

# **Fifth Generation mobile technology (5G) and radio frequency electromagnetic radiation (RF-EMR)**

**A basic overview for MPs, councillors, mayors, teachers, doctors, lawyers and all citizens**

- **Microwave radiation from mobile networks ('RF-EMR') has been found in thousands of peer-reviewed independent studies to pose a serious health risk to humans including DNA damage, neurological damage, cancer, heart damage, nervous system damage and more. International, independent scientists agree that there is no longer any cause for debate on this subject.**
- **Children and babies are particularly at risk. Initial research also suggests that RF-EMR may cause serious, irreparable damage to wildlife and the environment.**
- **250 scientists, doctors and environmentalists are calling for meaningful safety guidelines on RF-EMR and an immediate ban on 5G. Doctors and scientists have been warning the public about harm from mobile phones, phone masts, Wi-Fi and smart meters for many years.**
- **Danish lawyers have pronounced 5G illegal under EU law. Rolling out 5G without public consent breaches every point of the Nuremberg Code of Ethics.**
- **The robust evidence has been repeatedly presented to Public Health England and the World Health Organisation. Yet these bodies continue to use the guidelines suggested by ICNIRP, the International Commission on Non-Ionising Radiation Protection. These guidelines are 20 years old and do not account for the biological effects of RF-EMR.**
- **ICNIRP is a small, self-selecting, non-accountable group which has been widely accused of having financial conflicts of interest. Its core members also form the EMF groups within the World Health Organisation and Public Health England. Its members are not specialists in human radiation effects.**

## **Some facts about 5G**

- **5G will initially entail adding 5G capability to existing 4G and 3G masts, adding significantly to existing levels of manmade pulsed electromagnetic radiation.**

- Over the next few years it will entail dense placement of 100s of 1000s of small cells and antennas emitting high-frequency radiation (mm waves) in a phased array pulsed system.
- This will be done without safety testing, health or environmental impact assessments, or public consultation.
- According to a report commissioned by the European Parliament Committee on Industry, Research and Energy, increased exposure to EMR will result not only from the additional higher frequencies but also from the aggregation of different signals and complex interaction effects, especially in dense urban areas.
- The effects of being exposed to single EMR frequencies have been shown overwhelmingly to cause harm. The effects of being exposed to several different frequencies over a lifetime are unknown.
- 5G will increase levels of microwave radiation by between 10% and 40% according to estimates (Planetary Clean Energy Group estimates 30-40% in a statement to the UN).
- Millimetre waves as used in high-frequency forms of 5G behave in unpredictable ways and are highly biologically active. De-classified research from military testing describes damage to the eyes, skin, internal organs, metabolism, bone marrow, blood and other body systems. Eastern European research shows that, contrary to claims, mm waves penetrate the skin up to 2 mm and damage the nervous system.
- 5G, as with other manmade RF-EMR, is a form of pulsed radiation which cannot be compared with sunlight; natural background radiation is of a far lower intensity (experts state that manmade radiation is one billion, billion times more intense than natural background levels).
- **5G will result in all citizens and wildlife being mandatorily subjected to microwave radiation 24/7 with no power to opt out.**

## Some of the studies

- Aggressive brain gliomas have been 'clearly linked' with RF-EMR in 2 large recent studies: the \$30 million US National Toxicology Program study and the Ramazzini Cancer Research Institute study.
- A 2018 study of 79K brain tumours shows that brain gliomas have doubled in England in the last 20 years; matching results have been found in Denmark.
- Oncologist and epidemiologist Lennart Hardell has shown that risk of brain glioma is 5 x higher in mobile phone users, especially in those under the age of 20.
- 68% of studies show harm according to researcher Henry Lai; when industry-funded studies are included, around half show harm.
- Several international studies show neurological effects and cancer clusters around masts (see mobile radiation studies list).
- An article in top medical journal *The Lancet* states: *Contrary to the prevailing myth, the independent scientific consensus from thousands of international scientists is that non-ionising radiation damages DNA and oxidises cells.* <https://www.thelancet.com/journals/lanplh/>

[article/PIIS2542-5196\(18\)30221-3/fulltext?fbclid=IwAR28ftbPVxNPr5WcdkSytvBluMI7iUKmsjKI7xAGJs-CK3--bLjm8zybmfM\)](https://www.avaate.org/spip.php?article2834&fbclid=IwAR28ftbPVxNPr5WcdkSytvBluMI7iUKmsjKI7xAGJs-CK3--bLjm8zybmfM)

See 'mobile radiation studies' for an overview of some of the 1000s of studies.

## **Bans on 5G/legal action against 5G around the world:**

- Brussels - 5G has been banned on health grounds
- Geneva - further rollout of 5G has been stopped after complaints of symptoms
- Australia - several thousand masts have been removed after successful litigation
- US - states including New York State and Pennsylvania as well as parts of other states have paused deployment of 5G pending independent investigation into health effects  
NY State bill: [https://assembly.state.ny.us/leg/?default\\_fld=&bn=A08637&term=2019&Summary=Y&Actions=Y&Text=Y&Committee%26nbspVotes=Y&Floor%26nbspVotes=Y&fbclid=IwAR3kuP6RgsNcwr6SRtTcLW65n-JshH8B9heuckkWdf-eQQFaTj1qXTygzPdc](https://assembly.state.ny.us/leg/?default_fld=&bn=A08637&term=2019&Summary=Y&Actions=Y&Text=Y&Committee%26nbspVotes=Y&Floor%26nbspVotes=Y&fbclid=IwAR3kuP6RgsNcwr6SRtTcLW65n-JshH8B9heuckkWdf-eQQFaTj1qXTygzPdc)
- Florida cities are suing the state over telecoms placing masts without permission
- Oregon state bill July 2019: investigate Wifi danger in schools as a health emergency
- New Hampshire establishes a commission (House Bill 522): This bill was passed to study health effects of 5G and earlier technology which 'may pose significant risks to humans, animals and the environment'; the study will look particularly at children, foetuses and the elderly. *Electromagnetic Radiation Safety* (July 25, 2019) <https://legiscan.com/NH/bill/HB522/2019>
- Class action is currently taking place in the US against Verizon and Cable and Wireless
- 3000 people marched against 5G in Bern, Switzerland in October 2019 after masts were installed
- The mayor of Chiola, Italy has demanded a ban in his town
- The mayor of Jura, Switzerland has demanded a ban in his town
- Encinatas, San Diego has banned 5G masts by schools and in areas of high fire risk
- 3500 Netherlanders are taking liability action against telecoms companies in a lawsuit amounting to billions of dollars and a legal document has been prepared to show that the public does not give its tacit consent to the rollout and making telecoms companies liable for the violation of health and privacy ([https://www.earth-matters.nl/11/14660/verborgen-nieuws/aansprakelijkheidsactie-tegen-5g-groot-succes-miljardenclaim-tegen-telecombedrijven.html?fbclid=IwAR20e\\_yb7CJiW9ZBeOjJSeTsEUKPuLXTpAhzg-R76b\\_H3g2vEXAVgGia-lo](https://www.earth-matters.nl/11/14660/verborgen-nieuws/aansprakelijkheidsactie-tegen-5g-groot-succes-miljardenclaim-tegen-telecombedrijven.html?fbclid=IwAR20e_yb7CJiW9ZBeOjJSeTsEUKPuLXTpAhzg-R76b_H3g2vEXAVgGia-lo))
- Cape Town: [https://www.emfsa.co.za/news/city-of-cape-town-1-october-2019-media-release-city-victorious-in-cellphone-mast-case-against-telkom/?fbclid=IwAR2RPzFB-fo6yhRgNZAu\\_hLkTbr8ovpt8dXQHHxdaOiB6DbUeBEbQhp9Kg04](https://www.emfsa.co.za/news/city-of-cape-town-1-october-2019-media-release-city-victorious-in-cellphone-mast-case-against-telkom/?fbclid=IwAR2RPzFB-fo6yhRgNZAu_hLkTbr8ovpt8dXQHHxdaOiB6DbUeBEbQhp9Kg04) -
- The Spanish Ombudsman states that 5G has not had environmental approval <http://www.avaate.org/spip.php?article2834&fbclid=IwAR3zFSDiYtGPFB9LaqzEfn2jOXbC->

