Neutral Citation Number: [2023] EWHC 495 (Admin)

Case No: CO/1111/2021

IN THE HIGH COURT OF JUSTICE
KING'S BENCH DIVISION
ADMINISTRATIVE COURT

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 08/03/2023

Before :

THE HONOURABLE MRS JUSTICE STACEY

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Between :

The KING on the application of
Victoria Angell (1) **Claimants**
Karen Churchill (2)
Rosalyn Rock (3)

- and -

The Secretary of State for Health and Social Care (1) **Defendants**
The Secretary of State for the Environment, Food and Rural Affairs (2)
The Secretary of State for Digital, Culture, Media and Sport (3)

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Mr Michael Mansfield KC and Mr Philip Rule (instructed by **Hackett and Dabbs LLP**) for the **Claimants**
Mr Jack Anderson (instructed by **Government Legal Department**) for the **Defendants**

Hearing dates: 6-7 February 2023

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Approved Judgment

This judgment was handed down remotely at 10.30am on 8 March 2023 by circulation to the parties or their representatives by e-mail and by release to the National Archives.

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THE HONOURABLE MRS JUSTICE STACEY

Mrs Justice Stacey :

1. This case concerns the claimants' perceptions of the public health risks associated with 5G wireless technology ("5G"). A claim for judicial review was lodged in March 2021 which, in general terms, alleged that the defendants had both failed to investigate and consider the nature and extent of the risks to the safety of individuals and human health from 5G; had failed to implement safeguards to the exposure of non-consenting children and adults to the risk of harm from 5G; and, nor had they provided adequate or effective information about the risks to the public. Wide ranging grounds were relied on: breach of s.6 Human Rights Act 1998 ("HRA 1998") by reference to articles 2, 3 and 8 European Convention of Human Rights (ECHR); failure to consider the best interests of children; breach of the public sector equality duty pursuant to s.149 Equality Act 2010 ("PSED"); breach of a statutory duty under s.2a of the National Health Service Act 2006; failure to have regard to a relevant consideration; failure to provide adequate and sufficient reasons and/or transparency; and irrationality and/or irrational failure to make sufficient enquiry.

2. One of the claimants and several witnesses in the claim have developed medical symptoms which they attribute to being in the vicinity of 5G. The first defendant is the Secretary of State for the Department of Health and Social Care, ("DHSC") and is responsible for the advisory Committee on Medical Aspects of Radiation in the Environment, ("COMARE"). Public Health England ("PHE") was an executive agency of the DHSC whose functions, in so far as are relevant to the issues in this case, have been transferred to the United Kingdom Health Security Agency ("UKHSA"). The second defendant is the Secretary of State for the Environment, Food and Rural Affairs, ("DEFRA"). The third defendant is the Secretary of State for Digital Culture Media and Sport, ("DCMS") and is responsible for the roll-out of 5G and for the operation of Ofcom (a regulatory body created by the Communications Act 2003) and is empowered to introduce requirements for Ofcom to adhere to in licensing 5G technology and mast installations.

3. Permission was initially refused and the claim was ruled out of time by Foster J on the papers and then by Lang J following an oral renewal hearing. The substantive reasons for both judge's decisions were similar:

> "2. There is no arguable issue of law here nor is it arguable that there is some failure of rationality, logic or fairness. The decisions made are as the Defendants submit, quintessentially for Government and they were made on the basis of recognised materials and expertise: the technical advice to Government does not support the Claimants' concerns.
>
> 3. The case law cited at paragraph 55 of the Defendants' SGD supports the proposition there advanced: that this Court is in any event very slow to interfere with matters of technical scientific judgement and in particular in the public health sphere. The existence of differing views is not without more, evidence of a public law error in preferring one approach to another.

4. The Defendants have set out their (rational, scientifically based) view that there is nothing fundamentally different about the physical characteristics of the radio signals produced by 5G…..

5. Compared to those produced by 3G and 4G. The question whether non-ionising radiation has an impact on health is one that the defendants say has long been studied and a substantial international consensus exists to the effect that the roll out of 5G is safe.

6. In *R (Watts) v Secretary of State for Digital, Culture, Media and Sport and Secretary of State for Housing, Communities and Local Government* CO/3668/2020, the High Court rejected a challenge to the government's response to the consultation on proposed reforms to permitted development rights to support the development of 5G. This had been brought by a person claiming to suffer as some of these Claimants allege. This application is rejected not on account of that decision, but the case is illustrative of the effect of the Defendants' evidence namely, that the decision-making is based upon cogent technical information and unassailable in pubic (sic) law terms." (Foster J)

And

"12. As to the merits, I consider that each of the grounds of challenge face an insuperable obstacle, namely, that the defendants have obtained and considered extensive scientific evidence and advice on the potential health risks posed by RFR and 5G wireless technology, and have concluded that there is no risk to health, provided levels remain within recommended limits. Furthermore, the specific evidence provided by these claimants has been referred to Public Health England, which has advised the defendants that no further action is warranted.

13 The fact that the claimants and others disagree, and that there are genuine differences of professional opinion on these issues, is not a sufficient basis for a judicial review. The defendants' conclusions do not disclose any arguable error of law and the Court will not substitute its views for those of the defendants and its scientific advisers. For those reasons, permission is refused.

14 Finally, I observe that the individual complaints of adverse health effects may give rise to private law

> claims for personal injury if those concerned are able to obtain the necessary medical and scientific evidence on causation, and identify appropriate defendants. This may be a more appropriate route than a judicial review and human rights claim, but, of course, that is a matter on which the claimants should seek their own legal advice." (Lang J)

4. On appeal to the Court of Appeal, on 25th of May 2022, permission to apply for judicial review was granted on the following grounds only by Lewison LJ:

> 1. Failure to provide adequate or effective information to the public about the risks and how, if it be possible, it might be possible for individuals to avoid or minimise the risks from 5G technology
>
> 2. Failure to provide adequate and sufficient reasons for not establishing a process to investigate and establish the adverse health effects and risks of adverse health effects from 5G technology and/or for discounting the risks presented by the evidence available; and
>
> 3. Failure to meet the requirements of transparency and openness required of a public body.

Each of which was framed as a breach of articles 2, 3 and/or 8 ECHR.

