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:	29/08/2024	**Time Survey completed:**	14:28
Survey address:	York YO26		

Measurement equipment		**Serial number**	**Calibration Date**
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072594	04/11/2024
Probe	Agos Aria-6000 Antenna	6000-1024	30/03/2021
Cabling	1.7m cable	1383	12/11/2023

[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 420 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:	13:39
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.02169
174-230 MHz	0.01137
470-694 MHz	0.00886
700 MHz	0.01767
800 MHz	0.01055
900 MHz	0.00061
1400 MHz	0.00361
1800 MHz	0.00527
1900 MHz	0.00020
2100 MHz	0.00206
2300 MHz	0.00047
2600 MHz TDD	0.00039
2600 MHz FDD	0.00051
3.4 GHz	0.00271
3.8 GHz	0.00536
Others	0.15206
Total	**0.24338**

Location 2

Measurement time:	13:47
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.03699
174-230 MHz	0.01173
470-694 MHz	0.00919
700 MHz	0.03379
800 MHz	0.02251
900 MHz	0.00064
1400 MHz	0.00327
1800 MHz	0.00342
1900 MHz	0.00021
2100 MHz	0.00184
2300 MHz	0.00050
2600 MHz TDD	0.00041
2600 MHz FDD	0.00048
3.4 GHz	0.00315
3.8 GHz	0.00558
Others	0.15801
Total	**0.29171**

Location 3

Measurement time:	13:56
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01123
174-230 MHz	0.01213
470-694 MHz	0.00940
700 MHz	0.02981
800 MHz	0.01087
900 MHz	0.00064
1400 MHz	0.00172
1800 MHz	0.00323
1900 MHz	0.00021
2100 MHz	0.00305
2300 MHz	0.00051
2600 MHz TDD	0.00042
2600 MHz FDD	0.00047
3.4 GHz	0.00308
3.8 GHz	0.00572
Others	0.16197
Total	**0.25447**

Location 4

Measurement time:	14:04
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.03556
174-230 MHz	0.01216
470-694 MHz	0.00942
700 MHz	0.04572
800 MHz	0.03008
900 MHz	0.00064
1400 MHz	0.00570
1800 MHz	0.00745
1900 MHz	0.00022
2100 MHz	0.00189
2300 MHz	0.00051
2600 MHz TDD	0.00043
2600 MHz FDD	0.00095
3.4 GHz	0.00276
3.8 GHz	0.00576
Others	0.16449
Total	**0.32375**

Location 5

Measurement time:	14:13
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01603
174-230 MHz	0.01215
470-694 MHz	0.00941
700 MHz	0.03142
800 MHz	0.00901
900 MHz	0.00066
1400 MHz	0.00365
1800 MHz	0.00230
1900 MHz	0.00022
2100 MHz	0.00167
2300 MHz	0.00052
2600 MHz TDD	0.00043
2600 MHz FDD	0.00043
3.4 GHz	0.00282
3.8 GHz	0.00581
Others	0.16394
Total	**0.26048**

Location 6

Measurement time:	14:22
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01768
174-230 MHz	0.01225
470-694 MHz	0.00951
700 MHz	0.02453
800 MHz	0.00830
900 MHz	0.00065
1400 MHz	0.00123
1800 MHz	0.00494
1900 MHz	0.00022
2100 MHz	0.00137
2300 MHz	0.00053
2600 MHz TDD	0.00043
2600 MHz FDD	0.00090
3.4 GHz	0.00274
3.8 GHz	0.00606
Others	0.16569
Total	**0.25705**

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.