

**UK Government:  
Department for Communities and Local Government:**

**Housing Consultation:**

**“Planning for the right homes in the right places”**

**Response on behalf of  
Electrosensitivity UK  
November 2017**

**ADDITIONAL INFORMATION**

Relating to the submission by Michael Bevington on behalf of Electrosensitivity UK:

The following are some peer-reviewed studies showing adverse health effects from people living within about 500 metres of a mobile phone mast and similar radio transmitters.

The solution is to remove mobile phone masts and switch each new home to fibre optic cables only, as some countries are beginning to do.

- Aschermann C: "Electrosensitivity: A patient with Burn-like Skin Manifestations" *Umwelt-Medizin-Gesellschaft*. (2011) [pdf \(trans\)](#).
- Aschermann C: "Observations from a Psychotherapy Practice on Mobile Telecommunications and DECT Telephones" *Umwelt-Medizin-Gesellschaft*. (2004; rev. 2009) [pdf \(trans\)](#).
- Aschermann C: "Personality changes caused by mobile telecommunications" *Umwelt-Medizin-Gesellschaft*. (2010) [pdf \(trans\)](#).
- Bise W: "Low power radio-frequency and microwave effects on human electroencephalogram and behaviour" *Physiol Chem Phys*. (1978) [PMID: 751078](#).
- Blettner N et al.: "Mobile phone base stations and adverse health effects: phase 1 of a population-based, cross-sectional study in Germany" *Occup Environ Med*. (2009) [PMID: 19017702](#).
- Borkiewicz A et al.: "Subjective symptoms reported by people living in the vicinity of cellular phone base stations: review" (Polish) *Med Pr*. (2004) [PMID: 15620045](#).
- Borkiewicz A et al.: "Heart rate variability (HRV) analysis in radio and TV broadcasting stations workers" *Int J Occup Med Environ Health*. (2012) [PMID: 23224733](#).
- Buchner K et al.: "Changes of Clinically Important Neurotransmitters under the Influence of Modulated RF Fields - A Long-term Study under Real-life Conditions" *Umwelt-Medizin-Gesellschaft* (2011) ([copy](#)).
- Eger H et al.: "Einfluss der räumlichen Nähe von Mobilfunksendeanlagen auf die Krebsinzidenz" [Influence of the spatial proximity of mobile radio stations to the incidence of cancer] *Umwelt-Medizin-Gesellschaft*. (2004) [summary](#).
- Eger H et al.: "Specific Health Symptoms and Cell Phone Radiation in Selbitz, Bavaria, Germany - Evidence of a Dose-Response Relationship" *Umwelt Medizin Gesellschaft* (2010) [article in trans](#).
- Gandhi G et al.: "A cross-sectional case control study on genetic damage in individuals residing in the vicinity of a mobile phone base station" *Electromagn Biol Med*. (2015) [PMID: 25006864](#).
- Gomez-Perretta C et al: "Subjective symptoms related to GSM radiation from mobile phone base stations: a cross-sectional study" *BMJ Open* (2013) [PMID: 24381254](#); [pdf](#).

- Gulati S et al.: "Phenotypic and genotypic characterization of antioxidant enzyme system in human population exposed to radiation from mobile towers" *Mol Cell Biochem.* (2017) [PMID: 28819931](#).
- Hallberg Ö et al.: "Alzheimer mortality - why does it increase so fast in sparsely populated areas?" *Europ Biol Bioelectromag.* (2005) [pdf](#).
- Hocking B et al.: "Decreased survival for childhood leukemia in proximity to television towers" *Arch Environ Health.* (2003) [PMID: 15369273](#).
- Houshyari M et al.: "Incidence of Seminoma Cancer in Staffs that Worked in Electromagnetic Waves Station; Three Cases Report" *Iran J Cancer Prev.* (2015) [PMID: 25821575](#); [pdf](#).
- Huss A et al.: "Environmental Radiofrequency Electromagnetic Fields Exposure at Home, Mobile and Cordless Phone Use, and Sleep Problems in 7-Year-Old Children" *PLoS One.* (2015) [PMID: 26509676](#).
- Hutter H et al.: "Subjective symptoms, sleeping problems, and cognitive performance in subjects living near mobile phone base stations" *Occup Environ Med.* (2006) [PMID: 16621850](#).
- Huttunen P et al.: "Involuntary human hand movements due to FM radio waves in a moving van" *Acta Physiol Hung.* (2011) [PMID: 21616774](#).
- Khurana VG et al.: "Epidemiological evidence for a health risk from mobile phone base stations" *Int J Occup Environ Health* (2010) [PMID: 20662418](#).
- Kolodynski AA, Kolodynska W: "Motor and psychological functions of school children living in the area of the Skrunnda Radio Location Station in Latvia" *Sci Total Environ.* (1996) [PMID: 8717320](#).
- Kundi M et al.: "Mobile phone base stations-Effects on wellbeing and health" *Pathophysiology.* (2009) [PMID: 19261451](#).
- Liu J: "[Hazards of radio frequency magnetic field and their prevention and control]" *Wei Sheng Yan Jiu.* (2002) [PMID: 12572370](#).
- Navarro EA et al.: "The microwave syndrome: a preliminary study in Spain" *Electromagnetic Biol Med.* (2003) [abstract](#).
- Parsaei H et al.: "A Multilayer Perceptron Neural Network–Based Model for Predicting Subjective Health Symptoms in People Living in the Vicinity of Mobile Phone Base Stations" *Ecopsychology.* (2017) [link](#); [pdf](#).
- Preece AW et al.: "Health response of two communities to military antennae in Cyprus" *Occup Environ Med.* (2007) [PMID: 17259164](#).
- Santini R et al.: "Survey study of people living in the vicinity of cellular phone base stations" *Electromagn Biol Med.* (2003) [article](#).
- Santini R et al.: "Investigation on the health of people living near mobile telephone relay stations: I. Incidence according to distance and sex" *Pathol Biol. (Paris)* (2002) [PMID: 12168254](#).
- Santini R et al.: "Symptoms experienced by people in the vicinity of base stations: II. Incidence of age, duration of exposure, location of subjects in relation to the antennas and other electromagnetic factors" *Pathol Biol. (Paris)* (2003) [PMID: 12948762](#).
- Shahbazi-Gahrouei D et al.: "Health effects of living near mobile phone base transceiver station (BTS) antennae: a report from Isfahan, Iran" *Electromagn Biol Med.* (2014) [PMID: 23781985](#).
- Shinjyo T: [Signifikanter Rückgang klinischer Symptome nach Senderabbau – eine Interventionsstudie] "Significant Decrease of Clinical Symptoms after Mobile Phone Base Station Removal –An Intervention Study" *Umwelt-Medizin-Gesellschaft.* (2014) [copy](#).

