

**SUBMISSION TO SCRUTINY FOR TELEPHONE MASTS BY
DR. GRANVILLE LANGLY-SMITH**

My Credentials - I am a dentist, a specialist orthodontist and a certified cranial osteopath. My professional training and experience has given me a sound understanding of biological systems and the more subtle electrical processes by which our bodies function.

The human body is a wonderful electrical machine, a work of art and is an excellent receiver of Electromagnetic Frequencies. Hold a radio or TV aerial on a portable set and the reception increases.

E.M.F. Microwaves— Microwaves in the higher power range cause thermal effects as used in a microwave oven. Everyone would agree that these would be most harmful on human tissue as we would be cooked. The ICNIRP limits prevent emissions from telephone masts from going above these thermal limits. Nobody is questioning this – what people are questioning are the potentially harmful biological effects of sub-thermal emissions.

Microwave radiation is silent, insidious and lethal over the long term. The emissions from telephone masts are microwaves but have pulsing modulations that make the waves (even at lower power and below the thermal effect) more aggressive and penetrating to human tissue. They are constant, unremitting and cumulative in their effect. Although their effect is not felt in the early days and they often evade the body's senses, they none the less are acting as a constant stress to our systems. Hence the well known term 'Electromagnetic Stress'. Continual bombardment by these emissions eventually leads to break down in biological systems. DNA strands in our cell nuclei fragment and cells mutate leading to cancer. The constant stress response in our bodies leads to fatigue and exhaustion, hypothyroidism and a lowered immune system. People just "don't feel right" and they don't sleep well because their stress responses are on alarm all the time. Is this what we want in Jersey? An increase in sick and exhausted people.

(Ref: "Exposure to GSM and Tetra Base Stations Radiation can Adversely Affect Humans" By G.J. Hyland – May 2003 – Warwick University. Page 5, Section 12 and 13)

(Ref: Dr. G.J. Hyland "The Physics and biology of mobile telephony" The Lancet 356. 1833-1836(2000))

Jersey is following the UK guidelines which are based on ICNIRP and the Jersey Health and Social Services document is largely based on the Stewart report which in essence states more research is necessary and a precautionary approach to microwave emissions is taken. The Stewart Report was published 7 years ago and much has advanced since then. (Ref: Jersey report on mobile phones and base stations 2006. Page 2, Para 1 – Page 6, Para 2)

The following authorities show the potential dangers to health of emissions from base stations well below the ICNIRP Guidelines.

1. The International Ecolog Report 2000 – Authors Dr. Kerstin Hennies, Dr. H.-Peter Neitzke and Dr. Hartmut Voigt

At the same time as the Stewart Report in 2000 was published, the International Ecolog Report was commissioned by T-mobile. Mysteriously this has only just surfaced, apparently due to translation difficulties. 220 pieces of peer reviewed and published papers found evidence for:-

Effects on central nervous system e.g. MS and Motor Neurone Disease (Section 5.2)
Cancer initiating and promoting effects (Section 6.1.1)
Impairments of certain brain functions (Section 5.2.4)
Loss of memory and cognitive function (Section 5.2.4)
An increase in stress to the body resulting in breakdown and sleeping disorders (Section 5.3.1 and 5.3.2)
Breakdown of the blood brain barrier leading to toxic effect on the brain leading to Alzheimers (Section 5.2.1 and Table 6.1)
Reduction in fertility and decrease in the sperm count (Section 6.1.2)
Changes in the blood profile – clumping and acidity leading to thrombosis and Heart Disease (Section Table 6.1)

All this when exposed to microwave radiation well below ICNIRP guidelines.

Ref: [www.ecolog-institute.de/index.php?id=49&no_cache=1&sword_list\[\]=T-mobile](http://www.ecolog-institute.de/index.php?id=49&no_cache=1&sword_list[]=T-mobile)

2. Research into Microwave radiation below the thermal effect spectrum by Professor Robert O. Becker (M.D.) Leading Expert in the field of biological electricity. TWICE NOMINATED FOR THE NOBEL PRIZE. Full Professor at the State University of New York.

