

IN THE HIGH COURT OF JUSTICE
ADMINISTRATIVE COURT

CO/ 1111 / 2021

BETWEEN

The Queen, on the application of
VICTORIA ANGELL

First Claimant

-and-

KAREN CHURCHILL

Second Claimant

-and-

ROSALYN ROCK

Third Claimant

-v-

THE SECRETARY OF STATE FOR HEALTH AND SOCIAL CARE

First Defendant

-and-

THE SECRETARY OF STATE FOR THE ENVIRONMENT,
FOOD AND RURAL AFFAIRS

Second Defendant

-and-

THE SECRETARY OF STATE FOR DIGITAL CULTURE MEDIA AND SPORT

Third Defendant

AMENDED DETAILED STATEMENT OF THE FACTS
& GROUNDS OF CLAIM

Page references to the bundle are given as P.x [TBA]

1. This case concerns an important issue of public safety. It concerns the actual and potential risks to which members of the public, including particular vulnerable individuals, and children, are being exposed without having consented to or agreed to expose themselves, and without the necessary steps being undertaken by the relevant safeguarding authorities to provide the requisite knowledge of those risks to the public.
2. The particular environmental concerns at issue arise from the creation of man-made public health risks. It is the duty of the state to monitor, investigate, evaluate and understand any potentially hazardous new technology or other industrial development that it licences and controls so as to ensure that to the greatest extent reasonably practicable it protects life, safety and wellbeing of the public. This case is concerned with the safety of the environment in which people live, and the state's duty to positively protect citizens against appreciable risks of harm from radiation pollution through the duty to provide information and reasons in relation to these matters.

3. Permission to judicially review the Defendants’ conduct was granted by Lord Justice Lewison on 25 May 2022. His Lordship granted permission on the grounds challenging the Defendants’:
- (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 risks¹; and/or
 - (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 fifth-generation radiofrequency radiation technology (“5G”) and/or for discounting the risks presented by the evidence available²; and/or
 - (3) Failure to meet the requirements of transparency and openness required of a public body³.

These grounds include breach of the Human Rights Act 1998 obligations of the state authorities by omissions and failings that are in violation of the positive obligation to protect human life, health and dignity, that is required by Articles 2, 3 and/or 8 of the European Convention on Human Rights 1950 (“ECHR”). The claim challenges a continuing unlawful state of affairs.

4. Pursuant to directions made by Mr Justice Bennathan, dated 15 July 2022⁴, the Claimants file these amended grounds for judicial review focusing upon the grounds for which permission was granted by the Court of Appeal.
5. The Court is not required to determine any scientific dispute (to the extent that any dispute is identified), but to rule upon the discharge or otherwise of legal duties that arise (in the context of all the information available) concerning fulfilment of the safeguarding duties owed by the Defendants. Holding the executive authorities to account, and to their legal duties, is undoubtedly a proper and essential function for the Court.
6. It is important to be clear as to the risks that must be acknowledged by the state authorities. Risks do not need to be quantifiable. A real ‘risk’ does not need to be a certain course of consequence from a given act, omission or circumstance: it may be an acknowledged *potential* consequence, for all or certain individuals, from a given act, omission, or circumstance. Risks include matters that may occur in future as much as matters it is proven shall occur in future on balance of probabilities. The state of generally available current knowledge and information as to both proven and potential risks are therefore relevant to the steps required to discharge the state’s duty.

¹ Formerly appeal ground 2(i)(d).

² Formerly appeal ground 2(vi)(a).

³ Formerly appeal ground 2(vi)(b).

⁴ With agreed timetable amendment for the date of provision of these grounds, pursuant to CPR r.2.11.

7. In general terms the Defendants' failings follow an absence of due investigation and consideration of the dangers and health risks and harm arising from increasing public exposure to a new form of radiation. Such due analysis ought to inform and precede decisions to implement and render near-ubiquitous in the human environment such radiation of course, and that analysis ought to be made publicly available so as to inform the public, and specifically vulnerable sections of the public, of the assessed risk. There is a positive and/or public law duty to communicate or disseminate to the public information concerning environmental risks of this kind: to inform as to the nature and extent of the potential risks to the safety of individuals' human health posed by radiofrequency radiation, 'RFR', and/or 5G RFR.

MATERIAL FACTS

8. The Claimants are -
 - i. Victoria Angell, a mother of two children, and grand-mother to a young baby girl. Ms Angell has pre-cancerous cells in her breast. She lives, with her granddaughter and her parents, in a house in Fulham, London, in an area where 5G masts have been installed⁵;
 - ii. Karen Churchill, suffers from myalgic encephalomyelitis ('ME'). She spent 9 years as a computer programmer. She has also suffered skin cancer. She objects to 5G being installed at her home in Somerset; and
 - iii. Rosalyn Rock. She has a home in Chiswick, London, where she has sustained burn injury from the exposure to 5G radiation. She had lived in her home since 1989, but suffered these effects from April 2020 and was forced to stay away from her home as a result.

9. The Defendants are -
 - i. The Secretary of State for Health and Social Care, 'SSHSC'. SSHSC is responsible for Public Health England, 'PHE', and for an advisory Committee on Medical Aspects of Radiation in the Environment, 'COMARE';
 - ii. The Secretary of State for the Environment, Food and Rural Affairs, 'SEFRA';
 - iii. The Secretary of State for Digital Culture Media and Sport, 'SSDCMS'. This Defendant is responsible for the roll-out of 5G technology, '5G'. The SSDCMS has responsibility for the operation of Ofcom (a regulatory body created by the Communications Act 2003) and is empowered to introduce requirements that Ofcom would adhere to in licensing 5G technology and mast installations⁶.

⁵ *P.x* [TBA]. Her personal circumstances, and her particular knowledge of relevant perspectives, studies and developments are set out in detail. She is the founder of the website and representative of the Action Against 5G movement.

⁶ For example, it is reported in the 28 December 2020 "Tenth Report on the Secretary of State's functions under the Communications Act 2003..." that the Secretary of State can issue directions, and regulations that affect Ofcom

5G technology

10. 5G involves a form of wireless digital communication that uses a particular Radio Frequency Radiation (RFR). It emits radiation in waves that have a particular frequency, and a particular wavelength. It creates electromagnetic fields (EMFs) reflective of those particulars. It requires the installation of or use of particular base stations, or masts, which emit and receive a particular level of radiation.
11. RFR is a type of non-ionizing radiation (NIR), which is also referred to as radiofrequency (RF) electromagnetic fields (EMFs). In Europe, 5G technologies will emit RFR in the frequencies from 700 MHz-28GHz, and beyond⁷. Currently three frequency bands are in operation: low frequency (700MHz), high frequency (3.4-3.8 GHz, centimetre (CM)) or extremely high-frequency EHF millimetre (MM) (26 GHz and above) RFR.⁸ The 5G networks will - for the first time - introduce the use of millimetre wavelength (MMW) RFR.
12. Frequencies currently used for 5G in the UK are around 3.5GHz⁹. High frequency spectrum (referred to as *millimetre wave*) is now expected to be in use soon within the UK to deliver mobile services (as explained below). The human environment shall contain further-increased levels of intensity of radiofrequency radiation.
13. A particular real-world location may have multiple domains of unnatural radiation present. The cumulative consequences for the health of people created by each of these domains, individually and especially in aggregate, raises issues. The human environment is polluted by increasing levels of intensity of radiofrequency radiation. The established effects of this exposure, and the real risks, require proper information be provided to the public.
14. Non-Ionising Radiation used in 5G and RFR requires two effects to be considered. One effect is thermal, i.e. heat, generation. For instance, a microwave oven heats using RF-EMFs¹⁰. The other is biological effect, and risk, from this radiation exposure.
15. There is evidence of relevant risks in the form of:

(e.g. The Secretary of State for the Home Department issued a direction to Ofcom preventing Ofcom from introducing regulations which would make it lawful to operate commercial multi-user gateways without a licence on national security and public safety grounds (p22/26 of report)).
(https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/999887/D_CMS_s390_report_-_29_December_2012_to_28_December_2020.pdf)

⁷ 1 hertz is a cycle per second; 1000hz is 1 Kilohertz; 1 million hz is a Megahertz; 1 billion is a Gigahertz.

