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:	17/11/2026	**Time Survey completed:**	12:40
Survey address:	Theydon Bois CM16		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY58311497	18/08/2026
Probe	Agos Aria-6000 Antenna	ARIA-6000-1157	08/07/2025
Cabling	1.7m cable	2068	15/11/2024

[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 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:	11:38
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00534
174-230 MHz	0.00618
470-694 MHz	0.00508
700 MHz	0.00066
800 MHz	0.01393
900 MHz	0.00404
1400 MHz	0.00024
1800 MHz	0.00244
1900 MHz	0.00011
2100 MHz	0.01542
2300 MHz	0.00711
2600 MHz TDD	0.00023
2600 MHz FDD	0.00101
3.4 GHz	0.00111
3.8 GHz	0.00275
Others	0.08217
Total	**0.14782**

Location 2

Measurement time:	11:44
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00570
174-230 MHz	0.00650
470-694 MHz	0.00531
700 MHz	0.00070
800 MHz	0.02843
900 MHz	0.02631
1400 MHz	0.00025
1800 MHz	0.00189
1900 MHz	0.00012
2100 MHz	0.01228
2300 MHz	0.00202
2600 MHz TDD	0.00025
2600 MHz FDD	0.00106
3.4 GHz	0.00119
3.8 GHz	0.00294
Others	0.08692
Total	**0.18186**

Location 3

Measurement time:	11:53
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00603
174-230 MHz	0.00691
470-694 MHz	0.00563
700 MHz	0.00072
800 MHz	0.02412
900 MHz	0.00593
1400 MHz	0.00026
1800 MHz	0.00133
1900 MHz	0.00013
2100 MHz	0.01129
2300 MHz	0.00458
2600 MHz TDD	0.00027
2600 MHz FDD	0.00172
3.4 GHz	0.00128
3.8 GHz	0.00316
Others	0.09273
Total	**0.16610**

Location 4

Measurement time:	12:05
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00648
174-230 MHz	0.00738
470-694 MHz	0.00595
700 MHz	0.00077
800 MHz	0.01085
900 MHz	0.00885
1400 MHz	0.00028
1800 MHz	0.00069
1900 MHz	0.00014
2100 MHz	0.00464
2300 MHz	0.00252
2600 MHz TDD	0.00029
2600 MHz FDD	0.00113
3.4 GHz	0.00139
3.8 GHz	0.00344
Others	0.09942
Total	**0.15422**

Location 5

Measurement time:	12:16
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00680
174-230 MHz	0.00760
470-694 MHz	0.00613
700 MHz	0.00079
800 MHz	0.06196
900 MHz	0.02983
1400 MHz	0.00029
1800 MHz	0.00231
1900 MHz	0.00014
2100 MHz	0.01878
2300 MHz	0.00715
2600 MHz TDD	0.00048
2600 MHz FDD	0.00902
3.4 GHz	0.00145
3.8 GHz	0.00359
Others	0.10330
Total	**0.25964**

Location 6

Measurement time:	12:24
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00682
174-230 MHz	0.00781
470-694 MHz	0.00628
700 MHz	0.00081
800 MHz	0.01063
900 MHz	0.00537
1400 MHz	0.00030
1800 MHz	0.00060
1900 MHz	0.00015
2100 MHz	0.00132
2300 MHz	0.00107
2600 MHz TDD	0.00028
2600 MHz FDD	0.00023
3.4 GHz	0.00150
3.8 GHz	0.00371
Others	0.10609
Total	**0.15297**

Location 7

Measurement time:	12:34
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00722
174-230 MHz	0.00829
470-694 MHz	0.00655
700 MHz	0.00088
800 MHz	0.03886
900 MHz	0.00911
1400 MHz	0.00032
1800 MHz	0.00196
1900 MHz	0.00015
2100 MHz	0.01367
2300 MHz	0.00546
2600 MHz TDD	0.00033
2600 MHz FDD	0.00169
3.4 GHz	0.00161
3.8 GHz	0.00399
Others	0.11270
Total	**0.21278**

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.