

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:	27/04/2026	Time Survey completed:	13:53
Survey address:	Thurston IP31		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072591	11/12/2025
Probe	Agos Aria-6000 Antenna	AGOS-6000-1023	08/07/2025
Cabling	1.7m cable	1188	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 five locations and are presented in the following pages of this report.



Location 1

Measurement time:	12:54
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01892
174-230 MHz	0.02071
470-694 MHz	0.01598
700 MHz	0.02816
800 MHz	0.02625
900 MHz	0.04528
1400 MHz	0.00557
1800 MHz	0.00616
1900 MHz	0.00041
2100 MHz	0.00384
2300 MHz	0.00134
2600 MHz TDD	0.00071
2600 MHz FDD	0.00031
3.4 GHz	0.00348
3.8 GHz	0.00809
Others	0.26640
Total	0.45161

Location 2

Measurement time:	13:03
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01924
174-230 MHz	0.02124
470-694 MHz	0.01639
700 MHz	0.05466
800 MHz	0.01747
900 MHz	0.04648
1400 MHz	0.00210
1800 MHz	0.00245
1900 MHz	0.00042
2100 MHz	0.00415
2300 MHz	0.00167
2600 MHz TDD	0.00073
2600 MHz FDD	0.00032
3.4 GHz	0.00358
3.8 GHz	0.00836
Others	0.27470
Total	0.47396

Location 3

Measurement time:	13:13
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01994
174-230 MHz	0.02168
470-694 MHz	0.01660
700 MHz	0.02246
800 MHz	0.00938
900 MHz	0.00660
1400 MHz	0.00346
1800 MHz	0.00363
1900 MHz	0.00042
2100 MHz	0.00242
2300 MHz	0.00097
2600 MHz TDD	0.00074
2600 MHz FDD	0.00033
3.4 GHz	0.00363
3.8 GHz	0.00847
Others	0.27607
Total	0.39678

Location 4

Measurement time:	13:24
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01916
174-230 MHz	0.02127
470-694 MHz	0.01639
700 MHz	0.00781
800 MHz	0.00360
900 MHz	0.01871
1400 MHz	0.00139
1800 MHz	0.00165
1900 MHz	0.00042
2100 MHz	0.00338
2300 MHz	0.00102
2600 MHz TDD	0.00074
2600 MHz FDD	0.00032
3.4 GHz	0.00360
3.8 GHz	0.00835
Others	0.27350
Total	0.38129

Location 5

Measurement time:	13:47
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.02012
174-230 MHz	0.02216
470-694 MHz	0.01686
700 MHz	0.07204
800 MHz	0.03162
900 MHz	0.03017
1400 MHz	0.00215
1800 MHz	0.00575
1900 MHz	0.00043
2100 MHz	0.00474
2300 MHz	0.00121
2600 MHz TDD	0.00076
2600 MHz FDD	0.00033
3.4 GHz	0.00375
3.8 GHz	0.00871
Others	0.28426
Total	0.50507

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.