HEALTH AND SAFETY STATEMENT

As you are aware, technical information relating to health and safety issues arising from the proposed installation at the application site has already been provided in the Supplementary Information Template which is enclosed with this application.

Planning guidance related to telecommunications is contained in NPPF which states that it is not for the local planning authority to seek to replicate through the planning system controls under the health and safety regime. Enforcement of this legislation is a matter for the Health and Safety Executive. Further, it is clear that the responsibility to decide what measures are necessary to protect public health remains with central Government.

However, EE Ltd recognises the concerns of some members of the public over perceived health effects and considers that some further supplementary information on a small number of issues would be beneficial for all parties concerned.

Government Policy on Public perception of concern about harm to health

The Government's position relating to health and safety is reasonably clear and set out in paragraph 46 of NPPF.

"Local planning authorities must determine applications on planning grounds. They should not seek to prevent competition between different operators, question the need for the telecommunications system, or determine health safeguards if the proposal meets International Commission guidelines for public exposure."

This policy has been tested in numerous appeals (many at public inquiry) and in the Courts. To date no appeals by telecommunications operators have been dismissed where perceived health effects was the main issue. Although the application of this policy has been subject to challenge in the Courts, no decision granting planning permission for a mast has been quashed by the High Court where this policy has been applied.

The leading legal authority on this point is now provided by the Court of Appeal in **T Mobile – v- First Secretary of State and Harrogate BC [2004] EWCA Civ 1763**. The Court concluded that, in circumstances where there was ample compliance with the requirements set out in ICNIRP (and an appropriate certificate having been given by the operator, to that effect), it would not be consistent with Government policy to reject a telecommunications proposal on the basis that there was insufficient reassurance upon health. Indeed such a conclusion would represent a departure from policy. Such a decision by a decision taker would be a wholly exceptional and would have to be clearly justified. In the T Mobile case the Court found that that there were no circumstances that could properly be characterised as "exceptional" including whether the beam of greatest intensity was directed to two schools in the locality of the mast. As Laws LJ observed *"The planning policy indicated in paragraph 98 must, in my judgment, be ample to cover such a case"*

There have been a number of public inquiries where health and safety was considered a main issue. In all cases the Inspector allowed the appeal. On a number of occasions, costs were awarded against the Council. Details of some of these decisions can be found on the Mobile Operator's Association (MOA) web site; http://www.mobilemastinfo.com/planning/policy/intro.htm

Independent Expert Group on Mobile Phones – 2000 ("the Stewart Report")

Prior to issuing PPG 8 which is now replaced by NPPG, and in response to concern over mobile phones and base stations the Government, through the Minister for Public Health, set up the Independent Group on Mobile Phones in the UK in 1999, under the chairmanship of Professor Sir William Stewart. Its report (The Stewart Report) was published in May 2000 and is the first genuinely independent and comprehensive review of mobile communications technology in the UK. A copy of the report can be found at www.iegmp.org.uk It concluded that:

- *"the balance of evidence indicates that there is no general risk to the health of people living near base stations on the basis that exposures are expected to be small fractions of the guidelines;*
- *However there can be indirect adverse effects on their well being in some cases;*
- *There is now scientific evidence, however, which suggests that there may be biological effects occurring at exposures below these guidelines;*
- *We recommend that a precautionary approach of the use of mobile phone technology be adopted until much more detailed and scientifically robust information on any health effects becomes available".*

Developments Post Stewart

Advisory Group on Non-ionising Radiation (AGNIR) - 2004

Following one of the recommendations made in the Stewart Report to review the possible health effects from mobile phone technology in three years time (paragraph 1.60) AGNIR was reconstituted in 1999 as an independent body that now reports directly to the Board of NRPB.