Qy4TKdJuliriFbHovw7GhA-F4L\_3xY and <https://einarflydal.com/2019/09/06/5g-spanias-sivilombud-forlanger-konsekvensutredning/#more-33851>

- The German minister of environment states that the continued digitalisation will fuel future environmental problems (Article in Swedish) <https://einarflydal.com/2019/08/30/tysklands-miljominister-digitalisering-er-ikke-lenger-losningen-tvertimot/#more-33705>

UK:

- Radiation Research UK has put the government on notice: <https://www.radiationresearch.org/wp-content/uploads/2019/10/EM-Radiation-Research-Trust-second-letter-to-Government-1.pdf>
- SSITA, a group of doctors campaigning for safety in schools, has issued a formal complaint to Public Health England; the PHSO ombudsman has agreed that further investigation is warranted.
- Dr Sarah Wollaston MP, Chair of the Health and Social Care Select Committee, has recently tabled formal questions to Ministers on this subject. David Drew MP, Tonja Antoniazzi MP and Geraint Davis MP have asked questions in parliament.
- Several legal firms are advising members of the public on litigation.
- Totnes, Frome, Glastonbury, Kingsbridge, Shepton Mallet and Wellington councillors have all voted for moratoriums on 5G until it can be proven safe.
- Councillors in Exeter and Taunton are expressing concern and possible moratoriums.
- Councillors in Brighton have blocked the upgrading of three existing masts.

Chief Medical Officer Sally Davies: *We know that our present system is safe and this is only going up a bit—it is well under those guidelines—so there is nothing to suggest that devices will produce an exposure that is a risk, but clearly Public Health England will need to keep monitoring this on behalf of all of us. We do not accept this response from the Chief Medical Officer. Proof of harm from our present system already exists beyond any reasonable doubt. We believe that PHE are fully aware of this fact and that they are deliberately and wilfully misleading the public on RF-EMR safety. See below for more on PHE.*

The government has already received in excess of £3.7bn in proceeds from the 4G spectrum auction in 2013 and the 5G first-tranche spectrum auctions by Ofcom in 2018. (Source: Eric Peel).

**5G found illegal under EU law**

**Recent US bills to produce reports in which the following questions must be answered:**

- Why the insurance industry recognises wireless radiation as a leading risk and has placed exclusions in their policies not covering damages caused by the pathological properties of electromagnetic radiation?
- Why do cell phone manufacturers have in the legal section within the device saying keep the phone at least 5mm from the body?
- Why have 1,000s of peer-reviewed studies, including the recently published U.S. Toxicology Program 16-year \$30 million study, that are showing a wide-range of statistically significant DNA damage, brain and heart tumors, infertility, and so many other ailments, being ignored by the Federal Communication Commission (FCC)?
- Why are the FCC-sanctioned guidelines for public exposure to wireless radiation based only on the thermal effect on the temperature of the skin and do not account for the non-thermal, non-ionizing, biological effects of wireless radiation
- Why are the FCC radiofrequency exposure limits set for the United States 100 times higher than countries including Russia, China, Italy, Switzerland, and most of Eastern Europe?
- Why did the World Health Organization (WHO) signify that wireless radiation is a Group B Possibly Carcinogenic to Humans category, a group that includes lead, thalidomide, and others, and why are some experts who sat on the WHO committee in 2011 now calling for it to be placed in the Group 1, which are known carcinogens, and why is such information being ignored by the FCC?
- Why have more than 220 of the worlds leading scientists signed an appeal to the WHO and the United Nations to protect public health from wireless radiation and nothing has been done?
- Why have the cumulative biological damaging effects of ever-growing numbers of pulse signals riding on the back of the electromagnetic sine waves not been explored, especially as the world embraces the Internet of Things, meaning all devices being connected by electromagnetic waves, and the exploration of the number of such pulse signals that will be created by implementation of 5G technology?
- Safe alternatives will be explored

**Insurance companies will not insure for mobile radiation damage**

Insurance companies do not insure against damage from RF-EMR.

Lloyds of London: <https://principia-scientific.org/lloyds-insurers-refuse-to-cover-5g-wi-fi-illnesses/>

<https://ehtrust.org/wp-content/uploads/Telecom-10-K-Liability-and-Insurance-Companies-Slides-EHT-6-2016.pdf>

Swiss Re: mobile radiation is 'high impact' risk: [https://www.radiationresearch.org/articles/swiss-re-rated-5g-high-impact/?fbclid=IwAR1asU6TTPcTR1uZEaswbl9hppH\\_3olilKOO-GoMJimoFvk4B5PsbK73Fk-4](https://www.radiationresearch.org/articles/swiss-re-rated-5g-high-impact/?fbclid=IwAR1asU6TTPcTR1uZEaswbl9hppH_3olilKOO-GoMJimoFvk4B5PsbK73Fk-4)

Telecom and Insurance Companies Warn of Risk of Liability and Risk: Corporate Company Investor Warnings In Annual Reports 10k Filings Cell Phone Radiation Risks: all phone companies advise shareholders that shares may go down due to litigation over health effects or 'perceived' health effects.

## **Equalities Act and electromagnetic sensitivity**

See section 149 of the Equalities Act 2010 which exists to protect vulnerable groups including disabled people and pregnant women.

435,000 people in the UK alone are estimated by ES-UK director Michael Bevington to suffer from debilitating symptoms of electromagnetic sensitivity which prevent them from working, attending school, or even leaving the house. A total of 800K are thought to be affected so far, with the number growing. It is estimated that at least 200 million people globally have ES (Olga Sheehan; WHO Wireless World of Harm). [powerwatch.uk](http://powerwatch.uk) estimate 5% of population have symptoms but most are unaware of the cause.

ES has been dismissed by the UK medical establishment as psychosomatic. However, it has been measured with objective biomarkers (Olle Johansson study in 'Mobile Radiation Studies' doc.) It is legally and medically recognised in Sweden where financial help is given to shield homes.

On January 17th, 2019, the French Court of Cergy-Pontoise ruled that Electromagnetic Hyper Sensitivity (EHS) is an occupational disease that can be developed from exposure to levels of radiation which are considered to be safe by the government.

In the year 2000 ES symptoms were identified in the Internal Code of Diagnoses, version 10 (ICD-10; R68.8/now W90).

There are recognised by the WHO. (See Sue McCully on FB page UK Electrosensitives). *These should be shown to GPs and oncologists.*

The 2015 EHS Resolution adopted in Belgium: doctors can now use ICD-10-CM Code W90.0 to characterise health effects caused by emissions from radio frequency transmitting devices e.g. mobile phones, routers, BYOD, base stations:

<https://icd.codes/icd10cm/W900>

<https://icd.codes/icd10cm/W908> (household appliances, wall wiring, high tension lines etc).

To mandatorily subject people with ES, as well as other vulnerable groups such as pregnant women and children, is an unacceptable violation which is unethical and may be illegal.

**Note:** Susan Clarke (US irradiated communities researcher/legal worker): disabilities act (Equalities Act) - people cannot be harmed in own home. Clarke: legally politicians have to pause the rollout until they have replied to testimonies/letters from sufferers.

Further info on EMS: <https://www.elettrosensibili.it/2016/01/24/electrohypersensitivity-what-you-need-to-know-about-the-allergy-of-the-21st-century/?fbclid=IwAR1A7wVOAD-V1m6oKhHkJL-I5NHiki7fNCS3F11faiDiRpzWPcOuNVSOUuaA>

Johansson O, "Electrohypersensitivity: a functional impairment due to an inaccessible environment", *Rev Environ Health* 2015c; 30: 311–321.

## **EMR and children**

EMR is said by experts to be particularly dangerous to children due to higher numbers of stem cells, thinner skulls, increased cell division, decreased DNA repair. Children absorb up to 150% more radiation. Children will be exposed for longer, from womb to death (as replicated in Ramazzini Institute studies on rats which showed evidence of cancer). We do not yet know the effects on children as current high levels are recent and cancer takes 8-30 years to manifest.

