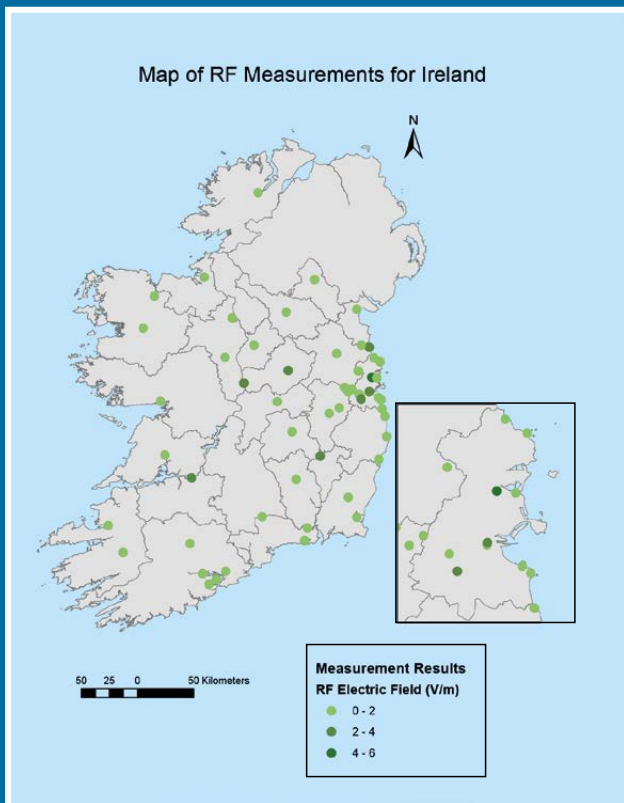


How & Where We Measured

Busy locations throughout the country, such as town and city centres, covering all 26 counties were selected and measured to assess typical RF EMF levels in Ireland. The map below shows the measurement locations and the range of results obtained. All results were below current guideline limits.



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Full report: <https://www.epa.ie/environment-and-you/radiation/emf/emf-monitoring-programme/>



Radiofrequency Electromagnetic Fields in Public Spaces in Ireland

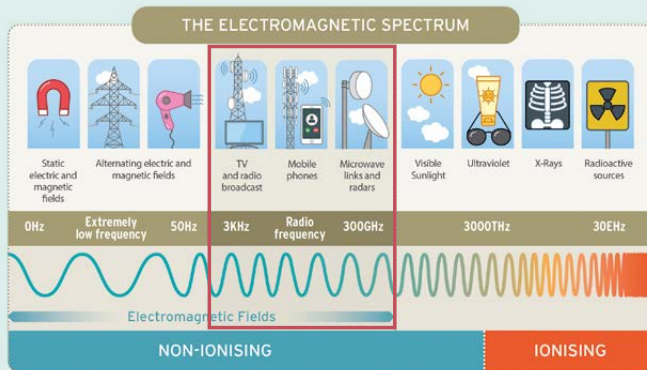
What are radiofrequency
electromagnetic fields?

What are the exposure limits?

What are the levels in Ireland?



What are radiofrequency electromagnetic fields?

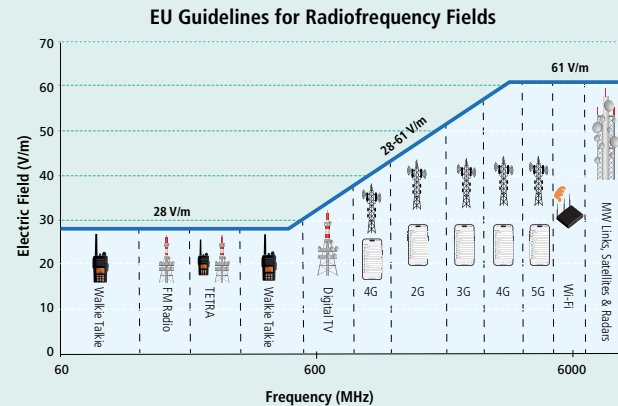


Wireless telecommunications like radio and television broadcasting, mobile telephones and Wi-Fi are examples of everyday technologies that use radio waves, also known as radiofrequency electromagnetic fields (RF EMF). RF EMF are part of the electromagnetic spectrum, covering frequencies between around 100 kHz and 300 GHz. Frequencies used for telecommunication are typically between 60 MHz and 90 GHz.

While needed in a modern society, wireless telecommunications lead to public exposure to RF EMF. For this reason, the EPA measured levels of RF EMF in towns and cities in Ireland and compared the results with international guidelines.

This work is part of the EPA's role of monitoring EMF levels in Ireland to support our main advisory role, as assigned by S.I. 190 of 2019.

What are the recommended exposure guidelines?

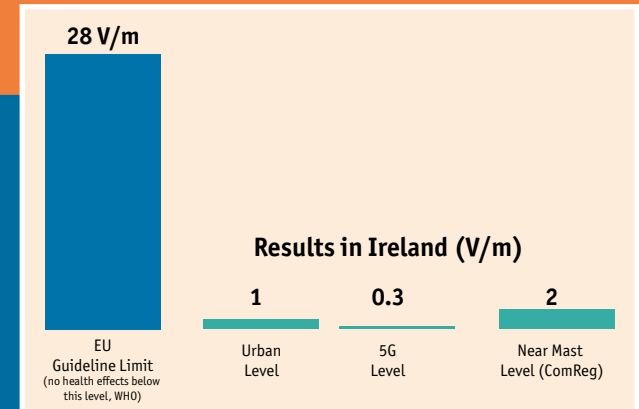


Recommended exposure guidelines for RF EMF are issued and regularly updated by the International Commission on Non-Ionizing Radiation Protection (ICNIRP). ICNIRP guidelines are endorsed by the European Commission¹ and are recognized by the World Health Organization (WHO). They are enforced in Ireland by the Commission for Communications Regulation (ComReg).

The lowest guideline limit recommended for the public is 28 V/m, which applies to the radiofrequencies used by FM radio and similar technologies. Guidelines up to 61 V/m apply to the radiofrequencies used by technologies such as mobile phones, Wi-Fi and radars.

1. 1999/519/EC: Council Recommendation of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz) <https://op.europa.eu/en/publication-detail/-/publication/9509b04f-1df0-4221-bfa2-c7af77975556/language-en>

Results for RF EMF measurements in Ireland



- ▲ The typical RF EMF level that people experience in busy urban areas in Ireland is around 1 V/m.
- ▲ According to the World Health Organization, no health effects have been identified for members of the public at RF EMF exposure levels below 28 V/m.
- ▲ The level 1 V/m is comparable to the levels found in urban areas in other European countries.
- ▲ The typical level from 5G in busy urban environments is 0.3 V/m. This value is similar to the typical levels from other mobile technologies such as 2G, 3G and 4G.
- ▲ These values can be compared to 28 V/m, which is the lowest guideline limit for public exposure to RF EMF recommended by the European Commission and other international bodies.
- ▲ The typical radiofrequency field level around masts measured by the Commission for Communications Regulation is around 2 V/m (www.comreg.ie). This is also well below the recommended limit of 28 V/m.

The full report on the RF EMF monitoring results is available at <https://www.epa.ie/environment-and-you/radiation/emf/emf-monitoring-programme/>