Their report issued 'Health Effects from Radiofrequency Electromagnetic Fields' was issued on 14th January 2004 and looked at the studies conducted since the review by the Independent Expert Group in 2000. Their conclusion is as follows:

> "In aggregate the research published since the IEGMP report does not give cause for concern. The weight of evidence now available does not suggest that there are adverse health effects to RF fields below guideline levels, but the published research on RF exposures and health has limitations, and mobile phones have only been in widespread use for a relatively short time. The possibility therefore remains open that there could be health effects from exposure to RF fields below guideline levels; hence continued research is required." (Paragraph 21, Chapter 8)
>
> "Exposure levels from living near to mobile phone base stations are extremely low, and the overall evidence indicates that they are unlikely to pose a risk to health". (Paragraph 20, Chapter 8).

A copy of the report can be found on the HPA web site:
http://www.hpa.org.uk/radiation/publications/documents_of_nrpb/abstracts/absd14-2.htm

Mobile Phones and Health 2004: Report by the Board of NRPB

This report follows the Stewart Report published in 2000. This report specifically revisits (and reiterates) many of the recommendations made in the original Stewart Report.

Paragraph 9 of the Summary states *"Since then, the widespread development in the use of mobile phones world-wide has not been accompanied by associated, clearly established*

increases in adverse health effects. 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 important point.

The report can be viewed on the HPA's web site:
http://www.hpa.org.uk/radiation/publications/documents_of_nrpb/abstracts/absd15-5.htm

Further Research

Having considered research issues, AGNIR also made a number of specific recommendations that aim to improve the quality and interpretability of future health-related research and current health research programmes. These should be seen in context of the substantial programme of ongoing research in the UK funded jointly by the government and industry. The research is being carried out under the management of an independent Programme Management Committee. Full details can be found on www.mthr.org.uk.

World Health Organisation

The World Health Organisation[1] updated its Fact Sheet No 193, Electromagnetic Fields and Public Health. It urges regulatory authorities not to undermine the science base of (health based) guidelines by incorporating arbitrary additional safety factors. The fact sheet also states that the ICNIRP guidelines offer protection against all identified hazards of RF energy with large safety margins.

The fact sheet concludes

> *'RF fields around base stations are not considered a health risk'.*

More recently (May 2006) WHO published a Fact Sheet (No 304) relating to Base Stations and other wireless technologies. The conclusion is similar to the previous one:

> *'Considering the very low exposure levels and research results collected to date, there is no convincing scientific evidence that the weak RF signals from base stations and wireless networks cause adverse health effects'.*

ICNIRP Compliance

One of the recommendations of the Stewart Report was to adopt ICNIRP (International Commission on Non-Ionising Radiation Protection) guidelines to limit public exposure from transmitter sites. The Government has adopted this recommendation.

Before going into further detail, we would like to confirm that the proposed installation, as detailed in the enclosed material, is designed to be in full compliance with the requirements of the radio frequency (RF) public exposure guidelines of the International Commission on Non-Ionising Radiation Protection (ICNIRP), as expressed in EU Council recommendation of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz). A Certificate is enclosed to this effect.

The site has been designed so that no member of the public can be expected to be exposed to electromagnetic fields in excess of ICNIRP general public guidelines.

Beam of Greatest Intensity

The Stewart Report referred to a 'Beam of Greatest Intensity' and this has been picked up on by certain local planning authorities and some members of the public. Although the Stewart

[1] See its report dated July 2000

Report defines this beam it is our feeling that the purpose of this calculation has been misunderstood and, in consequence, in some circumstances it has been misused.

The Stewart Report defines the Beam of Greatest Intensity[2] as the area that lies between two points: (1) the point where the centre of the main beam hits the ground and (2) the point where the nearest edge of the beam hits the ground[3]. So the region of greatest intensity lies between the points where the centre of the main beam hits the ground and where the nearest edge of the beam hits the ground.

The Stewart report points out that whether the radio signal from a given site falls on a particular location is dependent on the height of antennas and their direction and tilt. Based on typical down-tilt for antennas on, say, a 15m mast the beam would fall on a relatively large area typically 180m to 400m for a macro cell.

In our opinion, the reference to the beam has caused undue concern to residents and schools located near to a proposed telecommunications installation. The concept of anyone living in a beam is obviously likely to cause alarm particularly if they do not understand the technology and safety guidelines introduced by the Government. In reality, however as you will see from the diagrams below the theoretical maximum power levels are significantly below ICNIRP guidelines.

