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:	20/06/2024	**Time Survey completed:**	13:46
Survey address:	London TW15		

Measurement equipment		**Serial number**	**Calibration Date**
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY58311497	23/05/2024
Probe	Agos Aria-6000 Antenna	ARIA-6000-1157	15/07/2024
Cabling	1.7m cable	1379	15/07/2024

[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 420 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:	12:59
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00706
174-230 MHz	0.00804
470-694 MHz	0.00642
700 MHz	0.00648
800 MHz	0.00718
900 MHz	0.00206
1400 MHz	0.00509
1800 MHz	0.01117
1900 MHz	0.00015
2100 MHz	0.00319
2300 MHz	0.00035
2600 MHz TDD	0.00027
2600 MHz FDD	0.00014
3.4 GHz	0.00233
3.8 GHz	0.00378
Others	0.10765
Total	**0.17135**

Location 2

Measurement time:	13:09
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00764
174-230 MHz	0.00879
470-694 MHz	0.00690
700 MHz	0.00823
800 MHz	0.01825
900 MHz	0.01999
1400 MHz	0.00255
1800 MHz	0.00530
1900 MHz	0.00016
2100 MHz	0.00230
2300 MHz	0.00041
2600 MHz TDD	0.00030
2600 MHz FDD	0.00016
3.4 GHz	0.00246
3.8 GHz	0.00412
Others	0.11742
Total	**0.20499**

Location 3

Measurement time:	13:21
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00796
174-230 MHz	0.00912
470-694 MHz	0.00719
700 MHz	0.00567
800 MHz	0.02200
900 MHz	0.02921
1400 MHz	0.00273
1800 MHz	0.00676
1900 MHz	0.00017
2100 MHz	0.00393
2300 MHz	0.00040
2600 MHz TDD	0.00032
2600 MHz FDD	0.00016
3.4 GHz	0.00303
3.8 GHz	0.00442
Others	0.12471
Total	**0.22778**

Location 4

Measurement time:	13:30
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00826
174-230 MHz	0.00946
470-694 MHz	0.00735
700 MHz	0.02025
800 MHz	0.01415
900 MHz	0.00414
1400 MHz	0.00399
1800 MHz	0.00475
1900 MHz	0.00018
2100 MHz	0.00263
2300 MHz	0.00047
2600 MHz TDD	0.00032
2600 MHz FDD	0.00017
3.4 GHz	0.00253
3.8 GHz	0.00457
Others	0.12667
Total	**0.20988**

Location 5

Measurement time:	13:40
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00849
174-230 MHz	0.00966
470-694 MHz	0.00753
700 MHz	0.00636
800 MHz	0.00585
900 MHz	0.00169
1400 MHz	0.00377
1800 MHz	0.00851
1900 MHz	0.00018
2100 MHz	0.00335
2300 MHz	0.00041
2600 MHz TDD	0.00033
2600 MHz FDD	0.00018
3.4 GHz	0.00291
3.8 GHz	0.00473
Others	0.13117
Total	**0.19513**

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.