

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:	16/01/2025	Time Survey completed:	11:40
Survey address:	Bridgwater TA6		

Measurement equipment		Serial number	Calibration Date
Meter	Keysight Fieldfox N9915A Spectrum Analyser	MY56072612	04/11/2024
Probe	Agos Aria-6000 Antenna	1117	28/11/2022
Cabling	1.7m cable	1319	28/11/2022

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

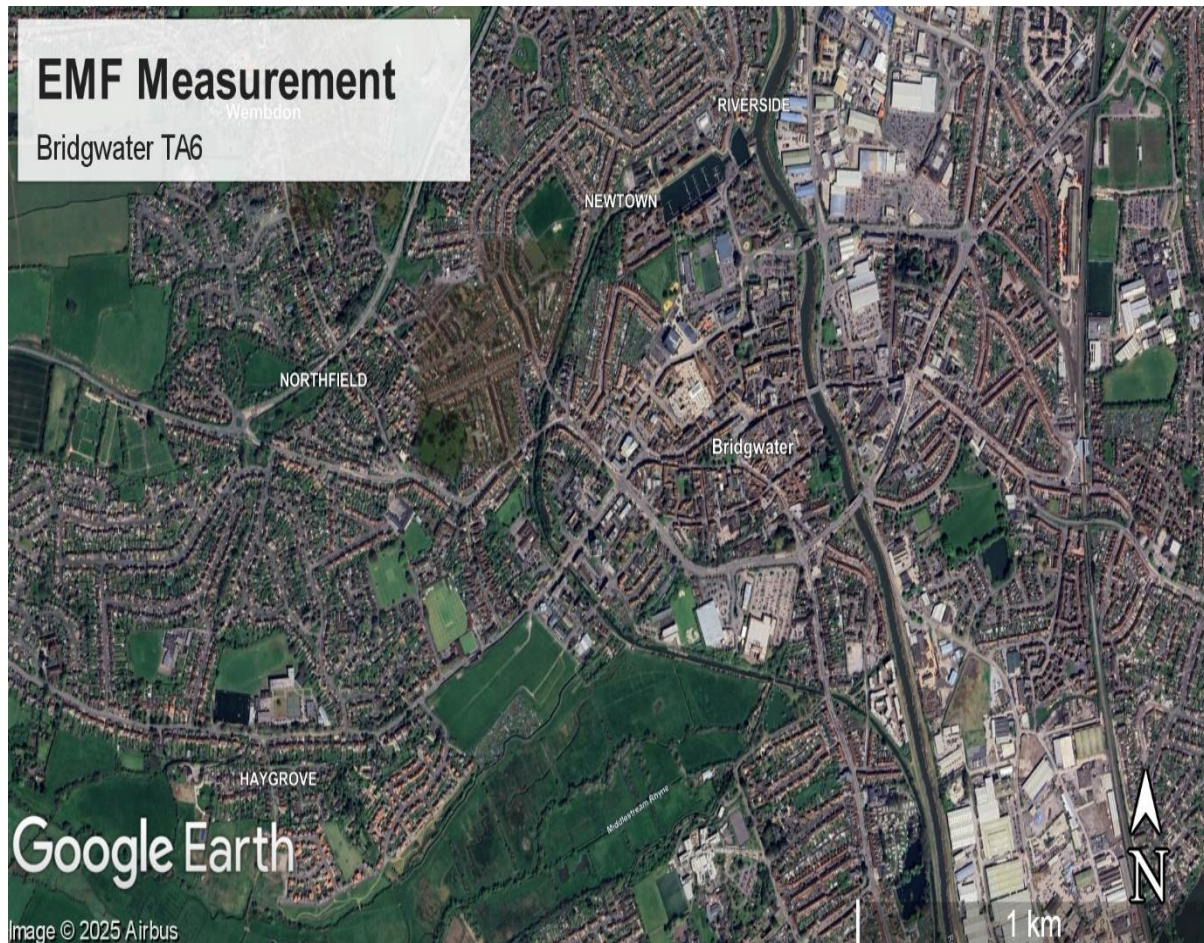
Mobile bands covered by this report

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:	10:57
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.38108
174-230 MHz	0.00833
470-694 MHz	0.00683
700 MHz	0.00425
800 MHz	0.01055
900 MHz	0.00206
1400 MHz	0.00032
1800 MHz	0.00566
1900 MHz	0.00016
2100 MHz	0.00525
2300 MHz	0.00030
2600 MHz TDD	0.00026
2600 MHz FDD	0.00014
3.4 GHz	0.00158
3.8 GHz	0.00362
Others	0.15839
Total	0.58877

Location 2

Measurement time:	11:06
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.74268
174-230 MHz	0.00870
470-694 MHz	0.00706
700 MHz	0.03754
800 MHz	0.03483
900 MHz	0.00151
1400 MHz	0.00034
1800 MHz	0.00478
1900 MHz	0.00017
2100 MHz	0.00949
2300 MHz	0.00032
2600 MHz TDD	0.00027
2600 MHz FDD	0.00015
3.4 GHz	0.00168
3.8 GHz	0.00384
Others	0.12794
Total	0.98129

Location 3

Measurement time:	11:15
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.08527
174-230 MHz	0.00893
470-694 MHz	0.00726
700 MHz	0.01166
800 MHz	0.04327
900 MHz	0.01205
1400 MHz	0.00035
1800 MHz	0.00837
1900 MHz	0.00017
2100 MHz	0.00762
2300 MHz	0.00033
2600 MHz TDD	0.00028
2600 MHz FDD	0.00015
3.4 GHz	0.00174
3.8 GHz	0.00400
Others	0.12308
Total	0.31452

Location 4

Measurement time:	11.25
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	0.36153
174-230 MHz	0.00908
470-694 MHz	0.00733
700 MHz	0.01753
800 MHz	0.02718
900 MHz	0.00069
1400 MHz	0.00036
1800 MHz	0.00348
1900 MHz	0.00017
2100 MHz	0.00372
2300 MHz	0.00033
2600 MHz TDD	0.00029
2600 MHz FDD	0.00016
3.4 GHz	0.00179
3.8 GHz	0.00412
Others	0.17070
Total	0.60846

Location 5

Measurement time:	11:34
Frequency band	Percentage of the ICNIRP reference levels for general public exposure
87.5-108 MHz	2.16555
174-230 MHz	0.00932
470-694 MHz	0.00758
700 MHz	0.00346
800 MHz	0.00769
900 MHz	0.00087
1400 MHz	0.00037
1800 MHz	0.01432
1900 MHz	0.00018
2100 MHz	0.00846
2300 MHz	0.00034
2600 MHz TDD	0.00029
2600 MHz FDD	0.00016
3.4 GHz	0.00184
3.8 GHz	0.00423
Others	0.22628
Total	2.45093

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.