Due to the complexity of calculating where the Beam falls, and possible concerns that could be raised by residents or schools located within it, the Government has distanced itself from the Beam of Greatest Intensity. None of the recent planning guidance refers to it once. Further, as noted above, the Government's policy approach is considered ample to cover all RF emissions, including the beam[4].

We would, therefore, in light of the above suggest a more pragmatic approach to such desktop calculations based on the theoretical power levels at various distances from the mast. We have also shown the point at which the highest power level falls. These are also shown in terms of percentage of ICNIRP guidelines.

Power Levels

Orange have developed a desk top calculator that provides theoretical power levels on a site specific basis expressed in terms of ICNIRP general public guidelines which for Orange is 9 W/m^2 (Watts per metres square) for GSM and 10 W/m^2 for UMTS.

Diagram 1 (overleaf) shows the theoretical maximum readings from the antenna of a typical micro cell type installation[1]. The calculations are based on 10m lamppost type installation and readings are given at set distances of 50, 100, 200, 300, 400, and 500 metres. The diagram also shows the distance at which the power level density is highest.

The power levels are given in power flux density[2] and expressed in terms of factors and percentages of ICNIRP public guidelines.

The theoretical model is based on optimum propagation and, therefore, cannot take account of normal terrain features such as trees and buildings that would degrade the received signal. It also does not allow for building penetration losses.

---

[2] See Stewart Report paragraph 4.32

[3] For this purpose, the edge is defined as occurring at the angle at which the intensity falls by half

[4] See comments of Laws LJ in T Mobile –v- First Secretary of State and Harrogate BC [2004] EWCA Civ 1763.

[1] The definition of Microcells as given in PPG8 is they are used to infill and improve the main network, especially where the volume of calls is high. They are sited in places such as airports, railway stations and shopping malls. The microcell base stations emit less power than those for macrocells and their range is a few hundred metres.

[2] This is an industry standard way of expressing the strength of a radio signal relative to a surface area. For example, a power flux density of 1 W/m^2 represents 1 watt of RF power spread evenly over $1m^2$. Ofcom uses this method of measurement in their schools audit (see below).

Based on a theoretical model the greatest power level would fall at a distance of 60 m. At this point, however, it would only be 0.0123 W/m^2 and only 0.13 per cent of ICNIRP public guidelines. The diagram also shows how the power level rapidly decreases with distance.

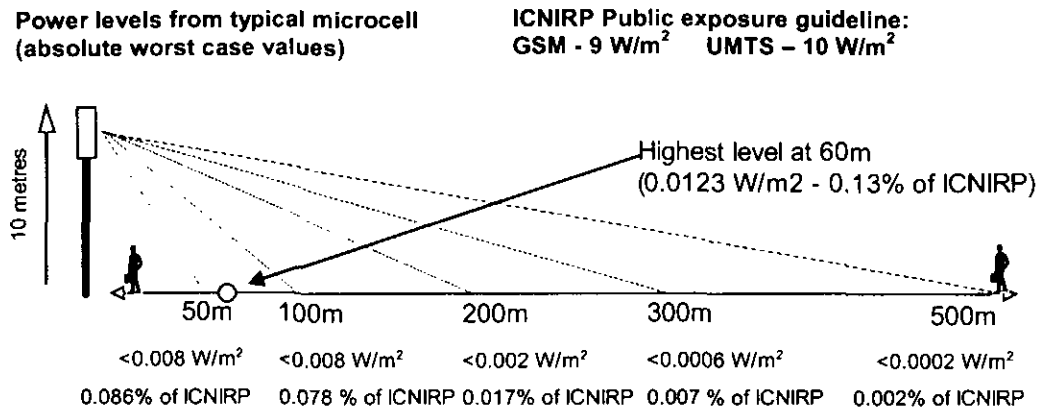


Diagram 1

Diagram 2 shows the power levels in graph form (i.e. signal along the ground). Note the point at which the level is highest and how this *rapidly* decreases with distance from the base station.

