

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:	31/01/2025	Time Survey completed:	13:23
Survey address:	Beverley HU17		

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:	12:29
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00786
174-230 MHz	0.00924
470-694 MHz	0.00737
700 MHz	0.00448
800 MHz	0.00833
900 MHz	0.00055
1400 MHz	0.00908
1800 MHz	0.00632
1900 MHz	0.00016
2100 MHz	0.00177
2300 MHz	0.00041
2600 MHz TDD	0.00031
2600 MHz FDD	0.00040
3.4 GHz	0.00185
3.8 GHz	0.00416
Others	0.12184
Total	0.18413

Location 2

Measurement time:	12:37
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00814
174-230 MHz	0.00949
470-694 MHz	0.00762
700 MHz	0.00183
800 MHz	0.00246
900 MHz	0.00055
1400 MHz	0.00255
1800 MHz	0.00608
1900 MHz	0.00017
2100 MHz	0.00138
2300 MHz	0.00041
2600 MHz TDD	0.00032
2600 MHz FDD	0.00047
3.4 GHz	0.00190
3.8 GHz	0.00437
Others	0.12651
Total	0.17425

Location 3

Measurement time:	12:47
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00826
174-230 MHz	0.00979
470-694 MHz	0.00776
700 MHz	0.00147
800 MHz	0.00184
900 MHz	0.00076
1400 MHz	0.00146
1800 MHz	0.00288
1900 MHz	0.00017
2100 MHz	0.00127
2300 MHz	0.00050
2600 MHz TDD	0.00033
2600 MHz FDD	0.00019
3.4 GHz	0.00195
3.8 GHz	0.00449
Others	0.12954
Total	0.17266

Location 4

Measurement time:	12:56
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00839
174-230 MHz	0.00991
470-694 MHz	0.00784
700 MHz	0.00337
800 MHz	0.00661
900 MHz	0.00061
1400 MHz	0.00341
1800 MHz	0.00355
1900 MHz	0.00018
2100 MHz	0.00172
2300 MHz	0.00047
2600 MHz TDD	0.00034
2600 MHz FDD	0.00019
3.4 GHz	0.00207
3.8 GHz	0.00469
Others	0.13405
Total	0.18741

Location 5

Measurement time:	13:05
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00855
174-230 MHz	0.01014
470-694 MHz	0.00797
700 MHz	0.00328
800 MHz	0.00583
900 MHz	0.00058
1400 MHz	0.00335
1800 MHz	0.00495
1900 MHz	0.00018
2100 MHz	0.00113
2300 MHz	0.00044
2600 MHz TDD	0.00034
2600 MHz FDD	0.00019
3.4 GHz	0.00203
3.8 GHz	0.00468
Others	0.13551
Total	0.18916

Location 6

Measurement time:	13:17
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00864
174-230 MHz	0.01007
470-694 MHz	0.00796
700 MHz	0.00214
800 MHz	0.00308
900 MHz	0.00059
1400 MHz	0.00283
1800 MHz	0.00471
1900 MHz	0.00018
2100 MHz	0.00168
2300 MHz	0.00043
2600 MHz TDD	0.00034
2600 MHz FDD	0.00041
3.4 GHz	0.00205
3.8 GHz	0.00467
Others	0.13430
Total	0.18407

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.