## **Environmental concerns**

The Chair of the British Ecological Society, Professor William Sutherland, Miriam Rothschild Professor of Conservation Biology, University of Cambridge, together with 24 International Environmental experts, in 2018 has identified anthropogenic electromagnetic radiation as one of the top 15 emerging issues that could affect global biological diversity, natural capital and ecosystem services, and conservation efforts.

See 'Mobile Radiation Studies' list for emerging evidence re wildlife including warnings from Buglife and Eklipse. Note that most lab studies showing harm are performed on rats, which will share strong characteristics with small wild mammals.

**Climate:** Potential detrimental effects <https://bit.ly/2CpvpoN>

Millimetre waves are partially blocked by trees and leaves. Due to this masts will be built above the tree line. There are widespread anecdotal reports of mass tree felling along railways and in some towns. Councils are reported not to be responding to FOIRs regarding reasons for observed mass tree felling.

### **Carbon:**

<https://spectrum.ieee.org/telecom/wireless/5gs-waveform-is-a-battery-vampire>  
<https://data-economy.com/data-centres-world-will-consume-1-5-earths-power-2025/>

Data centres set to become one of the biggest polluters in just seven years with 50 bn devices and projections of a further 100bn. The ICT is projected to escalate to 14% of global emissions by 2040 (Climate Change News), with high speeds a major factor.

A 5G base station is generally expected to consume **roughly three times as much power** as a 4G base station. And more 5G base stations are needed to cover the same area. *To check*

<https://conversations.e-flux.com/t/to-decarbonize-we-must-decomputerize/9409?fbclid=IwAR0R6E00IWNLVx-NFbrm9E8qgK0fI92CuObeUE9C7w9hrwrn0TuCTafzhUc>

### **Church spires**

An agreement has been signed with the C of E to site masts in church spires in return for an annual fee. Pulsed oscillating EMR damages stonework and may cause church masts to crumble, according to architects. In addition, bats, a protected species, tend to inhabit church spires.

### **Public Health England, the WHO, ICNIRP, AGNIR, and COMARE**

- PHE defer to the ICNIRP guidelines to reassure the public and enable emissions from masts and devices. These guidelines were set in 1998 and relate only to thermal heating effects tested for 6 minutes on a plastic dummy of a large male human. In February 2019 PHE revised their guidelines but made no meaningful changes. ICNIRP and PHE continue in effect to ignore the overwhelming independent scientific evidence of a range of harmful effects from RF-EMR. ICNIRP guidelines are far higher than other safety guidelines from organisations such as EUROPAEM and IGNIR.
- ICNIRP have been widely accused of industry bias and non-accountability, despite the fact that their website presents them as an independent group. Chairs and members

have previously been exposed as having shares in telecoms, family members in telecoms, and funding from telecoms (often via cancer hospital firewalls).

- The members of PHE supposedly monitoring EMR health effects have significant crossover with members of ICNIRP and the core WHO group. ICNIRP scientists are not specialists in human radiation effects.
- PHE previously appointed the group AGNIR to advise on EMR. After neuroscientist Sarah Starkey presented evidence to Westminster showing that AGNIR were ignoring robust evidence, AGNIR was disbanded and replaced by COMARE. COMARE continue to ignore the evidence and to delay forming a working group. Sarah Starkey's evidence: <http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/science-and-technology-committee/evidencebased-early-years-intervention/written/75325.pdf>. AGNIR appeared to cherry-pick studies. For example, although 78% of the studies cited on male fertility described significant adverse effects on sperm, male reproductive organs or changes in male testosterone concentrations, AGNIR's conclusion was that there was 'no convincing evidence that low-level exposure results in any adverse outcomes on testicular function' (p. 495 of Sarah Starkey's report).
- Public Health England's Simon Mann, also an ICNIRP member, made this statement to press: "It's possible there will be a small increase of exposure to radio waves when 5G is added to an existing telecommunications network. The overall exposures are expected to remain low, relative to guidelines and there should be no consequences to public health". *Questions:* What does 'small increase' mean, given the vastly increased data downloads, vastly increased power use, and faster speeds? Why 'possible' when the upgrade is actual and definite? Given that it is impossible to exceed guidelines, how is this a meaningful reassurance?
- Margot James (former Digital minister): *A considerable amount of research has been carried out on radio waves and Public Health England (PHE) have concluded that exposures of radio waves to the public are well within the international health-related guideline levels that are used in the UK. All 5G technology will also have to adhere to the International Commission on Non-Ionizing Radiation Protection (ICNIRP) exposure guidelines.* The first sentence contains two statements, which appear to be linked, but are not. It is true that there has been considerable research, but most of the independent research shows harm (the rest is largely ambiguous and calls for more research). It is true that exposures are below guidelines - that is because guidelines are set so high that it is almost impossible to reach even 1% of them even if you stand within metres of a large tower [see Ofcom and Simon Hodge measurements for more on this]. Furthermore, ICNIRP recently relaxed its guidelines still further to facilitate 5G.
- Public Health England 2019 updated guidance: *'[PHE is] continuing to review the emerging scientific evidence, providing any necessary advice and undertaking another*

*comprehensive review of the science once sufficient evidence has accumulated'. a) Sufficient evidence already exists in the scientific literature beyond any reasonable doubt b) more epidemiological evidence means the damage has already been done by the time that has accumulated to the point where there is pressure on PHE to admit it. This makes 5G an experiment on human beings without their consent; this is known by scientists as 'human subjects research' and it breaks the Nuremberg Code of Ethics.*

## **ICNIRP - conflicts of interest and non-accountability**

- ICNIRP are a small private group of approximately 14 scientists
- Only a small number have written or researched papers in relevant subjects
- None is a high-ranking scientist or expert professor
- Members are self-selected and do not invite members who disagree with their findings
- The group is non-accountable
- Members purport to be obliged to declare conflicts of interest, yet many of the conflict of interest pages on the ICNIRP website remain blank
- ICNIRP is widely accused of having financial conflicts of interest
- Former chair Michael Swerdlow and his wife were exposed as having shares in telecoms
- ICNIRP is widely accused of 'cherry-picking' ambiguous studies, funded by telecoms, and of ignoring the 1000s of others showing harm from RF-EMR
- ICNIRP is accused of receiving funding via firewalls such as cancer hospitals

## **Criticism of ICNIRP guidelines:**

ICNIRP guidelines: <https://www.icnirp.org/cms/upload/publications/ICNIRPemfgdl.pdf>

ICNIRP statement: *'Induction of cancer from long-term EMF exposure was not considered to be established, and so these guidelines are based on short-term, immediate health effects such as stimulation of peripheral nerves and muscles, shocks and burns caused by touching conducting objects, and elevated tissue temperatures resulting from absorption of energy during exposure to EMF...Epidemiological research has provided suggestive, but unconvincing, evidence of an association between possible carcinogenic effects and exposure at levels of 50/60 Hz magnetic flux densities substantially lower than those recommended in these guidelines.'*

June 2018/May 2019 updated ICNIRP guidelines do not account for 20 years' worth of accumulated evidence totalling thousands of studies.

