Your response

Question	Your response
Question 1: (section 3) Do you have any further comments on the approach we are minded to take to authorising the 40 GHz band?	*Is this response confidential? –N* See response below
Question 2: (section 5) Do you agree with the method that we have outlined in annex 16 for identifying which licences authorising the use of fixed links around high density areas will be subject to revocation on the basis that the authorised links would be likely to suffer interference from new users in the high density areas? If not, please give reasons.	*Is this response confidential? –N* See response below
Question 3: (section 7) Do you agree that the licence fee for fixed links that we allow to remain in the 40 GHz band should be the same as the fee in place for the 26 GHz band? If not, please give reasons.	*Is this response confidential? –N* See response below
Question 4: (section 9) Do you have any comments on the proposed rules of our auction?	*Is this response confidential? – N* See response below
Question 5: (section 9) Do you have an interest in bidding for specific high density areas in this award? If so, please provide evidence that you have a credible intention to do so.	*Is this response confidential? – N* See response below
Question 6: (section 9) Do you consider it appropriate to have one or two 26 GHz lot categories?	*Is this response confidential? – N* See response below

Question 7: (section 10) Do you agree with our proposed approach to coordinating Shared Access users in the 26 GHz band? If not, please give reasons.	*Is this response confidential? – N* See response below
Question 8: (section 10) Do you agree it would be appropriate to coordinate Shared Access users in the 40 GHz band in a similar way to the 26 GHz band if we make it available in 5 years time (noting we would consult on the detail of this coordination). If not, please give reasons.	*Is this response confidential? – N* See response below
Question 9: (section 10) Which of the proposed options for coordinating award winners and existing licensees during the (5-year) revocation period do you think would be most appropriate? Do you think alternative approaches to coordination would be more appropriate?	*Is this response confidential? – N* See response below
Question 10: (section 10) Do you agree with our proposal to protect the radio astronomy site at Cambridge (42.5-43.5 GHz) from new mobile users using the 40.5-43.5 GHz band using technical assignment coordination? If not, please give reasons.	*Is this response confidential? – N* See response below
Question 11: (section 10) Do you agree with our proposed approach to coordinating at the boundary of high and low density areas? If not, please give reasons.	*Is this response confidential? – N* See response below
Question 12: (section 10) Do you agree with our proposed approach to international coordination? If not, please give reasons.	*Is this response confidential? – N* See response below

Question 13: (section 11) Do you agree with the non-technical conditions that we propose to include in the award licences to be issued following the award of the 26 GHz and 40 GHz bands? If not, please give reasons.	*Is this response confidential? – N* See response below
Question 14: (section 12) Do you have any comments on our proposal to award fixed term licences with a 15 year term?	*Is this response confidential? – N* See response below
Question 15: (section 13) Do you agree with the proposed technical licence conditions for award licences and local access licences in the 26 GHz and 40 GHz bands? If not, please give reasons.	*Is this response confidential? – N* See response below
Question 16: (section 13) Do you have any comments on our proposed licence conditions relating to antenna elevation?	*Is this response confidential? – N* See response below
Question 17: (section 14) Do you agree with our proposal to make available channel sizes of 50 MHz, 100 MHz, 200 MHz, 400 MHz and 800 MHz? If not, please give reasons.	*Is this response confidential? – N* See response below
Question 18: (section 14) Do you have any further comments on the proposal to limit low power outdoor deployments in 24.45-25.05 GHz to three base stations in any 300km$_2$ area in order to comply with the EESS protection requirements?	*Is this response confidential? – N* See response below
Question 19: (section 14) Do you have any further comments on the proposed level of	*Is this response confidential? – N*

fees for the Shared Access licences in the 26 GHz and 40 GHz bands?	See response below
Question 20: (section 14) Do you have any further comments on the proposed extension of the Shared Access licensing framework (including its standard non-technical licence conditions) to the 26 GHz and 40 GHz bands?	*Is this response confidential? – N* See response below

Please complete this form in full and return to mmWave.allocation@ofcom.org.uk.