5. None of the other grounds were found to be reasonably arguable. On time limits the Court of Appeal considered that whilst the letter of 20 December 2020 sought to be relied on by the claimants for time limit purposes was plainly not a decision capable of challenge by judicial review, it was arguable that if the substantive grounds were made out, there was a continuing state of affairs in some respects, such as to permit a challenge by way of a declaration or mandatory order. In granting permission, Lewison LJ reminded the claimants that judicial review is not an appropriate vehicle for the determination of contested scientific matters. He noted that most of the contents of the statement of facts and grounds dealt with assertions about the safety (or otherwise) of 5G technology, which are not properly the subject of an application for judicial review.

> "3. It is plain from the grounds of resistance that HMG have taken advice on the safety of 5G from a variety of reputable bodies including ICNIRP, the Chief Medical Officer, PHE and COMARE. The extent of advice that a public body is required to take is a matter for the public body concerned. It is not arguable that taking advice from those bodies is susceptible to challenge on public law grounds.
>
> ……..
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> "6. Grounds (2)(i)(d) and (2)(vi) assert a duty to give reasons. The appellants do not point to any domestic authority requiring

> the giving of reasons in a case like this. The appellants rely on *Giacomelli v Italy* at [83]. But that case does not [do] more than require public access to the studies on which the public authority has relied. It does not hold that there is a positive duty to give reasons. Nevertheless in *Guerra v Italy* (1996) EHHR 357 at [60] the ECtHR does appear to have accepted a positive duty to communicate information on environmental matters. This ground does in my judgement pass the relatively low threshold required for permission to apply for JR."

6. The Court of Appeal referred the grounds on which permission had been granted back to the administrative court for directions, including for the claimants "to excise from the JR claim form the contested scientific evidence", and a hearing.

7. In directions ordered by Bennathan J the claimants were ordered to file and serve amended grounds addressing the ground for which permission had been granted. In his observations and reasons the judge again reminded the parties that a judicial review is not an appropriate vehicle for determining contested scientific material and that there was no basis for the grounds or the skeleton argument to invite the court to engage with the scientific evidence relied on by any party. He noted that the sole issue was whether the defendants had failed to meet the duty to inform the public as described in *Guerra*.

The issues

8. The issues are thus confined to the extent to which the defendants were, or are, under a duty to provide information and reasons to the public about 5G, based on their view of the scientific evidence. Permission has not been granted to challenge the defendants' assessment of the level of risk posed by 5G, their view of the scientific evidence and nor has permission been given to challenge the government's substantive decisions concerning 5G.

9. The claimants withdrew reliance on article 3 ECHR, relying only on articles 2 and 8, with the emphasis on 8. Nor did the claimants allege that a freestanding duty of transparency was owed, but asserted that the principle of transparency as articulated in the Nolan Principles of Public Life informed and was to be read into the defendants' positive duty and obligation to provide information and reasons and impact on the scope of the information to be provided.

Preliminary applications

10. Both sides had applied to admit additional evidence which it had been agreed should be considered *de bene esse* and the applications be determined at, rather than prior to, the hearing.

11. The claimants had been refused permission to admit additional witness statements from the first and second claimants and Ms Lorna Hackett on the papers by Sir Ross Cranston, on grounds of lack of relevance to the pleaded issues that had been allowed to go forward to a full hearing. An oral renewal application had been brought.

12. The claimants also sought permission to adduce a report by Veerbeek, Oftedal et al "Prioritizing health outcomes when assessing the effects of exposure to radiofrequency electromagnetic fields: A survey among experts" (January 2021 Environment International 146 (2021) 106300) ("the Veerbeek, Oftedal et al Report") which was co-authored by the defendants' witness, Dr Simon Mann, BSc, DPhil, CEng, MIET Head of the Radiation Dosimetry Department at UKHSA. The reason for seeking to introduce the article was to rebut the detailed grounds of resistance which was accompanied by a witness statement and exhibits from Dr Mann that asserted that there is a substantial international consensus to the effect that the roll out of 5G is safe and that the relevant emissions are not harmful to human health, provided that the emissions are kept within the limits of the ICNIRP guidance (the ICNIRP guidance will be discussed more fully later). The application was opposed by the defendants on grounds that the evidence strayed beyond the permitted grounds, could and should have been raised earlier and in any event did not contradict or rebut the defendants' case. If the court were to grant the claimants' application, the defendants sought permission to adduce a second statement of Dr Mann. The claimants did not oppose the introduction of Dr Mann's second statement if their application was successful. Nor did the claimants object to the defendants adducing the ICNIRP charter and statute and the AGNIR report referred to in Dr Mann's statement at [33], which was not exhibited by an oversight, but the claimants objected to the introduction of an ICNIRP report on its website on the effects on the body and health implications of radiofrequency (RF) electromagnetic fields (EMF) by the defendants.

13. As the parties were well aware, to some extent the applications were somewhat academic since during the course of the hearing I was taken to them in some detail *de bene esse*. I appreciate that the claimants wished the court to have as full a picture as possible, but the applications fall to be assessed by reference to the limited issues on which permission was granted. On the face of it, none of the documents sought to be adduced by the claimants were relevant to the issues, nor was the evidence sought to be adduced by the defendants apart, possibly, from the ICNIRP charter and statute and the AGNIR report for the sake of completeness since it had been referred to in Dr Mann's first statement. The claimants' application to admit the further evidence was in direct contradiction of the clear and repeated reminder that judicial review is not an appropriate vehicle for the determination of contested scientific matters.

14. But Mr Mansfield KC had a more nuanced point that he was not seeking to challenge the government's views on 5G, but that the Veerbeek, Oftedal et al Report to which Dr Mann contributed was at odds with the information and reasons that the government had provided to the public, and was therefore relevant to question of the adequacy of the information provided to the public by the government. He suggested that the information provided to the public did not align with the government's view thus demonstrating it was inadequate. But there are two difficulties. Firstly, the application is a thinly disguised attempt to challenge the science which is off limits. Secondly, even if the more subtle argument was accepted, the conclusions in the article to which Dr Mann contributed does not depart from the government's understanding and view of the risks associated with 5G as explained by Dr Mann in both his first and second statements and as expressed in the public information on GOV. UK. The Veerbeek, Oftedal et al Report is consistent with Dr Mann's evidence that there is a consensus between the domestic and international authorities which

have reviewed the public health evidence that the roll out of 5G is safe provided it is kept within ICNIRP levels, which is consistent with the government message. It was therefore not evidence that supported the claimants' point and would again fail the relevance test. It is not in the interests of justice to admit evidence that is not relevant to the issues in the case and which will not assist the party seeking to adduce it. Accordingly, beyond allowing the ICNIRP charter and statute which is helpful as background information and remedying the oversight of not exhibiting the AGNIR report referred to at [33] of Dr Mann's witness statement, the applications are refused.