Martin Pall's review of ICNIRP's June 2018 draft updates:

[https://www.stralskyddsstiftelsen.se/wp-content/uploads/2018/11/response\\_icnirp\\_2018\\_-\\_pall.pdf?fbclid=IwAR3WYX\\_NPJYw8c-xARgUvRyODvZIY4eEKY5ef1xywwD1Xtq0dsfLnMrGJMI](https://www.stralskyddsstiftelsen.se/wp-content/uploads/2018/11/response_icnirp_2018_-_pall.pdf?fbclid=IwAR3WYX_NPJYw8c-xARgUvRyODvZIY4eEKY5ef1xywwD1Xtq0dsfLnMrGJMI)

Martin Pall: 'Safety Guidelines are fraudulent' [https://www.salzburg.gv.at/gesundheit\\_/Documents/SafetyGuidelineFraud2.pdf](https://www.salzburg.gv.at/gesundheit_/Documents/SafetyGuidelineFraud2.pdf)

<https://www.emfcall.org/the-emf-call/>

[https://communityoperatingsystem.wordpress.com/2019/09/12/how-icnirp-agnir-phe-and-a-30-year-old-political-decision-created-and-then-covered-up-a-global-public-health-scandal/?fbclid=IwAR3AWj1g7EhXgh5Cke-mfp5u2yUNAmUQRwrTEPLO-Hw2Um9H\\_M5HD3v7PP1Y](https://communityoperatingsystem.wordpress.com/2019/09/12/how-icnirp-agnir-phe-and-a-30-year-old-political-decision-created-and-then-covered-up-a-global-public-health-scandal/?fbclid=IwAR3AWj1g7EhXgh5Cke-mfp5u2yUNAmUQRwrTEPLO-Hw2Um9H_M5HD3v7PP1Y)

## **The WHO and ICNIRP/conflicts of interest**

ICNIRP members are also members of the particular part of the WHO dealing in international EMR guidelines. The WHO has been repeatedly challenged by experts to update its classification of RF-EMR as a 'possible carcinogen.' The 'possible carcinogen' classification is based on an ICNIRP interpretation of the 2014 INTERPHONE study which is refuted by reputable oncologists who point to studies showing harm. Independent scientists are challenging the WHO to update classification of EMR to a 'probable carcinogen' or 'carcinogen' based on the 2018 US National Toxicology Program and Italian Ramazzini Institute studies. The WHO claims to be reviewing the evidence but continues to ignore the appeals.

See: *The WHO: Setting the Standard for a Wireless World of Harm* (Olga Sheehan). Thorough investigation of the apparently wilful ignoring of the evidence by the WHO and the epidemic of microwave sickness written by a brain tumour survivor and civil servant in collaboration with several international experts. Some main points:

- The head of the WHO EMF project Emelie Van Deventer is an electrical engineer specialising in telecommunications devices and how they work who has no health credentials
- The WHO claimed that its 2017 monograph was open to external scientists but in reality this was not the case as sections were missing and over 1000 studies were omitted
- Oncologist and EMR expert Dr Lennart Hardell writes 'the WHO draft is biased towards a null result'
- Studies have so far looked only at single frequencies, not the multiple frequencies people are now exposed to
- ICNIRP is not held accountable or checked for full disclosure
- 'The International EMF Project is a telecom mole hiding within the WHO,' claims EH Trust senior research fellow Lloyd Morgan
- 'The wireless industry has for decades engaged the services of members of the scientific community who are willing to represent their interests. [...] these scientists are then upgraded to 'expert' status and placed in national and international committees, which are mostly responsible for advising government agencies and educating the public.'

WHO classifies RF-EMR as a possible carcinogen: [https://www.iarc.fr/wp-content/uploads/2018/07/pr208\\_E.pdf](https://www.iarc.fr/wp-content/uploads/2018/07/pr208_E.pdf)

*Int Jnl Oncology* article on WHO and ICNIRP ties/non-accountability: <https://www.ncbi.nlm.nih.gov/pubmed/28656257>

Council of Europe challenges ICNIRP: In resolution 1815 of 2011, cf. item 8.1.2., the Council of Europe recommended that its member states: *Reconsider the scientific basis for the present standards on exposure to electromagnetic fields set by the International Commission on Non-Ionising Radiation Protection, which have serious limitations, and apply ALARA82 principles, covering both thermal effects and the athermic or biological effects of electromagnetic emissions or radiation. ICNIRP has 'too close links with the telecoms industrie' and its recommendations are considered by scientists and medical experts worldwide as 'wrong, out of date and have not been revised for over 7 years'.*

Parliament of Europe Report on EMF and Environment (May 6, 2011)  
<http://www.electrosmogprevention.org/public-health-alert/wifi-dangers/parliament-of-europe-report-on-emf-and-environment-may-6-2011/>

Investigate Europe article on ICNIRP: <https://www.investigate-europe.eu/publications/how-much-is-safe/>

[emfcall.org](http://emfcall.org) - criticism of ICNIRP guidelines

[Emeritus professor of biochemistry at Washington State University Martin L Pall: 21SafetyGuidQuestions.docx](#)

These questions show that the guidelines are not able to protect against observed EMF damage.

The scientific evidence that there are effects not accounted for by ICNIRP's guidelines  
90-pages walk-through of the evidence by Martin L Pall, Pall ML - 5g-emf-hazards-eu-emf2018-6-11us3 - MED RETTELSER.pdf

Pall Response to 2018 ICNIRP Draft Guidelines and Appendices Oct 2018.pdf

Pall: SafetyGuidelineFraud.pdf

Martin L Pall 2018 EMF-appeals - List of 41 expressions of concern.pdf

*These documents are available to be sent as PDFs*

Sarah Starkey-2016- Inaccurate official assessment of radiofrequency safety by the Advisory Group on Non-ionising Radiation.pdf

<https://www.saferemr.com/2018/07/icnirps-exposure-guidelines-for-radio.html>

Campaigner Simon Hodges of Bristol has written this information:

[https://communityoperatingsystem.wordpress.com/2019/09/12/how-icnirp-agnir-phe-and-a-30-year-old-political-decision-created-and-then-covered-up-a-global-public-health-scandal/?fbclid=IwAR3AWj1g7EhXgh5Cke-mfp5u2yUNAmUQRwrTEPLO-Hw2Um9H\\_M5HD3v7PP1Y](https://communityoperatingsystem.wordpress.com/2019/09/12/how-icnirp-agnir-phe-and-a-30-year-old-political-decision-created-and-then-covered-up-a-global-public-health-scandal/?fbclid=IwAR3AWj1g7EhXgh5Cke-mfp5u2yUNAmUQRwrTEPLO-Hw2Um9H_M5HD3v7PP1Y)

A detailed list of undeclared conflicts of interest among ICNIRP members has been published by a group of concerned citizens: [https://www.mdpi.com/2312-7481/5/2/31/htm?fbclid=IwAR1oPTC3hHyU\\_IdHoNAo212Y5lme9l\\_G-S\\_XQwPdBUHWMIUodH89cZOnD2Q#B10-magnetochemistry-05-00031](https://www.mdpi.com/2312-7481/5/2/31/htm?fbclid=IwAR1oPTC3hHyU_IdHoNAo212Y5lme9l_G-S_XQwPdBUHWMIUodH89cZOnD2Q#B10-magnetochemistry-05-00031)

AVAATE. 2015. Available online: [http://www.avaate.org/IMG/pdf/escrito\\_web\\_icnirp\\_in-gles\\_final.pdf](http://www.avaate.org/IMG/pdf/escrito_web_icnirp_in-gles_final.pdf) (accessed on 29 April 2019).

The relevant section of WHO is essentially identical to ICNIRP: <http://assembly.coe.int/nw/xml/XRef/Xref-XML2HTML-en.asp?fileid=13137>

Michael Repacholi, the founder of ICNIRP, established the WHO International EMF Project (IEMFP) in 1996 and remained in charge of it until 2006 [3], when he reportedly resigned after allegations of corruption [12] to officially become an industry consultant [13].

*Researcher Einart Flydal has references*

[Doubts about the reliability of ICNIRP evaluation admitted by ICNIRP chairs:](#)

Van Røngen and van Deventer admit they have doubts:

<https://betweenrockandhardplace.wordpress.com/2017/09/13/blunder-by-icnirps-and-who-emf-projects-bosses/>

ICNIRP claim that their members are ‘independent experts’ and that they cannot receive funding from industry. This is misleading:

<https://www.emfacts.com/2011/07/anthony-swerdlow%E2%80%99s-share-portfolio-or-business-as-usual-at-icnirp/>

Anthony Swerdlow was chair of ICNIRP. Swerdlow chaired the AGNIR group that produced the discredited 2012 AGNIR report. AGNIR’s [Maria Feychting](#) and [Zenon Sienkiewicz](#) were also members of ICNIRP. ICNIRP set the guidelines, and AGNIR judged the quality of the guidelines. Swerdlow and his wife both had shares in Telecoms. These were not disclosed in the AGNIR report. AGNIR was represented as an ‘independent’ advisory body. But Starkey revealed that 43% of its members were from the Health Protection Agency (now Public Health England), the government health agency which commissioned the report, and from the Department of Health. AGNIR could therefore hardly be thought of as ‘independent’.