⁸ P.x [TBA] fn.1

⁹ P.x [TBA]. per expert Stephen Grills in his report at [22] and [24].

¹⁰ It is understood that consumer microwave ovens use non-ionising electromagnetic radiation to heat material, at a nominal 2.45 gigahertz (GHz), i.e. a wavelength of 12.2cm; and a frequency in the range of 300 MHz to 300 GHz.

- i. Published studies of the thermal and non-thermal effects of non-ionising radiation upon the human body, and the harmful effects capable of being caused to individuals by such effects; and
- ii. Evidence of individuals harmed and injured by NIR emissions and the EMFs created by human sources. An identifiable and real risk of harm has been reflected in particular, for example, in the injuries to six different individuals explained below.

Evidence of harm to individuals

16. Multiple individuals have been exposed to the radiation fields at the Chiswick home address of Ms Rosalyn Rock. None were able to exercise a choice over attendance with the proper information or advice of the risks from even relatively short-term exposure at a high density location. Witnesses of fact evidence the harmful potential from exposure to this technology even at lesser frequencies than it is intended that 5G shall ultimately use. Each of these witnesses has suffered harm and this evidence shows the effects upon some individuals of exposure to RFR at a real-world location (this one being in Chiswick) where many masts and signals conflate and where 5G has been installed and is operating. The injuries to some include erythema (skin burns or visible reddening) that have been photographed.
17. On 18 September 2020 the expert Stephen Grills surveyed the RFR present at the property, and confirmed the presence of multiple 5G signals in locations in the vicinity of Ms. Rock's home¹¹. Separate areas of 5G signal (emitted by mobile telephone network providers) were recorded and the masts emitting 5G are depicted, along with the location of Ms Rock's home on Netheravon Road South, on the map exhibit LH-02A¹². The 5G signals were recorded on the 3.5GHz band. The report notes that three of the four mobile telephone networks provide their 5G service in the Chiswick location.
18. Those who have suffered physical harm and injury from their presence at that address include –

- i. **Ms Rosalyn Rock**.¹³

19. Ms Rock has lived in that house for 31 years. She has a metal tooth implant in her left bottom molar. She is (and her siblings are each) a carrier for the condition of hemochromatosis, a disorder where too much iron builds up in the body. Before April 2020 Ms Rock was however a generally healthy, and a happy person. She now lives in fear of spending any time at her own home and is being forced to live an itinerant lifestyle, seeking refuge on sofas at friends and relations' homes. Her symptoms commenced one evening in mid-April 2020, whilst sitting in her sitting room, when her skin started to prickle, and her throat felt tight. She did not recognise what was happening to her but describes,

¹¹ P.x [TBA]. Report [Exhibit LH-1]; and, at P.x [TBA], accompanying maps [Exhibit LH-2].

¹² P.x [TBA]. [Marked extract of page 7 of 16 of Exhibit LH-2].

¹³ P.x [TBA] witness statement

inter alia, a physical sensation “like continuous bee and wasp stings all over my body” and mental confusion and detachment with inexplicable emotion. Since this time Ms Rock’s health has been affected very badly. She has attended hospital numerous times, and repeatedly sought her GP’s help¹⁴. She has experienced conditions and injuries including: radiation ‘zaps’ to her face, causing bleeding (e.g. exhibit RR-4 & RR-5)¹⁵; blisters on her legs (e.g, exhibit RR-6 & RR-7)¹⁶; radiation burns and blisters on her arms (e.g, exhibit RR-8)¹⁷; skin rashes and itching, and a prickly sensation over her body; bleeding from her bottom; for which she has undergone examinations by colonoscopy on 18 November 2020¹⁸, and CT scan of her abdomen¹⁹; abdominal pain; bleeding from her nose; a strange lump appeared in her mouth (Exhibit RR-9)²⁰; white marks on her cheeks. A benign lesion on her right inner cheek was excised at West Middlesex Hospital in October 2020²¹; burning of the lungs and burning of the liver; with visible and painful burning of the skin under the breast around the ribcage (Exhibit RR-12)²²; tightness in her throat²³; weakness in her legs; detachment from people; a clouded brain and confusion; headaches; weight loss; low mood; exhaustion. Further details are recorded in the report of Dr Andrew Tressider²⁴. In large part the symptoms are alleviated by absence from her home, and she seeks to be in parks and natural spaces to escape from radiation when possible. She does what she is able to mitigate the symptoms, including restricting use of radiating items such as a modern mobile telephone. When she stays at the house, she now sleeps downstairs in the hallway as she is afraid to sleep upstairs.

¹⁴ She has sought assistance from Charing Cross Hospital, Chelsea and Westminster hospital, West Middlesex Hospital, and her own doctor. E.g. P. P.x [TBA] Exhibit RR-10, records attendance at Accident and Emergency, at Chelsea and Westminster Hospital on 15 August 2020 for the 5th occasion within a year. She had been referred there by West Middlesex hospital for investigation of potential radiation. The doctor explained that Electromagnetic Hypersensitivity Syndrome, EHS, is not a recognised medical diagnosis so they could only rule out other causes and look to manage the symptoms. Diazepam and Paracetamol was prescribed. The GP letter Exhibit RR-13 at P.x [TBA] also mentions the attempts to seek medical assistance and remedy. It is evident the medical profession at large has not been equipped with the knowledge and tools to address the potential harm from this form of non-ionising radiation poisoning in the community and means to diagnose.

¹⁵ P.x [TBA]

¹⁶ P.x [TBA]

¹⁷ P.x [TBA]

¹⁸ P.x [TBA] Exhibit RR-16.

¹⁹ P.x [TBA] Exhibit RR-17.

²⁰ P.x [TBA]

²¹ P.x [TBA] records this in the Chelsea and Westminster discharge letter from dermatology clinic. There was noted to be a mild rosacea, i.e. reddening of the face, and unexplained skin rashes and prickly sensation over the body.

²² P.x [TBA]

²³ She attended a hospital clinic appointment on 17 December 2020 in this respect P.x [TBA].

²⁴ P.x [TBA]. Exhibit RR-19

20. In September 2020 the expert Dr Andrew Tresidder visited the property to examine Ms Rock.²⁵ He assessed her mental state and found her to be a credible witness²⁶. Regarding Ms Rock’s condition he concludes that the constellation of her symptoms, which are mainly neurological and skin, and which are improved when she is away from her house which is in the vicinity of a density of transmitting technology, are consistent with symptoms of an environmental exposure to electromagnetic fields²⁷. This is a diagnosis related to ICD 10 W90.0 *Exposure to radiofrequency*²⁸. Nonetheless it is not taught to doctors, and most people will only be diagnosed if they themselves observe the cause and effect – the Defendants provide no or no adequate information for the medical profession (or others who need to know more of the risks and potential symptoms or harms). He observes that modern biology recognises that cells communicate using electromagnetic and not only chemical means. Organs such as the brain and the heart have electrical signals; the ‘heart is a large electromagnetic organ, with a measurable field over a metre from the body, whilst the brain is well-known to produce electromagnetic signals’²⁹.
21. The symptoms of EHS have some similarity it might be said to those described as ‘long-COVID’ symptoms³⁰; which has not faced similar governmental resistance.

ii. Ms Rock’s sister, Susan Webb³¹; and daughter Jessica Rock³².

22. On 15 May 2020 Ms Rock’s daughter Jessica Rock, a student at LSE; and Ms Rock’s eldest sister Susan Webb, a retired barrister, visited to celebrate Jessica’s birthday, in the back garden. Two days later, Ms Webb had come up with blisters across her skin, and they were bleeding. There was blood on her bedsheets. She felt confused and not very well. The following day Ms Rock also started blistering, and again these bled. Jessica had returned to her home in Pimlico, and the same day was admitted to hospital experiencing prickling on her skin and all down her spine, chronic headaches and burning under her breasts. She was admitted for 3 days.

²⁵ P.x [TBA]. In addition to having been a GP since 1989, he has worked for NHS England as a GP Appraiser, has worked as a police Force Medical Examiner, and is approved under s12 of the Mental Health Act 1983. [Exhibit RR-21]. He has a particular expertise having worked as a doctor, and as a trainer and educator of other doctors, and in 2017 became the first Chair of the advisory Group ‘IGNIR’, International Guidelines on Non-Ionising Radiation, set up to publicise EUROPAEM non-thermal Guidelines. He has published work on the topic of electrosensitivity.