Background facts

15. A prescript is necessary before embarking on a summary of the background facts. There is an inevitable degree of artificiality. The claim stems from the claimants strongly held view and fundamental disagreement with the government's view of the risks associated with 5G, but Mr Mansfield acknowledged, as he had to, that it was not open to him to challenge the factual assertions of the defendant, because of the limited scope of permitted grounds and the acknowledgement that this is not a case in which the High Court should intervene in respect of a decision that involves issues of technical scientific judgment (see for example *Secretary of State for the Environment, Food and Rural Affairs v Downs* [2009] EWCA Civ 664 at [43]). It is also worth noting that on the basis of the evidence served in this case (and for this purpose I have also considered the Veerbeek, Oftedal et al Report) the claimants would not be in a position to discharge their evidential burden, even if they were permitted to attempt to do so. Although Mr Mansfield explored various possible inconsistencies in the defendants' evidence he did not assert that they were such as could lead a court to reject the defendants' evidence. The focus of the challenge could only explore potential inconsistencies and differences in the defendants' analysis of the level or health risk with the public information provided by the defendants, in order to challenge the information provided, to make good the assertion that the information provided was inadequate. It was not sought to undermine the defendant's scientific evidence or launch an attack on the evidence on grounds such as referred to in *S v Airedale NHS Trust* [2002] EWHC 1780 (Admin) at [18] or *R(McVey) v Secretary of State for Health* [2010] EWHC 437 (Admin) where, for example, a witness's testimony is manifestly wrong. The background facts that follow have therefore had to be accepted by the claimants given the constraints of the limitation of the grant of permission, and not because the claimants agree.

16. 5G is the term used for the fifth and newest generation of wireless technology. It was developed to cope with the increasing demand for mobile telecommunications and to make new applications possible such as self- driving cars and remote surgery. 5G uses radio waves, otherwise known as radiofrequency (RF) electromagnetic fields (EMF), and which are classified as non-ionising radiation (NIR). This means the packets of energy that form the radiation are too small to break chemical bonds: the radiation cannot damage cells and cause cancer in the same way as ionising radiation. 5G re-uses parts of the electromagnetic spectrum that have previously been used to deliver services such as TV broadcasting and broadband although 5G can also make use of higher frequency parts of the spectrum and some 5G trials have already taken place in these frequencies. 5G technologies will emit RF in the frequencies from 700 MHz-28GHz, and beyond. These frequencies have also been used on a more limited basis for other radio services including point-to-point links, satellite earth

stations and radio astronomy. 5G uses radio waves like broadcast radio and television transmitters have done for decades. Up to now a new "G" has been launched roughly every ten years. Terms like "5G" are used for the branding of technology and services – the G standing for generation - but the agent people are exposed to from 1G, 2G, 3G, 4G or 5G continues to be radio waves. The physical characteristics are fundamentally the same but a wider part of the spectrum is being used. 5G requires the installation of, or use of, particular base stations, masts or nodes to receive or emit transmissions as the earlier generations did and continue to do.

17. It is the government's aim for the UK to be a world leader in 5G technology and it considers that 5G offers much greater speed and capacity than 4G and opens the potential for innovation in both the private and public sectors.

18. All the claimants consider that their health has been, or could be, affected by proximity to 5G. They have all led busy and fulfilled lives with impressive accomplishments and careers under their belts. They all have concerns about the 5G rollout and have read widely and gathered information about 5G. They seek to raise awareness of their concerns and issues through local campaigning and engagement with local councils and authorities over the installation of 5G masts and infrastructure. Ms Angell has launched a website Action Against 5G and has been contacted by many others who share her concerns. Some of those who get in touch with the campaign are very unwell, sometimes unable to leave home with wide-ranging symptoms and suicidal ideation at times. Some eschew all kinds of technology and have become increasingly isolated from the world in order to minimise exposure to the increasing ubiquity of G technology and the 5G rollout programme. They find the increasing coverage of masts and street furniture intimidating and reminiscent of Big Brother in the dystopian novel 1984 by George Orwell. Many of those who contact Action Against 5G are experiencing considerable distress and anguish which has affected their sense of safety as well as unpleasant and debilitating physical symptoms. Those with underlying health conditions, or metal implants in parts of their bodies and teeth, or pre-cancerous cells have increased anxiety levels for fear that 5G exposure will increase the likelihood of adverse reactions to 5G or to the risk of their developing cancer.

19. From mid-April 2020 the third claimant has developed very debilitating symptoms that she attributes to the installation of mobile phone poles near her house in Chiswick. She and visitors to her house – both friends, family, her lawyers, (Ms Hackett, and her assistant, Ms Suzanne Openshaw), and a doctor, (Dr Andrew Tressider), have all developed observable physical symptoms such as burning, blistering and bleeding to the skin, reddening of the skin, as well as less visible symptoms such as pins and needles and headaches, brain fog and dizziness, to name but a few, after visiting Ms Rock's home. A particularly bad occasion was on 15 May 2020 on her daughter's birthday.

20. A number of neighbours of Ms Rock in Chiswick have also experienced similar symptoms which they attribute to being in the vicinity of 5G masts and devices operating on 5G. It is accepted that at present (for the purposes of public law proceedings) there is insufficient direct evidence to establish a causal link between the symptoms experienced by Ms Rock and her visitors, but the genuineness of the symptoms is not disputed and nor do the defendants dispute the genuineness of their belief that 5G is causing them harm. The devastating effect on Ms Rock's life is also

not disputed. She now feels unable even to stay in her own home for any length of time and is unable to lead her previously full, active, sociable life (notwithstanding some other underlying health issues that she has managed successfully for a number of years) before the onset of her symptoms that she attributes to 5G in 2020. The lives of Ms Rock, Ms Hackett, Ms Openshaw and others are considerably constrained by the time consuming, complex and costly measures they are taking to reduce their exposure to Wi-Fi and radiofrequency radiation (RFR) – such as sleeping in silver lined full body sleeping bags and wearing silver threaded clothing. Some are believing themselves to be increasingly sensitive to even low level RFR including, for example, LED lights which constrains their lives still further. Mr Mansfield clarified that the claimants do not assert that they suffer from electromagnetic hypersensitivity (EHS).

