

Open Letter to Dr Mike Clark
(Spokesperson for the Health Protection Agency – Radiation Protection Division)
On the Subject of WiFi in Schools
15th June 2007

Dear Dr Clark

I'm writing to you in your capacity as spokesperson for the HPA-RPD in the hope of obtaining clarification on what appears to be an ambiguous position held by that body in respect of possible biological effects of WiFi signals – particularly in relation to usage in schools.

I note that the HPA website carries a page entitled 'WiFi Summary'. This appears to be a response to various recent media expressions of public concerns in respect of this technology, especially in respect of its possible impact on schoolchildren. The final sentence of that summary reads: *"There is no consistent evidence of health effects from RF exposures below guideline levels and no reason why schools and others should not use WiFi equipment."*

You will no doubt be aware that various public bodies, including notably local education authorities, take pronouncements by the HPA as the definitive statement on such matters; I was told as much just yesterday by representatives from a local authority department concerned with deployment of WiFi in schools. I understand that they take this position irrespective of any scientific evidence to the contrary, since yours is the government-appointed advisory body on such matters. It follows, whether you would wish it or not, that the HPA-RPD is answerable for national deployment of WiFi in schools.

I would now refer you to an observation made first in the Stewart Report (April 2000) and repeated by your organisation (under its former title of National Radiological Protection Board) in Autumn 2004. In the Executive Summary of your report 'Mobile Phones and Health', your Board stated:

"The balance of evidence suggests that exposures to radiation below NRPB and ICNIRP guidelines do not cause adverse health effects to the general population.

"There is now scientific evidence, however, which suggests that there may be biological effects occurring at exposures below these guidelines.

"We conclude therefore that it is not possible at present to say that exposure to RF radiation, even at levels below national guidelines, is totally without potential adverse health effects, and that the gaps in knowledge are sufficient to justify a precautionary approach."

It's most puzzling that the NRPB/HPA can (along with numerous others) recognise the existence of scientific evidence of biological effects below national guidelines, can explicitly acknowledge that exposures at levels below those guidelines may possibly lead to adverse health effects – and yet that same body can confidently assert, without any caveats, that *"there is ... no reason why schools and others should not use WiFi equipment."* This despite the fact that children were specifically identified in the Stewart Report as one of the groups most vulnerable to those possible adverse health effects. [It should be added that WiFi signals are very similar in nature and frequency to those considered in that Report].

I'm also more than a little puzzled at the fact that the NRPB/HPA recommends a Precautionary Approach specifically because the ICNIRP guidelines are potentially inadequate – but seems quite content for our government to use those suspect guidelines as their chosen 'precaution' against their own shortcomings!

As you know the ICNIRP guidelines provide effective protection against surface shocks and short-term heating effects – and only against those effects. Those biological effects at levels below ICNIRP are therefore, almost by definition, not thermal effects. This is explicitly recognized in the Stewart Report, which refers in places to evidence of biological effects at power levels *"too low to cause significant heating"* – if these were thermal effects then that heating would by definition be 'significant'.

This point is highlighted specifically in respect of WiFi by Professor Lawrie Challis, head of the government's Mobile Telecommunications Health Research programme. Professor Challis has recently been widely reported as advising against children using WiFi-enabled laptops on their laps. It's beyond doubt that every laptop in use in this country conforms with the ICNIRP guidelines and therefore poses absolutely no threat from any form of heat-based effect (Prof Challis is not reported as in any way suggesting that he was referring to illicit non-ICNIRP-compliant equipment).

It follows that the head of the MTHR programme, who has a very thorough knowledge of research in this field, apparently has concerns over possible non-thermal effects. Obviously any such effects will be totally different in terms of their action on living organisms from thermal effects, so any references to thermal-based guidelines are totally irrelevant to such a potential hazard. Even such terms as 'thousands of times below' have no meaning – think of size-based criteria to filter out threats from terrorists in the form of guns or bombs, then consider how effective such criteria might be against a virus attack.

It's also inappropriate, as has been done, to cast doubt on a potential hazard on the basis that no clear causal mechanism can be identified. Medical history is littered with such situations, for example the role of fleas on rats in the spread of bubonic plague was identified and addressed long before a causal mechanism was known. Likewise the HPA's repeated reference to "no **consistent** evidence" is wholly inappropriate: if ten young women had regular sexual relations with their partners for six months and at the end of that time five of them were pregnant and five were not, would the HPA regard that as 'inconsistent' and therefore question the causative role of those sexual activities in producing those pregnancies? There are countless other examples in the field of biological causation.

In short, if there is **any** plausible evidence of **any** non-thermal effects from this type of radiation – and there **are** peer-reviewed replicated studies showing such effects, some referred to in the Stewart Report – then non-thermal interaction of this type of radiation with living tissue becomes a possibility. At that point the ICNIRP guidelines become irrelevant, any supposed protection for ourselves and our children becomes a pious hope and the level of emissions which can be considered safe becomes anybody's guess.

In autumn 2004, when asked in a press interview "Are we all guinea pigs in some global multi-billion pound commercial experiment?", your response as quoted was "In a way, yes, we are." (Sunday Times, 3/10/04, referring to mobile telecommunications emissions very similar to those used in WiFi). Are we to understand that you and your colleagues at the HPA are in agreement with the nation's children becoming the youngest, arguably the most vulnerable and probably the most thoroughly exposed guinea pigs in that commercial experiment?

[I shall in due course copy this letter to a number of groups that share my concerns over these questions and will be most interested to know your response, which I will also copy to them all. As the spokesperson for an advisory body I'm confident that you'll be agreeable to your advice being disseminated in this way.]

Yours sincerely

Dr Grahame Blackwell