

In Sir William Stewart's report page 113, frequencies between 300 MHz and 300 GHz are defined as microwaves. This is in line with the International Commission's definition of microwaves as defined in 1998. Therefore everything discussed in this report is in the microwave frequency.

Microwaves react very differently in our water-based bodies to radio waves. The term 'Radio Frequency' is often used to describe microwaves, based communication systems. It is important that the term 'Radio Frequency' is not associated with Radio Waves, but associated with microwaves. Microwaves are used by the communications industry because they are more penetrative than radio waves.

The Stewart Report 2004 asks that anecdotal evidence be taken seriously in the absence of long-term epidemiological studies, concerning illnesses around the area of mobile phone transmitters. Such anecdotal evidence produced July 2002 refers to 92 cases of cancer around just 19 mobile phone transmitters. Other illnesses on the same paper refer to breast cancers, thyroid, bowel and blood problems. Another report dated November 2003 titled 'School References (school and cell tower antennas)' from 138 schools lists miscarriages, brain tumours, cancers, breast cancers and teachers ill within this report. One single school had transmitters on its roof in the Saint-Cyr-l'Ecole quarter of France where 8 cases of cancer were confirmed among children in the district. Common sense dictates that if you surround the school with mobile transmitters, the children will be able to use their mobile phones in school, this obviously exacerbates the problem of surrounding the children with microwave radiation.

The Stewart Report on page 63, section 4.1.1 recommends .....RF fields to which the public will be exposed will be kept to the lowest practical level that will be commensurate with the system....

The same page the Stewart Group recommend..... Base Stations sited within school grounds that the beam of greatest intensity should not fall on any part of the school grounds or buildings without agreement from the school and parents. Similar considerations should apply to macro base stations sited near school grounds.

Professor Gerd Oberfeld of the Environmental and Resource Studies Programme, Trent University, Ontario, Canada, published a report dated November and December 2004, titled 'Putting Cellphone Antennas near schools is too Risky'. This report states:.....with respect to negative health effects on people living in close proximity to cell phone towers, there are three different epidemiological studies including our recent study. All of them found statistically significant relationships between exposure to radiation and health effects. Two of the studies did measurements in subject's bedrooms and found significant increases in stress related symptoms as well and neurological symptoms.... Also depression, fatigue, sleep disorders and concentration difficulty were found. These symptoms were related to exposure levels, not distance from the antennas. A recent research project called EU-Reflex or European Union Risk Evaluation of Potential Environmental Hazards from Low Frequency Electromagnetic Field Exposure using sensitive in Vitro Methods shows that cells exposed to cell phone radiation exhibit chromosomal damage well below the exposure guidelines of the W.H.O.

It is worth mentioning that the ICNIRP Guidelines also the NRPB Guidelines are based purely on the thermal effect of the waves. No account what so ever is given to the effect of the electric and magnetic of the wave interacting with the physiology of the body. The WHO's Guidelines are based on the short-term effects of this radiation. No long-term experiments have been done in 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.

Professor Oberfield's report concludes.....as a general rule cell towers should not be placed near schools.

The recent Stewart Report on page 31, states: 'Where a base station is to be installed near a school or college, local consultation is also required prior to the submission of an application for Planning Permission'. Page 53, continues...we also recommend that the mobile phone industry should refrain from promoting the use of mobile phones by children. Placing mobile transmitters in the vicinity of schools cannot discourage the use of mobile phones by children. Only this last Christmas the German VERUM group which consists of twelve research groups from seven countries, concluded that mobile phones cause DNA damage. It can be argued that as responsible adults in charge of Planning, giving the opportunity to children to use mobile phones, some responsibility MUST fall on the Planners for the scientific ignorance of the children.

Referring back to semi-scientific and/or anecdotal evidence concerning masts, at this present time in Osafia, Israel in the last four years, 165 people have died of cancer from living in the vicinity of antennas. This has now become a legal case.

Scientific research by Dr. John Walker has highlighted cancer clusters within the 'footprint' of base station transmissions. Coloured photographs of cancer clusters can be found in the main part of base station beams. Theoretically, looking at this research, which has covered several transmitters, it should be possible to predict future cancer clusters. Dr. Walker's research is on the Internet.