Government view of the scientific evidence and how it reaches its view

21. The UKHSA is an executive agency sponsored by the first defendant (DHSC) which advises the UK Government on all aspects of public health protection, including exposure to radio waves, the appropriate standards of protection for the general population and any measures necessary to protect sensitive groups. UKHSA came into being in October 2021 and inherited this responsibility from PHE and it continues to develop and provide a range of published information about radiofrequency topics. Dr Mann is the head of the Radiation Dosimetry Department at UKHSA and his role includes provision of expert advice on the dosimetry (measurement of radiation exposure) aspects of exposure to electromagnetic fields; conducting research and evidence reviews on the health effects of exposure to electromagnetic fields, including the radio waves from telecommunications systems; developing and maintaining the public-facing web pages of UKHSA on the GOV.UK website for this topic; supporting local health leaders in responding to community concerns, and answering questions for UKHSA about the scientific evidence. He leads the Secretariat function of the Committee on Medical Aspects of Radiation in the Environment (COMARE) and his department prepares an annual report for COMARE on electromagnetic field exposure. COMARE is an expert advisory group maintained by DHSC with terms of reference "to assess and advise the government and the devolved administrations on the health effects of natural and man-made radiation and to assess the adequacy of the available data and the need for further research."

22. Dr Mann and the defendants' opinion, based on the scientific evidence is that exposure levels of EMF to the public from telecommunications networks are currently very low in relation to the international guideline levels and are expected to stay that way after the deployment of 5G. There may be a small increase in overall exposure to radio waves when 5G is added to an existing telecommunications network or in a new area, but overall exposure is expected to remain low and compliant with international guidelines.

23. Dr Mann and his colleagues study and research the large volume of domestic and international studies that attempt to assess the impact of exposure to radio waves on health. They analyse and interpret relevant studies to consider their strengths and weaknesses, test the robustness of their conclusions, and what a particular study means collectively when placed in the canon of other studies and literature. The study and analysis is undertaken by groups made up of experts, often international, taken

from a number of disciplines. UKHSA identifies and responds to any important new evidence as it emerges, working collaboratively with international bodies.

24. The UK position is to keep in line with the international consensus on the established effects of exposure to radio waves used by 5G and other technologies, which it then publishes and sets out on the GOV.UK website with links to expert reviews and guidance.

25. The government considers that the most comprehensive scientific review in relation to the effect of non-ionising radiation is that conducted by the International Commission on Non-Ionizing Radiation Protection ("ICNIRP"). ICNIRP is a non-profit international organization based in Munich, Germany established for the purpose of advancing NIR Protection for the benefit of people and the environment and in particular to provide guidance and recommendations on protection from NIR exposure, established as an independent and neutral scientific commission, which writes its guidance and recommendations on the basis of established scientific principles only. ICNIRP is recognized as an official collaborating Non-Governmental Organisation ("NGO") by the World Health Organisation ("WHO") and the International Labour Organisation ("ILO"). Its membership is limited to scientific experts who have no commercial or other vested interests.

26. In 1998, ICNIRP issued international guidelines for the exposure limit in respect of electromagnetic fields up to 300 GHz (which includes the radio frequencies allocated for 5G) which it has periodically reviewed since. In 2009 it concluded that subsequent research had not identified any evidence of adverse health effects below the recommended exposure limits. It revised and published its guidelines in 2020 with specific consideration being given to 5G, following a comprehensive review of the scientific evidence and a process of public consultation. It adopts a conservative approach in relation to each of the steps contained in its guidelines to ensure that the limits set would remain protective, even if exceeded by a substantial margin. The guidance explains how this operates:

> "For example, the choice of adverse health effects, presumed exposure scenarios, application of reduction factors and derivation of reference levels are all conducted conservatively. The degree of protection in the exposure levels is thus greater than may be suggested by considering only the reduction factors, which represent only one conservative element of the guidelines."

27. ICNIRP concludes that

> "There is no evidence that additional precautionary measures will result in a benefit to the health of the population."

28. ICNIRP's guidelines are based on thermal, non-thermal and all potential adverse health effects. However since it concludes that the lowest exposure levels that can cause adverse health effects are due to thermal mechanisms, restrictions are set based on the thermal effects, as it considers that these will protect against any other effects that could occur at higher exposure levels.

29. In Appendix B to the 2020 guidelines, ICNIRP undertook a health risk assessment literature review, by reference to a range of bodily, physical and mental functions and conditions and concluded that:

> "The only substantiated adverse health effects caused by exposure to radiofrequency EMFs are nerve stimulation, changes to the permeability of cell membranes, and effects due to temperature elevation. There is no evidence of adverse health effects at exposure levels below the restriction levels in the ICNIRP (1998) guidelines and no evidence of an interaction mechanism that would predict that adverse health effects could occur due to radiofrequency EMF exposure below those restriction levels"

30. The WHO's most recent information on its website on 27 February 2020 about the potential health risks from 5G is that:

> "To date, and after much research performed, no adverse health effect has been causally linked with exposure to wireless technologies. Health-related conclusions are drawn from studies performed across the entire radio spectrum but, so far, only a few studies have been carried out at the frequencies to be used by 5G.
>
> Tissue heating is the main mechanism of interaction between radiofrequency fields and the human body. Radiofrequency exposure levels from current technologies result in negligible temperature rise in the human body.
>
> As the frequency increases, there is less penetration into the body tissues and absorption of the energy becomes more confined to the surface of the body (skin and eye). Provided that the overall exposure remains below international guidelines, no consequences for public health are anticipated."

31. The outcome of a further risk assessment by the WHO is awaited and in the meantime the UK government's opinion based on the scientific literature and its own involvement in the WHO review considers the current guidance still to be accurate and that it is unnecessary to take further measures to reduce exposure for either communities or individuals while the further WHO risk assessment is awaited.