Submission:

As members of the public we do not consent and refuse to be irradiated with 26 and 40 GHz RFR. We do not want to live in an environment where we have no way of escaping from RFR in our own homes. You should not auction the 26 and 40 GHz spectrum under any circumstances. You should not allow companies to indiscriminately irradiate citizens without their consent and knowledge. You have no data on 26 and 40 GHz RFR proving it is safe.

The "safety" guidelines for 0-300 GHz RFR are not protecting public safety:

This is the relevant statement from ICNIRP regarding its EMF safety guidelines "*However, **some exposure scenarios are defined as outside the scope of these guidelines**. Medical procedures may utilize EMFs, and **metallic implants** may alter or perturb EMFs in the body, which in turn can affect the body both directly (via direct interaction between field and tissue) and indirectly (via an intermediate conducting object)".* Please also note ICNIRP's disclaimer on their website. They even say they're not accountable for their guidelines "*ICNIRP e.V. undertakes all reasonable measures to ensure the reliability of information presented on the website, but **does not guarantee the correctness, reliability, or completeness of the information and views published**. **The content of our website is provided to you for information only. We do not assume any responsibility for any damage, including direct or indirect loss suffered by users or third parties in connection with the use of our website and/or the information it contains, including for the use or the interpretation of any technical data, recommendations, or specifications available on our website**.*"

The fact that the ICNIRP guidelines do not apply to a large proportion of UK residents with any form of metal in their bodies is an **acute safety issue** which needs to be taken seriously and addressed. Doing so would NOT result in setting **health** safeguards different from ICNIRP but is in fact applying ICNIRP exactly as stated from a safety perspective. There are many scenarios in which metal is used in the human body for medical reasons. Surgical – metal pins, plates, rods, discs, screws e.g. scoliosis surgery and joint replacement of knees and hips. Urinary, gynaecological and intestinal repairs – e.g. mesh repairs and copper contraceptive coils. Cardiovascular – implantable heart loop recorders, stents and pacemakers. Implants to treat and monitor health conditions, deliver drugs or to restore bodily functions e.g. diabetes related products. Magnetic cerebral spinal fluid shunts. Cochlear implants for hearing loss. Dental work – braces, implants, metal crowns, pins, denture arches, mercury amalgam fillings. What about body piercings? There are very few of us that do not have some metal in our bodies and none of us know when we may need it in the future. These people are not covered by the ICNIRP certificate of "safety" for RFR.

The "safety" guidelines for 0 – 300 GHz are based on the thermal effect only and ignore proven non-thermal biological effects:

Any health and safety information regarding EMFs (including 26 and 40 GHz) has now been superseded by 3 recently published case studies which demonstrate the real-life effect of 5G deployment on human health. **These case studies indicate a clear and unequivocal issue of serious public safety.** The abstracts for these three case studies are included below. The conclusions of these studies need to be considered in conjunction with the fact that the ICNIRP "safety" certificate is based on guidelines which categorically do not apply to, or protect, anyone with any metal in their body.

1. **Development of the Microwave Syndrome in Two Men Shortly after Installation of 5G on the Roof above their Office** by Nilsson M of the Swedish Radiation Protection Foundation, Sweden and Hardell L. of the Environment and Cancer Research Foundation, Sweden. Published in the Annals of Clinical Case Reports February 2023.

   Abstract: *The 5th generation, 5G, for wireless communication is rolled out without previous studies on potential effects on human health and the environment. In this case study we describe two men, case 1 and case 2, working in three office rooms close to base stations. After the deployment of 5G, both men developed symptoms typical for the microwave syndrome, e.g., headache, tinnitus, dizziness, balance disorder, concentration and attention deficiency, and fatigue. Radiofrequency Radiation (RFR) after the 5G deployment was measured in the three offices. In office one maximum (peak) RFR during one minute varied from 463 to 1,180,000 µW/m2, in office two from 6,230 to 501,000 and in office three from 13,700 to 613,000 µW/m2. The symptoms disappeared in both men within a couple of weeks (case 1) or immediately (case 2) after leaving the office for other offices with much lower maximum peak RFR emissions, maximum for case 1 =16 and for case 2 =2,920 µW/m2. This case report may be regarded as a provocation study on health from 5G RFR. The clinical picture in both men was clearly related to the exposure, although the exposures were well below the guidelines recommended by ICNIRP that are claimed to protect against all health effects. We conclude that the guidelines for RFR exposure based only on tissue heating by ICNIRP are inadequate to protect human health and that 5G appears to provoke symptoms of microwave syndrome in previously healthy people*

   https://www.researchgate.net/publication/368690391_Development_of_the_Microwave_Syndrome_in_Two_Men_Shortly_after_Installation_of_5G_on_the_Roof_above_their_Office

