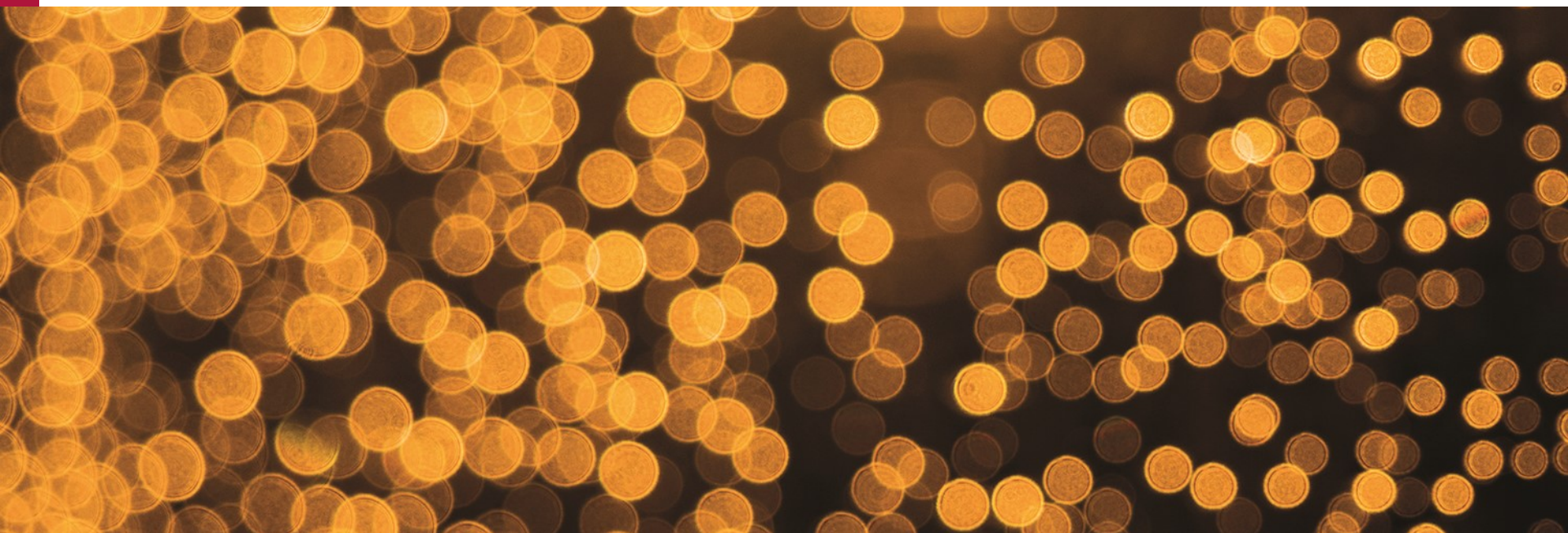


BEREC Workshop: How best to promote science based emf limits

Martin Fenton, Director of Spectrum Analysis

21 September 2021



What Ofcom is doing on EMF

We carry out EMF measurement audits and publish factual information about emissions. We enforce conditions in spectrum licences requiring compliance with the general public levels from the ICNIRP Guidelines. We respond to misleading information in the media. We sanction TV and radio broadcasters who breach our rules.



However, we are not public health experts and we rely on the advice of the recognised public health authorities.

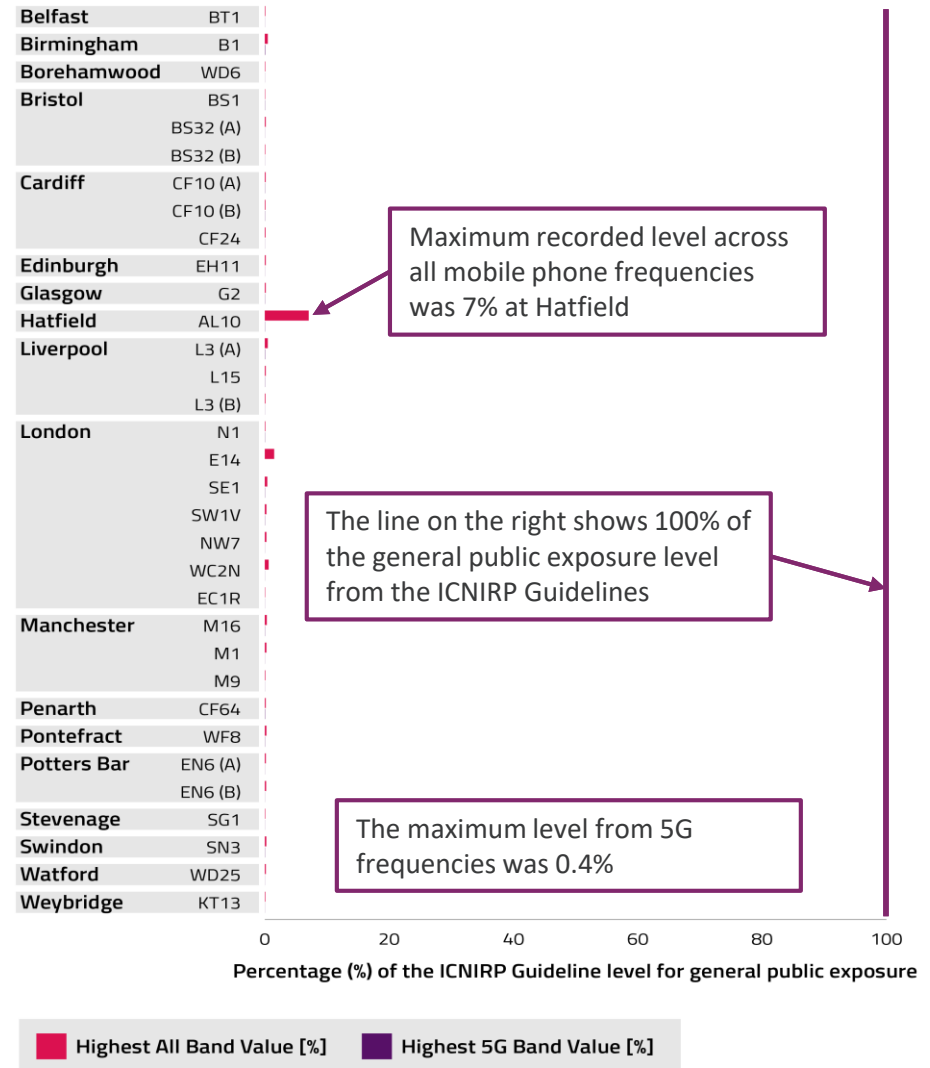
Public Health England (PHE) is the lead UK authority on public health matters associated with EMF.

