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:	20/10/2025	**Time Survey completed:**	15:58
Survey address:	Leeds LS14		

Measurement equipment			**Serial number**	**Calibration Date**
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072594	04/11/2024	
Probe	Agos Aria-6000 Antenna	ARIA-6000-1156	08/07/2025	
Cabling	1.7m cable	1378	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

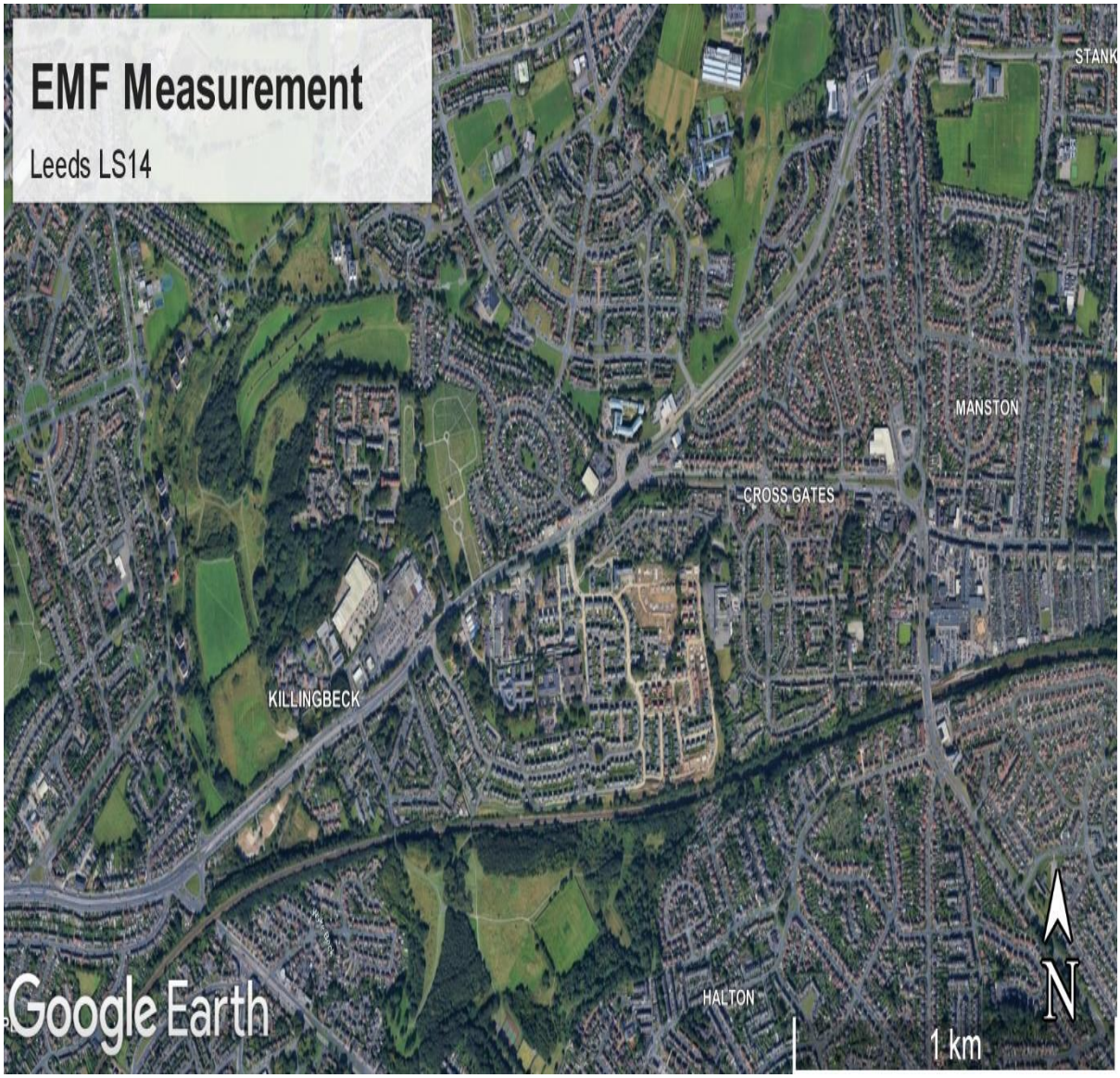
Mobile bands covered by this report

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:	15:08
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00821
174-230 MHz	0.00970
470-694 MHz	0.00767
700 MHz	0.00107
800 MHz	0.03124
900 MHz	0.01490
1400 MHz	0.00044
1800 MHz	0.00245
1900 MHz	0.00017
2100 MHz	0.00378
2300 MHz	0.00506
2600 MHz TDD	0.00034
2600 MHz FDD	0.00017
3.4 GHz	0.00197
3.8 GHz	0.00443
Others	0.12955
Total	**0.22115**

Location 2

Measurement time:	15:16
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00886
174-230 MHz	0.01017
470-694 MHz	0.00810
700 MHz	0.00239
800 MHz	0.00931
900 MHz	0.03300
1400 MHz	0.00221
1800 MHz	0.00294
1900 MHz	0.00018
2100 MHz	0.00460
2300 MHz	0.00139
2600 MHz TDD	0.00035
2600 MHz FDD	0.00018
3.4 GHz	0.00234
3.8 GHz	0.00475
Others	0.13752
Total	**0.22829**

Location 3

Measurement time:	15:24
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00934
174-230 MHz	0.01057
470-694 MHz	0.00829
700 MHz	0.00115
800 MHz	0.01821
900 MHz	0.01052
1400 MHz	0.00054
1800 MHz	0.00096
1900 MHz	0.00019
2100 MHz	0.00100
2300 MHz	0.00074
2600 MHz TDD	0.00036
2600 MHz FDD	0.00019
3.4 GHz	0.00217
3.8 GHz	0.00492
Others	0.14187
Total	**0.21102**

Location 4

Measurement time:	15:34
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.01168
174-230 MHz	0.01084
470-694 MHz	0.00857
700 MHz	0.00565
800 MHz	0.02079
900 MHz	0.05072
1400 MHz	0.01030
1800 MHz	0.00992
1900 MHz	0.00019
2100 MHz	0.00322
2300 MHz	0.00125
2600 MHz TDD	0.00038
2600 MHz FDD	0.00020
3.4 GHz	0.00291
3.8 GHz	0.00523
Others	0.14982
Total	**0.29169**

Location 5

Measurement time:	15:43
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00975
174-230 MHz	0.01128
470-694 MHz	0.00881
700 MHz	0.00220
800 MHz	0.02243
900 MHz	0.01835
1400 MHz	0.00083
1800 MHz	0.00155
1900 MHz	0.00020
2100 MHz	0.00157
2300 MHz	0.00092
2600 MHz TDD	0.00039
2600 MHz FDD	0.00020
3.4 GHz	0.00248
3.8 GHz	0.00536
Others	0.15179
Total	**0.23811**

Location 6

Measurement time:	15:52
Frequency band	**Percentage of the ICNIRP reference levels for general public exposure**
87.5-108 MHz	0.00968
174-230 MHz	0.01141
470-694 MHz	0.00894
700 MHz	0.00124
800 MHz	0.03391
900 MHz	0.01562
1400 MHz	0.00055
1800 MHz	0.00243
1900 MHz	0.00020
2100 MHz	0.00232
2300 MHz	0.00279
2600 MHz TDD	0.00040
2600 MHz FDD	0.00021
3.4 GHz	0.00237
3.8 GHz	0.00543
Others	0.15551
Total	**0.25302**

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.