General practitioners in Naila examined the medical histories of nearly 1000 patients, searching for link between the distance of the patient's living quarters from a long-standing mobile phone base station and the incidence of cancer. The physicians distinguished between an inner circle, within a 400m radius from the tower, and the area outside it. Tumours were found in patients living within 400m of the base station three times more frequently than among patients living outside.

The result of the Naila study, November 2004 shows that the proportion of newly developing cancer cases was significantly higher among those patients who had lived during the past 10 years at a distance of up to 400 m from the transmitter site, and that the patients fell ill on average 8 years earlier.

A similar study from the National Institute of Sciences (Professor Santini) showed from a study of 270 men and 260 women less than 300 m from a transmitter, showed signs of nausea, loss of appetite, visual and motor problems. Less than 100 m the symptoms were irritability, depression, concentration problems, memory dysfunction, dizziness, libido problems, headaches, sleep and skin problems.

The highly respected Professor Olle Johansson in his 2004 paper 'Malignant melanoma of the skin - not a sunshine story' states that women seem to be more susceptible to these electromagnetic waves than men. Possibly because of the influence on hormones within the body. He concludes ..'we believe this environmental factor to be radio frequency, electromagnetic radiation which is capable of affecting the proper function of cell repair and auto immune system mechanisms'.

In an earlier paper Professors Hallberg and Johansson - 'Cancer Trends during the 20<sup>th</sup> Century'. These Professors studied the cancer rates before and after telecommunication systems were introduced into different countries. They found after the introduction of the systems the cancer rates increased. They conclude....breast, bladder, prostate, lung, colon and cutaneous melanoma cancers are all associated with each other....relate melanoma to radio frequency EMF.

It continues, Estonia had a steep increase in the cancer mortality in 1991, the year that the western FM radio frequencies were allowed and introduced all over the country. This report was published in the Australian Journal of Environmental Medicine, Volume 21, No.1, pages 3-8 (April 2002).

An argument often given against protestors is that cancers cannot develop in under 10 years, therefore all recent cancers cannot be caused by the telecommunications industry. There are many published research papers showing that electromagnetic waves may act as both cancer promoters and initiators, for example:

Lyle et al 1983 ...Hence EMR appears to be both a cancer initiator and a cancer promoter which also enhances progression. In this way the similarity with cigarettes is quite strong.

Adey 1992.... Many papers give evidence of EMR as a cancer promoter.

Hagmar et al 1994....Microwaves have also been shown to potentize cancer initiators...with exposure to GSM digital base stations....hence EMR is implicated in increasing cancer rates in exposed populations.

## **-Safety Levels**

The safety levels set by ICNIRP and the NRPB are the highest in the world. Being thermally based, it is very unlikely, if not impossible for any person to receive the warming of the body to exceed their safety levels if this person is not sitting right on top of the mobile phone transmitter. As an example of safety levels in units of Microwatts per cm<sup>2</sup>. Our maximum levels for 400, 900 and 1800 MHz transmitters are 2640, 3300 and 10,000 of these units. By

contrast Russia and China have a total maximum of 10 of these units, Toronto has a maximum of 6 and Salzburg has a maximum of 0.1 of these units.

Clearly if you were going into a chemist's shop and the chemist said 'you may take either 10,000 pills or 1/10<sup>th</sup> of one pill there would be confusion. That is how ridiculous these safety levels look to the rest of the world. Professor Vladimir Binhi of the Russian Academy of Sciences was asked why their safety levels were so low. He replied 'In Russia we have experience of what can be achieved by using radio frequency radiation. So we know what we think is needed to avoid adverse health effects'.

It is published that in Sweden 3.15% of its population is medically recognised and registered as being handicapped from electro-sensitivity. This number is comparable in California and it is believed Australia. If this number were compared with the population of the UK, roughly 1.8 million people are electro-sensitive. Electro-sensitivity is best described rather like a food allergy that can only get worse the more you are exposed to it.

Interestingly, a High Court Judge ruled in the case of Yasmin Skelt -v- The First Secretary of State and Three Bridges District Council and Orange PCS Limited that....reliance on ICNIRP Certification is not enough.