²⁶ P.x [TBA] [Exhibit RR-19]

²⁷ P.x [TBA]. And see Stein and Udasin, Electromagnetic Hypersensitivity, Review of Mechanisms, Environmental Research 186 (2020) 109445.

²⁸ P.x [TBA]

²⁹ P.x [TBA]

³⁰ Dr Tresidder makes the point – ‘There is a school of thought that dismissed the issue as purely psychological: similar schools have argued in the same way about Gulf War Syndrome, a problem known to be tragically real by thousands of veterans. Twenty years ago, other thinkers might have dismissed Chronic Fatigue and Myalgic Encephalomyelitis as psychological (and therefore unimportant and non-existent) illnesses. Time has moved on. Indeed, there might be shared mechanisms, as a number of people with CFS/ME also suffer from symptoms of ES. There may be links in mitochondrial function, implicated in chronic fatigue’ P.x [TBA].

It is notable also that many other countries *do* recognise EHS and offer treatment.

³¹ This is evidenced by Mrs Hackett’s statement at [4] P.x [TBA]; and Ms Rock’s statement P.x [TBA].

³² Ms Rock’s statement explains this at [6] P.x [TBA].

iii. Neighbours

23. Neighbours have also been affected. A little girl from one family came to Ms Rock with blisters all over her arms and on her face. Exhibit RR-11 is a photograph taken of the burns on the girl's arm³³. Others are suffering chronic headaches. One lady moved from her bedroom into her living room to try to avert her chronic headaches.

iv. **Dr Andrew Tressider**.³⁴ A doctor who attended in order to interview and assess Ms Rock on one occasion.

24. Dr Tressider is not only an expert witness in this case however. He also became a victim of the exposure to electromagnetic fields at the same premises. He provides a witness statement explaining the injury he himself sustained on his visit to Ms Rock's home, and exhibits a photograph of the lesions to his shoulder³⁵. He developed a number of symptoms whilst in Ms Rock's house and especially her garden. These he describes as 'a loss of clarity of thinking, pressure in the head, a slight unsteadiness on my feet, pricking sensations in various places, especially my left shoulder, and the appearance of a rash of four discrete lesions on my left shoulder (the largest where the pricking pain occurred) overnight and the next morning, and which lasted two days in total'. He is not prone to skin complaints but this appeared and lasted a couple of days.

v. **Mrs Lorna Hackett**, the legal representative of the Claimants who attended to obtain a witness statement from Ms Rock at her home address on 7 September 2020.³⁶

vi. **Mrs Suzanne Openshaw**, colleague of Mrs Hackett, also in attendance on 7 September 2020³⁷

25. At the time that Mmes Hackett and Openshaw attended Ms. Rock's home they were each fit and healthy. From 1.30pm they spent time inside the house initially. In the sitting room, Mrs Openshaw felt pins-and-needles sensation very strongly in her right foot, under and across the ball of the foot. She also felt unusually tight-chested. Moving to the kitchen, with a window facing North over the garden, she almost immediately had a tight headache across the front of her head. The double glazing and the panes were warm to the touch. Mrs Openshaw's throat felt very constricted, as if the muscles were contracting. She then stood with her back to the window. After a few minutes that headache/tightness had shifted location to being across the top of her head. She felt pins and needles in her left wrist which

³³ P.x [TBA] Exhibit RR-11

³⁴ P.x [TBA] witness statement

³⁵ P.x [TBA]. Exhibit AT-01.

³⁶ P.x [TBA] witness statement. There is also a further statement dated 18 October 2021 that provides an update from Mrs Hackett [P.x [TBA]

³⁷ P.x [TBA] witness statement. There is also a further statement dated 15 October 2021 that provides an update from Ms Openshaw P.x [TBA].

possibly improved when she removed a gold ring from her finger. She then had a sudden unexplained overwhelming feeling of emotion and 'brain fog' i.e. lack of concentration/confusion.

26. They went into the garden. Mrs Openshaw felt very dizzy passing through the passageway to the side of the house. Her headache and dizziness worsened, and her balance was affected. Ms Rock also showed them outside the various equipment installed at the top of poles near to her house. Nearing the masts at the corner of Netheravon Road South, Mrs Hackett experienced a sharp pain in her head, which subsided almost immediately she moved away from the masts.
27. Sat in the garden a redness appeared on Mrs Openshaw's forehead, neck and then to her chest, and to the other side of her neck. Its appearance was becoming very red, like sunburn. Photographs are exhibited³⁸. Mrs Hackett experienced pins-and-needles sensation, and a goosebump-type sensation similar to an involuntary frisson that individuals, who experience such³⁹, might experience. Even after they had moved away from the property Mrs Openshaw's headache and the tight band feeling around her head remained, as did the 'brain fog', i.e. loss of concentration. She had no appetite, which was very unusual. Mrs Hackett felt unable to think clearly and spaced-out as if tranquilised or intoxicated. She did not feel capable of driving.
28. That evening the redness to Mrs Openshaw's skin had subsided by 7pm/8pm. She noticed however a blister under her tongue which was 2mm wide and domed, which looked like a water blister. She photographed it⁴⁰. She felt quite tetchy and unable to cope with anything apart from quiet. At about 9pm the blister under her tongue burst. She felt very tired. She went on to suffer ongoing serious health effects from her exposure. Her evidence explains in detail how she has been required to seek medical advice on numerous occasions and to make fundamental changes to her daily life and living conditions, including those of her family. On 9 September Dr Tom Willsher suggested a possible diagnosis of radiation/EMF injury⁴¹. She became so unwell she could not work for 10 days (though she is self-employed). She again consulted Dr Tom Willsher on 27 October 2020⁴². Blood pathology was taken and this attracted comment that it showed a mitochondria of the liver malfunction that occurs when there is a stress placed on the liver⁴³.
29. Mrs Hackett's symptoms also continued after the visit. On 11 September 2020 she realised that when driving she felt the coming and going of a sensation of a tight band around her head. This eased as she

³⁸ P.x [TBA] Exhibit SO-1

³⁹ Not all individuals experience involuntary frisson. There appears to be a genetic disposition variable within the population.

⁴⁰ P.x [TBA] See photograph Exhibit SO-2

⁴¹ P.x [TBA]. Exhibit SO-3

⁴² P.x [TBA] Exhibit SO-4

⁴³ P.x [TBA] Exhibit SO-5.

passed away from, and aggravated as she approached, mobile telephone masts. Mrs Hackett consulted her doctor, Dr. Tom Willsher of Winchester GP⁴⁴. She thereafter took steps to minimise exposure generally to RFR, and has experienced improvements and deteriorations in her condition at times since when her exposure has been decreased or increased.

30. A further EMF survey of the electromagnetic fields in the location of Netheravon Road South was conducted on 17 February 2021 by Link Microtek Ltd⁴⁵. It also was able to take measurements of RFR in the area. The report of 3 March 2021 confirms the presence of 5G radiation; and some Infinet wireless equipment. It also mentions that the guidelines for safety from ICNIRP are for 6 or 30 minute exposure periods only⁴⁶. Notably there was a considerable difference between the power density of the electrical field strength as between the location at the junction of the A4 and Netheravon Road South – which is where Ms Rock’s home is – and all the other places a reading was taken⁴⁷. Most readings were at less than 0.05% of the ICNIRP general public reference level; but at that specific location the maximum singular readings were at 2.32% of the level. That reading was 100 times higher than the maximum signal recorded at one of the other locations. If all of the maximum values were present simultaneously at the location closest to the house in fact the reading would be 4.47%⁴⁸.
31. The witnesses provide evidence of manifest, observable and significant harm. The precise thermal or non-thermal mechanism of injury causation is not required to be proved, but the significant number of instances of persons suffering these injuries as a direct result of RFR exposure at that location is a matter that any responsible authority would be closely examining regarding what it says about the level of risks posed by increasing RFR in the community, and disseminating the information to the public necessary, for those who may wish to, to be able to take steps of precaution against possible harm. At no stage have the Defendants even attempted to explain what is concluded as to this compelling multiple-source material, or what it is intended to draw from it to properly publish the information necessary for the public to know of the risks.