2. **The Microwave Syndrome after Installation of 5G Emphasizes the Need for Protection from Radiofrequency Radiation** by Nilsson M of the Swedish Radiation Protection Foundation, Sweden and Hardell L. of the Environment and Cancer Research Foundation, Sweden. Published in the Annals of Clinical Case Reports January 2023.

   Abstract: *In this case, report two previously healthy persons, a man aged 63 years and a woman aged 62 years, developed symptoms of the microwave syndrome after installation of a 5G base station for wireless communication on the roof above their apartment. A base station for previous telecommunication generation technology (3G/4G) was present at the same spot since several years. Very high radiofrequency (RF) radiation with maximum (highest measured peak value) levels of 354 000, 1 690 000, and >2 500 000 µW/m2 were measured at three occasions in the bedroom located only 5 meters below the new 5G base station, compared to maximum (peak) 9 000 µW/m2 prior to the 5G deployment. The rapidly emerging symptoms after the 5G deployment were typical for the microwave syndrome with e.g., neurological symptoms, tinnitus, fatigue, insomnia, emotional distress, skin disorders,*

and blood pressure variability. The symptoms were more pronounced in the woman. Due to the severity of symptoms, the couple left their dwelling and moved to a small office room with maximum (peak) RF radiation 3 500 µW/m2. Within a couple of days, most of their symptoms alleviated or disappeared completely. This medical history can be regarded as a classic provocation test. The RF radiation levels in the apartment were well below the limit proposed to be "safe" below which no health effects would occur, recommended by the International Commission on Non-Ionizing Radiation (ICNIRP). These now presented symptoms of the microwave syndrome were caused by non-thermal effects from RF radiation and highlight that the ICNIRP guidelines used in most countries including Sweden do not protect human health. Guidelines based on all biological negative effects from RF radiation are urgently needed, as well as monitoring human health, not the least due to rapidly increasing levels of exposure.

https://www.gavinpublishers.com/article/view/case-report-the-microwave-syndrome-after-installation-of-5g-emphasizes-the-need-for-protection-from-radiofrequency-radiation

3. **Case Report: A 52-Year Healthy Woman Developed Severe Microwave Syndrome Shortly After Installation of a 5G Base Station Close to Her Apartment** by Nilsson M of the Swedish Radiation Protection Foundation, Sweden and Hardell L. of the Environment and Cancer Research Foundation, Sweden. Published in the Annals of Clinical Case Reports April 2023.

Abstract:
In this case report we present a woman aged 52 years who developed health problems consistent with the microwave syndrome after installation of a 5G base station facing her apartment at 60 meters' distance. These symptoms consisted of e.g., headache, dizziness, concentration difficulties, fatigue, arrhythmia, skin burning and nose bleeding corresponding to the microwave syndrome. High radiofrequency (RF) radiation levels were measured in her apartment especially in the part closest to the base station. In her living room at the window 17 500 to 758 000 µW/m2 peak levels were obtained during 10 measurements, each over 1 minute. At the place of her sofa in her living room peak levels from 36 800 to 222 000 µW/m2 were measured. It is noteworthy that very high radiation was found at the balcony facing the base station. All ten measurements at that place yielded within 10-15 seconds peak levels >2 500 000 µW/m2, which is the highest measurable level with the meter used in this study. At the playground about 40 meters from the base station peak levels of 1 120 000 µW/m2 and 479000 µW/m2 were measured, respectively. After temporally leaving the apartment for another dwelling with much lower RF radiation, 96 to 2 810 µW/m2 peak levels, almost all symptoms disappeared within a short time. After moving back to her own apartment the symptoms reappeared. This study is in line with the results of our two previous case studies showing that installation of 5G caused an extreme increase in exposure and rapid development of the microwave syndrome. These case studies indicate that implementation of 5G cannot be done without the risk of harmful effects on human health.

