

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:	16/04/2025	Time Survey completed:	15:40
Survey address:	Colne, BB8		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072590	17/04/2024
Probe	Agos Aria-6000 Antenna	6000-1022	22/01/2021
Cabling	1.7m cable	1462	18/01/2024

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 six locations and are presented in the following pages of this report.



Location 1

Measurement time:	14:54
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00723
174-230 MHz	0.00793
470-694 MHz	0.00616
700 MHz	0.00953
800 MHz	0.00354
900 MHz	0.00049
1400 MHz	0.00029
1800 MHz	0.00551
1900 MHz	0.00014
2100 MHz	0.00430
2300 MHz	0.00030
2600 MHz TDD	0.00023
2600 MHz FDD	0.00014
3.4 GHz	0.00205
3.8 GHz	0.00315
Others	0.09773
Total	0.14873

Location 2

Measurement time:	15:01
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00855
174-230 MHz	0.00852
470-694 MHz	0.00642
700 MHz	0.04057
800 MHz	0.00833
900 MHz	0.00046
1400 MHz	0.00030
1800 MHz	0.02613
1900 MHz	0.00015
2100 MHz	0.01101
2300 MHz	0.00032
2600 MHz TDD	0.00025
2600 MHz FDD	0.00013
3.4 GHz	0.00185
3.8 GHz	0.00334
Others	0.10363
Total	0.21996

Location 3

Measurement time:	15:10
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00804
174-230 MHz	0.00868
470-694 MHz	0.00661
700 MHz	0.01317
800 MHz	0.00331
900 MHz	0.00073
1400 MHz	0.00031
1800 MHz	0.00556
1900 MHz	0.00016
2100 MHz	0.00368
2300 MHz	0.00033
2600 MHz TDD	0.00026
2600 MHz FDD	0.00014
3.4 GHz	0.00190
3.8 GHz	0.00348
Others	0.10705
Total	0.16340

Location 4

Measurement time:	15:17
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00888
174-230 MHz	0.00889
470-694 MHz	0.00682
700 MHz	0.03468
800 MHz	0.01098
900 MHz	0.00105
1400 MHz	0.00035
1800 MHz	0.00505
1900 MHz	0.00016
2100 MHz	0.00426
2300 MHz	0.00034
2600 MHz TDD	0.00027
2600 MHz FDD	0.00020
3.4 GHz	0.00209
3.8 GHz	0.00359
Others	0.11032
Total	0.19791

Location 5

Measurement time:	15:26
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00832
174-230 MHz	0.00917
470-694 MHz	0.00691
700 MHz	0.01424
800 MHz	0.00283
900 MHz	0.00054
1400 MHz	0.00033
1800 MHz	0.00451
1900 MHz	0.00016
2100 MHz	0.00278
2300 MHz	0.00034
2600 MHz TDD	0.00027
2600 MHz FDD	0.00015
3.4 GHz	0.00269
3.8 GHz	0.00372
Others	0.11290
Total	0.16987

Location 6

Measurement time:	15:34
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00815
174-230 MHz	0.00935
470-694 MHz	0.00704
700 MHz	0.00553
800 MHz	0.00217
900 MHz	0.00057
1400 MHz	0.00033
1800 MHz	0.00377
1900 MHz	0.00017
2100 MHz	0.00410
2300 MHz	0.00035
2600 MHz TDD	0.00028
2600 MHz FDD	0.00016
3.4 GHz	0.00247
3.8 GHz	0.00379
Others	0.11553
Total	0.16375

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.