32. At a European Union level the Scientific Committee on Emerging and Newly Identified Health Risks ("SCENIHR") opinion of 2015 concluded that provided exposure remained below the levels set by current standards there are no evident adverse health effects. The work of SCENHIR has been restructured into the Scientific Committee on Health, Environmental and Emerging Risks ("SCHEER"). In SCHEER's draft opinion of 22 August 2022 it recommends aligning exposure guidelines to the ICNIRP 2020 guidelines to protect humans more effectively from emerging technological applications of RF EMF.

33. Specific to the UK, the Advisory Group on Non-Ionising Radiation ("AGNIR") is an independent scientific advisory group established to "…review work on the biological effects of non-ionising radiation relevant to human health and to advise on research priorities". In its latest review of 2012 it concluded that:

> "There is increasing evidence that RF field exposure below guideline levels does not cause symptoms and cannot be detected by people, even by those who consider themselves sensitive to RF fields. The limited available data on other non-cancer outcomes show no effects of RF field exposure. The accumulating evidence on cancer risks, notably in relation to mobile phone use, is not definitive, but overall is increasingly in the direction of no material effect of exposure. There are few data, however, on risks beyond 15 years from first exposure. In summary, although a substantial amount of research has been conducted in this area, there is no convincing evidence that RF field exposure below guideline levels causes health effects in adults or children"

34. Other bodies too have considered the risks posed by 5G. For example, prior to the rollout of 5G the then Chief Medical Officer for England concluded that there were no adverse health risks from exposure within the guidelines.

35. It is acknowledged that a small portion of the population attribute a range of symptoms, some non-specific, to various types of RF EMF exposure. Both ICNIRP and SCHEER have found no causal link between such symptoms and exposure to 5G and other RF EMF.

36. In short, the UK government agrees with, accepts and follows the ICNIRP guidelines which are consistent with the international consensus, which is also the expert scientific opinion of Dr Mann. Provided exposure is within the guidelines set by ICNIRP, the relevant emissions are not harmful to human health. There is no convincing evidence that adverse health effects can occur as a result of exposures within the guidelines. It is not scientifically possible to be 100% certain, but after detailed and specialist analysis of the research studies, literature and other materials produced globally, the government considers that it has taken all risks and known potential risks into account and in so far as is possible to predict, 5G at the levels permitted by the regulations and within the ICNIRP guidelines is safe.

37. The current ICNIRP guidelines of March 2020 followed a comprehensive review of the scientific evidence and a process of public consultation in 2018. ICNIRP adopted a conservative approach with a wide margin of safety built into the exposure restrictions to provide protection even if the Guidelines are substantially exceeded and which takes into account potentially vulnerable groups such as the elderly, children and people with poor health. The 2020 ICNIRP report concluded that "there was no evidence that additional precautionary measures will result in a benefit to the health of the population." The implications of both thermal and non-thermal, short and long-term effects were reviewed by reference to both frequency, duration and exposure levels in the studies.

38. The basic restrictions and reference levels in the guidelines provide a conservative framework for avoiding injuries due to exposure to electromagnetic fields.

39. A statement of 27 February 2020 from WHO about 5G mobile networks and health remains in force that "To date, and after much research performed, no adverse health effect has been causally linked with exposure in wireless technologies." The article notes that some people have developed various symptoms which they attribute to 5G technology and being in the vicinity of 5G, but no causal link has been identified. The attribution of non-specific symptoms to various types of radiofrequency EMF exposure; is referred to as Idiopathic Environmental Intolerance attributed to EMF (IEI-EMF). ICNIRP's conclusion from its analysis of a number of studies is that "[d]ouble-blind experimental studies have consistently failed to identify a relation between radiofrequency EMF exposure and such symptoms in the IEI-EMF population, as well as in healthy population samples."

Information provided to the public

40. Precautionary advice on reducing exposure to radio waves from mobile phones has been issued since 2000 on the government website, GOV.UK, suggesting that where simple measures can be taken to reduce exposure, in addition to the international guidelines adopted by the government, some level of precaution is warranted given uncertainties in the science, such as discouraging excessive use of mobile phones by children and moving the phone away from the body whilst using it.

41. The information on 5G on GOV.UK published by UKHSA, Ofcom, DCMS and the Health and Safety Executive is consistent with the government's opinion that there is no convincing evidence that adverse health effects can occur as a result of exposures within the guidelines. The website posts include hyperlinks to domestic and international assessments of the scientific evidence. The message has been consistent throughout, although the precise wording used has varied a little. Examples include:

> "It is possible that there may be a small increase in overall exposure to radio waves when 5G is added to an existing network or in a new area. However, the overall exposure is expected to remain low relative to guidelines and, as such, there should be no consequences for public health" ((3 October 2019)

And

> "..health effects are unlikely to occur if exposures are below international guideline levels" (27 August 2021)

The information provided refers to health effects from heat as well as other biological and adverse health effects.

42. Ofcom has produced a general guide to 5G seeking to combat misinformation about 5G. Ofcom guidance states that:

> "In relation to 5G, PHE have said that "the overall exposure is expected to remain low relative to guidelines and, as such, there

should be no consequences for public health" (undated)

43. The government have also put out public health information seeking to debunk groundless theories that there is a link between 5G and coronavirus. For the avoidance of doubt, none of the claimants subscribe to the theory that coronavirus is in any way linked to 5G.

44. The HSE publications provide factual information regarding NIR and RF EMF to aid public understanding in line with the government analysis and adoption of the ICNIRP conclusions and allay what are considered to be groundless fears.

45. UKHSA is committed to keeping its advice under review and continues to monitor the evidence and research data produced nationally and internationally to ensure its advice and public information remains accurate and up to date.

Legal framework

46. The Radio Equipment Regulations 2017 transpose the EU Radio Equipment Directive (2014/53/EU) which requires radio equipment to conform to harmonised standards including in relation to EMF exposure limits. Ofcom is responsible for regulating operators licensed to use radio frequencies and its licence conditions incorporate the limits in the ICNIRP guidelines. Ofcom has undertaken monitoring of emission levels near 5G-enabled base stations throughout 2020 and all the results were well within the ICNIRP limits.