Whilst our Government and its Scientists are keen to promote the knowledge of their scientific advisors, they only represent a small proportion of the scientists in the world, making judgements on safety levels.

For example: The June 2000 International Conference at Salzburg consisted of 19 of the world's top scientists in this field and they set the level already given as 0.1 of our units. It can be argued that the more power given to the companies to 'pump out' the more profit they can make. It could also be argued that as the Government has a huge financial stake with this industry, the Government cannot be unbiased in its decision making processes.

## Heat

NRPB and ICNIRP's safety levels are based purely on thermal effects. Looking at scientific papers, most of the rest of the world disagrees with this assessment. Doctor Cletus Kanavy, Chief of the biological effects group of the Phillips Laboratory's Electromagnetic Effects Division at Kirkfield Air Force Base in New Mexico, says 'Large amount of data, both animal, experimental and human clinical to support the existence of chronic non thermal effects....these include behavioural, neural, foetal, blood, metabolic, endocrine and immune problems.

Professor John R Goldsmith who holds 11 Professorships, WHO Officer for Europe and International Consultant for RF Communication, possibly the world's leading expert in this field (now deceased), wrote in his paper 'The End of Innocence' 'to use the lack of significant heating effect as evidence of lack of risk is the red herring'

During September 2002 at the University of Vienna, 19 of the world's top scientists met to discuss electromagnetic waves. This was known as the Catania Resolution. They stated 'we take exception to arguments suggesting that weak, low intensity EMF cannot interact with tissue. There are plausible mechanistic explanations for EMF induced effects which occur below present ICIRP guidelines and exposure recommendations by the EU.

In a confidential note to its military personnel in March 1976, document number DST-181OS-074-76 states 'personnel exposed to microwave radiation below thermal effects experience more neurological, cardio-vascular and haemodynamic disturbances than do their unexposed counterparts. This document from the US Defence Intelligence Agency continues to warn personnel of headache, fatigue, dizziness, menstrual disorders, sleeplessness, depression, anxiety and so on.

Professor Adey, a Fellow of the American Academy of Scientists and a distinguished visitor of the Royal Society of Medicine said 'of his own research in parallel with similar studies in Russia in the early 1980's showed that radio frequency and the lower microwave range affected enzyme systems that regulate growth and division of white blood cells.

Clearly there is experts' world opinion both military and from Universities showing that radiation below thermal effects can impinge on our physiological functions.

## **Pulsing**

It should be noted that whilst professional bodies have noticed the effects of pulsed microwaves on the physiology of the body, no safety levels exists for pulses microwave radiation. All mobile communication systems pulse in some way.

Sometimes academic arguments arise where the word 'pulsing' is not used and a word like 'modulated' substituted. Theoretically, there can be very little difference between a modulated wave and a pulsed wave.

The Health Council of the Netherlands Radio Frequency Radiation Committee say in their 1997 report, page 134 concerning frequencies of 300 Hz to 300 GHz.... 'The experimental data indicate that the effects of EM fields occur at lower power densities when the object is exposed to pulsed electromagnetic fields. In other words the illnesses already reported, you will get quicker if the microwaves are pulsed. The Freiburger Appeal on the 9<sup>th</sup> October 2002 signed by approximately 2,000 doctors and scientists says 'One can no longer evade these pulsed microwaves. They heighten the risk of already present chemical/physical influences, stress the body's immune system and can bring the body's still functioning regulatory mechanisms to a halt. Pregnant women, children, adolescents, elderly and sick people are especially at risk.

Professor Salford at Lund University in Sweden has shown in his work in the year 2000 that pulsing can alter the permeability of the blood/brain barrier in rats. If occurring in humans, this could have profound effects on brain function.

In terms of planning, I wonder whether encouraging the use of mobile phones in an around children would not have a detrimental effect on their concentration levels during the school day.

### **The Accumulative Dose**

Professors Sosskind, Provsnitz, Lai, Cherry and a Russian International Medical Commission have all warned about the cumulative effect of these microwaves.

This is not surprising; a property of the electromagnetic spectrum is that these waves are accumulative.

If we go out on a cloudy day we can still get sunburned, it just takes longer, slow cookers work on the same principal.