These are excerpts from his book “Cross Currents – the perils of Electropollution”

p. 187 “ Scientific evidence makes only one conclusion: The Exposure of living organisms to abnormal electro magnetic fields results in significant abnormalities in physiology and function.”

pp.214, 215 “All abnormal, man made electromagnetic fields, regardless of their frequencies, produce the same biological effects. These effects, which deviate from normal functions and are actually or potentially harmful, are the following:-

1. Effects on growing cells, such as increases in the rate of cancer cell division.
2. Increase in the incidence of certain cancers.
3. Developmental abnormalities in embryos.

4. Alterations in neurochemicals, resulting in behavioural abnormalities such as suicide.
5. Alterations in biological cycles.
6. Stress responses in exposed animals that, if prolonged, lead to declines in immune system efficiency.
7. Alterations in learning ability.”

p.200 “The hazard comes from the fact that exposure to microwaves, like exposure to any abnormal electromagnetic field produces stress. Prolonged stress results in a decline in the immune system competency and changes in the genetic apparatus. Thus the levels of exposure that governments say are safe are in fact not safe at all.”

p.198 “FDA Centre for Devices and Radiological Health. Report on the reproductive cells of male mice exposed to microwaves at a level below the thermal level.
 - Sperm production decreased with a short exposure of 30 mins per day for 2 weeks.
 - Abnormal changes in the structure of the chromosomes of the sperm.
 - When the exposed subjects were mated with unexposed females, a significant increase in miscarriages occurred.
Conclusion: Chromosomal abnormalities were produced by the microwave exposure at dose rates far below those producing a heating effect.”

pp.194-197 “Dr. Arthur W. Guy’s study on rats at the University of Washington – 1986 Journal of Scientific American.
 Rats were continuously exposed to high frequency microwaves of 2.45 gigahertz at 0.5 mw/cm³ (20 times lower than the safe thermal level). Exposures lasted for as long as 25 months and 155 different measures of health and behaviour were collected. In the irradiated subjects four times as many developed tumours than in the control group. The cancers were mainly limited to the pituitary thyroid and adrenal glands which indicated that the rats were highly stressed. This experiment indicates that chronic exposure to microwaves at levels 20 times below the established safe thermal level produces profound stress and ultimately exhaustion of the stress response system. (As shown by plasma cortisol levels.)”

p.216 “The overall incidence of cancer is slowly increasing year by year and the relationship between field exposure and those types of cancer that are on the increase is evident.
 The distinct possibility that genetic effects of a wide variety may occur with chronic field exposure is disturbing in view of the fact that generally speaking such defects are permanent and are passed on to succeeding generations.”

3. Electromog in the environment by The Swiss Agency for the Environment, Forests and Landscape (SAEFL) – June 2005

“The negative impacts of non-ionising radiation on our health have been scientifically established and are undisputed. Biological effects can occur at levels well below

internationally recommended hazard thresholds. Since scientists are unable to indicate how harmful these effects are, it is advisable to take certain precautions.”

Ref: www.environment-switzerland.ch/electrosmog - Page 6

4. Base Station Emissions and Health Concerns

Mrs Eileen O'Connor – Member of the Electro Magnetic Fields Discussion Group(EMF-DG) which is chaired by Sir William Stewart, Chairman for the Health Protection Agency. Founder member of the EM Radiation Research Trust and Human Ecological Social Economic UK

The following is an excerpt from an open letter by Eileen O'Connor to the media of Sutton Coldfields

I was invited to give the EMF-DG a presentation about ‘base-station emissions and health concerns’ on 16th October 2006 at the Health Protection Agency in London. I presented evidence of electro-sensitive symptoms and the cancer clusters, including Motor Neurone Disease in the hamlet of Wishaw and spoke about the enormous impact this has had on my life and the lives of family, friends and neighbours. I talked about how I started the campaign after developing breast cancer in 2001 at the age of 38 which I believe could have been due to living 100 metres from a 22.5m T-Mobile phone mast for over seven years.

I also presented evidence gathered over the last five years and informed the EMF-DG that I am now networked at the highest level and am linked up with doctors, scientists, politicians, the media and campaigners throughout the UK and the world. I demonstrated that it is a global issue with some countries taking dramatic steps to remove phone masts and many others operating at different guidelines. I also provided INDEPENDENT scientific evidence which provided statistics showing evidence that people and animals are suffering with symptoms at levels below the current ICNIRP guidelines, this backs up the health complaints made by the public worldwide.

