

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:	28/04/2026	Time Survey completed:	13:36
Survey address:	Newtownards BT23		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY57271743	22/12/2025
Probe	Agos Aria-6000 Antenna	1112	08/07/2025
Cabling	1.7m cable	1314	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:	12:39
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.00976
174-230 MHz	0.01123
470-694 MHz	0.00911
700 MHz	0.00125
800 MHz	0.00074
900 MHz	0.00065
1400 MHz	0.00044
1800 MHz	0.00070
1900 MHz	0.00019
2100 MHz	0.00068
2300 MHz	0.00042
2600 MHz TDD	0.00031
2600 MHz FDD	0.00018
3.4 GHz	0.00153
3.8 GHz	0.00369
Others	0.13582
Total	0.17669

Location 2

Measurement time:	12:47
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01023
174-230 MHz	0.01190
470-694 MHz	0.00945
700 MHz	0.00129
800 MHz	0.00069
900 MHz	0.00066
1400 MHz	0.00045
1800 MHz	0.00089
1900 MHz	0.00020
2100 MHz	0.00093
2300 MHz	0.00044
2600 MHz TDD	0.00033
2600 MHz FDD	0.00038
3.4 GHz	0.00166
3.8 GHz	0.00390
Others	0.14273
Total	0.18615

Location 3

Measurement time:	12:58
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01077
174-230 MHz	0.01228
470-694 MHz	0.00978
700 MHz	0.00140
800 MHz	0.00073
900 MHz	0.00069
1400 MHz	0.00047
1800 MHz	0.00090
1900 MHz	0.00021
2100 MHz	0.00104
2300 MHz	0.00046
2600 MHz TDD	0.00038
2600 MHz FDD	0.00051
3.4 GHz	0.00171
3.8 GHz	0.00412
Others	0.14829
Total	0.19374

Location 4

Measurement time:	13:07
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01087
174-230 MHz	0.01258
470-694 MHz	0.01000
700 MHz	0.00138
800 MHz	0.00076
900 MHz	0.00070
1400 MHz	0.00048
1800 MHz	0.00182
1900 MHz	0.00021
2100 MHz	0.00093
2300 MHz	0.00046
2600 MHz TDD	0.00036
2600 MHz FDD	0.00050
3.4 GHz	0.00177
3.8 GHz	0.00425
Others	0.15164
Total	0.19871

Location 5

Measurement time:	13:16
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01106
174-230 MHz	0.01264
470-694 MHz	0.01002
700 MHz	0.00175
800 MHz	0.00089
900 MHz	0.00104
1400 MHz	0.00048
1800 MHz	0.00801
1900 MHz	0.00021
2100 MHz	0.00205
2300 MHz	0.00046
2600 MHz TDD	0.00041
2600 MHz FDD	0.00087
3.4 GHz	0.00182
3.8 GHz	0.00425
Others	0.15217
Total	0.20814

Location 6

Measurement time:	13:30
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.01116
174-230 MHz	0.01279
470-694 MHz	0.01005
700 MHz	0.00148
800 MHz	0.00099
900 MHz	0.00091
1400 MHz	0.00048
1800 MHz	0.00171
1900 MHz	0.00021
2100 MHz	0.00174
2300 MHz	0.00047
2600 MHz TDD	0.00037
2600 MHz FDD	0.00053
3.4 GHz	0.00184
3.8 GHz	0.00431
Others	0.15314
Total	0.20220

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.