Swerdlow was the lead author of the ICNIRP interpretation of the INTERPHONE Study; an interpretation which is contested by independent experts as being misleading. The INTERPHONE Study, which is a review of studies, does in fact include studies showing increased risk of glioma.

Swerdlow and Feychting are both recognised as *'leading sceptics'* about the existence of adverse health effects from RF-EMFs

Psychiatrist James Rubin of AGNIR has published a number of studies all concluding that RF-EMFs cause no adverse health effects.

Therefore appointing AGNIR meant a foregone conclusion.

Funding via firewalls: *Mobile Phones, Brain Tumours and the Interphone Study: Where Are We Now?* A hugely influential interpretation of a huge study by ICNIRP's Anthony Swerdlow and Maria Feychting.

The Conflict of Interest Statement on p2 says that AS and MF received funding from the International Union Against Cancer. The IUAC in turn receives funding from the Mobile Manufacturers' Forum, VINNOVA which receives funding from TeliaSonera, EricssonAB, and Telenor.

Swerdlow has (or had at the time) shares in Cable and Wireless Communications and his wife has/had shares in BT. <https://www.emfacts.com/2011/07/anthony-swerdlow%E2%80%99s-share-portfolio-or-business-as-usual-at-icnirp/>

Cable and Wireless gave 'generous support' to ICNIRP's David Black to secure a degree at Auckland University.

### **A trend towards financial conflicts of interest**

In 2012, the Union of Concerned Scientists published a report: *Heads They Win, Tails We Lose. How Corporations Corrupt Science at the Public's Expense.*

*'Government agencies rely on independent scientific advisory panels to provide objective advice'... 'panel members often have undisclosed financial conflicts of interest: ties to companies that stand to win or lose based on the findings of these advisory committees.'*

### **Professor Lennart Hardell's opinion on ICNIRP**

Hardell is a Swedish oncologist and professor at Örebro University Hospital in Örebro, Sweden. He is an expert in environmental cancer-causing agents such as Agent Orange. His research shows that cell phones increase the risk of brain tumours (*see studies list*).

"it is time to close down ICNIRP since their evaluation is not based on science but on selective data such as only thermal effects from RFR, see also [www.emfcall.org](http://www.emfcall.org)."  
<http://www.avaate.org/spip.php?article2828>

## **SAR limits for mobile phones**

Dr Marc Arazi presentation: 9 out of 10 phones exceed safety limits; phone companies have been dishonest for 20 years: <https://www.phonegatealert.org/en/dr-arazis-presentation-at-the-international-scientific-conference-in-mainz-germany>

## **OFCOM (lack of) independence**

OFCOM receives funding from telecoms companies - Sim from East Sussex campaign group has info on this.

## **Legalities**

### **Standards failures**

No health impact assessments have been carried out despite being required by law  
No environmental impact assessments have been carried out  
Lampost equipment for LED lighting and 5G antennas has been found by Isle of Wight campaigners not to comply with International Standards Organisation standards as required by law

### **Informed consent**

Rollout plans are not available to the public or, often, councils. This is in clear breach of the fundamental Human Right to Informed Consent which constitutes Article 7 of the United Nations International Covenant on Civil and Political Rights. This article explicitly includes a prohibition on medical and scientific experimentation without consent. 5G technology has not been tested on populations and it therefore constitutes experimental technology and a breach of human rights.

### **The Precautionary Principle**

*As 5G continues to develop, the Government is committed to working with Public Health England's Centre for Radiation, Chemical and Environmental Hazards (CRCE) in order to monitor available evidence and will take action if necessary. This is reactive, not proactive and thus in breach of The Precautionary Principle. Furthermore, the evidence of harm from*

RF-EMR is already overwhelming. According to doctors campaigning on this matter, urgent action is already warranted.

## **Councils and the Constitutional Duty of Care to citizens**

Councils have a Duty of Care to citizens and may have a legal or constitutional duty to protect their health and welfare, devolved from the Secretary of State for Health. [Social Care Act 2012?]

It is small pockets of people nearest masts and vulnerable groups who will initially be more affected. Therefore councils should make decisions on exposure limits having monitored the areas, not central governments. This should be in consultation with independent experts and not reliant on the ICNIRP guidelines.

## **The Electronic Communications Code**

The Code was substantially reformed through the Digital Economy Act 2017. The purpose of these reforms was to ensure UK consumers and businesses receive the digital connectivity they need, by making it cheaper and easier for Code Operators to install, maintain and upgrade their apparatus. The reformed Code is set out in Schedule 3A to the Communications Act 2003.

<http://www.legislation.gov.uk/ukpga/2017/30/section/7/enacted>

*7Application of the code: protection of the environment*

*For section 109(2A) of the Communications Act 2003 (under which regulations that set restrictions and conditions to the application of the electronic communications code are deemed by subsection (2B) to comply with duties under National Parks and other legislation if they comply with the **duty to have regard to the need to protect the environment**, but only if they expire before 6 April 2018) substitute—“(2A) Subsection (2B) applies if the Secretary of State has complied with subsection (2)(b) in connection with any particular exercise of the power to make regulations under this section.”*

## **Public hearing on Wireless Small Cell Siting Legislation in Pennsylvania, USA**

From a nurse. Sent by Susan Clarke, US irradiation researcher (also involved in legal).

*Having been a nurse for over 40 years, I additionally attest and affirm that, given the maximized absorption of 5G irradiation in human bodies, and given 5G wavelengths and proximities, the health decline in the generally public, particularly children will be precipitous, and, should 5G proliferate, the next generation will be plagued with unprecedented birth defects, infertility, DNA damage, neurological impairments, cardiac problems, immune and*

*other diseases and early deaths. One cannot imagine a worse attack on America or our Commonwealth.*

Points mentioned include:

Dangers to installers from close contact - like being by an open microwave oven

State and local officials being obligated to regulate wireless communications facilities on the basis of health effects according to the 1996 Telecommunications Act (TCA Preemption Clause, Section 704 subpart iv) 'the terms "health effects" and "health" are never mentioned, positively leaving these "fields" as they are called in preemption law, in the governing, regulatory hands of state and local officials.'

Only three activities are preempted: placement, construction, and modification.

The operations of wireless communications facilities remain under state and local regulatory control on all bases, both health and environmental effects, which is why the National Environmental Protection Act (NEPA) retains its authority in tandem with the TCA.

## **Firefighters**

In California firemen have successfully exempted themselves from the forced placement of antennas on their stations because of the actual health effects many have suffered from the RF/MW radiation.

## **Some technological points**

5G Deployment: State of Play in UK, USA and Asia

Consultants engaged by the ITRE Committee of the European Parliament (Forge & Blackman, 2019): *Significant concern is emerging over the possible impact on health and safety arising from potentially much higher exposure to radio frequency electromagnetic radiation (RF-EMR) arising from 5G. Increased exposure may result not only from the use of much higher frequencies in 5G but also from the potential for the aggregation of different signals, their dynamic nature, and the complex interference effects that may result, especially in dense urban areas.*

*The 5G radio emission fields are quite different to those of previous generations because of their complex beamformed transmissions in both directions – from base station to handset and for the return. Although fields are highly focused by beams, they vary rapidly with time and movement and so are unpredictable, as the signal levels and patterns interact as a closed loop system...currently it is not possible to accurately simulate or measure 5G emissions in the real world.*

Sunlight and RF-EMR

The American Cancer Society state that the energy level of radio frequency waves is relatively low, especially when compared with the types of radiation that are known to increase cancer risk, such as gamma rays, x-rays, and ultraviolet light. According to Emeritus Professor of human radiation effects Denis Henshaw and others, comparisons with sunlight are a gross misrepresentation of the science. a) RF-EMR penetrates the skin, unlike sunlight b) we are exposed to RF-EMR over long time periods. X rays are minimised and of very short duration. Microwave ovens have doors. We are advised to limit exposure to UV light. Experts say that manmade EMR is one billion billion times more intense than natural background levels.