⁴⁴ P.x [TBA]

⁴⁵ P.x [TBA] Exhibit LH-04.

⁴⁶ P.x [TBA]

⁴⁷ P.x [TBA]

⁴⁸ P.x [TBA] explains that this aggregate of the highest readings should be an artificially high one because they should not all be at maximum levels at the same time. No reason as to why that should not occur is given, but the worst-case scenario is said to be double the individual peak recorded, which was the very high comparable maximum closest to Ms Rock’s home.

32. Experts including Professor Heroux and Dr Goodman⁴⁹ report on the circumstances of these individual specific examples, and others known to them⁵⁰. Professor Paul Heroux is both Professor of Toxicology and Health Effects of Electromagnetism, at McGill University, Canada, and a Medical Scientist of the Department of Surgery at McGill University Health Center. He is a doctor holding BSc, MSc and PhD in Physics, and with extensive training and expertise in engineering, biology and medicine⁵¹, and occupational health. He has been working in the relevant field since 1976. He provides an expert report considering the presence of an electromagnetic exposure event, and resulting Electromagnetic Hypersensitivity, arising from the 7 September 2020 attendance of Mmes Hackett and Openshaw⁵². He received a history of the erythema, i.e. the skin reddening, and sensations and symptoms of the occasion and subsequent to that attendance. Considering the Link Microtek report, Professor Heroux observes that an individual can be exposed at a location to the signals of all providers simultaneously, as shown by the coexisting peaks in all the graphs. The measurements quoted were for the signal of each particular provider only. Separate networks however are able to radiate simultaneously; indeed providers can compete for dominance in the strength of the signal as is shown in the graphs in the Link Microtek report. On those graphs of the readings taken, for example, the true peak could be seven times higher. The industry firm's report therefore under-rates the exposures possible for individuals at the location⁵³. In addition, it is observed by the expert that the readings were taken over a 6-minute period. This was a snapshot with no attempt to establish if other readings exist at other times of day for example, and whether all antennas were in operation or not in that particular 6-minute period⁵⁴.
33. Professor Heroux notes that the rural residence of Mmes Hackett and Openshaw would be estimated typically to involve daily exposure to levels 100 times less than those to which they were exposed for a short period of hours on 7 September 2020⁵⁵. He notes the symptoms are in keeping with a diagnosis of EHS. He notes the research trials that evidence that Electromagnetic Hypersensitivity may occur after an acute event with acute onset, and that cutaneous reactions in the skin, and erythema are documented in the scientific studies. When an acute event occurs, the cellular population of mitochondria is altered, transiently or permanently (this is known as heteroplasmy). The population of

⁴⁹ Dr. Jenny Goodman is a UK-based environmental doctor. She began practising in Environmental Medicine in 2000. She saw her first patient with Electro-HyperSensitivity (EHS) in 2010 and, since then, has seen more and more people who are made ill by devices which emit EMR. Her witness statement describes four anonymised case studies of patients suffering from EHS, and comments that those who do not experience such obvious clinical reactions to EMR exposure are arguably more at risk in the long term, because they take no steps to limit their exposure [P.x [TBA]]

⁵⁰ P.x [TBA].

⁵¹ Curriculum Vitae at P.x [TBA]. A sufficiently impressive short summary is seen at P.x [TBA] and P.x [TBA]

⁵² P.x [TBA]. Exhibit LH-5.

⁵³ P.x [TBA]

⁵⁴ P.x [TBA]

⁵⁵ P.x [TBA]

mitochondria within cells (300,000 per cell in human eggs and 50,000 per cell in heart cells) is a diverse population that can be modified, with or without recovery after toxic insult⁵⁶. Professor Heroux concludes that Mmes Hackett and Openshaw are further victims of EMR intoxication and each suffered EHS⁵⁷.

Evidence concerning 5G technology and risk of harm to humans

34. In contrast to ionizing radiation, which induces ionization of water and biologically important macromolecules, RFR does not ionize. Unlike, for example X-rays, the energy of RFR is not enough to break electrons off the molecules. However, the evidence has mounted that radiation at the lower frequency of RFR is capable of effects upon the human body and living cells. Professor Heroux explains that:

First, whether the radiation is ionizing or not does not mean anything in this context. The human body is full of molecules that are already ionized. Therefore, the question is whether the electromagnetic fields in question can interact with charges in the body that are released in various ongoing metabolic processes, such as oxidative phosphorylation and the rate of action of different enzymes. Second, thermal motion is a thermodynamic variable that changes the rate of reactions between molecules, but does not exclude a separate action of electromagnetic fields on the transfer of charges (electrons and protons) between molecules.⁵⁸

35. All types of man-made Electromagnetic Fields (EMFs)/Electromagnetic Radiation (EMR) - in contrast to naturally occurring EMFs/EMR - are polarized. Polarized EMFs/EMR can have increased biological activity. They are able to produce amplified intensities – a phenomenon not present in natural forms of EMF. They have the ability to force all charged/polar molecules and especially free ions within and around all living cells to oscillate on parallel planes and in phase with the applied polarized field. Such ionic forced-oscillations exert additive electrostatic forces that disrupt the cell's electrochemical balance. These features render man-made EMFs/EMR more bioactive⁵⁹. The effect appears to be an explanation for 'the large and increasing number of studies during the past few decades have indicated a variety of adverse biological effects to be triggered by exposure to man-made EMFs, especially of radio frequency (RF)/microwaves, and extremely low frequency (ELF). The recorded biological effects range from alterations in the synthesis rates and intracellular concentrations of different biomolecules, to DNA and protein damage, which may result in cell death, reproductive declines, or even cancer.

36. Even before increasing RFR to the proposed 5G levels, under the weight of the objective evidence, the International Agency for Research on Cancer (IARC) has classified both ELF magnetic fields and RF

⁵⁶ P.x [TBA]

⁵⁷ P.x [TBA]

⁵⁸ P.x [TBA]

⁵⁹ P.x [TBA]. Panagopoulos, D, Johannson, O, and Carlo, G. (2015) *Polarization: A Key Difference between Man-made and Natural Electromagnetic Fields, in regard to Biological Activity*. *Sci. Rep.* **5**, 14914; doi: 10.1038/srep14914 (2015). The study was supported by the Karolinska Institute, Stockholm, Sweden, the Irish Doctors Environmental Association, and the Alliance for Irish Radiation Protection.

EMFs as possibly carcinogenic to humans⁶⁰. Geesink and Meijer observe that “The strongest evidence for health effects comes from an association observed with childhood leukaemia. This lies at the basis of a classification performed by the International Agency for Research on Cancer in 2001, ranking ELF magnetic fields as possibly carcinogenic to humans (Group 2B) (IARC, 2002). The classifications, essentially, were based on the fact that epidemiological studies showed a consistent association between magnetic fields above approximately 0.3/0.4 μT (Marino, 2016)⁶¹. IARC has issued two reports, in 2002 and 2011⁶², that have classified EMR as “possibly carcinogenic” (“2B”)⁶³

37. It is sufficient for present purposes to recognise the risks and effects from the existing and increasing use of RFR due to the effects and possible effects and harms of:

- i. Oxidative stress⁶⁴; and nitrosative stress⁶⁵;
- ii. Cancer. Indeed in 2011 both the World Health Organization (WHO) and IARC classified radiofrequency radiation as a possible carcinogen to humans⁶⁶;
- iii. Dementia / neurodegenerative diseases;
- iv. Infertility, particularly sperm function⁶⁷;
- v. Heightened risks to developing immune and health systems in infants and children. Neurodevelopmental or immunological harm;
- vi. Electromagnetic Hypersensitivity Syndrome, EHS. Exposure to non-ionising radiation including radiofrequency is notably a recorded disease or illness recognised by the WHO, since 2005, in the International Classification of Diseases, ICD⁶⁸.

