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:	18/05/2026	**Time Survey completed:**	15:22
Survey address:	Hartlepool TS25		

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	1348	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:	14:32
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00849
174-230 MHz	0.01006
470-694 MHz	0.00793
700 MHz	0.00106
800 MHz	0.03021
900 MHz	0.01377
1400 MHz	0.00038
1800 MHz	0.03675
1900 MHz	0.00018
2100 MHz	0.00149
2300 MHz	0.00064
2600 MHz TDD	0.00034
2600 MHz FDD	0.00018
3.4 GHz	0.00196
3.8 GHz	0.00461
Others	0.13397
Total	**0.25201**

Location 2

Measurement time:	14:49
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00852
174-230 MHz	0.01014
470-694 MHz	0.00801
700 MHz	0.00107
800 MHz	0.01549
900 MHz	0.01872
1400 MHz	0.00040
1800 MHz	0.03498
1900 MHz	0.00018
2100 MHz	0.00230
2300 MHz	0.00136
2600 MHz TDD	0.00035
2600 MHz FDD	0.00018
3.4 GHz	0.00200
3.8 GHz	0.00467
Others	0.13524
Total	**0.24362**

Location 3

Measurement time:	14:55
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00890
174-230 MHz	0.01053
470-694 MHz	0.00827
700 MHz	0.00110
800 MHz	0.02745
900 MHz	0.03695
1400 MHz	0.00040
1800 MHz	0.02016
1900 MHz	0.00019
2100 MHz	0.00349
2300 MHz	0.00148
2600 MHz TDD	0.00036
2600 MHz FDD	0.00019
3.4 GHz	0.00208
3.8 GHz	0.00488
Others	0.14076
Total	**0.26718**

Location 4

Measurement time:	15:03
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00930
174-230 MHz	0.01093
470-694 MHz	0.00856
700 MHz	0.00114
800 MHz	0.06033
900 MHz	0.02021
1400 MHz	0.00042
1800 MHz	0.04471
1900 MHz	0.00020
2100 MHz	0.00366
2300 MHz	0.00075
2600 MHz TDD	0.00038
2600 MHz FDD	0.00020
3.4 GHz	0.00219
3.8 GHz	0.00514
Others	0.14744
Total	**0.31553**

Location 5

Measurement time:	15:10
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00972
174-230 MHz	0.01145
470-694 MHz	0.00891
700 MHz	0.00117
800 MHz	0.05466
900 MHz	0.03669
1400 MHz	0.00044
1800 MHz	0.01580
1900 MHz	0.00020
2100 MHz	0.00256
2300 MHz	0.00082
2600 MHz TDD	0.00040
2600 MHz FDD	0.00021
3.4 GHz	0.00231
3.8 GHz	0.00541
Others	0.15496
Total	**0.30571**

Location 6

Measurement time:	15:16
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00988
174-230 MHz	0.01174
470-694 MHz	0.00909
700 MHz	0.00120
800 MHz	0.02964
900 MHz	0.01226
1400 MHz	0.00045
1800 MHz	0.06245
1900 MHz	0.00021
2100 MHz	0.00249
2300 MHz	0.00063
2600 MHz TDD	0.00041
2600 MHz FDD	0.00021
3.4 GHz	0.00238
3.8 GHz	0.00557
Others	0.15920
Total	**0.30781**

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.