RF-EMR is not a static field as with EMFs (also found harmful; e.g. link with pylons and leukaemia) but a propagating wave which penetrates the body

This is a matter of health effects, not health concerns. These health effects have been objectively proven beyond reasonable doubt.

According to Ofcom & Alasdair Philips [author of glioma paper], 5G in the UK has been gearing up to use low bands (700MHz large rural zones; also good for wall penetration / potential surveillance), 3.4 to 3.8GHz (= harmful over time, organ penetrating) and frequencies over 6GHz (= as we all know, higher energy with special risks to surface tissue for urban hotspots/city centres.)

EE's current "5G" rollouts currently consist of souped up WiFi and souped up LTE (4G-plus) – low frequencies, but harmful and adding to existing levels.

According to Dr Mallery-Blythe, our government claims it is not planning to use millimetre waves (MMW). Ofcom has licensed 28GHz, already sold to "Three", just short of the MMW = 30GHz+, but with similar risks.

Engineer Eric Peel:

Effects occur at approximately 100,000 times below allowable levels.

Pulsed EMFs are in most cases much more biologically active than are non-pulsed EMFs of the same average intensity, but pulsations are ignored in the safety guidelines despite the fact that almost all of our current exposures are highly pulsed.

There are exposure windows such that maximum effects are produced in certain intensity windows and also in certain frequency windows but the consequent very complex dose-response curves are ignored by the safety guidelines. Several additional flaws in the safety guidelines are shown through studies of both individual and paired nanosecond pulses. The properties of 5G predict that guidelines will be even more flawed in predicting 5G effects than the flaws that the safety guidelines have in predicting other EMF exposures.

### **Direct Energy Weaponry (DEW)**

At a 15-degree arc of concentration, as will be the case with lamppost 5G emissions, 5G closely approaches DEW, as used as a weapon by the military. THAT, along with various

other parameters, including its proximity, is why it is certain to be harmful. (Susan Clarke, researcher and radiation expert involved with legal action for irradiated communities.)

According to former MI6 agent, physicist Barrie Trower PhD, microwave radiation with the same wavelengths, intensities, and modulation characteristics as 4G wifi have been used for confession extraction (torture) as far back as the 1950s in the West - quite possibly earlier in the Eastern Bloc. The frequencies used are higher than currently planned for commercial use.

### **Opinion from a physicist (Nisa, contact of Amber's) on spatial radiation distribution**

With regards to the legal action, perhaps you would like to inform the lawyers about my work. LED lighting and 5G both use electromagnetic waves off flat radiation sources. The radiation intensity is enormous for both cases along the propagation axis. This means that certain subjects absorbing the radiation will get "fried" from this intensity much more than others in the periphery. I have proven this with very rigorous scientific analysis backed by experiments.

### **High UK/US guidelines**

<http://www.es-uk.info/wp-content/uploads/2018/05/RF%20Radiation%20Safety%20Limits.pdf> (note chart is faulty with two 'UK' bars)

### **Different types of 5G:**

<https://communityoperatingsystem.wordpress.com/2019/07/20/4g-fake-5g-and-real-5g-know-the-differences/>

### **Increase in radiation levels since 2012**

Simon Hodges has provided this info and also has a video of Bristol emissions

- New bandwidth spectrum and technologies (3G, 4G & 4GLTE) have been introduced since 2012 in addition to previous GSM and 2G spectrums.
- Wireless Wi-Fi networks have become more ubiquitous - in schools, public buildings, shops, cafes, pubs, shops, buses, trains etc. Even if you turn off a home wireless network you are still affected by all the surrounding ones in your neighbourhood.
- Power density increases with network demand. As the number of devices on the network exponentially increases as will happen if the IoT takes place, then all those devices and also the high data throughput rates of 3-10Gbps all increase power density proportionately.

- With 5G an additional area of concern is when data rates rise above 10Gbps one starts to see Brillouin Precursors take effect.

pp1-10, more on Brillouin Precursors:

<https://microwavenews.com/news/backissues/m-a02issue.pdf>

## **LED street lights**

To find out: PHE has already warned of harm from LED lights. Is it the case that they work on the 868mhz frequency which will also be one of the two frequencies used for 5G (Source - Tanja re Isle of Wight).

## **Media bias**

There appears to be a mainstream media blackout regarding EMR, including from the BBC who are partners in 5G and stand to gain financially. Local papers are reporting on the issue however.

Matthew Howett (Radio 5 Live) is from Assembly Research whose work is paid for by Telecoms clients. We would strongly contest that this constitutes 'independent' analysis.

David Robert Grimes, Martin Sperrin: the mainstream media appear to have a set of 'experts' who will not speak against industry and who are always quoted in articles.

The Times: 5G Totnes article by Will Humphries began with the words 'conspiracy theorists' which shows clear bias.

Spectator blog 15 October: 'Conspiracy loons' is defamatory and leading.

## **Purported economic benefits**

Economic benefits are vague unsubstantiated promises and with unknown outcomes. Guaranteed profits are for the telecoms companies only. There may be some beneficial uses for 5G, but benefits need to outweigh the costs. X-rays and CAT scans have beneficial applications, but are contained.

Prof William Webb, former OFCOM director: book *The 5G Myth* claims the 5G vision is unrealisable.

## **Smart grid - other dystopian angles contrary to 5G-promotional myths:**

Job losses

Security issues

Devastating deadly wildfires in Korea reported to be caused by 5G transmitters (to check); ditto Malibu wildfires

## **Alternatives: Cabled tech and SafeG**

Wired communication is faster, more reliable and more secure (not ideal - still sheds EMFs and is 'dirty electricity' - but better

SafeG campaign for cabled tech

SSITA campaign for no internet or cabled internet in schools

[scientists4wiredtech.com](http://scientists4wiredtech.com)

## **Councils**

There is currently central government pressure on councillors to agree to giving Telecoms companies free licence to place masts wherever they choose with no obstruction from local councils. There is a survey for councillors (deadline 4 Nov) and a directive requesting them not to obstruct placement on any grounds. Currently (Oct 2019) they may object only on aesthetic grounds. 3 masts were blocked by Brighton and Hove councillors in mid-October.

Ordnance survey are helping to accelerate the deployment of 5G 'through geospatial data planning.'

<https://www.ordnancesurvey.co.uk/blog/2018/08/how-environment-will-affect-5g/>

Rt Hon James Brokenshire Secretary of State for Housing, Communities and Local Government, was in charge of the legislation that takes all control and authority away from a supposed devolved assembly and local councils.

116. Local planning authorities must determine applications on planning grounds only. They should not seek to prevent competition between different operators, question the need for an electronic communications system, or set health safeguards different from the International Commission guidelines for public exposure. <https://assets.publishing.ser->

[vice.gov.uk/government/uploads/system/uploads/attachment\\_data/file/810197/NPPF\\_Feb\\_2019\\_revised.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf)

## **National Association of Local Councils**

**Proposed relaxation of infrastructure laws:** <https://www.gov.uk/government/consultations/proposed-reforms-to-permitted-development-rights-to-support-the-deployment-of-5g-and-extend-mobile-coverage>

If little opposition is shown the govt can or will take this as acceptance and telecoms companies will then be able to place masts on private or public land without the owner having a right to obstruct.

## **Policy Consultation E-Briefing 10-19 – 5G Mobile Coverage In Rural Areas**

The Ministry of Housing, Communities and Local Government (MHCLG) is leading a joint consultation with the Department for Culture, Media and Sport (DCMS) on extending 5G mobile provision in rural areas.

This discusses permitting operators under the Electronic Communications Code to deploy 5G and whether there should be restrictions. This talks about infrastructure to facilitate quality jobs. *Note:* campaigners are not against cabled tech if proven safe; it is certainly safer than wireless. 5G and 4G can be achieved using cabled tech. Mobile devices would not be possible.