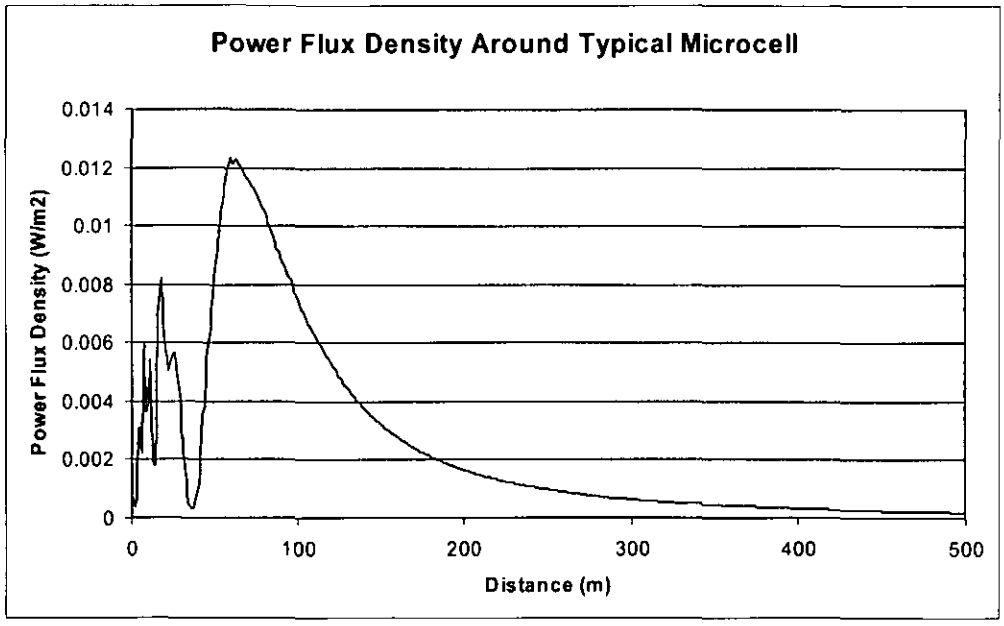


Diagram 2

The table below shows the figures for the theoretical model above.

Distance	Power Flux Density W/m2	Electric field strength V/m	Percentage of ICNIRP	Factor Less than ICNIRP
50m	0.00826	1.7647	0.0858	1166
60	0.01232	2.1555	0.1276	784
100m	0.00755	1.6868	0.0783	1277
200m	0.00164	0.7871	0.0171	5848
300m	0.00064	0.4896	0.0067	14925
400m	0.00033	0.3513	0.0034	29412
500m	0.00019	0.2706	0.0020	50000
1000m	0.00004	0.1255	0.0004	250000

Independent RF Surveys

These theoretical calculations anticipate the theoretical maximum readings and hence represent a "worst case" assessment. In reality, numerous independent surveys, at a range of sites, have confirmed that the actual emissions are well below the theoretical levels outlined above.

As a result of one of the recommendations of the Stewart Report, the Government commissioned the Radiocommunications Agency (now Ofcom) to implement a programme of surveys to ensure that emissions from base stations do not exceed guidelines. Reflecting public concern, the initial focus of the audit was directed towards schools with base stations on or close to their premises. In the last couple of years the remit has widened to include other sensitive sites such as hospitals, residential areas and places of work.

The audit results indicated in every case, levels of radiation far below those specified in the guidelines of the ICNIRP. In fact since 2001, 462 surveys have been undertaken and the highest level was recorded in 2001 as 1/279th (0.358%) of the ICNIRP maximum guideline reference level for public exposure.

An Information Sheet can be found on Ofcom's web site – http://www.ofcom.org.uk/sitefinder/audit_info

Summary

We hope that this brief statement is of assistance to local planning authorities in considering telecommunications proposals and provides a helpful guide to a number of frequently raised points.

As set out above, we confirm that the proposed installation, as detailed in the enclosed material, is designed to be in full compliance with the requirements of the radio frequency (RF) public exposure guidelines of ICNIRP. A Certificate to this effect has been enclosed. As so designed, no member of the public is expected to be exposed to electromagnetic fields in excess of ICNIRP general public guidelines.