38. Both oncologic and non-cancerous chronic effects are suggested by the research⁶⁹. It is not necessary to determine by this claim the correctness of the preponderance of the scientific evidence that attests to certain harms *already* evidenced, but simply necessary to determine whether there is any evidence that

⁶⁰ P.x [TBA]. Panagopoulos, D, Johansson, O, and Carlo, G. (2015) *Polarization: A Key Difference between Man-made and Natural Electromagnetic Fields, in regard to Biological Activity*. *Sci. Rep.* **5**, 14914; doi: 10.1038/srep14914 (2015).

⁶¹ P.x [TBA]. Geesink, H and Meijer, D (2020) *An integral predictive model that reveals a causal relation between exposures to non-thermal electromagnetic waves and healthy or unhealthy effects*.

⁶² IARC, 2013. Non-ionizing radiation, part 2: radiofrequency electromagnetic fields. In: Organization, W.H. (Ed.), IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. WHO – International Agency for Research on Cancer, Geneva.

⁶³ P.x [TBA]

⁶⁴ P.x [TBA] of full application bundle, ‘Oxidative stress is an induced imbalance between prooxidant and antioxidant systems resulting in oxidative damage to proteins, lipids and DNA; and is closely connected to overproduction of reactive oxygen species (ROS) in living cells’ [1].

Figure 5 at P.x [TBA] depicts the effects that oxidative stress has within the body’s cells.

⁶⁵ i.e. overproduction of nitric oxide

⁶⁶ P.x [TBA], at P.x [TBA], Yakymenko, I, Sidorik, E, et al (2014) *Low Intensity Radiofrequency radiation: a new oxidant for living cells* (2014) *Oxid Antioxid Med Sci*. DOI 10.5455

⁶⁷ P.x [TBA]. At [3.1.2] Di Ciaula.

⁶⁸ <https://icd.who.int/browse10/2019/en#/W90>

⁶⁹ P.x [TBA], Ciaula, Agostino Di, (2018) *Towards 5G communication systems: are there health implications?* International Journal of Hygiene and Environmental Health.

the Respondents have adequately considered the material and reached a considered and reasoned decision as to the risks that the public needs to be informed as to.

39. Leaving aside (for present purposes) the legitimate and important criticisms⁷⁰ of the work of the private non-governmental organisation “ICNIRP” (the International Commission on Non-Ionising Radiation Protection)⁷¹, the Defendants themselves place significance reliance upon its guidelines. ICNIRP issued guidelines, which it publishes in a journal as it has no official status, in 1998, in 2009, and most recently its significantly revised version in 2020⁷². It should be noted that the new RFR ranges that 5G uses have been little studied to-date, and the guidelines review therefore could only consider studies of less aggressive and less powerful RFR farther away along the spectrum from the frequency and wavelength of certain radiation that is, precisely for its known effects on the human body, presently used in medicine and illegal warfare.
40. The Defendants are not legally entitled to delegate their functions under the ECHR to ICNIRP; and notably whilst the former focuses on what it considers to be proven adverse effects (and continues to focus only upon thermal effects⁷³), that is far narrower than the duty to have regard to real risks. Proper foresight of risks of harm does not require that the harm first be caused and proved to the human population.
41. Another important issue, is that ICNIRP does not ask the question over risk that the Defendants are obliged to. ICNIRP has asked itself (on what it did consider) whether it is satisfied of proof of past harm, such as would have established a civil liability for the industry. But that is *not* a concern for whether or not there is a real risk of harm posed – the protective obligation question to be properly informed by the Defendants.
42. ICNIRP is expressly clear that there *is some evidence* suggestive of harm, and it only concludes that it is *not yet* convinced that harm has been proven by consistent study. This difference is fundamental given

⁷⁰ These concern (i) methodology it adopts to setting its own recommendation of guidelines (reviewing others’ work but conducting no experiments or studies); (ii) membership; both as to fields of expertise within the small 14-member Commission; and the member cross-relationship to other bodies; (iii) independence or otherwise, in funding, appointment, and influence of the membership and organisation. The Buchner and Rivasi (2020) report provides detailed evidence of a range of conflicts of interests of ICNIRP members, including its current chair: [P.x [TBA]]; and at P.x [TBA]]; report of Professor Butler, endorsed by 22 international experts – scientists, academics, and doctors: [P.x [TBA]]; Professor Frank, of the University of Edinburgh: [P.x [TBA]]; Hardell and Carlberg (2020) P.x [TBA]

⁷¹ On 29 May 1992, in Montreal, the General Assembly of the International Radiation Protection Association (IRPA) which is “the international voice of the radiation protection profession” (<https://www.irpa.net/>), created the ICNIRP for the purpose of protecting public health from non-ionising radiation. ICNIRP was a non-governmental organisation charged with employing the same fundamental principles and approaches as IRPA.

⁷² ICNIRP (2020). Guidelines for limiting exposure to electromagnetic fields (100 kHz to 300 GHz).

Health Physics, 118(5), 483-524. P.x [TBA]

⁷³ P.x [TBA] [internal p485]; P.x [TBA] [internal p487] ; P.x [TBA] [internal p489]

the nature of the duties owed by the Defendants to safeguard public health from risks, not merely from established harm caused already but also from risks posed in future by the permission of this industrial activity.

43. ICNIRP does not conduct any studies, but appends its volunteers' summary of the reviews conducted by others. What is notable is that there is not denied to be a body of study identifying harm, but that the reason that it is not factored into the guidelines of ICNIRP is the level of *consistent one-way proof of harm caused*. In short, it is akin to looking at whether there is an unanswerable case pointing in only one direction – it is not asking if there is an evidential basis for finding that a real risk has been shown.
44. Furthermore the evidence that RFR has certain impacts upon the body biologically is regarded as unimportant by ICNIRP: 'Appendix B: Health Risk Assessment Literature'⁷⁴. (Professor Butler observes, to the contrary, that standard practice is to consider both the biological and health effects of environmental toxins⁷⁵). Taken together with its approach placing a necessity upon epidemiological study rather than animal or in vitro study, this means that only *AFTER* such biological effects have already been substantiated to have harmed human health would notice be taken by ICNIRP.
45. ICNIRP summarises that it concludes, (based on its very limited approach discussed above) that there are already three substantiated adverse health effects caused by exposure to radiofrequency EMFs: (i) nerve stimulation, (ii) changes in the permeability of cell membranes, and (ii) effects due to temperature elevation⁷⁶.
46. As well as those genetically or environmentally susceptible to suffer cancer or EHS in the future from the exposure to RFR, there are also existing vulnerable groups who ought to be considered and who deserve to be given information to assist them, including:
 - i. Those with disabilities that require medical implants with electrical currents or conductivity, including pace-makers in the heart for example. (This important issue has simply not been addressed at all, even by ICNIRP);
 - ii. Those with disabilities that required the implant of metal to their body;
 - iii. Children;
 - iv. Those who presently suffer disability arising from existing cancer;
 - v. Those presently suffering pre-cancerous conditions;
 - vi. Those exposed habitually to radiation in the workplace, of particular levels or longevity;

⁷⁴ P.x [TBA] [internal p517] : "It is important to note that ICNIRP bases its guidelines on substantiated adverse health effects. This makes the difference between a biological and an adverse health effect an important distinction, where only adverse health effects require restrictions for the protection of humans".

⁷⁵ P.x [TBA]

⁷⁶ P.x [TBA] [INTERNAL p522]

- vii. Those with immunosuppressant conditions;
- viii. Those suffering ME; / Those presently suffering from EHS.

47. For those with disability treated by medical implant the consideration of safety given by ICNIRP, in its revised 2020 guidelines expressly do not cater for their safety. It is stated simply -

radiofrequency EMFs can indirectly cause harm by unintentionally interfering with active implantable medical devices (see ISO 2012) or altering EMFs due to the presence of conductive implants.

As medical procedures rely on medical expertise to weigh potential harm against intended benefits, ICNIRP considers such exposure managed by qualified medical practitioners... as well as the utilization of conducting materials for medical procedures, as beyond the scope of these guidelines⁷⁷

48. Children's interests and safety obviously deserves specific and careful attention. Professor Butler records that 'Children are particularly vulnerable and their risk from exposure is very high⁷⁸. Dr Erica Mallery-Blythe, for the Physicians' Health Initiative for Radiation and Environment, 'PHIRE', summarises⁷⁹ studies leading to identified vulnerability of children -

Children are more vulnerable due to multiple factors:⁸²⁸⁰. It is noteworthy that brain tumours have overtaken leukaemia as a leading cause of cancer death in young people.

a) Children absorb more radiation:

The brain of a child (age 5-8yrs) can absorb 2x the radiation of an adult.⁸³⁸¹

Exposure in bone marrow can be up to 10x greater than an adult.⁸⁴⁸²

b) Outcomes in children may be worse as:

Children have systems which are still developing.

