

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:	26/11/2024	Time Survey completed:	12:08
Survey address:	Worcester Park KT4		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	US55240262	24/01/2024
Probe	Agos Aria-6000 Antenna	1313	28/11/2022
Cabling	1.7m cable	1111	28/11/2022

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

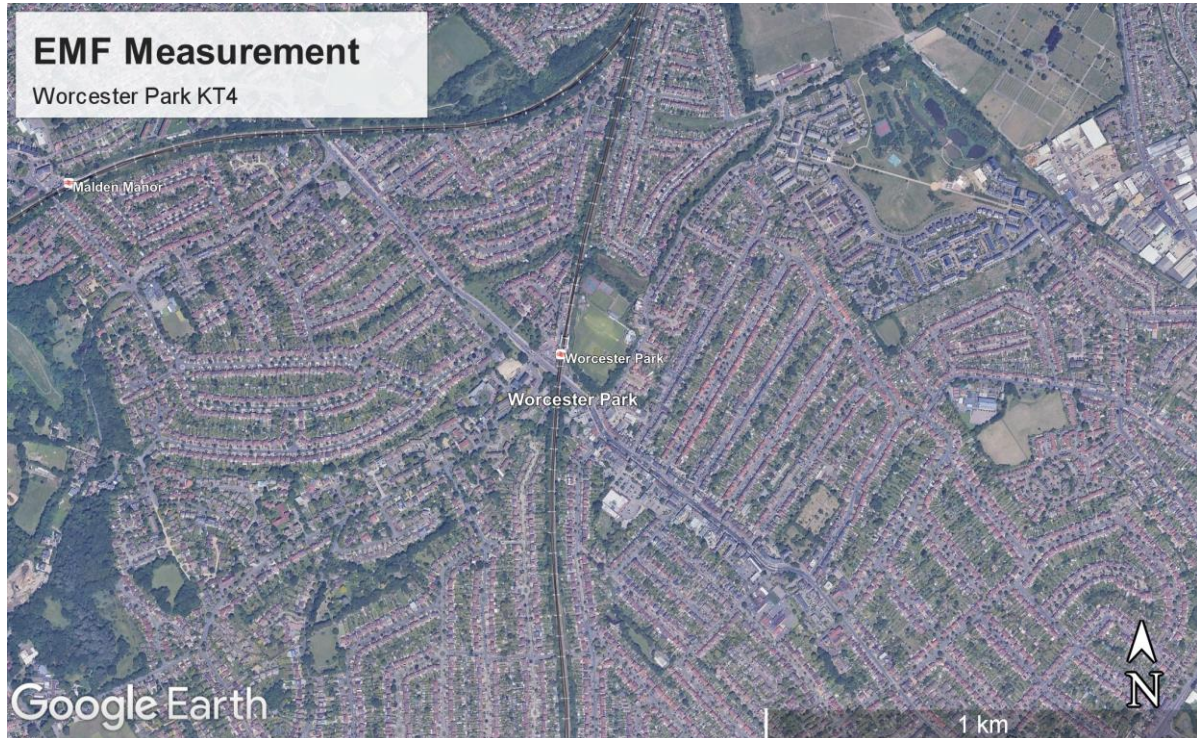
Mobile bands covered by this report

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:	11:15
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00627
174-230 MHz	0.00557
470-694 MHz	0.00461
700 MHz	0.00479
800 MHz	0.01682
900 MHz	0.01409
1400 MHz	0.00019
1800 MHz	0.00521
1900 MHz	0.00008
2100 MHz	0.00244
2300 MHz	0.00018
2600 MHz TDD	0.00022
2600 MHz FDD	0.00299
3.4 GHz	0.00064
3.8 GHz	0.00142
Others	0.06817
Total	0.13371

Location 2

Measurement time:	11:23
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00637
174-230 MHz	0.00566
470-694 MHz	0.00480
700 MHz	0.00295
800 MHz	0.00853
900 MHz	0.01295
1400 MHz	0.00019
1800 MHz	0.00325
1900 MHz	0.00008
2100 MHz	0.00190
2300 MHz	0.00019
2600 MHz TDD	0.00022
2600 MHz FDD	0.00171
3.4 GHz	0.00065
3.8 GHz	0.00147
Others	0.07015
Total	0.12106

Location 3

Measurement time:	11:38
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00663
174-230 MHz	0.00588
470-694 MHz	0.00473
700 MHz	0.00157
800 MHz	0.00669
900 MHz	0.03422
1400 MHz	0.00020
1800 MHz	0.00129
1900 MHz	0.00008
2100 MHz	0.00125
2300 MHz	0.00020
2600 MHz TDD	0.00020
2600 MHz FDD	0.00057
3.4 GHz	0.00065
3.8 GHz	0.00152
Others	0.07352
Total	0.13919

Location 4

Measurement time:	11:46
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00640
174-230 MHz	0.00584
470-694 MHz	0.00472
700 MHz	0.00255
800 MHz	0.00897
900 MHz	0.00458
1400 MHz	0.00020
1800 MHz	0.00777
1900 MHz	0.00008
2100 MHz	0.00078
2300 MHz	0.00020
2600 MHz TDD	0.00019
2600 MHz FDD	0.00240
3.4 GHz	0.00068
3.8 GHz	0.00154
Others	0.07232
Total	0.11924

Location 5

Measurement time:	12:02
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00667
174-230 MHz	0.00609
470-694 MHz	0.00506
700 MHz	0.00338
800 MHz	0.02383
900 MHz	0.02770
1400 MHz	0.00021
1800 MHz	0.00674
1900 MHz	0.00009
2100 MHz	0.00231
2300 MHz	0.00020
2600 MHz TDD	0.00026
2600 MHz FDD	0.00376
3.4 GHz	0.00071
3.8 GHz	0.00158
Others	0.07583
Total	0.16441

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.