(Ref: radiationresearch.org)

5. Professor Rüdiger from the University of Vienna stated that genetic toxicity is caused by these R.F. microwaves. This is one of the key elements in knowing and understanding tumours. It is the first event that must take place in the cell before there is any chance of a tumour occurring. (Ref: “A Handy Way to Cook Your Brain” by Dr. David R. James and Ora S. James, 2003 – Page 132)

6. Professor Adey, a fellow of the American Academy of Scientists and a distinguished visitor of the Royal Society of Medicine says “of my own research in parallel with similar studies in Russia, shows that radio frequencies in the lower microwave range affects enzyme systems that regulate growth and division of white blood cells.”

7. The Freiburger Appeal 2002 (Ref: EM Radiation Research Trust)

“An important appeal from German doctors and other health professionals, reporting an increase in observed cases of:

Learning, concentration and behavioural disorders

Headaches, migraines, nervous and connective tissue pains

Sleeplessness, daytime sleepiness, chronic exhaustion

Extreme fluctuations in blood pressure, hard to influence with medication

Heart rhythm disorders

Brain-degenerative diseases and epilepsy

Cancerous afflictions: leukaemia, brain tumours

After carefully-directed inquiry they found a clear temporal and spatial correlations between the appearance of disease and exposure to pulsed high-frequency microwave radiation from mobile phone masts, mobile and DECT phone use.

(Ref: www.laleva.cc/environment/freiburger_appeal.html)

The Following International Authorities have questioned the ICNIRP Guidelines

Dr. Barrie Trower – Independent Research Physicist and Scientific Advisor to the Radiation Research Trust

Having had many years of experience studying the effects of microwaves, he states in his address to the Welsh Assembly on “Wireless Telecommunications” – 3rd October 2006

“The safety level set by our Government, which is for short-term heating effect only, is incorrectly relied upon by decision-makers for planning applications for masts. Both the International Commission for Electromagnetic Safety and the US Environmental Protection Agency agree on this. It is invalid for communities living near masts.”

He also states in his address to the Court of Appeal in January 2005 that “The WHO’s guidelines are based on the short term effects of this radiation. No long-term experiments have been done in the terms of safety levels. Further, no experiments have been done to determine the safety levels from the pulsed microwaves exhibited by all microwave communication systems.”

“.... The ICNIRP guidelines also the NRPB Guidelines are based purely on the thermal effects. No account what so ever is given to the effect of the electrical and magnetic waves interacting with the physiology of the body at sub-thermal levels.”

Ecolog has called for ICNIRP guidelines to be reduced immediately. Ref: Section 8.1

The Ecolog Report states that the precautionary limit should be 0.01w/m^2 .

The ICNIRP reference level for 900MHz 2G is 4.5W/m², for 1800MHz 2G is 9W/m² and for 2100MHz 3G is 10W/m².

Other Countries

Russia, China and other European countries are rejecting ICNIRP guidelines saying they are far too lenient and the power far too high and altogether too dangerous. i.e. They are being precautionary. Many countries now are fixing lower limits, having considered ICNIRP guidelines to be too high. According to a study in June 2000 prepared by Alistair Philips of Powerwatch these are the following values in W/m²

Australia	2
Poland	1 and 0.1 for stationary people
Italy	0.1
Russia	0.1
Toronto Health Board	0.06
→ Salzburg, Austria	<u>0.001</u>
New Zealand proposal by Dr. Neil Cherry	0.0002

(Ref: www.emrnetwork.org/position/exhibit_d.htm)

According to The Planning and Environment Department, Jersey is proposing a maximum level of 0.3 W/m², although they state that “all three operators could operate at the ICNIRP reference level and this would still be considered taking a precautionary approach.”

It is clear from the above figures that other countries fundamentally disagree.

September 2002 at the University of Vienna and Catania, Italy.

19 of the World’s top scientists met to discuss Electro Magnetic Waves. This was known as the Catania Resolution. They stated “We take exception to arguments suggesting that weak, low intensity E.M.F. cannot interact with tissue. There are plausible mechanistic explanations for E.M.F. induced effects which occur below present ICNIRP guidelines and exposure recommendations by the European Union.”