Children have a longer time ahead for latent effects to manifest.

49. Belpomme *et al* report that, as regards the health effects of RFR upon humans, children have a greater susceptibility of the developing nervous system, hyperconductivity of their brain tissue, greater penetration of radiofrequency radiation relative to head size, and their potential for a longer lifetime exposure⁸³.

50. A study published in the USA has criticised the mobile [cell] phone certification process in that country that uses a plastic model of a head called the Specific Anthropomorphic Mannequin (SAM), which represented the top 10% of U.S. military recruits in 1989 – i.e. tall male adults⁸⁴. This model is 'greatly

⁷⁷ P.x [TBA]. ICNIRP. Guidelines for limiting exposure to electromagnetic fields (100 kHz to 300 GHz). Health Phys 118(5):483–524; 2020. [At internal p483].

⁷⁸ P.x [TBA]; and at P.x [TBA]

⁷⁹ P.x [TBA]

⁸⁰ Morgan et al., 2014. *Why children absorb more microwave radiation than adults: The consequences* JMAU 2014; 2 (4): 197 – 204 <https://www.sciencedirect.com/science/article/pii/S2213879X14000583>

⁸¹ Wiart, J., et al, 2008. *Analysis of RF exposure in the head tissues of children and adults*. Physics in Medicine and Biology vol 53, No.13, p3681-3695

⁸² Christ, A., Gosselin, M-C., Christopoulou, M., et al., 2010. *Age-dependent tissue-specific exposure of cell phone users*. Phys. Med. Biol. 55:1767–1783. <https://iopscience.iop.org/article/10.1088/0031-9155/55/7/001/pdf>

⁸³ P.1033-P.1057. At P.x [TBA], and see P.x [TBA]. Belpomme, D, Hardell, L et al (2018) *Thermal and non-thermal health effects of low intensity non-ionizing radiation: An international perspective*, Environmental Pollution 242 643-658

⁸⁴ P.x [TBA]

underestimating the Specific Absorption Rate (SAR) for typical mobile phone users, especially children⁸⁵. The SAR for a 10-year old is up to 153% higher than the SAR for the SAM model.

51. Objective available scientific information as to the risks from RFR must be considered by the Defendants when proposing what information it is required to provide to the public. The further witness statement of Mrs Lorna Hackett to be filed identifies the up-dated material that the Defendants must have regard to in discharging their duties.

Defendants' consideration of RFR and NIR, and information provided to the public

52. Presently PHE says that the Committee on Medical Aspects of Radiation in the Environment (COMARE) is an existing Department of Health expert committee that has a watching brief on non-ionising radiation⁸⁶. However (as Ms Angell describes in her statement) its minutes demonstrate its failure to consider the issue because the DHSC instructed it not to form a sub-committee to assess the effects of EMF/RFR on health⁸⁷.

53. There is an absence of appropriate investigations and studies to predict and evaluate the effects of exposure in advance; and/or of public access to the conclusions of such studies, and to information arising enabling members of the public to assess the risk posed to themselves. The Defendants are providing to the public advice and information that is both out-of-date, and that is posited on the exclusive basis that all activities within ICNIRP guideline levels of RFR are entirely and without question safe, presumably for everyone. The identifiable information given is limited to:

- i. Ofcom (in its current proposals to extend the 5G frequency band in use) is relying upon the guidance of the UK Health and Safety Agency (UKHSA). Specifically it refers the public to the guidance “5G technologies: radio waves and health” published on 3 October 2019⁸⁸ - that pre-dates even the new ICNIRP guidelines. It recognised that using higher frequencies “there is less penetration of radio waves into body tissues and absorption of the radio energy, and any consequent heating, becomes more confined to the body surface”. It assumes that “overall exposure is expected to remain low relative to guidelines and, as such, there should be no consequences for public health”.
- ii. HM Government (in the form of the Department for Digital Culture Media and Sport) last produced a guide to 5G, a 4-page document, on 27 August 2020⁸⁹. It is not intended

⁸⁵ P.x [TBA]. Gandhi et al *Exposure Limits: The underestimation of absorbed cell phone radiation, especially in children*, *Electromagnetic Biology and Medicine*, 31(1): 34–51, 2012

⁸⁶ <https://www.gov.uk/government/groups/advisory-group-on-non-ionising-radiation-agnir> P.x [TBA]

⁸⁷ P.x [TBA] at [15]; at P.x [TBA] [2.12].

⁸⁸ <https://www.gov.uk/government/publications/5g-technologies-radio-waves-and-health/5g-technologies-radio-waves-and-health> P.x [TBA]

⁸⁹ <https://www.gov.uk/government/publications/5g-mobile-technology-a-guide> P.x [TBA]

for the public, but is available online. Its purpose is explained: “This guide, produced by Government and Ofcom, explains the facts about 5G to help you deal with queries from the public and to combat the disinformation that is spreading online”. It asserts boldly that “concerns that the introduction of 5G could affect people’s health” are “completely unfounded”. It ignores anything but the characteristic of non-ionising which it says “means that these radio waves do not carry enough energy to directly damage cells”. It refers to the ICNIRP guidelines and asserts “The guidelines were updated in March 2020 and take full account of 5G operating at higher frequencies. 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”.

- iii. PHE – the same body that prevented COMARE from recently considering RFR and NIR safety – in February 2020⁹⁰ published very limited guidance on the use of mobile telephones, which relies on a 22-year old report⁹¹; and advice on limiting exposure to electromagnetic fields by the National Radiological Protection Board (which has not existed since 2005) that had adopted the 1998 ICNIRP guidelines⁹².
- iv. PHE updated its guidance in relation to *Mobile phone base stations: radio waves and health* in August 2021⁹³. Notwithstanding that date, it has been updated only in part, because other parts still refer to 5G as yet to arrive, and to the 1998 ICNIRP guidelines. It declines to give any detail as to dates or expert body involved, but asserts “Independent expert groups in the UK and at international level have examined the accumulated body of research evidence. Their conclusions support the view that health effects are unlikely to occur if exposures are below international guideline levels”. It is acknowledged that “With some of the larger and more powerful base stations, there can be regions around the antennas within which the guideline levels can be exceeded” (and where exclusion zones should be placed). It is said that “Expert groups have examined the accumulated body of research evidence at national and international levels. Their conclusions support the view that health effects are unlikely to occur if exposures are below ICNIRP’s internationally agreed guideline levels”. It refers to the AGNIR 2012 review concluding “there is no convincing evidence that radiofrequency field exposures below guideline levels cause health effects in either adults or children”. That notably does not address the *risks* that the published research has highlighted. In a paragraph that appears to be the new insertion, it is said that:

⁹⁰ <https://www.gov.uk/government/publications/radio-waves-reducing-exposure/radio-waves-reducing-exposure-from-mobile-phones> P.x [TBA]

⁹¹ <https://webarchive.nationalarchives.gov.uk/ukgwa/20101011032547/http://www.iegmp.org.uk/> P.x [TBA]

⁹² <https://webarchive.nationalarchives.gov.uk/ukgwa/20140722015459/http://www.hpa.org.uk/Publications/Radiation/NPRBArchive/DocumentsOfTheNRPB/Absd1502/> P.x [TBA]

⁹³ <https://www.gov.uk/government/publications/mobile-phone-base-stations-radio-waves-and-health/mobile-phone-base-stations-radio-waves-and-health> P.x [TBA]

In March 2020, ICNIRP published new radiofrequency exposure guidelines that have been developed to take account of the increased scientific evidence. Like the predecessor (1998) guidelines, the restrictions are based on the avoidance of excessive localised and whole-body heating. A wide range of other biological and adverse health effects have been investigated, as set out by ICNIRP, and ICNIRP concluded that exposure below the heating threshold is unlikely to be associated with adverse health effects. The restriction values in the new guidelines are very similar to those in the previous guidelines, especially at frequencies below 6 GHz, where current mobile communications systems operate.

