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:	26/11/2025	**Time Survey completed:**	11:50
Survey address:	Ulverston LA12		

Measurement equipment			**Serial number**	**Calibration Date**
Meter	Keysight Fieldfox N9915A Spectrum Analyser	US55240265	31/10/2025	
Probe	Agos Aria-6000 Antenna	AGOS-6000-1022	08/07/2025	
Cabling	1.7m cable	1405	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:	10:54
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00660
174-230 MHz	0.00580
470-694 MHz	0.00456
700 MHz	0.00063
800 MHz	0.05152
900 MHz	0.03703
1400 MHz	0.00141
1800 MHz	0.00172
1900 MHz	0.00008
2100 MHz	0.00149
2300 MHz	0.00018
2600 MHz TDD	0.00043
2600 MHz FDD	0.00019
3.4 GHz	0.00081
3.8 GHz	0.00160
Others	0.09028
Total	**0.20433**

Location 2

Measurement time:	11:01
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00675
174-230 MHz	0.00602
470-694 MHz	0.00477
700 MHz	0.00075
800 MHz	0.02869
900 MHz	0.01528
1400 MHz	0.00106
1800 MHz	0.00304
1900 MHz	0.00008
2100 MHz	0.00278
2300 MHz	0.00019
2600 MHz TDD	0.00080
2600 MHz FDD	0.00031
3.4 GHz	0.00100
3.8 GHz	0.00169
Others	0.07743
Total	**0.15064**

Location 3

Measurement time:	11:09
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00735
174-230 MHz	0.00660
470-694 MHz	0.00497
700 MHz	0.00069
800 MHz	0.01346
900 MHz	0.01159
1400 MHz	0.00154
1800 MHz	0.04621
1900 MHz	0.00008
2100 MHz	0.00320
2300 MHz	0.00019
2600 MHz TDD	0.00038
2600 MHz FDD	0.00023
3.4 GHz	0.00088
3.8 GHz	0.00181
Others	0.08027
Total	**0.17945**

Location 4

Measurement time:	11:17
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00714
174-230 MHz	0.00653
470-694 MHz	0.00511
700 MHz	0.00086
800 MHz	0.08615
900 MHz	0.04709
1400 MHz	0.00656
1800 MHz	0.00489
1900 MHz	0.00009
2100 MHz	0.00571
2300 MHz	0.00020
2600 MHz TDD	0.00064
2600 MHz FDD	0.00022
3.4 GHz	0.00081
3.8 GHz	0.00187
Others	0.08303
Total	**0.25689**

Location 5

Measurement time:	11:26
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00750
174-230 MHz	0.00683
470-694 MHz	0.00527
700 MHz	0.00104
800 MHz	0.09952
900 MHz	0.01386
1400 MHz	0.00121
1800 MHz	0.01827
1900 MHz	0.00009
2100 MHz	0.00290
2300 MHz	0.00021
2600 MHz TDD	0.00046
2600 MHz FDD	0.00018
3.4 GHz	0.00111
3.8 GHz	0.00197
Others	0.08549
Total	**0.24592**

Location 6

Measurement time:	11:35
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00775
174-230 MHz	0.00688
470-694 MHz	0.00540
700 MHz	0.00073
800 MHz	0.01168
900 MHz	0.00713
1400 MHz	0.00088
1800 MHz	0.00244
1900 MHz	0.00009
2100 MHz	0.00087
2300 MHz	0.00022
2600 MHz TDD	0.00059
2600 MHz FDD	0.00022
3.4 GHz	0.00137
3.8 GHz	0.00202
Others	0.10976
Total	**0.15803**

Location 7

Measurement time:	11:44
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00778
174-230 MHz	0.00704
470-694 MHz	0.00547
700 MHz	0.00077
800 MHz	0.11286
900 MHz	0.04609
1400 MHz	0.00132
1800 MHz	0.00118
1900 MHz	0.00009
2100 MHz	0.00152
2300 MHz	0.00022
2600 MHz TDD	0.00038
2600 MHz FDD	0.00021
3.4 GHz	0.00102
3.8 GHz	0.00211
Others	0.10047
Total	**0.28854**

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.