Professor Sosskind and Provsnitz write 'an accumulated cellular level damage mechanism is not necessarily related to the intensity but can relate to total dose'.

In their report 'Mobile telephones, their base stations and health' from the French Health General Directorate January 2001, they warn of the cumulative exposure over the lifetime of a child.

This body conclude with an interesting sentence stating 'biological effects occur at energy levels that do not cause any rise in local temperature' It can be argued that biological effects may not be hazardous but beneficial. It could also be argued that the responsibility for this decision concerning children should lay with the parents, guardians or those in loco-parentis and not the Planners.

### **3 G**

The new breed of 3 G masts appear to be particularly alarming.

The wave lengths of these microwaves are roughly 14 -15 cm. This is roughly 6". It can be argued that any part of a child's anatomy - head or organ exposed to these waves will act like an aerial and resonate with the frequency. This is how aerials work and as we are water-based or fluid based, resonance could occur in these organs or bones, in particular bones containing marrow. The power a child would receive at 30m from a 3G transmitter would be roughly 2 micro Watt per cm<sup>2</sup> and at 100m roughly 0.2 micro Watt per cm<sup>2</sup>.

Professor Hocking in 1996 wrote that a twofold increase in childhood leukaemia could arise from RFR at 0.2 micro Watt per cm<sup>2</sup>. Similarly, Kolodynski in 1996 said that motor function, memory, attention problems may occur at 0.1 micro Watt per cm<sup>2</sup>.

The new 3 G transmitters also have a higher frequency than most mobile transmitters. This higher frequency comes with more energy. It can be argued

that the symptoms of 'microwave sickness' will arise more quickly from children if these transmitters are certainly at these powers near schools.

The two papers previously mentioned show that at 100m the children are twice the level argued by Kolodnyski and at 30m 20 times this level.

It can be argued by the Planning Authorities that children are only in school a few hours a day and do not receive long term exposure. This argument is flawed in so far as children are really everywhere and the transmitters are quite capable of penetrating their bedrooms and play areas.

## **The Government**

The Stewart Report 2004, Section 9 states: 'Within the UK there is a lack of hard information showing that mobile phone systems in use are damaging to health. It is important to emphasise this crucial point' It can be argued that every time scientific evidence is produced or MPs try and bring up this issue in Parliament, the Government's response is usually the same and that is 'We would need to replicate this experiment', which generally means finding funding which can take a few years, repeating the experiments which can take up to 10 years and then having it published, which can take another couple of years. Another 'stock answer' when complaints are broached towards the Government, it is said 'our transmitters are within Government Guidelines'. This of course means that you won't get too warm near the transmitter and nothing else.

In the same report, paragraph 4 'The UK Government has given strong encouragement to the development of mobile phone technology'. With respect to the science, Michael Meacher, Minister for the Environment 1997-2003 wrote, which was published in The Times:

'Our Universities eye the donor as a potential source of funds and try to ensure nothing is said which might jeopardise big new cash possibilities.'  
Academics who raise embarrassing questions -

- Who is paying for the Lab?
- How independent is the peer review?
- Who profits from the research?
- Is the University's integrity compromised?

Soon learn that keeping their heads down is the best way not to risk their careers, let alone future funding. The message is clear, making money is good and dissent is stifled.

Similarly in the science magazine, Scientific American May 2004, Congressman Henry Waxman wrote an article saying roughly the same of the American Government.

Published in the International Ecologist Science & Technology section, June 2004, they write 'You will hear statements by supposed experts, always the same few in the pay of the telecommunications industry, to the effect that cell phones, cell towers, microwave radiation have been proved safe in

countless studies. It is an easy lie, one that the news media have been eager to propagate. Such studies don't exist. Quite the contrary, it has been shown that just as for X-rays there is no safe level of exposure to microwave radiation.

In Parliament on 28<sup>th</sup> January 2004, 20 pages of questions and answers were printed with respect to MP's complaining about their constituents ill-health from mobile phone transmitters.

At the end of all this the Minister replied 'UK/ICNIRP Guidelines are based on a comprehensive assessment of current scientific knowledge'. It could be argued that this is very selective current scientific knowledge and not a wide based review of research from around the world.