47. By virtue of section 6(1) HRA 1998, "It is unlawful for a public authority to act in a way which is incompatible with a Convention right". Schedule 1 to the HRA 1998 includes certain relevant protections to which the Act gives domestic effect. The text of the articles is subject to the interpretation and jurisprudence of the Strasbourg court which ensures that the rights are practical and effective and not theoretical or illusory. Domestic courts must have regard to that jurisprudence when considering the rights and obligations (by section 2 HRA 1998). Article 8 of the ECHR provides that everyone has the right to respect for his private and family life and his home. Article 2 provides that everyone's right to life shall be protected by law. Article 3 prohibits anyone from being subjected to inhuman or degrading treatment. Article 8 provides that everyone has the right to respect for their private and family life, their home and their correspondence. Positive obligations arise under these protections that require certain actions to be taken by state parties in some circumstances.

48. It is settled law that "severe environmental pollution may affect individuals' well-being and prevent them from enjoying their homes in such a way as to affect their private and family life adversely, without, however, seriously endangering their health.'' *Lopez Ostra v Spain* (1995) 20 EHRR 277 [51] (a reference to article 8).

49. In *Guerra & Ors v Italy* (1998) 26 EHRR 357 the European Court of Human Rights ("ECtHR") found unanimously that the state did not fulfil its obligations to secure the article 8 rights of Mr Guerra and the 39 other Italian national applicants by failing to provide essential information that would have enabled the applicants to assess the risks that they and their families might run if they continued to live close to a classified high risk and accident-prone chemical factory in Manfredonia, Apulia, that

released large quantities of inflammable gas and other toxic substances including arsenic trioxide.[1]

50. In all the opinions before the court– both the opinion of the Commission and the minority of dissenting opinions – there was agreement that there was a positive obligation on national authorities to provide relevant information so as to minimise the risk posed to the inhabitants by the Enichem plant – the cause of the dissent was whether the obligation to inform arose under article 10, or whether the obligation to inform was one aspect of the obligation pursuant to article 8 to regulate dangerous factories and give all possible assistance to the local residents to protect their private and family life. The Commission opinion was that article 10 was apt. The Court unanimously held that it was article 8, not article 10, that was applicable. The direct effect of the toxic emissions on the applicants engaged their article 8 rights which had been violated by the failure of the state to provide the essential information that would have enabled them to assess the risks of staying in that town.

51. Subsequent ECtHR cases have reiterated the general principle that in the field of environmental protection and the protection of health and well-being in some circumstances the positive obligation under articles 2 and 8 may require a contracting state to provide both access to, and the provisions of, clear and full information about activities dangerous to the environment and the well-being of individuals.

Parties' arguments

Ground 1

52. Mr Mansfield for the claimants stressed a number of features particular to 5G that make it comparable to decided ECHR cases concerning immediate and tangible extremely hazardous circumstances, such as noxious poisoning from waste treatment plants, arsenic poisoning and risk of explosion from chemical plants, risk of asbestosis or mudslides. The features are the ubiquity, universality and invisibility of 5G, the fact that everyone is potentially affected and individuals cannot choose to avoid it given the extent of the planned coverage as the programme is rolled out.

53. Mr Mansfield described the concept of risk as not being an absolute term. There is a spectrum, or hinterland, of risk and the, as yet undiscovered, possible risk of harm from 5G requires the public to be warned. The mere fact that risks are unsubstantiated or unproven, does not mean that they do not exist. The claimants accepted that they could not, for the purposes of these public law proceedings, establish causation in the sense that they could not prove to the civil standard that their symptoms and ill-health were more likely than not caused by exposure or proximity to 5G, but Mr Mansfield submitted that there was enough suspicion and concern – and circumstantial evidence - to give rise to the positive obligations.

54. Mr Mansfield argued that the public needs to be aware that some research does not accord with the government's view and that there are differences of opinion. He conceded that the government was entitled to disagree with contrary views, but the

[1] On one occasion, after an explosion in the scrubbing tower, 150 people had been hospitalised on account of acute arsenic poisoning. A committee of technical experts had also found that the factory's geographical position meant that emissions from it into the atmosphere were often channelled towards Manfredonia.

public was entitled to know why the government rejected some of the conclusions in some of the research papers.

55. Mr Anderson for the defendants argued that the government had provided ample, accurate information on the GOV.UK website about 5G that reflected the government's view. Since the government had concluded, on the basis of the considered opinion and analysis of Dr Mann and the other experts and research it had relied on, that there are no discernible risks from 5G provided the ICNIRP guidelines are followed and since the regulatory framework in place ensures that the guidelines are followed, nothing further is required. The facts in the cases cited by the claimants with established high risk from mudslides, the bends, chemical poisoning and the like, are far, far removed from the absence of risk from harm from 5G. In the circumstances, no positive obligation to provide information arose under any of articles 2, 3 and 8, but if it did, it had been fully complied with by the information set out on the GOV.UK website.

Ground 2

56. For the claimants Mr Mansfield accepted that he did not have permission to argue that the failure to conduct an impact assessment was a breach of a public law duty, nor could he challenge the lack of a reporting mechanism for those who wish to report harm from 5G, but he challenged the government's failure to provide reasons for not having such a mechanism. Those, such as the claimants, who tried to report harm from 5G were dismissed out of hand as having idiopathic ailments, the nocebo effect or electro-magnetic hypersensitivity, rather than having the possibility that the cause might be 5G.

57. The claimants, and others like them who attribute various ailments to exposure to 5G and the public, were entitled to know the reason why the government dismissed the possibility that their symptoms were caused by 5G and would not investigate further.

58. Mr Anderson disputed the existence of a duty to give reasons in circumstances where the government's considered view, which was also the view of the international consensus of scientific opinion, is that 5G is safe. Whatever the cause of the symptoms, which were accepted as entirely genuine, it was not exposure to 5G and there must be another explanation for the symptoms exhibited. It was not for the defendants to identify what it was, but the defendants' view is that there is no convincing evidence that adverse health effects can occur as a result of exposures to 5G within the guidelines.

