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:	03/07/2026	**Time Survey completed:**	11:12
Survey address:	Durham DH1		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072594	25/11/2025
Probe	Agos Aria-6000 Antenna	ARIA-6000-1156	08/07/2025
Cabling	1.7m cable	2063	18/02/2025

[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:	10:21
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01042
174-230 MHz	0.01215
470-694 MHz	0.00946
700 MHz	0.02636
800 MHz	0.05367
900 MHz	0.03008
1400 MHz	0.00953
1800 MHz	0.01744
1900 MHz	0.00022
2100 MHz	0.00836
2300 MHz	0.00159
2600 MHz TDD	0.00043
2600 MHz FDD	0.00324
3.4 GHz	0.00351
3.8 GHz	0.00614
Others	0.16527
Total	**0.35788**

Location 2

Measurement time:	10:29
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01060
174-230 MHz	0.01217
470-694 MHz	0.00946
700 MHz	0.01572
800 MHz	0.04142
900 MHz	0.02993
1400 MHz	0.01428
1800 MHz	0.01148
1900 MHz	0.00022
2100 MHz	0.00810
2300 MHz	0.00140
2600 MHz TDD	0.00043
2600 MHz FDD	0.00261
3.4 GHz	0.00380
3.8 GHz	0.00613
Others	0.16594
Total	**0.33368**

Location 3

Measurement time:	10:38
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01044
174-230 MHz	0.01218
470-694 MHz	0.00945
700 MHz	0.01871
800 MHz	0.03082
900 MHz	0.06420
1400 MHz	0.01335
1800 MHz	0.00822
1900 MHz	0.00022
2100 MHz	0.03435
2300 MHz	0.00882
2600 MHz TDD	0.00043
2600 MHz FDD	0.00169
3.4 GHz	0.00497
3.8 GHz	0.00642
Others	0.16659
Total	**0.39085**

Location 4

Measurement time:	10:47
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01045
174-230 MHz	0.01225
470-694 MHz	0.00953
700 MHz	0.03358
800 MHz	0.26154
900 MHz	0.71374
1400 MHz	0.01176
1800 MHz	0.02355
1900 MHz	0.00022
2100 MHz	0.08926
2300 MHz	0.01923
2600 MHz TDD	0.00043
2600 MHz FDD	0.00164
3.4 GHz	0.00384
3.8 GHz	0.00623
Others	0.17657
Total	**1.37383**

Location 5

Measurement time:	10:58
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01046
174-230 MHz	0.01236
470-694 MHz	0.00960
700 MHz	0.04285
800 MHz	0.03432
900 MHz	0.02569
1400 MHz	0.00283
1800 MHz	0.00609
1900 MHz	0.00022
2100 MHz	0.01023
2300 MHz	0.00351
2600 MHz TDD	0.00044
2600 MHz FDD	0.00110
3.4 GHz	0.00387
3.8 GHz	0.00629
Others	0.16836
Total	**0.33821**

Location 6

Measurement time:	11:06
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01065
174-230 MHz	0.01244
470-694 MHz	0.00965
700 MHz	0.02975
800 MHz	0.04752
900 MHz	0.03934
1400 MHz	0.01312
1800 MHz	0.02915
1900 MHz	0.00022
2100 MHz	0.01082
2300 MHz	0.00219
2600 MHz TDD	0.00044
2600 MHz FDD	0.00388
3.4 GHz	0.00362
3.8 GHz	0.00639
Others	0.16986
Total	**0.38905**

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.