

Your response

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<p>Question 1: Do you have any comments on our proposal to apply Code powers to the Applicant?</p>	<p>Yes</p> <p>I would be extremely concerned that we do not know any details of the proposed operating frequencies and power levels of the transponders themselves and/or those of their front haul and backhaul emitters. I would be very concerned if their beam path(s) impinged on peoples sleeping areas. It is insufficient just to quote EIRP or possible SAR because the modern way of quantum biological understanding suggests that absorption of RF and microwaves into the human body and on pathways from antennas is according to a geometric function rather than an exponential decay mode.</p> <p>I develop this further below:</p> <p>Smith and Best (2001) re-examines the combined data from both Dolk1 (1997) and Dolk 2 (1997) studies and explains that since the Study covered 20 transmitters from different parts of the UK, it is reasonable to assume that any effects related to geographical or topographical features and antenna design should average out. He believes this only leaves the physical characteristics of the propagation of electromagnetic radiation from which to seek a mechanism. He reaches the conclusion that when all the data is considered there is a highly significant peak in cancer incidence at on average some 5 km from the transmitter masts giving an observed to expected ratio of up to two fold. In following Smith’s logic, we must not loose site of the fact that most British UHF TV transmitter masts are co-sited with high power VHF FM facilities.</p> <p>In seeking potential novel and new mechanisms to explain subtle energy bio-interactions, Smith(2001 and 2004) and others (Pitkanen 2006) have recently discussed water memory effects not only with regard to homeopathy but with regard to radio –frequency imprinting as well. A simple experiment involving a toroid and solenoid connected in series shows that when the magnetic A –potential and magnetic field vector- B are in op-</p>

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	<p>posite directions (180° or $\pi/2$ phase difference) the frequency of the current is imprinted into water placed nearby. When the A-potential and B field are parallel (zero phase difference) the frequency imprint is erased. Smith (2001) sees carcinogenesis associated with electromagnetic fields (and potentials) as a subtle bio-effect related to the Aharonov-Bohm effect first described in 1959. More recently it has been shown by van Vlaenderen (2001) that for electromagnetism the generalised Maxwell equations also contain scalar field terms which predict the existence of so called LES (longitudinal electro-scalar) waves in the vacuum which have an associated power flow term. Evans (2004) has stressed the possible importance of the Electromagnetic Aharonov-Bohm effect in radar and signalling technologies and is convinced that the effect is responsible for certain effects of radio frequency radiation on animal and human physiology. Additionally, if Batteaus' (1968) hypothesis on nerve function proves correct, then the A-potential with its ability to perturb electron wave function at a distance may be able to directly influence nerve and brain tissue.</p> <p>I also agrees that the results as re-evaluated by Smith certainly appear to bear some kind of a manifestation of the electromagnetic Aharonov-Bohm effect. For instance, the electromagnetic radiation (E- and B-fields) from a transmitter will experience refractive index and propagate at the velocity of light in air, but the magnetic vector potential-A (A-field), following the Aharonov-Bohm effect, does not interact with matter (instead it alters the phase of the electron wave-function) and so propagates at the vacuum velocity of light. At 5 km distance from a 100 MHz VHF FM transmitter, there will thus be a transit time difference of 5 ns between the A and B fields, based on standard values for the dielectric constant and refractive index of air. At 100MHz, this distance or time delay represents a 180° or $\pi/2$ phase difference. This would be the ideal condition for that frequency to be imprinted into any water present such as living tissues. The frequency band 70MHz-130MHz would cover the standard deviations in Smith's data as plotted. In the UK VHF FM broadcasts can be made anywhere within the band 88-108 MHz.</p>

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	<p data-bbox="699 327 1385 591">At the other end of the frequency scale, there has been talk of restricting the power output of some medium wave transmitters such as the one at Anguillara-Sabazia (Italy) in response to pressure from the government on the basis of a ‘thermal effects’ hypothesis from “classical physics”. On the basis of Smith’s findings and the work presented here that would seem rather pointless.</p> <p data-bbox="699 674 1385 1014">Smith (Electromagnetic Man, Chapter 11) has further stated that possible bio-medical effects of the FM transmissions should include stress by entrainment of the allergy acupuncture meridian (AD1 in Voll-notation) which has an endogenous frequency of 94 MHz. As with power lines, there should be stress from chronic exposure to the ‘proving-symptoms’ for whatever homoeopathic potencies happen contain in this case, frequencies in the region of 100 MHz.</p> <p data-bbox="699 1097 1251 1126">I now extend the Aharonov-Bohm hypothesis</p> <p data-bbox="699 1209 1385 1391">The hypothesis I present is that it should be wholly reasonable to expect Aharonov –Bohm type bio-interactions not only at $\pi/2$ phase difference between A and B but also at odd integer multiples of this phase difference as well.</p> <p data-bbox="699 1473 1385 2013">Cherry (2000) has analysed the incidence of all cancers, brain cancer and leukaemia around the Sutro TV tower. In his findings he concludes that cancer clusters coincide well with the radial distances of the antenna lobes. However if one looks at the positive residual variances in the data over and above those expected on a straight linear decrease in cancer probability with distance from the transmitter, (Cherry (2000), figure 11) it can be seen that there are significant increases in all cancers at distances of .9 ,2.6 , 4.3 and 6.3 km from the transmitter. The actual UHF channels in use at the Sutro transmitter mast are UHF 32, 44, 60 and 66 corresponding to a minimum frequency of 560 MHz and a maximum frequency of 834 MHz. On the basis of expectant peaks in bio-interaction,</p>