PHE's advice is that EMF emissions should comply with the ICNIRP Guidelines and on 5G, their view is that *"the overall exposure is expected to remain low relative to guidelines and, as such, there should be no consequences for public health"*.



EMF measurements near 5G base stations

- We have been carrying out [measurements](#) near 5G-enabled mobile phone base stations.
- We measured EMF emissions at numerous locations in various cities across the UK, including Belfast, Cardiff, Edinburgh and London, focusing on areas where mobile use is likely to be highest, e.g. train stations, shopping centres, etc.



Adding conditions to spectrum licences to require compliance with ICNIRP general public levels

- We consulted in early 2020 on [proposals](#) to include a new condition in spectrum licences (for powers above 10W EIRP) to require compliance with the general public limits in the ICNIRP Guidelines.
- In late 2020, we published a [statement](#) setting out our decision to proceed with this proposal and a [further consultation](#) on the detailed wording of the condition and on guidance for licensees.
- In March 2021 we published an [update](#) on our proposals and started the process of varying spectrum licences – that process concluded in May 2021.
- We did this, not because we thought there was a problem, but to ensure the public can have confidence that exposure levels are being respected and hold licensees to account if they are not.



Providing information on 5G Technology and EMF



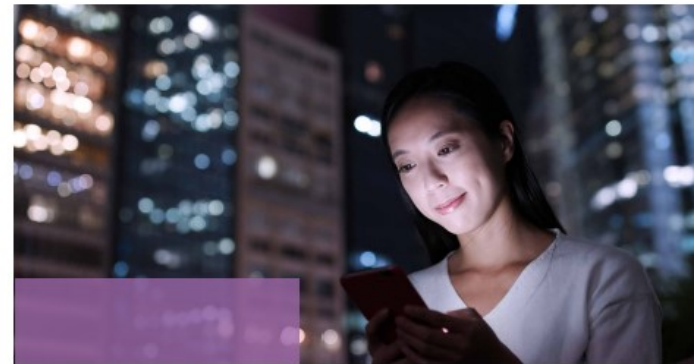
In conjunction with the UK Government, we have published a guide to 5G technology for local councillors and planning departments providing information of 5G, allaying EMF concerns and rebutting claims linking 5G to the Coronavirus pandemic.

https://www.ofcom.org.uk/__data/assets/pdf_file/0015/202065/5g-guide.pdf

Working with other public bodies

We have also worked with other public bodies in the UK to tackle myths around 5G, for instance the IET, Which? and local authorities such as the GLA.

Such collaboration is important and we are keen to continue it.



Allaying health concerns regarding 5G and exposure to radio waves

An IET guide for policy makers and local planning authorities
2nd edition

[theiet.org/5G-health](https://www.theiet.org/5G-health)

<https://www.theiet.org/media/6248/allaying-health-concerns-regarding-5g-and-exposure-to-radio-waves-2nd-edition.pdf>

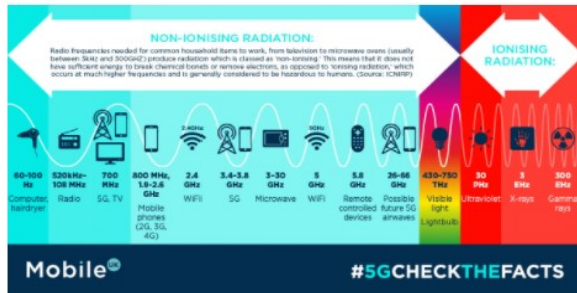


- Introduction
- What is 5G?
- 5G radio waves
- 5G masts and base stations
- 5G and health concerns
- 5G benefits
- #Talking5G Series
- 5G Case Studies
- 4G vs 5G
- Local Authority Toolkit
- Further information
- 5G and health FAQs