Analysis and Conclusions

59. It is important to keep in sharp focus the very limited remit of the claim, as permitted by the Court of Appeal. As had been repeatedly said it was not open in these proceedings for the claimants to challenge "contested scientific matters" which included the government's interpretation of the scientific evidence. Nor was it open to the claimants to challenge the ICNIRP guidelines and research papers or conclusions of COMARE. Permission had been refused to argue that the defendants had unlawfully failed to review the scientific evidence and/or take account of the evidence of risk posed to human health by radio frequency radiation and/or 5G. There was no permission to argue that the defendants had unlawfully failed to undertake an

effective, independent and sufficiently informed assessment of the risks of 5G, or failed to implement effective safeguards against those risks, or failed to put in place sufficient measures to provide effective protection for children. Nor had the claimants been given permission to argue failure to take into account relevant considerations, giving due and proper consideration to the evidence, information and concerns raised. Nor had the Court of Appeal found it to be reasonably arguable that it had been *Wednesbury* unreasonable or an illogical failure to conduct a due and sufficient enquiry into relevant matters and/or unreasonable adherence to the ICNIRP guidelines. The Court thus refused to allow the claimants to impugn, generally, the Defendants approach to the regulation of 5G.

60. What is in scope is this: in light of the government's view based on the scientific evidence of the level of risk from 5G, what is the extent, if any, of the duty to provide information and reasons to the public and did the government comply with it? Is the information provided by the government adequate, is it inconsistent with its own view and does it lack sufficient detail, or clarity? Is the government required, as suggested by Mr Mansfield to signpost (by means, for example by hyperlink to the publications that the government does not agree with) and acknowledge contrary views?

61. Mr Mansfield had no alternative but to accept that on the government's view of the science 5G is considered safe and that the risks from 5G are considered very unlikely if the ICNIRP guidelines are followed, which they are in the UK. His argument was that there is a hinterland of risk and that the risks are not known as they have not been enumerated and they cannot be excluded just because they have not materialised: the public ought to know.

62. Starting with article 2 ECHR, the general principles to be applied have been helpfully summarised in *Kolyadenko and Ors v Russia* (2013) 56 EHRR 2 at [157] - [161]. "The positive obligation to take all appropriate steps to safeguard life for the purposes of article 2 entails above all a primary duty to put in place a legislative and administrative framework designed to provide effective deterrence against threats to the right to life." [157].

63. It begs the question of what constitutes a "threat to life". Assistance is provided in [158] which states that the obligation:

> "must be construed as applying in the context of any activity, whether public or not, in which the right to life may be at stake, and a fortiori in the case of industrial activities, which by their very nature are dangerous."

64. Where the positive obligation arises:

> "159. Among these preventative measures particular emphasis should be placed on the public's right to information, as established in the case law of the convention institutions. The relevant regulations must also provide for appropriate procedures, taking into account the technical aspects of the activity in question, for identifying shortcomings in the processes concerned and any errors committed by those responsible at different levels."

65. The court then notes that:

> "160. As to the choice of particular practical measures, the court has consistently held that where the state is required to take positive measures, the choice of means is in principal a matter that falls within the contracting state's margin of appreciation. "

66. Finally, the court reminds us that cases are always fact sensitive and context specific:

> "161. In assessing whether the respondent state complied with its positive obligation, the court must consider the particular circumstances of the case, regard being had, among other elements, to the domestic legality of the authorities' acts or omissions, the domestic decision-making process, including the appropriate investigations and studies, and the complexity of the issue, especially where conflicting convention interests are involved. The scope of the positive obligations imputable to the state in the particular circumstances would depend on the origin of the threat and the extent to which one or the other risk is susceptible to mitigation."

67. In so far as article 8 is concerned the ECtHR has, as noted above, firmly reiterated that severe environmental pollution may affect private and family life and has also affirmed a positive obligation for states to provide access to essential information enabling individuals to assess risks to their health and lives. *Vilnes & ors v Norway* (2013) 36 BHRC 297 concluded that this obligation may in certain circumstances also encompass a duty to *provide* such information as part of the public's right to information, as part of the positive obligations of a state under article 8. As it noted: "The position in relation to article 8 can hardly be different [to article 2]" [235]. The importance of the provision of accurate information was examined in the Commission's opinion before the court:

> "43….[P]ublic information is now an essential tool for protecting public well being and health in situations of danger to the environment. Similar provisions deal, basically, with two types of information:
>
> (a) information on preventative safety measures and the procedures to be followed in the event of an accident. This category of information clearly relates directly to protecting the health, or even the lives, of the persons concerned; and
>
> (b) information on certain features of the industrial or other activity in issue, together with an assessment of the potential risks for employees and workers at the relevant factory, as well as for local residents and the environment. This second category is designed to enable persons affected to satisfy themselves that, in non-emergency situations, the activity in question is being carried out in conformity with the technical rules designed to ensure its compatibility with the protection of

> the environment and of the local population. The purpose is not merely to enable people to take any initiatives which may be necessary to prevent accidents, but also to enable them to intervene where they are exposed to a level of pollution which is harmful to their well being and health, but does not necessarily reach the level at which it can be described as an accident.
>
> Therefore, the importance of the role which public information now plays in the interdependent fields of environmental protection and of the protection of the health and well being of persons, cannot be overlooked. In this regard, the Commission recalls that "the Convention must be interpreted in the light of present-day conditions ... and it is designed to safeguard the individual in a real and practical way as regards those areas with which it deals. Further, preserving nature is commonly recognised in all Contracting States as being of great importance in present-day society.
>
> 44. Moreover, the Commission considers it useful to quote, in this regard, Resolution 1087 (1996) of the Parliamentary Assembly of the Council of Europe referred to above. Referring not merely to the risks associated with the production and use of civil nuclear energy, but also to other matters, this resolution states that "public access to clear and full information ... must be viewed as a basic human right.
>
> The fact that such a principle has been set out in a resolution of the Parliamentary Assembly of the Council of Europe constitutes, in the Commission's eyes, evidence that a body of opinion is developing, at least on the European level, which seeks to obtain recognition for the existence of a fundamental right to information in the field of industrial or other activities dangerous to the environment and the well being of individuals.
>
> 45. The importance of a right to information in this field derives from its raison d'etre, which is to protect the well being and health of the persons concerned and so, indirectly, rights which are covered by other provisions of the Convention. In this regard, the Commission recalls that "severe environmental pollution may affect individuals' well being and prevent them from enjoying their homes in such a way as to affect their private and family life adversely" . Moreover, it cannot be ruled out that in extreme situations human life itself may be endangered, which could, in theory, engage the responsibility of the State under provisions of the Convention other than Article 8, which protect rights which are no less."

