



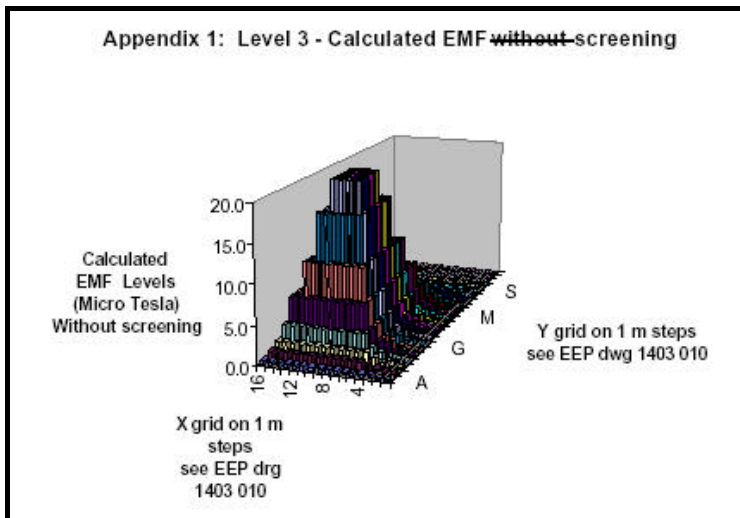
EMF Surveys

Where an EMF problem is visible or suspected, an EMF survey will be required to establish the location and magnitude of the problem. A survey for low frequency EMF should normally be carried out when the affected area is in use, i.e. the typical levels of power are being used. The results of the survey will:

- Identify the source or sources of interference
- Quantify the level of interference
- Identify potential solutions



Complete sub station enclosed in EMF steel screening, to prevent low frequency fields affecting living accommodation in housing to be built above.

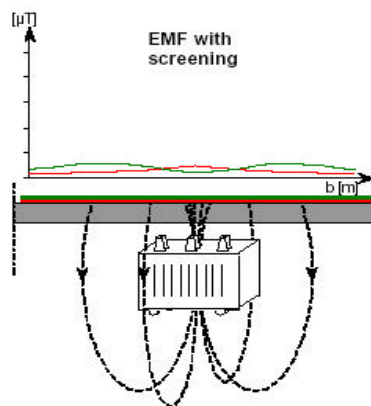
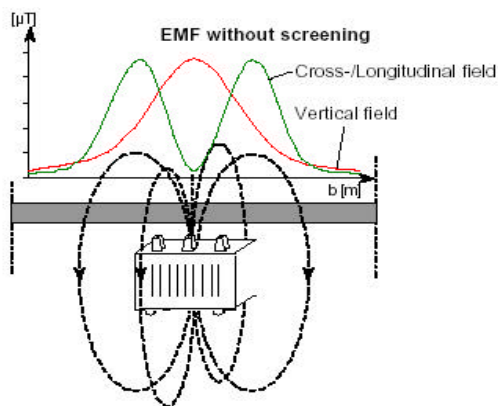


EMF Studies

Potential EMF problems can, in many circumstances, be anticipated and avoided by careful layout of cables and electrical equipment. If this is not possible, an EMF study can be carried out to calculate the theoretical levels of magnetic fields that will be generated. These study results can be used to determine whether EMF screening or other remedial measures are required. To the left is an example of the calculated magnetic fields from an electrical sub station below an IT room.

EMF and Health

The earth's magnetic field is a polarised field and humans are able to live without negative effects from this direct DC type field. However, the long term effects of exposure to alternating AC type fields is not clearly understood. These effects have, and continue to be, the subject of much discussion and study which so far have produced no conclusive results. Perhaps as a result of increasing cynicism over official reassurances on health issues, some companies and official bodies take the view that a precautionary principle is applicable. The Swedish Government is generally considered to have taken this pro-active approach. For example, if a 220 kV power transmission line was planned through a suburban area, guidelines are available which compare the additional costs of reducing the magnetic field, (e.g. by installing a split phase line), with the comparative expenses incurred by the additional medical and social costs associated with potentially elevated incidences of cancer. Although these guidelines are not legally enforced, they ensure consideration is taken during the planning stage. The safe level for long-term exposure to magnetic fields is a source of debate. The guideline level suggested by the UK National Radiological Protection Board (NRPB) for unlimited exposure is 174 μ T. This, when compared to the 0.2 μ T used by the UK Childhood Cancer Study as a mean level when studying association between exposure to EMF and development of childhood leukaemia, illustrates the gap between what is 'officially' safe, and the levels that many individuals believe to be of concern. As with computer screen flicker, the same principles can be applied to reducing or alleviating EMF problems for health reasons.



The Diagrams to the left show the effect of an EMF Screen

Quality

EEP are registered to BS EN ISO 9001: 1994 Registration number FS 38901 for the DESIGN, ASSEMBLY, SERVICING OF RF SHIELDED STRUCTURES AND EQUIPMENT INCLUDING EMI SHIELDING AND THERMAL MANAGEMENT MATERIALS; GAS TIGHT DOORS; AND SPECIALISED MOBILE ELECTROMAGNETIC PULSE PROTECTION CONTAINERS.

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