(Ref. <http://www.radiationresearch.org/newsletterPDFs/DrGerdOberfelds-MastForumPresentation.pdf> – Page 4)

The Helsinki Appeal 2005

The Helsinki Appeal from E.M.F. Team Finland calls on the European Parliament to act promptly for the adoption of the new safety standard in the European Union. Physicians and researchers feel great concern about the precautionary principle not being sufficiently applied to E.M. fields. They are requesting that the standards recommended by ICNIRP be rejected.

(Ref: www.emrpolicy.org/news/headlines/helsinki_appeal_05.pdf)

**Survey by Dr. Henry Lai, Washington University
Seattle 2003 – Emissions from Base Stations**

The amount of evidence for biological effects and the characteristics of these are so alarming, that all efforts should be dedicated to find a way of minimize these effects .

(Ref: EM Radiation Research Trust www.radiationresearch.org)

RECOMMENDATIONS

A Precautionary Approach

To the lay person, a precautionary approach would indicate using caution, going carefully and not being reckless. If competition is so absolutely necessary, a precautionary approach would have been to introduce one competitor to Jersey Telecoms, not 2 or possibly 3. With each company having its own network, this potentially quadruples the emissions that were pre-existing. This does not seem to be using caution in any manner of speaking.

1. I recommend that we limit the telephone companies to 2, thereby satisfying the requirements for competition and minimising health risks

2. The siting of masts are far too close to people's working environment and in many incidences, far too close to people's homes. In France four of their twenty proposed laws are to "Limit maximum power any person may receive to:-

1. $1/9000^{\text{th}}$ of ICNIRP = 0.001 W/m^2 as in Salzburg
2. Have exclusion zones of 300 metres from houses/sensitive buildings
11. Planning permission compulsory for all equipment
19. Use of phones forbidden in schools.

Also in the Santini Report 2002 there is a definite correlation between the distance a telephone mast is sited and the severity of symptoms of those living in the nearby vicinity.

(Ref: <http://www.radiationresearch.org/newsletterPDFs/DrGerdOberfelds-MastForumPresentation.pdf> – Page 4)

(Ref: www.emrnetwork.org/position/santini_hearing_march6_02.pdf)

I therefore recommend that no mast is situated closer that 300 metres to sensitive areas such as residential areas and schools.

3. As can be seen in the preceding table from Powerwatch's research in June 2000 it is possible to run a mobile network at a maximum power of 0.001 W/m^2 as the City of Salzburg has done. I recommend that Jersey should be aiming for this figure and certainly not as high as 0.3 W/m^2 which as you can see is three hundred times higher than

Saltzburg. Dr. Neil Cherry of New Zealand has recommended that the only really safe level of emission is 0.0002W/m^2 .

Dr. Gerd Oberfelds has also published "The Microwave Syndrome" which was a Spanish Study whereby inhabitants near base stations contracted multiple symptoms when the power was 0.00001W/m^2 i.e. 30,000 times lower than Jersey

(Ref.<http://www.radiationresearch.org/newsletterPDFs/DrGerdOberfelds-MastForumPresentation.pdf> – Page 21

In Egypt. Professor Abdel Rassoul, , professor of occupational medicine at the University of Menoutyia concluded in a report in 2006 that inhabitants contracted symptoms around base stations with power of 0.00002W/m^2 i.e. 15,000 times lower than Jersey.

(Ref: www.radiationresearch.org E.M. Radiation Research Trust

Gentlemen, this is Jersey, our island 9 x 5 miles and our home which is a truly beautiful place. I see you here as the thin red line between life as we have known it and a catastrophe to the health of us all and many generations to come. Our present government is developing one of the densest areas of electrosmog in the World. We are going to have wall to wall emissions 24 hours a day, 365 days a year with no escape. Every green field will become an electric field contrary to nature's environment. I fear many casualties in the long term, both humans and animals alike.

There have been some 40 studies on farm animals where they have been affected by mast emissions – increased miscarriages, low milk yields and severe foetal abnormalities. Once they were removed from this environment, they recovered. When the animals returned, they instantly became ill again. (Ref: www.radiationresearch.org)

Gentlemen, the evidence is there – it just needs reading.

After all, our real wealth is our health.