https://www.acmcasereport.com/pdf/ACMCR-v10-1926.pdf

Former ICNIRP Scientist Raises Serious Concerns regarding ICNIRP 2020 Guidelines

A former member of ICNIRP, Dr James Lin, has just published a study in Environmental Research Volume 222, 1 April 2023, 115369 "Incongruities in recently revised radiofrequency exposure guidelines and standards"

https://doi.org/10.1016/j.envres.2023.115369

It is also summarised in the June edition of Microwave News from the IEEE.

This is the conclusion of the article -

"The rapid proliferation of cellular mobile telecommunication devices and systems is raising public health concerns about the biological effects and safety of radiofrequency (RF) radiation exposure. There is also concern about the efficacy of promulgated health safety limits, rules, and recommendations for RF radiation used by these devices and systems. The recently revised RF exposure limits adjust only for heating with RF radiation. These limits are devised largely for restricting short-term heating by RF radiation to raise tissue temperatures. *They disregarded decisions by scientific organizations such as IARC.* Furthermore, *the limits are based on obsolete information*, circumvent important animal data, and even more so in the case of mm-wave radiation from 5G mobile communications for which there is a paucity of health effects studies in the published literature. *They are flawed and are not applicable to long-term exposure at low levels.* Instead of advances in science, *they are predicated on misguided assumptions with outdated exposure metrics that do not adequately protect children, workers, and the public from exposure to the RF radiation or people with sensitivity to electromagnetic radiation from wireless devices and systems.* Thus, *many of the recommended limits are debatable and absent of scientific justification from the standpoint of safety and public health protection*."

Discussion regarding IARC classification for non-ionizing radiation:

"IARC classified RF radiation from cellphones as a possible carcinogen in humans according to the strength of then available epidemiological reports but partial data from experimental animals (Baan et al., 2011; IARC, 2013). The sought-after animal data were presented later by NTP/ NIEHS (2018) and Ramazzini Institute (Falcioni et al., 2018), which logically and scientifically supplement IARC's earlier decision. Nonetheless, the revisions evaded them by declaring the findings do not provide credible evidence of adverse effects induced by chronic RF exposures. The latest animal data should help to upgrade the classification to the probably carcinogenic category, if not elevated to a higher level."

Independent Scientists Refute ICNIRP's guidelines:

At the very least the science on the health implications of 5G isn't settled. This recent study titled *Scientific evidence invalidates health assumptions underlying the FCC and ICNIRP exposure limit determinations for radiofrequency radiation: implications for 5G* (https://ehjournal.biomedcentral.com/articles/10.1186/s12940-022-00900-9) published on October 18th 2022 in the journal Environmental Health by the ICBE-EMF (International Commission on the Biological Effects of Electromagnetic Fields) raises the following key issues:

1. ICBE-EMF scientists report that exposure limits for radiofrequency (or wireless) radiation set by ICNIRP and the FCC are based on invalid assumptions and outdated science and are not protective of human health and wildlife.

2. ICBE-EMF calls for an independent assessment of the effects and risks of radiofrequency radiation based on scientific evidence from peer-reviewed studies conducted over the past 25 years. The aim of such assessment would be to establish health protective exposure standards for workers and the public.

3. The public should be informed of the health risks of wireless radiation and encouraged to take precautions to minimize exposures, especially for children, pregnant women and people who are electromagnetically hypersensitive.

4. ICBE-EMF calls for an immediate moratorium on further rollout of 5G wireless technologies until safety is demonstrated and not simply assumed.

Roll-out of 5G is Exacerbating Discrimination Against People with Electro-sensitivity

Under the Equality Act 2010 EHS qualifies as a disability as it already does in some European countries. The Equality Act 2010 says someone is considered to have a disability if both of the following apply:

• they have a 'physical or mental impairment'

• the impairment 'has a substantial and long-term adverse effect on their ability to carry out normal day-to-day activities'

Symptoms of EHS can include severe fatigue, loss of concentration and brain fog which would constitute mental impairment. For those with EHS it is a disability under the Equality Act 2010 as it meets both criteria. The location of a 5G mast close to the home of someone with EHS may contravene the Equality Act 2010 through indirect discrimination – i.e. putting rules or arrangements in place that apply to everyone, but that puts someone with a protected characteristic at an unfair disadvantage. If mmWave 5G is rolled out it would significantly increase their level of exposure to EMFs and put them at an unfair disadvantage.