#5GCheckTheFacts > 5G and health concerns

Mobile phones and mobile masts transmit and receive radio waves, which are a type of electromagnetic radiation. Importantly, this type of radiation is classed as mainly harmless, or in scientific terms, non-ionising when used within guidelines, just like our TVs, remote controls, home WiFi and so on. It is widely recognised that the strength of the signals is extremely weak and therefore does not have enough energy to cause adverse health effects.

As you can see from the graph below, 5G falls way short of the ionising (harmful) part of the electromagnetic spectrum.



Mobile UK Q&A on 5G and Health

- UK and international guidelines for exposure limits
- Do current guidelines cover 5G?
- Have the guidelines been tested?
- What kind of research exists on the possible health risks from exposure to 5G?
- Is 5G safe? What about cancer?
- What is the advice from Public Health England?
- What is the advice from the WHO on mobile phones and health?
- Are children at a greater risk?
- Can I reduce exposure?

"...no health risks have been established from exposure to the low-level radio signals used for mobile communications."

Information from the mobile Industry

We also cooperate with the UK mobile industry to try and ensure there is a consistent message on EMF and health that is based on science and the facts and which is not undermined by marketing.

MAKING COMMUNICATIONS WORK FOR EVERYONE

<https://www.mobileuk.org/5g-and-health-concerns>

Responding to misleading information in the media



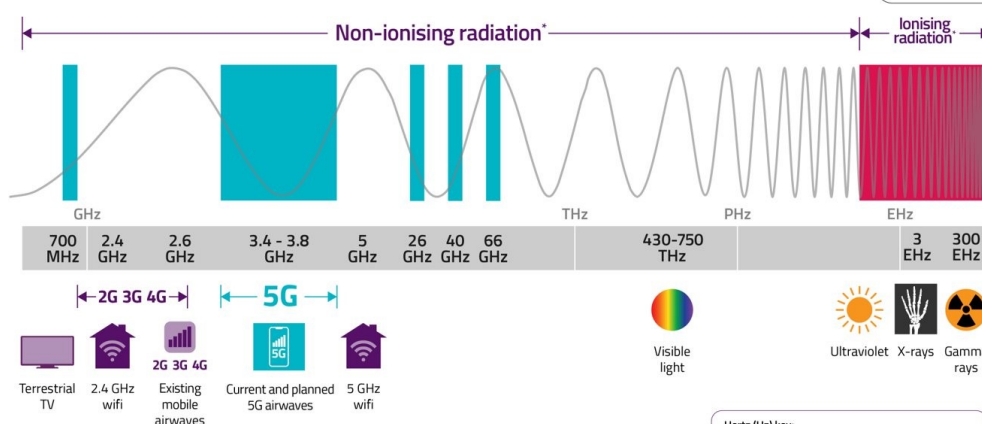
Ofcom
@Ofcom

There is no scientific evidence to support the conspiracy theories linking the coronavirus to 5G and putting lives at risk.

Today we've released more test results showing that UK 5G continues to operate well within internationally-accepted safety levels: [ofcom.in/5GCovidMyth](https://www.ofcom.gov.uk/consult/condocs/5g/5gcovidmyth/5gcovidmyth.pdf)



The Electromagnetic Spectrum



Hertz (Hz) key:
kHz: kilohertz = 10^3 Hz
MHz: megahertz = 10^6 Hz
GHz: gigahertz = 10^9 Hz
THz: terahertz = 10^{12} Hz
PHz: petahertz = 10^{15} Hz
EHz: exahertz = 10^{18} Hz

*Radio frequencies needed for common household items to work, from televisions to microwave ovens (usually between 30Hz and 300GHz), produce radiation which is classed as 'non-ionising'. This means that it does not have sufficient energy to break chemical bonds or remove electrons, as opposed to 'ionising radiation', which occurs at much higher frequencies and is generally considered to be hazardous to humans. (Source: International Commission for Non-Ionizing Radiation Protection (ICNIRP))

Sanctioning TV and radio broadcasters who breach our rules

The Guardian logo, featuring the words "The Guardian" in a bold, black, serif font.

TV station's interview with David Icke
'posed threat to public health'

Ofcom acts over London Live segment in which Icke claimed
pandemic was a cover story

**Coronavirus: Christian TV channel sanctioned
by Ofcom after falsely linking 5G to pandemic**



INDEPENDENT

The BBC News logo, featuring the letters "BBC" in white inside a red square, with the word "NEWS" in white below it.

Broadcasting watchdog Ofcom has "issued guidance" to
ITV following Eamonn Holmes' comments about 5G
technology and coronavirus on This Morning.