None of these publications satisfies the needs of the public to be adequately informed of the risks in a meaningful manner. They amount instead to assurances that if ICNIRP levels are not exceeded there is no risk at all to be considered.

54. In the meantime, Ofcom now proposes to make mmWave spectrum available in 26 GHz and 40 GHz bands for 5G⁹⁴. Ofcom says “We recognise that mass market applications for mmWave spectrum are still at an early stage worldwide, but believe this spectrum has the potential to deliver significant benefits by enabling large increases in wireless data capacity and speeds”. There is no discussion of safety or risks in the 9 May 2022 consultation. Alongside this Ofcom published information⁹⁵ (a short website page) that refers to the UKHSA’s 3 October 2019 guidance (*supra*) and relies on the ICNIRP guidelines for limiting exposures. On 19 July 2022 – the day after that former consultation closed - Ofcom began its consultation on its proposals for the level of annual licence fees for 10 GHz, 28 GHz and 32 GHz spectrum (and on the draft regulations to implement them)⁹⁶.

LEGAL FRAMEWORK

55. By virtue of section 6(1) of the Human Rights Act 1998 (“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).
56. Materially, 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; and

⁹⁴ On 9 May 2022 Ofcom published a consultation on enabling mmWave spectrum for new uses, closing on 18 July 2022: <https://www.ofcom.org.uk/consultations-and-statements/category-1/mmwave-spectrum-for-new-uses> (at [2.2]). P.x [TBA]

⁹⁵ <https://www.ofcom.org.uk/news-centre/2022/rolling-out-millimetre-wave-spectrum-what-you-need-to-know> P.x [TBA]

⁹⁶ <https://www.ofcom.org.uk/consultations-and-statements/category-1/annual-licence-fees-10-28-and-32-ghz-spectrum>

Article 3 prohibits anyone being subjected to inhuman or degrading treatment. Positive obligations arise under these protections that require certain actions to be taken by state parties. Three aspects to the substantive positive obligations owed by the state authorities under Arts. 2, 3, and also 8, ECHR are identified to be:

- (1) A general positive obligation of a systemic nature; and
- (2) A protective (operational) obligation towards persons for whose care the state has responsibility or who have recognised vulnerability; and
- (3) An investigative duty.

57. The authorities must do *all* that may be reasonably expected of them to avoid or minimise a real risk of harm. The duty is “particularly stringent in relation to those who are especially vulnerable by reason of their physical or mental condition” (Rabone v Pennine Care NHS Foundation Trust [2012] 2 AC 72, per Lord Dyson at [22]). A “real” risk of a violation means simply not a fanciful one and may be established even by a relatively low percentage chance of 5-20%: Rabone v Pennine Care NHS Foundation Trust [2012] 2 AC 72 at [35]; and at [2010] EWCA Civ 698 at [73]. It is immaterial if the threat of harm arises from a non-state agent: R (DSD) v Commr of Police for the Metropolis [2018] 2 WLR 895, SC.

58. The general positive obligation under Art. 2 or 3 ECHR is to establish a framework of laws, policies, procedures and means of enforcement of the law that protects against and prevents the occurrence of inhuman or degrading treatment to the greatest extent possible. Lord Bingham explained the nature of the systemic obligation in R (Middleton) v West Somerset Coroner [2004] 2 AC 182 as a duty “to establish a framework of laws, precautions, procedures and means of enforcement which will, to the greatest extent reasonably practicable, protect life” (at [2]). Articles 2 and 3 require the state to take measures to prevent, or to avert the real risk of, the violation: Osman v United Kingdom (2000) 29 EHRR 245; Sarjantson v Chief Constable of Humberside [2014] QB 411 (and that does not in fact depend on identification of a specific individual at risk, but the general obligation exists independently of that: [13]-[25]); MC v Bulgaria (2003) 40 EHRR 20. There is overlap with positive obligations owed by virtue of the need to respect private life of an individual guaranteed by Article 8. The positive obligations to respect private and family life interests are considered for example in Anufrijeva v Southwark LBC [2004] QB 1124, CA, at [16]⁹⁷.

⁹⁷ “Where the ECtHR identifies a positive obligation on a State in the context of Article 8 it often has two aspects: (1) to require the introduction of a legislative or administrative scheme to protect the right to respect for private and family life: and (2) to require the scheme to be operated competently so as to achieve its aim”.

59. All the rights contained within the HRA 1998 must be secured without discrimination, which includes unjustified differential treatment by reason of disability, or on grounds of age, which is an accepted ‘other status’ (Article 14⁹⁸).
60. The UN Convention on the Rights of the Child 1989, Article 3, establishes a principle that actions affecting children should have their best interests as a primary consideration: ZH (Tanzania) v Secretary of State for the Home Department [2011] 2 A.C. 166, SC, (per Baroness Hale JSC at [21]-[33])
61. Section 2A of the National Health Service Act 2006 imposes a duty upon the SSHSC to protect public health; including appropriate consultations, and providing information and advice concerning ionising or non-ionising radiation.
62. The need for a public authority subject to a duty to exercise its own mind independently on a subject – which must mean open-mindedly considering all relevant sources of information in order to sufficiently and adequately consider the question – is well-established. The obligation to discharge the positive obligations to protect human rights, and so comply with the duty under s.6 HRA 1998, is one that must be discharged personally by the public authority. It can of course have regard to all sources of opinion or study but it cannot abdicate its own decision to one other body: R v Teignmouth District Council, ex p Teignmouth Quay Co Ltd [1995] 2 PLR 1, p8C-D; Lavender (H) & Son Ltd v Minister of Housing and Local Government [1970] 1WLR 1231; R v Secretary of State for Trade and Industry, ex p Lonrho [1989] 1 WLR 525, at p538C; R (Venables) v Secretary of State for the Home Department [1998] AC 407. The Defendants cannot abdicate a decision by treating it as conclusively determined by an expert body even on a matter of a technical nature: R v Tandridge District Council, ex p Al Fayed [1999] 1 PLR 104 at p110D-F (and [2000] 1 PLR 58).

GROUNDS FOR JUDICIAL REVIEW

Convention obligations not discharged

63. The production of radiation microwaves is a hazardous activity and is subject to licensing and regulation. The state has a positive duty to protect the health, welfare and life of the population. Reasonable steps must be taken to safeguard the public, and elements of the public, from foreseeable *risks* posed by potentially hazardous activities to either life or injury and harm to health. States must govern the licensing, setting up, operation, security and supervision of the activity and must make it compulsory for all those concerned to take practical measures to ensure the effective protection of

⁹⁸ Article 14 - Prohibition of discrimination

The enjoyment of the rights and freedoms set forth in this Convention shall be secured without discrimination on any ground such as sex, race, colour, language, religion, political or other opinion, national or social origin, association with a national minority, property, birth or other status’

citizens whose lives might be endangered by the inherent risks. Risks must be minimised. These positive duties require the state to -

- i. Carefully assess, investigate and monitor the risks arising. This involves taking into account relevant information about the risks, which the state must show it has fully assessed and had regard to;
- ii. Inform the public of the evidence of the risks, and how those risks may be avoided. Among the preventive measures, a particular weight is placed on the public's right to information⁹⁹; and
- iii. To put in place appropriate safeguards to protect the public from the risks.¹⁰⁰

64. The Defendants have failed to provide adequate or effective information to the public about the risks that enables the public to assess those risks, and how (to the extent it is possible) individuals might choose to avoid or minimise the risks. The relevant public of course are those who do or may in future reside in, visit, or work in areas with masts or devices emitting the increased 5G RFR. Given the intention to place these emissions in the community - this form of environmental pollution - in blanket or close-to blanket coverage across the UK, the consequent public body who require to be informed is or is as good as the public generally. The risk is not localised to one place, so neither is the public placed at risk.