OFCOM would need to carefully consider its position regarding its public sector equality duty. The Equality Act 2010 says public authorities must comply with the public sector equality duty. This is in addition to their duty not to discriminate against people.

The duty aims to make sure public authorities think about things like discrimination and the needs of people who are disadvantaged or suffer inequality, when they make decisions about how they provide services and implement policies. EHS has now been recognized in the UK by an Upper Tribunal which found, in July 2022, that a person with EHS was “disabled within the definition in section 6 of the Equality Act and section 20(2)(b)” (https://assets.publishing.service.gov.uk/media/62f3997ed3bf7f5c11330ea3/ua-2022-000328-hs__002_.pdf).

5G is an experiment on Public Health and as such is subject to the Nuremberg Code

OFCOM has no definitive data proving that 5G (at all frequency bands) is safe and carries no negative health impacts. No large-scale studies have been performed on beamforming, high modulation 5G, mmWave frequencies. The Nuremberg code is relevant because the implementation of 5G is a giant and all-pervasive experiment on citizens. It is an experiment because you, OFCOM, do not know if 26 and 40 GHz is a health risk or not as you have no data. The whole 5G roll-out is an experiment. Under the Nuremberg code people have a right not to be experimented on without their knowledge and against their will. Especially, when it is known that disabling illness could result. The voluntary consent of the human subject is absolutely essential.

The Nuremberg code highlights that people actively involved in progressing an initiative cannot hide behind the claim “I was only following orders”. Under the code they are individually responsible for their role and their actions.

The issue of individual accountability and responsibility is fundamental here.

Public Perception of Health Risks Can be a Material Consideration Within the Planning System

Case law suggests that public perceptions of health risks can be a material planning consideration within the land-use planning system. Below is an excerpt from a Barrister's advice on this issue.

"*Public health concerns are in fact material considerations in the determination of an application for planning permission and accordingly a failure to have regard to them is a public law error, and a breach of the duty in section 70(2) of the Town and Country Planning Act 1990:*
1. In Newport BC v Secretary of State for Wales [1998] Env. L.R. 174 the court held that it was a material error of law for the Secretary of State on an appeal to conclude that a genuinely held public perception of danger (in that case from a public waste treatment plant) which was unfounded could never amount to a valid ground for refusal of planning permission. Hutchinson L.J. held: "I would say that local fears which are not, in fact, justified can rank as part of the human factor and could be given direct effect as an exceptional or special circumstance".
2. In Trevett v Secretary of State for Transport, Local Government and the Regions [2002] EWHC 2696 (Admin), a challenge to a decision made on appeal to grant planning permission for three telecommunications masts, Sullivan J held that the Inspector had properly followed the Newport approach and had recognised that the perceived adverse effects on health of the public could justify a refusal of planning permission.
3. T Mobile UK Ltd v First Secretary of State [2004] EWCA Civ 1763 (Pill, Mummery and Laws L.JJ.; 12th November 2004) concerned an appeal proposal for telecommunications infrastructure which complied with ICNIRP guidelines. The court held it would be open to the decision-maker to identify some exceptional circumstance whereby, despite compliance with ICNIRP guidelines, health concerns should constitute a material consideration justifying refusal."

This public perception of a health risk has recently been demonstrated in real-life in the West Midlands in relation to a proposed 5G mast which was refused by a Council's Planning Committee but is currently being appealed. The concern about that this potential mast has had a demonstrable impact on the sale of a house which was solely put on the market due to valid health concerns about the mast in light of a pre-existing health issue. The sale has now fallen through 4 times and the proposed mast has been a factor in 3, and probably 4 of those occasions. This is a real-life example of the impact of the perception of health risks in connection with 5G. This is causing huge neighbourhood stress.