The govt wants to address 'total not-spots' and 'partial non-spots'. ES sufferers and others should have access to such 'not-spots', also known as 'white zones.' Public perception of not-spots should be that they are a necessity and a choice.

The consultation also asks if masts should be wider and higher.

Govt to council: The council is able to exercise control over developments in its capacity as the owner of land and assets or in its capacity as the Local Planning Authority (LPA). However, as the LPA it is required to comply with the government's National Planning Policy Framework (NPPF); this provides the following directives with which the council must comply:

### Para. 114

local planning authorities should not impose a ban on new electronic communications development in certain areas.

### Para 112

Planning policies and decisions should support expansion of electronic communications networks, including next generation mobile technology (such as 5G) and full fibre broadband connections.

### **Guidance for local authorities re street furniture.**

<https://www.gov.uk/guidance/access-to-public-sector-assets>

<https://www.gov.uk/guidance/guidance-on-access-agreements>

### **What we require from councils**

- Alcohol is a class 1 carcinogen. Public health bodies have informed the public about this and imposed taxes and recommendations. Driving can kill - the same applies. Smoking in public places is banned. RF-EMR is different, because there is no opting out. We need a) transparency/public information campaigns and b) protection. 5G and mobile radiation are equivalent to forcing all citizens to smoke.
- If new reforms are adopted, prior approval for deployment of 5G infrastructure within conservation areas and on listed buildings, in AONBs, areas defined within the Wildlife and Countryside Act (1981), national parks and World Heritage sites, will no longer be required. An increasingly unsightly network of 5G infrastructure will at best severely compromise, and at worst destroy the beauty of the British landscape.

### **Bristol City Council:**

BCC is an interested party in the 5G rollout. The city has received funding worth millions to help develop 5G. Residents demand transparency on contracts signed and the exact role of the mayor and the Chief Executive responsible for the 'digital transformation' of the city, Mike Jackson.

*Ian Herd of WECA has stated 'The 5G Smart Tourism project is led by the West of England Combined Authority and funded by The Department for Digital, Culture, Media & Sport. It brings together 19 organisations and will see the development of a testbed to demonstrate 5G capability, establishing the West of England as a world-leader in the development of advanced fixed and mobile communication systems'.*

see: <https://www.digicatapult.org.uk/news-and-views/press/next-generation-tech-enabled-experiences-expose-the-benefits-of-5g-to-uk/>

And, Bristol City Council can benefit financially from 5G rollout.

*The 'South West England and South East Wales Science and Innovation Audit: 'A Science and Innovation Audit Report sponsored by the Department for Business, Energy and Industrial Strategy J Annex J: Digital Living Innovation Theme Report'*

<https://gw4.ac.uk/wp-content/uploads/2017/11/SWW-SIA-MainReport-Final.pdf>

P 29 has reports on **BCC joint ventures** with Bristol university:

- Smart Cities/Regions and Transport Asset Host/Lead Descriptor Bristol is Open/Open Programmable City: 'a mesh bouncing from lamppost to lamppost across the City; and a mile of experimental wireless connectivity along Harbourside. The networks are controlled in Software – creating a Software Defined Network. It uses Network Function Virtualisation to make the infrastructure super-fluid, sliceable, and usable by many different projects at once Extension across the WoE is planned'.

- 'REPLICATE Bristol –

1 of 3 Lighthouse Cities

City Council / Univ. Bristol

<https://www.connectingbristol.org/budget/>

£29m euro H2020 project developing and validating a Sustainable City Business Model; enhancing transition to smart cities in the areas of energy efficiency, sustainable mobility and ICT infrastructure. The main purpose is to accelerate the deployment of innovative technologies, organisational and economic solutions to significantly increase resource and energy efficiency, improve the sustainability of urban transport and drastically reduce urban greenhouse gas emissions'

### **5G Smart Tourism**

Lead organisation: West of England Combined Authority, supported by the BBC, Aardman and the University of Bristol

Grant: £5m

Location: Bath and Bristol

Using 5G to offer tourists 'enhanced visual experiences' via augmented and virtual reality technologies is the aim of this project. Visitors to attractions including the Roman Baths and Bristol Millennium Square will be offered AR and VR content provided by the BBC and animation studio Aardman.

### **Bristol is Open report:**

<https://democracy.bristol.gov.uk/documents/s31034/1.%2019%2003%2022%20Cabinet%20cover%20Report%20BIO%20vFINAL.pdf>

### **Quotes from Bristol residents**

*I was forced to leave Bristol. I became sick and fatigued.*

*I live right behind Colston Hall. Constantly headachy, sleep quality affected, blurring vision, ear pain. All since 5G was rolled out behind our backs.*

*We are moving to get away from the masts. I have headaches and pain.*

*I am planning to sell up as there is no point in living here.*

*Bristol is my birthplace but now I do not want to go there.*

*If you've got 5G in Bristol I don't want to go there. Simple as that.*

*I live in Bedminster near a cluster of masts and four of my near neighbours have developed fatal cancer this year including two with brain tumours.*

*We don't need faster downloads or more virtual gaming on the go.*

*I'm sad for my children's future.*

*I can never visit Bristol now. I can't go to a concert, to an art gallery or see a film.*

## Links and further information:

Research from UK doctors PHIRE medical: <http://phiremedical.org>

US Physicians for Safe Technology (this group includes former Microsoft director): <https://mdsafetech.org/problems/5g/>

Emeritus Professor of biochemistry at Washington State University Martin Pall, a dedicated campaigner and researcher of biochemical effects: <https://bit.ly/2FIgWsa>

International appeal to stop the launch of 25,000 5G satellites: <http://www.5gspaceappeal.org/the-appeal>

Excellent info and studies lists: <https://bioinitiative.org>

Excellent info and studies lists: <https://emfscientist.org/index.php/emf-scientist-appeal>

Environmental Health Trust website - excellent resource with studies

Brussels ban: <https://bit.ly/2XHnn4f>

[EMF Call for Truly Protective Limits for Exposure to Electromagnetic Fields \(100 kHz to 300 GHz\)](#)

Public Health England and 5G. <https://www.parliament.uk/documents/commons-committees/science-technology/Correspondence/Duncan-Selbie-to-Chair-re-Health-effects-of-5G.pdf>.

Frank Clegg, former President of Microsoft, of Canada Physicians for Safe Tech - issues a stark warning about the coming health time bomb [https://www.youtube.com/watch?feature=youtu.be&v=xSP2exnmJXg&fbclid=IwAR0NwCZh1YG65\\_EYk-82-WUgplX5C0N-HUAof10-aLtHetd1EH21ldIY1kE&app=desktop](https://www.youtube.com/watch?feature=youtu.be&v=xSP2exnmJXg&fbclid=IwAR0NwCZh1YG65_EYk-82-WUgplX5C0N-HUAof10-aLtHetd1EH21ldIY1kE&app=desktop)

Former head of Microsoft Frank Clegg warns against 5G: <https://www.youtube.com/watch?v=xSP2exnmJXg&feature=youtu.be>

Lena Pu [https://www.youtube.com/watch?v=D1pzeTFmCn8&fbclid=IwAR1EAJdeGvg-IE6uUkO4rJr40mk5JMSq5b3ovLCdyrHSx\\_6muER1EFXgBjxl](https://www.youtube.com/watch?v=D1pzeTFmCn8&fbclid=IwAR1EAJdeGvg-IE6uUkO4rJr40mk5JMSq5b3ovLCdyrHSx_6muER1EFXgBjxl)

*Computer Weekly: Mobile phones and health. 5G being rolled out too fast.* Excellent expose of how industry apologists have managed to convince various government health agencies to give industry carte blanche.