68. In order to establish the extent of the positive obligations imposed on the defendants under either article 2 or article 8, to the facts of this case, the first question is whether there is a threat to life, or to private and family life posed by 5G. In many of the cases

referred to by both parties the proven existence of serious life (or family and private life) threatening hazards was not in dispute and there was proven evidence of harm that had been caused by the activity: from asbestosis in *Brincat v Malta* (2014) 59 EHRR 2; to stray dog infestation in *Stoicescu v Romania* [2011] ECHR 1193; to pollution from a steel plant proven to have caused adult cancer deaths and childhood respiratory and skin disease in *Fadeyeva v Russia* (2007) 45 EHRR 10 based on previous episodes of harm caused by the plant and an acknowledged high risk of future harm. In *Guerra* the factory in question was also acknowledged as a proven high risk.

69. In *Vilnes* the issue concerned the risk of adverse health effects from the use of rapid decompression tables of deep-sea divers in Norway following a dive. The adverse health effects suffered by the divers had not been proven to have been caused by rapid decompression and diving was acknowledged by everyone to be a "risky activity". The following terms were used in the ECtHR judgment to describe the possible link between the use of the rapid decompression tables and the divers' health problems: "a strong likelihood," "not inconceivable", "seems probable", "most likely been caused by" "probably been a strong contributory cause [of Mr Vilnes' brain and spinal injuries]".

70. Warnings of the inadequacy of the regulation decompression procedures had been flagged up to the Norwegian authorities from as early as 1969 in a report from the University of Newcastle Upon Tyne (MRC Decompression Sickness Central Registry) to the Norwegian Labour Inspection Authority. There continued to be evidence of strong links and much concern from a range of authoritative and official bodies and research organisations. For example in 1986 the Norwegian Petroleum Directorate described "an uneasy feeling among many people closely connected with diving work that perhaps the current procedures could be causing long-term damage to sensitive tissues, particularly the nervous system". When the regulations concerning decompression tables were revised to adopt a precautionary principle in 1991 on the most conservative basis to optimise the safety of divers, the reports of injury to divers dropped to zero.

71. In matters of health and safety, an analysis of risk involves an assessment of a potential hazard against the probability, chance or likelihood of harm. A hazard is a potential source of harm, adverse effect or damage. Relevant considerations in assessing the level of risk include analysing the potential seriousness that would be caused by the potential harm if it occurred both in terms of its effect - what might be the effects of the hazard if the harm were to occur (for example death at one end of the spectrum and temporary minor inconvenience at the other) and the extent of the impact – for example the number of people who could potentially be affected. Those factors are then assessed against the chance of the hazard occurring in order to understand the level of risk. It goes without saying that evidence of past harm caused by a particular activity is highly relevant to the assessment of risk of future harm, but is not determinative.

72. When considering the issue the court – both ECtHR and the lower courts - did not conduct their analysis of the relevant circumstances on the basis of hindsight, but based on the knowledge and perception of the matter at the time in question and the then prevailing perception of risk.

73. So on the facts of this case, the claim fails at the first hurdle on both grounds 1 and 2 – there is insufficient support for the proposition that exposure to 5G within the ICNIRP guidelines poses a risk to life or family and private life, so as to give rise to a positive obligation to provide information. Accordingly the claim must fail. Absent an identified threat or risk, there is nothing for the public to be warned of.

74. The cases that have come before both the domestic courts and the ECtHR are far removed factually from the circumstances here. In most cases there was proven harm caused by the activity in question, and in *Vilnes*, where there was not, there was nonetheless a high likelihood or probability of harm caused from the use of the rapid decompression tables. The authorities in fact knew, or ought to have known the risks involved from rapid decompression and they failed to act reasonably in accordance with it. On the facts before me, the risk of harm from 5G is most unlikely if exposure is kept within the guidelines and the government imposes compliance with the ICNIRP guidelines by regulation in accordance with its primary preventative duty under articles 2 and 8. The government therefore does not know that there is a high likelihood, or probability, of harm and nor ought it to do so from the evidence before me. The government is following the science closely and is keeping abreast of and participating in ongoing research. There is no violation of the claimants' articles 2 and 8 rights.

75. The suggestion that the government is under a positive obligation to signpost to the public research or reports that it does not find credible would be confusing and unhelpful at best and dangerous at worst. If one were to test the proposition in a different context it would be rather like suggesting that in public information encouraging parents to vaccinate their children with an MMR jab, the government was under a duty to signpost "research" by Andrew Wakefield. It would be akin to requiring the government to give publicity to what it believes to be disinformation. The argument also falls apart when one tests the proposition against a related 5G concern that some people (not the claimants I stress to add) have that coronavirus and the Covid vaccination programme is linked to 5G. If the claimants were right, the government would be required to alert readers of the relevant pages of GOV.UK to "reports" or "research" or doctors of some sort or another who have written opinions that link 5G to coronavirus which the government does not believe to be valid or reliable. It would amount to requiring the government to publicise theories it believes are dangerous and wrong.

76. It is uncontroversial that clear and accurate public information and guidance is extremely and increasingly important to counter inaccurate rumours, disinformation and unfounded conspiracy theories which are so easily spread on social media. The GOV.UK website provides clear advice and consistent messaging based on its considered opinion which is in line with the international consensus.

77. The government has adopted a precautionary approach in its messaging. Although it believes 5G is safe, out of an abundance of caution and on conservative principles it has suggested that those who are worried could, for example unplug the router at night, or not sleep with their mobile phone by their bed and to use their device further away from their body.

78. Mr Mansfield's approach was to require the defendants to prove the negative in the absence of known risks of exposure at the levels experienced by the claimants and Ms

Rock's visitors. It is speculation and guesswork that something that we do not yet know of, or understand, might be harmful: an unknown unknown of the type that kept Donald Rumsfeld awake at night. It begs the question of what the information to be provided to the public would look like.

79. I acknowledge the distress to the claimants of the symptoms that they are experiencing. Unexplained medical symptoms cause misery and anxiety in addition to the pain and distress of the symptoms themselves. The defendants do not dispute that the symptoms are real, but there is insufficient evidence to attribute them to exposure to 5G or to demonstrate that the defendants are in violation of article 2 or 8 in ground 1 or 2.

80. In light of my conclusions on grounds 1 and 2, ground 3 as a contingent ground also falls away. It follows that the claim fails for the reasons set out above.