

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:	30/09/2025	Time Survey completed:	15:43
Survey address:	Burnley BB11		

Measurement equipment			Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072593	06/08/2025	
Probe	Agos Aria-6000 Antenna	AGOS-6000-1022	08/07/2025	
Cabling	1.7m cable	1462	08/07/2025	

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



Location 1

Measurement time:	14:55
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01023
174-230 MHz	0.01131
470-694 MHz	0.00875
700 MHz	0.00210
800 MHz	0.00724
900 MHz	0.00154
1400 MHz	0.00046
1800 MHz	0.00150
1900 MHz	0.00021
2100 MHz	0.00095
2300 MHz	0.00045
2600 MHz TDD	0.00043
2600 MHz FDD	0.00048
3.4 GHz	0.00208
3.8 GHz	0.00479
Others	0.14612
Total	0.19864

Location 2

Measurement time:	15:04
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01266
174-230 MHz	0.01213
470-694 MHz	0.00936
700 MHz	0.00347
800 MHz	0.01117
900 MHz	0.00156
1400 MHz	0.00052
1800 MHz	0.00431
1900 MHz	0.00023
2100 MHz	0.00101
2300 MHz	0.00052
2600 MHz TDD	0.00047
2600 MHz FDD	0.00027
3.4 GHz	0.00232
3.8 GHz	0.00529
Others	0.15882
Total	0.22410

Location 3

Measurement time:	15:16
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01137
174-230 MHz	0.01289
470-694 MHz	0.00984
700 MHz	0.00211
800 MHz	0.00312
900 MHz	0.00074
1400 MHz	0.00053
1800 MHz	0.00107
1900 MHz	0.00025
2100 MHz	0.00078
2300 MHz	0.00054
2600 MHz TDD	0.00050
2600 MHz FDD	0.00032
3.4 GHz	0.00247
3.8 GHz	0.00569
Others	0.16852
Total	0.22074

Location 4

Measurement time:	15:23
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01155
174-230 MHz	0.01314
470-694 MHz	0.00996
700 MHz	0.00256
800 MHz	0.01576
900 MHz	0.00102
1400 MHz	0.00062
1800 MHz	0.00176
1900 MHz	0.00025
2100 MHz	0.00232
2300 MHz	0.00053
2600 MHz TDD	0.00050
2600 MHz FDD	0.00089
3.4 GHz	0.00253
3.8 GHz	0.00578
Others	0.17121
Total	0.24039

Location 5

Measurement time:	15:31
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01241
174-230 MHz	0.01330
470-694 MHz	0.01012
700 MHz	0.00419
800 MHz	0.01110
900 MHz	0.00078
1400 MHz	0.00054
1800 MHz	0.00200
1900 MHz	0.00025
2100 MHz	0.00084
2300 MHz	0.00055
2600 MHz TDD	0.00052
2600 MHz FDD	0.00038
3.4 GHz	0.00256
3.8 GHz	0.00591
Others	0.17414
Total	0.23961

Location 6

Measurement time:	15:37
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01238
174-230 MHz	0.01355
470-694 MHz	0.01022
700 MHz	0.00237
800 MHz	0.00447
900 MHz	0.00150
1400 MHz	0.00055
1800 MHz	0.00242
1900 MHz	0.00026
2100 MHz	0.00102
2300 MHz	0.00055
2600 MHz TDD	0.00052
2600 MHz FDD	0.00049
3.4 GHz	0.00261
3.8 GHz	0.00602
Others	0.17728
Total	0.23623

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.