Scientific American Oct 2019 [https://blogs.scientificamerican.com/observations/we-have-no-reason-to-believe-5g-is-safe/?fbclid=IwAR2qeDRUTvXTUPW3i9Cs\\_Hilbutb18qVVc-DQMIWRzeL7FwLMBjskh\\_U7y1s](https://blogs.scientificamerican.com/observations/we-have-no-reason-to-believe-5g-is-safe/?fbclid=IwAR2qeDRUTvXTUPW3i9Cs_Hilbutb18qVVc-DQMIWRzeL7FwLMBjskh_U7y1s)

<https://newsvoice.se/2019/05/5g-question-olle-johansson/>

Investigate Europe: A group of independent European Journalists have produced this introductory two minute video on 5G. <https://www.youtube.com/watch?v=JKaoLxw0qJI&feature=youtu.be>

The Telegraph: mobile phones cause cancer [https://www.telegraph.co.uk/science/2018/05/02/mobile-phone-cancer-warning-malignant-brain-tumours-double/?fbclid=IwAR2-fUnYW5SSh3gKyBJ\\_5NTtYkD0QidISDuvs8wXxbGwxS-do\\_WWP8kN89EY](https://www.telegraph.co.uk/science/2018/05/02/mobile-phone-cancer-warning-malignant-brain-tumours-double/?fbclid=IwAR2-fUnYW5SSh3gKyBJ_5NTtYkD0QidISDuvs8wXxbGwxS-do_WWP8kN89EY)

Daily Mail: Joel Moskowitz' warning

The Guardian: Mark Hertsgaard investigates conflicts of interest and corruption

Parliament of Europe report <http://www.electrosmogprevention.org/public-health-alert/wifi-dangers/parliament-of-europe-report-on-emf-and-environment-may-6-2011/>

PHIRE: safety limits and political conflicts of interest <http://phiremedical.org/safety-limits-and-political-conflicts-of-interest/>

<https://bmcbgenomics.biomedcentral.com/articles/10.1186/1471-2164-9-77>

The Telegraph: dangers of Wi-Fi <https://www.telegraph.co.uk/health-fitness/body/wifi-internet-family-dangerous-health/>

Increased amounts of energy are required for 5G, says biologist & environmental scientist: <https://www.forbes.com/sites/dipkabhbhambhani/2019/04/22/5g-may-be-holy-grail-for-telecom-but-energy-sector-feels-much-anxiety-over-new-network/#124075286efe> <https://www.cfr.org/blog/what-5g-means-energy>

EM Facts: 5G Introducing Brillouin Precursors, Microwave Radiation Runs Deep

Radiation turns to heat on absorption by rain droplets: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/684421/OS\\_Final\\_report\\_\\_5g-report-environment.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/684421/OS_Final_report__5g-report-environment.pdf)

5G Frequency Free Fairbanks, including multiple scientific reports

Dr Joseph Mercola: The 5G War, Technology versus Humanity including 68 references

Jeremy Naydler PhD, Children's Health Defence, 5G from Space, Not one inch of the Globe will be free of Radiation

Federal Court overturns Order for 5G and Small Cells Senate Hearing: Senator Blumenthal "No safety testing". Letters from: Frank Clegg, Former CEO of Microsoft Canada  
David O Carpenter MD, University at Albany

Prof Yuri Grigorievich Grigoriev Dr Sc Med, Academy Russian A E S

Dr Paul Ben Ishai (scientist who revealed sweat duct act as antenna exposed to 5G EMF

## Smart meters

These are being pushed without any independent investigation into their health effects and despite the warnings of experts who have researched those effects as well as a large body of anecdotal evidence suggesting serious health issues including seizures and heart failure.

Take Back Your Power is an award-winning film which exposes the health risks and the cover-up: <https://www.youtube.com/watch?v=8ZTiT9ZSg3Q>

**50 doctors warn against smart meters - similar to living by a phone mast:** [https://maisonsaine.ca/actualites/smart-meters-correcting-the-gross-misinformation.html?fbclid=IwAR0I7BgpNSmnhOgPIIe\\_0PBV1I\\_xZDQDUeBhap0T3eIKh94dA0mS6gKCAp4](https://maisonsaine.ca/actualites/smart-meters-correcting-the-gross-misinformation.html?fbclid=IwAR0I7BgpNSmnhOgPIIe_0PBV1I_xZDQDUeBhap0T3eIKh94dA0mS6gKCAp4)

Information on microwave spikes from smart meters causing cardiac risk, insomnia, headaches and other health risks: <https://theecologist.org/2017/apr/11/smart-meters-and-cell-damage-pulsed-em-radiation-our-health-risk> 2 <https://theecologist.org/2017/jun/06/smart-meter-radiation-and-health-why-are-we-neglecting-non-toxic-alternatives>

Further information: <https://www.youtube.com/watch?v=nPITup9oZRY&feature=youtu.be&fbclid=IwAR3sloUxDk6zaY1NAeMKUimtbMZyYf-eTHoFsob9UeQuOrDCUfeAWeht2BA>

## WiFi

WiFi has been shown to cause harmful biological effects and has been banned in schools/ converted to cabled internet in several EU countries including France

**Green Party** existing Agreed Relevant Policies include the following:- Record of Policy Statements Oct 18, 2016 ...

The primacy of the precautionary principle must be maintained over the scientific principle in assessing acceptability of industrial processes.

**ST201** Science and technology have made enormous contributions to our civilisation and wellbeing. However, irresponsible use of science and technology have undoubtedly resulted in problems for society. We recognise that when used responsibly science and technology have great potential to be part of the solution to many problems, including environmental ones. However, we recognise that there are very unlikely to be any technological 'quick fixes' and that science needs to be part of a coordinated response alongside political and economic solutions.

**ST300** We will support the development of technology that promises to benefit society and the planet. However we believe that technology must be regulated as outcomes may be malign. We do not believe that technological fixes alone will deal with the serious problems facing the planet.

**ST301** There is a risk that further rapid technological change will bring about new and catastrophic threats to human survival and flourishing, and to the natural world. In line with our moral obligations to future generations, the Green Party supports the creation of a law formalising the Precautionary Principle to be applied to technologies that pose a plausible risk of ecocide, catastrophe or human extinction. **The Precautionary Principle applies especially to those risks where we are uncertain or ignorant of their magnitude or likelihood.**

**PL300** To negotiate effective international and national agreements for pollution control and minimisation, and to ensure their implementation at local levels through industry, agriculture and society at large.

**PL301** To continuously monitor the environment using agreed protocols to ensure comparability of data and to ensure the effective transmission of all relevant data on pollution between states through international agencies such as the United Nations.

**PL302** To require industries to systematically audit and publish their use of toxic chemicals, and to establish binding timetables to reduce such use.

**PL303** To guarantee the public's right to know about chemical usage and emissions.

**PL304** To determine socially and environmentally acceptable levels for pollutants based on both chronic and interactive effects. Environmental and health considerations will be given precedence over economic factors in the determination of such levels.

**PL305** To guarantee the public's right to know about the health and environmental aspects of pollution and to actively promote environmental education.

**PL306** To introduce environmental impact and improvement analysis into all public planning decisions, and to ensure free public access to the evidence used in both the analysis and in the final assessment.

**PL431** Individuals and organisations concerned with generating pollution will be held responsible for the costs of control and for any damage caused, however remote in time or distance. There will be no Crown immunity.

**PL432** If suggestive evidence emerges that a pollutant or product may have an adverse effect on the health of humans or the environment, a levy will be placed on the process sufficient to pay for scientific research on the link between pollutant and effect. If a causal association seems reasonable, but the harm is not sufficient to justify the banning of the pollutant or product, a levy will be placed on the process sufficient to pay for the extra health or environmental service work caused by the product.

**DY100** This policy relates to all disability, sickness and mental health issues. This includes hearing and vision and brain differences of all kinds. We recognise that many impairments such as those relating to sight, hearing and intellect are not visible or apparent.

**RR207** While seeking to maintain equity in meeting people's needs, people have responsibility for ensuring the absence of discrimination in ethnicity, gender, sexual orientation, language, religion or other opinion, age, national or social origin, economic status or any other social, physical or mental condition.

In line with Policy ST301, where we are uncertain or ignorant of the magnitude or likelihood of the harmful effects of anthropogenic electromagnetic radiation, the Precautionary Principle must be applied.

Policies RR207 and DY100 are concerned with rights, responsibilities, discrimination and disability. The Green Party aims to tackle discrimination and it therefore follows that special consideration should be given to the rights of those suffering from ElectroMagnetic-Sensitivity.