This topic was again brought to Parliament on 10<sup>th</sup> June 2004, and again dismissed.

On 21<sup>st</sup> May 2004 again MP's tried to bring up this debate in Parliament. In Hansard, Section 1245 concerns illnesses of school children and reports on what the MP's describe as sensible people. Section 1247, again covers children where in one case 11 children under the age of 11 have leukaemia within the vicinity of a transmitter and Section 1258, the Stewart Report is quoted as saying 'The beam of greatest intensity should not fall on any part of the school grounds or buildings, without agreement of the school or parents'.

Again it appears that despite the efforts of many MP's, transmitters are still being allowed to be erected near schools.

Reported in the Sunday Herald, 4<sup>th</sup> July 2004 Doctor Keith Baverstok who was the WHO's senior radiation advisor in Europe says that science has been perverted for political ends by Government Agencies which should be protecting public health.

He continues 'Politics, aided and abetted by some in the scientific community has poisoned the well which sustains democratic decision making'.

He accused the NRPB of mis-using science.

It could be argued that there appears to be no democratic decision making process in where masts are to be sited. If a community does not want a mast, it appears that this community has to take on the communications industry, the Planning Department and the Government in order to win their case. As the onus is on the community to prove that the mast is dangerous and expenses can run at £140,000 a day, it appears not surprising that both the Government and the industry are getting their way. It also appears that challenging this 'super giant' is futile. The question then is - Is this Democracy?

## **Legal Responsibility**

It was reported in the Saturday Mail, January 22 2005, that when a transmitter was erected outside a house £50,000 was instantly wiped off its value. If we



look at these implications across the country, many billions of £'s must be wiped off the value of houses. The question of course is, who is responsible for this? Further complications must arise where Planning Permission is not required. It could be argued that legislation should be brought about whereby responsibility is attributed to a named 'body'.

The Stewart Report 2004, Section 3.0 states 'It is important that as the Networks develop there is a need for clarity in terms of legal responsibilities and regulations'....

An interesting legal argument can be based on the countries that have over 3% of their population's electro-sensitive. By association, it could be argued that 3% of this population must also be electro-sensitive.

Electro-sensitivity is written about in the Stewart Report on page 34. Interestingly, the Children's Act 1989, part 3, section 17, places a legal obligation to protect children from a 'perceived risk'. This risk does not have to be real, it could be argued that 3% of our children could be electro-sensitive and therefore should be protected from the harm, supposedly caused by microwaves from base stations.

Also the 1993 UN Directive for Handicapped People, states that they must not be disadvantaged. This argument then may follow that electro-sensitive children cannot be ignored as they have a disability. Clearly, it could be argued that the mobile industry, by introducing such children to their microwaves; if the children are suffering; are breaking the law.

In the Court of Appeal on November 13<sup>th</sup> 2003, the Court spelled out the duty of care resting on the landowner/occupier of land in respect of activities which he permitted or encouraged on his land. See Bottomley -v- Secretary and members of Todmorden Cricket Club and others.

An interesting argument is :

- Who are the landowners?
- Do they have full Insurance Indemnity in writing?
- Would this Indemnity cover medical illness for several children for the rest of their lives?

Mr Wulf Dietrich Rose, expert in mobile communications of Kitzbühl, Austria, internationally known for his research works in this field, won his Court case for the third time on 26<sup>th</sup> April 2001. He proved, through his studies and researches that mobile radiation represents serious health risks to the nearby living populations like cancer, brain tumours, genetic problems and deformity of newborns.

In this country Appeal Decision APP/U1105/A/04/1137356 concluded that a mast be refused because of ... 'Likely effects of the project on the health of local people'

In 1998 a Court of Appeal Decision found that 'Genuine public fear and concern is a material planning consideration even if the fear is irrational and

not based upon evidence' - see Newport BC -v- Secretary of State for Wales 1998 JPL 377.

An interesting statement made on 7<sup>th</sup> June 2004 by Australia's leading Neuro-Surgeon Dr Charles Teo stated that he has seen a 21% increase in children's brain tumours over the past few years. Dr Teo issued a warning on national TV for parents to be aware. It is his opinion that there is a connection between EMR and the development of brain cancer.

