

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:	24/03/2026	Time Survey completed:	12:17
Survey address:	Swadlincote DE11		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072608	19/02/2026
Probe	Agos Aria-6000 Antenna	1158	08/07/2025
Cabling	1.7m cable	1458	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:	10:53
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.02318
174-230 MHz	0.01523
470-694 MHz	0.00972
700 MHz	0.00301
800 MHz	0.00269
900 MHz	0.00097
1400 MHz	0.00114
1800 MHz	0.00134
1900 MHz	0.00025
2100 MHz	0.00077
2300 MHz	0.00049
2600 MHz TDD	0.00042
2600 MHz FDD	0.00023
3.4 GHz	0.00205
3.8 GHz	0.00437
Others	0.22662
Total	0.29248

Location 2

Measurement time:	11:20
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.02634
174-230 MHz	0.01730
470-694 MHz	0.01103
700 MHz	0.00136
800 MHz	0.00074
900 MHz	0.00063
1400 MHz	0.00057
1800 MHz	0.00091
1900 MHz	0.00029
2100 MHz	0.00073
2300 MHz	0.00050
2600 MHz TDD	0.00048
2600 MHz FDD	0.00020
3.4 GHz	0.00220
3.8 GHz	0.00521
Others	0.26160
Total	0.33009

Location 3

Measurement time:	11:42
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.02806
174-230 MHz	0.01814
470-694 MHz	0.01149
700 MHz	0.00179
800 MHz	0.00124
900 MHz	0.00077
1400 MHz	0.00146
1800 MHz	0.00137
1900 MHz	0.00030
2100 MHz	0.00087
2300 MHz	0.00057
2600 MHz TDD	0.00051
2600 MHz FDD	0.00021
3.4 GHz	0.00241
3.8 GHz	0.00554
Others	0.27397
Total	0.34870

Location 4

Measurement time:	11:59
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.02777
174-230 MHz	0.01819
470-694 MHz	0.01150
700 MHz	0.02166
800 MHz	0.01685
900 MHz	0.00208
1400 MHz	0.04881
1800 MHz	0.00278
1900 MHz	0.00030
2100 MHz	0.00299
2300 MHz	0.00069
2600 MHz TDD	0.00051
2600 MHz FDD	0.00075
3.4 GHz	0.00324
3.8 GHz	0.00574
Others	0.27653
Total	0.44040

Location 5

Measurement time:	12:11
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.02892
174-230 MHz	0.01868
470-694 MHz	0.01180
700 MHz	0.00270
800 MHz	0.00267
900 MHz	0.00146
1400 MHz	0.00149
1800 MHz	0.00142
1900 MHz	0.00031
2100 MHz	0.00093
2300 MHz	0.00059
2600 MHz TDD	0.00053
2600 MHz FDD	0.00029
3.4 GHz	0.00253
3.8 GHz	0.00577
Others	0.28491
Total	0.36500

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.