65. In Giacomelli v Italy (2007) 45 E.H.R.R. 38 (which found a violation of Article 8 in the grant of successive operating licences from 1989 onwards) it is explained that the applicable principles recognise:

- i. The need for proper consideration by the courts which should “scrutinise” the government's decision-making process, and should ensure that due weight has been accorded to matters of interest to the individual's rights (which protections would include health and wellbeing) [79];
- ii. The necessity for appropriate investigations and studies by the government so that (a) the effects of activities that might infringe the rights may be predicted and evaluated in advance; and (b) a fair balance may accordingly be struck between competing interests at stake [83];
- iii. The need to inform the public: “The importance of public access to the conclusions of such studies and to information enabling members of the public to assess the danger to which they are exposed is beyond question” [83]; and
- iv. The need for procedural safeguards to be in place for affected persons to challenge the change being made to their living environment before the courts [83].

⁹⁹ Öneriyıldız v. Turkey [GC] (2005) 41 EHRR 20 at §90; Budayeva and Ors v Russia (2014) 59 EHRR 2 at §132; Kolyadenko and Ors v Russia (2013) 56 EHRR 2 at §159.

¹⁰⁰ Jugheli v Georgia, 38342/05, 13 July 2017; Brincat v Malta, 60908/11, 24 July 2014; Giacomelli v Italy (2007) 45 E.H.R.R. 38; Tatar v Romania, 67021/01, 27 January 2009; Taskin v Turkey, 46117/99, 10 November 2004.

66. In Guerra v Italy (1998) 26 EHRR 357 the European Court of Human Rights (“ECtHR”) considered a complaint that included Article 2 and 8 ECHR violation, but was able to decide the case simply by reference to Article 8 (and it was unnecessary to also consider Article 2 in that case [62]). The Court recognised the positive obligations arising under Article 8 and considered that what “had to be ascertained was whether the national authorities had taken the necessary steps to ensure effective protection of the applicants' right to respect for their private and family life” ([58]). Where it did not warn the public of the risks to their private life, it had breached the positive obligations. There was not the essential information that would allow the applicants to assess the risks they and their families “might run” if they were to allow themselves to be exposed to harm resulting from the factory [60]. The Court found a violation of Article 8 where the public who *might* be affected by environmental pollution or hazard were not provided with information about health risks (and safety measures that could mitigate against them) in respect of a chemical plant. Had the information been provided, it would have allowed individuals to take steps to protect themselves from health risks.
67. There is no need for quantifiable harm to the health of individuals to be yet caused: Brândușe v Romania (ECtHR, App. No. 6586/03, 7 April 2009) at [67]. It is notable 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; and even without that the balance of interests to be considered can lead to the operation of commercially valuable or community-beneficial activities constituting a violation where the consequence is interference with a person's home: e.g. Lopez Ostra v Spain (1995) 20 E.H.R.R. 277 at [51]; [58]. Similarly, Fadeyeva v Russia (2007) 45 EHRR 10 is an example of a breach of Article 8 where the operation of a steel plant caused localised pollution. The court noted that environmental pollution that surpasses a minimum level of interference, which is “relative and depends on all the circumstances of the case” for its assessment, engages the protection [68]-[69]. Article 8 applies where individuals are merely made more vulnerable to various illnesses by the act or omission in question: Jugheli v Georgia [2017] ECHR 38342/05 at [30], [68] and [71]. A failure to take sufficient measures to address the issues giving rise to a risk to physical and psychological integrity can amount to a breach of Article 8, see e.g. Stoicescu v Romania (2011) 31 BHRC 523 at [62] (where there was a problem of public health and threat to the physical integrity of the population represented by a large number of stray dogs). Nor do those affected by a present breach in the taking of necessary steps that the Convention requires need to wait for the harm to befall them before being able to challenge the system in place which enables the potential for the harm: e.g. Klass v Germany (1979-1980) 2 EHRR 214 at [37]-[38]. Cessation altogether of an activity is of course a more significant step than the simple provision of proper information about risks that empowers the public to make their own assessments and decisions. The information also provides guidance to decision-making authorities at local level, and public participation within those

fora.

68. The right to information being provided also applies to Article 2: Budayeva and Ors v Russia (2014) 59 EHRR 2 at [132]; Brincat v Malta, 60908/11, 24 July 2014 at [102]; which also confirms that constructive knowledge of the risks is sufficient to render the state liable, including “objective scientific evidence” [105]-[106].
69. Further or alternately, the Defendants have not provided adequate and sufficient reasons for not (a) establishing a process to investigate and establish the adverse health effects and risks of adverse health effects from 5G radiation; and/or (b) to dispute any evidence or discount the risks presented by the available evidence. The Claimants are, *inter alia*, entitled to know the reasons given as to why no apparent risk is accepted to arise from the evidence of harm caused in Chiswick, and why public health advice and information should not reflect the knowledge of risk presented by that case study. The same applies to the wider scientific evidence that the Defendants are obliged to consider. The fact, for example, that the ICNIRP guidelines do not cater for some categories of disabled persons means *no* guidelines are adopted by the UK for the protection from risk of harm for those groups. The Defendants are required to monitor, assess and evaluate risks and evidence or information going to the same, and give reasons.
70. In South Bucks District Council v. Porter (No. 2) [2004] 1 WLR 1953, the speech of Lord Brown famously summarised the principles applicable to the duty to give sufficient reasons (at paragraph 36):
- The reasons for a decision must be intelligible and they must be adequate. They must enable the reader to understand why the matter was decided as it was and what conclusions were reached on the “principal important controversial issues”, disclosing how any issue of law or fact was resolved. Reasons can be briefly stated, the degree of particularity required depending entirely on the nature of the issues falling for decision. The reasoning must not give rise to a substantial doubt as to whether the decision-maker erred in law, for example by misunderstanding some relevant policy or some other important matter or by failing to reach a rational decision on relevant grounds.
71. In R (Stephenson) v. Secretary of State of Housing, Communities and Local Government [2019] EWHC 519 (Admin.), a case involving what is commonly known as “fracking”, Dove J had held that it was necessary for the Secretary of State to address the specific points which had been raised and, in particular, the challenges which were made to the accepted scientific basis on which the government was proceeding.
72. In this case no intelligible and sufficient reasoning has been provided by the Defendants to justify the adoption of one singular scientific opinion – a minority view of researchers and published experts – as to the biological effects and anticipated or witnessed harm from RFR, over the other conclusions and opinions available; or to reason concerning the risks identified therein or in the objective evidence and scientific material. In the circumstances set out in detail above, there is an imperative need for decisions and information to be set out in with appropriate reasoning and explanation.

Failure to meet the common law requirements of transparency and openness required of a public body

73. In the further alternative, there has been a failure by the Defendants to meet the requirements of transparency and openness required of a public body. In R (Justice for Health Ltd) v Secretary of State for Health [2016] EWHC 2338 (Admin), on the issue of principle, Green J. (as he then was) noted the principle of transparency had evolved from Strasbourg jurisprudence but is now well-established as a common law principle, and a component of the broad principle of “good administration”, the “rule of law”, and “legal certainty” [148]. Laws LJ’s dicta (in Nadarajah v SSHD [2005] EWCA Civ 363 at [68]) that transparency was a requirement of good administration, and “public bodies ought to deal straightforwardly and consistently with the public” is cited [141].
74. Such principles of good administration and transparency of course have applicability to the qualities to be expected of the Defendants’ approach to this important issue, but are here absent or deficient.

RELIEF PRAYER

75. Without prejudice to the powers of the Court, specific invitation shall be made for the following in particular
- i. Declaratory relief recording the identified failings of public law duty and/or violation of the obligations arising pursuant to s6 of the Human Rights Act and Articles 2, 3 or 8, and/or 14 ECHR; and/or
 - ii. A mandatory order requiring that the relevant Defendant comply with the applicable duties forthwith. Such order potentially to include:
 - a. Assessment of the risks posed by the intended use of 5G as informed by all relevant evidence to-date and to include consideration of all members of the public including children and those with disabilities; and/or
 - b. Publication of the findings of the study and assessment conducted, and of information detailing the risks identified and detailing steps that may be taken by individuals to reduce the risks they are exposed to; and/or
 - c. Consideration given to advice as to limiting the installation or use of 5G near to schools and nurseries; and whether to advise provision for designated low Radio Frequency Radiation areas so that those who choose to do so, or need to do so due to any health condition, can protect themselves.

18 August 2022

Michael Mansfield QC

Philip Rule