Birmingham City Council Planning Department on 5<sup>th</sup> January 2004 wrote : 'I believe that there is a pressing need for urgent further research into the health aspects of telecommunications developments together with a review of the existing guidance and regulations on how such proposals should be considered'. It was signed by Mr Jones, Chief Planning Officer.

It may be possible that under the Human Rights Act a person's human rights may be infringed by the sighting of a mast or base station. In so far as the individual's right of privacy and to quiet enjoyment of the home. Re: The Right of Privacy, Article 8 (2).

UK Case Law also makes it clear that the perceived risk to health need not relate solely to radiation but the stress caused by the actual installation of the mast.

It could be recommended that for in-depth knowledge of this subject, expert legal counsel should be consulted. With reference to Insurance Indemnity, it is worth checking the policy of the landowner. For example: One company excludes any legal responsibility with regard to :

- Personal damage
- Illness
- Disability of any type
- Death
- Mental illness
- Anguish
- Mental or physical pain
- Mental or physical deterioration
- Mental or physical disorder
- Any mental or physical disability
- Any symptoms caused or said to have been caused by or attributed to the continuous use of mobile telephones.

It could be argued that if you are placing a transmitter near a school, you are encouraging children to use mobile telephones.

It could be argued that Planning Authorities, the Government and the Government Scientists are immune from prosecution because the only ill effects they will recognise are from excess heating. It could also be argued that the insurance companies have not made this comprehensive list of illnesses just for something to do. Their information must be based on worldwide research covering effects below our Government's guidelines.

## Miscellaneous Evidence

There is a plethora of extensive, well researched documents highlighting illnesses caused by microwave sickness around the world. These papers (in their thousands) highlight the illnesses caused by low level (below thermal) microwaves as :

- Arrhythmia
- Heart attack
- Cell death
- Diseases of the blood
- Interference to bone marrow
- Brain tumours
- DNA damage
- Altered Calcium level in cells
- Reduction in night-time Melatonin
- Suppression of the Immune System
- Arthritis
- Rheumatism
- Skin problems
- Lymphatic diseases
- Vaginal discharge
- Vascular system disease
- Tinnitis
- Leukaemia
- Childhood cancer
- Sleep problems
- Mental problems involving depression, irritability, memory loss, difficulty in concentrating, headache, dizziness and fatigue, suicidal tendencies, miscarriage and infertility.

Clearly, this is the work of thousands of overseas scientists, although some are in this country, but below thermal effects, none of these illnesses will be accepted by our Government and its scientists.

It can often be argued that these illnesses are psychosomatic ie: when a neighbourhood sees the erection of a mast, any illness they get is instantly blamed on that mast. Or, psychologically the mast is reported to cause the illnesses.

However, an argument against this are the many cases where masts have been erected without local knowledge and these illnesses still occur.

There are some 40 farm studies where animals have been affected by masts on their land, and once removed, have recovered. When the animals return - they instantly become ill again.

Other studies show effects on the migratory patterns of birds and even insects. Peer reviewed and published works show that plants (trees) can stop growing when exposed to long-term low level microwaves.

If could be argued that everything in this report need to be considered very seriously before the siting of a mast or masts close to schools, residential areas, nursing homes, nurseries and hospitals.

A solution to this problem is not so much where the masts are sited but the power transmitted. If the power transmitted were at the Salzburg level, this would instantly seem more acceptable to the scientific community opposing masts.

The implication of this would probably mean less profits for the mobile industry and mobile phones would not work inside houses. However, mobile phones would work outside houses and open fields where children are thought to be at most risk from danger and/or accident.

Signed: \_\_\_\_\_

Date : \_\_\_\_\_

**B. Trower  
3 Flowers Meadow  
Liverton  
Devon  
TQ12 6UP  
Tel: 01626 821 014**

My work is done entirely free of charge and I have never accepted money from any person or organisation in the years I have been doing this research.

I consider myself absolutely independent.

All of the documents I have mentioned (enough to fill a suitcase) I am prepared to bring to any Planning Office free of charge, should they wish any photocopies. The last time they were photocopied it took about 6 hours.