHz FDD	0.00535
3.4 GHz	0.02504
3.8 GHz	0.00468
Others	0.13169
Total	**0.32590**

Location 3

Measurement time:	11:37
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00865
174-230 MHz	0.01024
470-694 MHz	0.00866
700 MHz	0.03394
800 MHz	0.01276
900 MHz	0.01266
1400 MHz	0.03366
1800 MHz	0.02987
1900 MHz	0.00018
2100 MHz	0.02197
2300 MHz	0.00240
2600 MHz TDD	0.00036
2600 MHz FDD	0.00087
3.4 GHz	0.01038
3.8 GHz	0.00478
Others	0.13615
Total	**0.32752**

Location 4

Measurement time:	11:45
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00892
174-230 MHz	0.01043
470-694 MHz	0.00826
700 MHz	0.11050
800 MHz	0.01272
900 MHz	0.00168
1400 MHz	0.04776
1800 MHz	0.01279
1900 MHz	0.00019
2100 MHz	0.01709
2300 MHz	0.00118
2600 MHz TDD	0.00036
2600 MHz FDD	0.00049
3.4 GHz	0.00976
3.8 GHz	0.00502
Others	0.13935
Total	**0.38650**

Location 5

Measurement time:	11:55
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00903
174-230 MHz	0.01063
470-694 MHz	0.00835
700 MHz	0.01342
800 MHz	0.00689
900 MHz	0.00243
1400 MHz	0.00846
1800 MHz	0.00497
1900 MHz	0.00019
2100 MHz	0.00592
2300 MHz	0.00115
2600 MHz TDD	0.00038
2600 MHz FDD	0.00088
3.4 GHz	0.02096
3.8 GHz	0.00523
Others	0.14246
Total	**0.24135**

Location 6

Measurement time:	12:04
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00928
174-230 MHz	0.01094
470-694 MHz	0.00853
700 MHz	0.02107
800 MHz	0.00735
900 MHz	0.00188
1400 MHz	0.01298
1800 MHz	0.00371
1900 MHz	0.00019
2100 MHz	0.00300
2300 MHz	0.00088
2600 MHz TDD	0.00038
2600 MHz FDD	0.00093
3.4 GHz	0.00581
3.8 GHz	0.00520
Others	0.14570
Total	**0.23782**

Location 7

Measurement time:	12:14
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00941
174-230 MHz	0.01101
470-694 MHz	0.00867
700 MHz	0.04832
800 MHz	0.01135
900 MHz	0.00182
1400 MHz	0.01589
1800 MHz	0.00634
1900 MHz	0.00020
2100 MHz	0.00762
2300 MHz	0.00100
2600 MHz TDD	0.00039
2600 MHz FDD	0.00053
3.4 GHz	0.00735
3.8 GHz	0.00532
Others	0.14815
Total	**0.28337**

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.