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in this case carcinogenesis, one would expect families of peaks in cancer incidence to occur at distances from the transmitter most corresponding to odd integer multiples of $\pi/2$ phase between A and B at the working frequencies. A working frequency of 834 MHz yields expected peaks for the first, third, fifth and seventh integer multiples at distances of .89, 2.67, 4.45 and 6.29 Km from the mast. A working frequency of 560 MHz yields distances of 0.6, 1.8, 3.0, 4.2 and 5.4 Km. The data show a positive residual in the region of .9 km which is not explained by the antenna characteristic alone, Cherry (2000) makes no comment on this. It can be seen by the argument presented here that this residual has as its most likely origin the Aharonov-Bohm type electromagnetic bio-effect with A and B exactly $\pi/2$ out of phase at 834 MHz. Moreover, Cherry suggests the residual in the data which peaks at 4.3 km is due to the antenna lobe at 4.5 km whereas a more accurate picture is obtained by considering the mean of distances 4.2 and 4.45 Km predicted above. The data also show a clear peaking positive residual at 6.3km which Cherry attributes to the antenna main lobe at exactly 6 km distant from the tower. However, a more accurate fit can be obtained by considering the influence of the seventh integer Aharonov-Bohm electromagnetic bio-effect associated with 834 MHz signal which peaks at exactly 6.29km from the transmitter. Generally the 834 MHz transmitter seems a more effective source of carcinogenesis than does the one of 560 MHz frequency. Interestingly Smith has stated that the Ren 24 acupuncture point on the Ren Mai meridian will entrain at a frequency of 730 MHz and up to 920 MHz but from his data it does not appear to do the same at frequencies as low as 560 MHz.

Also the natural resonant frequencies of the water molecule at 1.42 and 2.65 GHz are both significantly closer to direct harmonics of the 834 MHz frequency than to those of the 560 MHz frequency.

Also see:

<http://www.drchrisbarnes.co.uk/SAR01.htm>

<http://drchrisbarnes.co.uk/Bringing01.htm>

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	<p>Modulated RF may interact with the body via a number of potential pathways. Being: ICR based on the principle that ions in a magnetic field follow a circular motion (cyclotroning). Hence could be 'steered' in /out of membrane (especially helical) pores</p> <p>IPR (Blanchard and Blackman) predicts distinct magnetic field interactions with biological systems based on four factors: the flux density of the static magnetic field, the frequency and flux density (Bac) of the parallel ac magnetic and yields more specific frequency and power windowing than ICR.</p> <p>Radical pair mechanism involves the quantum dynamics of the electron and nuclear spins of transient radical molecules in biochemical reactions.</p> <p>the International Agency for Research on Cancer classified RF EMF as a "possibly carcinogenic to humans" (Group 2B).</p> <p>Some networks have suggested frequencies of 3.4/3.6 GHz would be used, others slots round about 800 MHz we simply do not know for sure and have not been told.</p> <p>Frequencies in the upper tens of GHz which could potentially be used for backhaul/front haul and are potentially dangerous especially in the V band as there are interactions with the oxygen molecule. https://www.researchgate.net/publication/244400548_60-GHz_oxygen_band_Precise_broadening_and_central_frequencies_of_fine-structure_lines_absolute_absorption_profile_at_atmospheric_pressure_and_revision_of_mixing_coefficients</p> <p>Some studies have shown mobile phone frequencies can decrease of oxygen affinity of HbA corresponded to the EMFs intensity and time of exposure. https://www.sciencedirect.com/science/article/abs/pii/S0141813009000051</p> <p>https://www.bmmj.org/article_18650.html</p>

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	<p>The results can potentially be increased oxidative stress in the body's cells. https://www.sciencedirect.com/science/article/abs/pii/S0891061815000691</p> <p>https://bioinitiative.org/wp-content/uploads/pdfs/sec07_2007_Evidence_for_Stress_Response.pdf</p> <p>https://hrcak.srce.hr/86911</p> <p>Promotion of latent cancers.</p> <p>http://wirelesswatchblog.org/wp-content/uploads/2011/06/Yakymenko_cancer_MW2011.pdf</p> <p>https://onlinelibrary.wiley.com/doi/abs/10.1002/bem.2250030202</p> <p>Sleep and melatonin suppression. Creation of vertigo, allergy and anxiety symptoms and produce widespread neuropsychiatric effects including depression etc. etc.</p> <p>https://www.sciencedirect.com/science/article/pii/S0891061815000599</p> <p>https://direct.mit.edu/neco/article/30/11/2882/8424/Diplomats-Mystery-Illness-and-Pulsed</p> <p>For these reasons I do not think there should be a carte blanche for Dense Air to develop 5G wireless and I feel every case ought to be dealt with in its merit by local planning and local community consultation.</p> <p>Moreover, the vast majority of areas, homes and businesses now have 5G internet speeds through super-fast optical Fiber connection and the same requirement for mobile technology is not as desperate. Let's face it if you are mobile you are often driving and it is simply not safe to use a phone for anything other than hands free voice for which 5G is not required.</p> <p>I am happy to interact further and to answer or attempt to answer any questions you may have.</p>

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