- Singh K et al.: "Effect of electromagnetic radiations from mobile phone base stations on general health and salivary function" *J Int Soc Prev Community Dent.* (2016) [PMID: 27011934](#).
- Sorgucu U et al.: "Measurement and analysis of electromagnetic pollution generated by GSM-900 mobile phone networks in Erciyes University, Turkey" *Electromagn Biol Med.* (2012) [PMID: 22676177](#).
- Suvorov IM: "[Clinical monitoring in areas of exposure to radiofrequency electromagnetic fields]" *Med Tr Prom Ekol.* (2013) [PMID: 23785812](#).
- Taheri M et al.: "The effect of Base Transceiver Station waves on some immunological and hematological factors in exposed persons" *Hum Antibodies.* (2017) [PMID: 27911288](#).
- Tuysuz B et al.: "Measurement and mapping of the GSM-based electromagnetic pollution in the Black Sea region of Turkey" *Electromagn Biol Med.* (2017) [PMID: 27463094](#).
- Zinelis SA: "Short-term exposure to mobile phone base station signals" *Environ Health Perspect.* (2008) [PMID: 18288295](#); [article](#).
- Zothansiamia et al.: "Impact of radiofrequency radiation on DNA damage and antioxidants in peripheral blood lymphocytes of humans residing in the vicinity of mobile phone base stations" *Electromagn Biol Med.* (2017) [PMID: 28777669](#).
- Zwamborn APM et al.: "Effects of Global Communication System Radio-Frequency Fields on Well-being and Cognitive Functions of Human Subjects with and without Subjective Complaints" *Netherlands Organisation for Applied Scientific Research (TNO)* (2003) [pdf](#).

This list is from a document listing peer-reviewed studies showing health effects from man-made radiation: "Selected Studies on ES and EHS" available on the ES-UK website under "Research":

<http://www.es-uk.info/attachments/article/85/Selected%20ES%20and%20EHS%20studies.pdf>

The current international safety standards for long term effects (i.e. longer than the UK's and ICNIRP's heating effects averaged over 6 minutes) are:

EUROPAEM EMF Guidelines 2016 at:

<https://www.degruyter.com/view/j/reveh.2016.31.issue-3/reveh-2016-0011/reveh-2016-0011.xml>

## **SURVEY RESPONSE:**

Qu.3

There is a clear need for amending the NPPF to include three specific groups of people:

(i) those people who are sensitive to electromagnetic radiation exposure, such as that from mobile phone masts; current international guidelines such as EUROPAEM 2016 lay down limits for both the sensitive population and the general population, both for daytime and night-time exposures; according to the UK government-sponsored survey (Eltiti et al, 2007) 4% of the UK population fall into this category. All new housing should comply with these long-term biological safety limits, as in fact is already required by NPPF section 7 (2012);

(ii) all people living within about 500 metres of mobile phone masts are up to 5 times more likely to suffer cancers and neurological conditions because of the electromagnetic radiation from the masts, according to 80% of peer-reviewed studies on health outcomes close to mobile phone masts; therefore all new housing should be required to be sited at least 500 metres from any mobile phone mast in order to comply with NPPF

section 7 (2012) which places the onus on the planning authority "to ensure the health of residents";

(iii) the latest research indicates that some 40% of adults in the USA are sensitive at subliminal or subconscious levels to electromagnetic radiation such as from mobile phone masts since they have existing autoimmune or chronic inflammatory conditions which react adversely to this form of toxic pollution (Marshal TG et al 2017).

It is therefore vital that all new housing is designed to be located so as to obviate these health risks.

Qu.10(a)

There is a clear need to include a specific reference to people with Electromagnetic Hypersensitivity since such people have specific housing needs where they are not irradiated by electromagnetic radiation from neighbours' Wifi, mobile phones or smart meters, in addition to nearby mobile phone masts (see answer to question 3). Such a functional impairment should be specifically noted so that the local authority should be required to provide housing shielded or located so that there is minimal ambient radiation as required under the international EUROPAEM 2016 safety guidelines, as is required by law in some other countries.

Qu.16

There should be a requirement to fulfil NPPF section 7 (2012) "to ensure a health society" by removing NPPF section 46 denying planners the opportunity to consider health, and thus allow planners to design, allocate and site new housing so that it meets the safety requirements not for only six minutes, as at present required by the UK's reliance on the ICNIRP heating standards of 1998, but for long-term safety of more than six minutes, such as the EUROPAEM 2016 standards, since most people spend more than six minutes at any one stretch in their own homes.

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November 3 2017