Buying an 'EMF safe' Property

This article is separated into 6 sections, each of which can be individually downloaded. It is a 'work in progress' incorporating new information whenever time permits.

Section 2

Powerlines and pylons

1. Introduction; The need for more housing and potential EMF effects; Powerfrequency EMF exposure sources; Radiofrequency EMF exposure sources; how microwaves reflect off building surfaces and into buildings; impact on property value; location maps; in the face of uncertainty, measure and take action if necessary; references

2. Powerlines and pylons; when are powerlines 'needed'?; an easement; a wayleave; references; equipment for measuring powerfrequency electric and magnetic fields; summary of safety points to do with powerlines; powerlines worksheet (2 sides)

3. Substations and transformers; junction boxes; net currents; stray currents; references; equipment for measuring powerfrequency electric and magnetic fields; summary of safety points to do with substations and transformers; substations and transformers worksheet (2 sides)

4. Electrified railways; overhead lines; third rail; diesel; references; summary of points to do with railway lines; equipment for measuring electric and magnetic fields; meters for measuring microwave radiation; electrified railways worksheet (1 side)

5. Mobile Phone base stations or masts; what base stations may look like, including hidden ones; effect on house prices; distance from the source where the microwave radiation meets the ground; drums; TETRA antennas; amateur radio operator's equipment; equipment for measuring microwave radiation; summary of safety points to do with mobile phone base stations; Mobile Phone Base Stations worksheet (2 sides)

6. EMFs inside buildings (including flats and caravans); wiring; electrical appliances; caravans; summary of safety points to do with your home, school, office, etc.; equipment for measuring electric and magnetic fields; equipment for measuring microwave radiation; EMFs inside buildings worksheet (2 sides)

Powerlines and pylons

In July 2007 a Cross-Party Inquiry set up to examine in detail the association between High Voltage Overhead Transmission Lines and an increased risk of childhood leukaemia published its recommendations to Government. Top of their recommendations was a moratorium on the building of new homes and schools within at least 60 metres of existing High Voltage Overhead Transmission Lines (HVOTL) and on the building of new HVOTL within 60 metres of existing homes and schools.

Exposure limits are based on established acute effects, whereas the possible chronic effects are considered too uncertain for quantitative limits, but might justify precautionary measures. The choice of precautionary measures can be informed by a health-economics analysis (HEA). Kandel (2016) considered four analyses of precautionary measures conducted in California, the Netherlands, the United Kingdom, and Israel. The most significant qualitative choices that were made were what dose-response relationship to assume, what allowance if any to make for uncertainty, what diseases to consider, and all four analyses made similar choices. They decided that there are some low-cost measures, such as rephasing, that can be applied to transmission in some circumstances and that can be justifiable in cost-benefit terms, but that higher cost measures, such as undergrounding, become unjustifiable.

The Royal Institution of Chartered Surveyors (RICS) called on the Government to legislate to restrict the building of new homes and schools next to existing power lines and on the placing of new power lines close to existing homes and schools.

The Stakeholder Advisory Group on ELF-EMF (SAGE) recommended that powerlines (particularly the 132 kV distribution lines, quite commonly located close to houses) should all be "reverse-phased" to minimise magnetic fields. There are approximately 40,000 houses within 30 metres of 132 kV lines.

The government has not acted on the recommendations of its advisory expert group.

As more powerlines are predicted to meet the need for the infrastructure to take power generated by wind farms, both on- and off-shore to electricity consumers, the energy and housing policies may result in more people being exposed to EMFs from powerlines.

The concept of infrastructure "need" has in the past been used to limit opposition to powerline projects. The idea was that a (claimed) "over-riding national need" should trump environmental impact and other objections. Need was seen as an absolute standing above, coming before and not to be frustrated by other aspects of a project. Further, the determination of "need" by national government could not be challenged at public inquiries or hearings. The Irish-Scottish Links on Energy Study (ISLES) is a joint initiative between the three partner governments of Scotland, Ireland and Northern Ireland. The vision is for offshore wind farms to be connected by an offshore grid which itself would ultimately be integrated with the onshore grids, serving two purposes: connecting the wind farms to markets and being part of an integrated transmission interconnection system.

REVOLT (an organisation which opposes 'unnecessary, excessive and intrusive powerline development' http://www.revolt.co.uk), in August 2010, said that there are 49 planned powerline projects. When power stations are built or upgraded, perhaps to connect to local wind farms, etc. the applications are often considered separately from the proposals to connect the power generating facility to the infrastructure of the existing grid. This is in contravention to the spirit of the EU Environmental Impact Directive, which requires that the cumulative impact of the whole project should be assessed. You may consider investigating whether such a proposal is

being considered near to your possible property purchase and whether details such as new powerlines are included and how near they may come to your area of interest.

Many substantial changes were made to the 2008 proposal before the 2013 application for a new powerline in Northern Ireland. 26% of towers were moved outside the original application area; 27% were moved closer to residential properties, the line was moved up to 150 metres in places, and the original "red line" covering the area of the power line has not only been extended but has been replaced by a new different line in 25 locations. What this seems to mean is that many now-affected people may have missed the opportunity to take part in early-stage consultations and in the initial response to the principal application (REVOLT News).

Another case in point is at St Asaph in North Wales. There is already the National Grid substation with its overhead lines, to which has been added the German RWE substation serving the offshore windfarm. Dong Energy company are seeking compulsory purchase of land for a third substation at St Asaph, as well as high-voltage cables to distribute power from another windfarm. The cables are planned to be as close as 3 metres from some family homes. The areas south and west of St Asaph face a complex of multiple developments of powerlines, cables and substations, with disproportionate local impact and little local benefit from this national infrastructure (REVOLT). DONG Energy's own application details show magnetic fields greater than 0.4 microtesla (μT) at the proposed location of cables immediately adjacent to residents, as they have only considered health effects on the basis of International Commission on Non-Ionizing Radiation Protection (ICNIRP) Industry standards, which are concerned with proven harm, not precaution against possible harm. 0.4 μT is the internationally accepted level at which the incidence of childhood leukaemia doubles.

A new large 400 kV double-circuit 95 km power line is planned across Kent and part of Surrey, planned to start in 2017. There will be a new Lydd substation and a new Rowdown substation (East edge of New Addington SE of Croydon). New powerlines are also planned for East Anglia, Eire, Lincolnshire, the West Country & mid-Wales. It is very unlikely that these will be undrergrounded as the electricity companies, already fighting for customers, are not going to be allowed by their shareholders to carry the burden of the expense that would be needed for undergrounding.

It may also be that the pre-existence of electricity distribution infrastructure (powerlines, transformer sites, substations, etc) and telecommunications infrastructure (mobile phone base stations, etc) will be ignored with respect to planning new housing to meet the government's objectives. Powerwatch's legal advisor, Brenda Short, wrote an exceptional 100 page document considering whether existing legislation could be applied to any potential pollution from EMFs. It also considers other legislation in relation to powerlines/EMFs and how a precautionary approach could be adopted.

The land under powerlines is often cheap. This can attract developers who may build estates of high density housing, often social housing, on this land. There are no planning regulations to prevent this sort of development. If the houses are made available for rent by housing associations or councils, the tenants may have little choice in whether they wish to live in close proximity to powerlines.

It seems that the evidence is becoming more convincing that ill health is associated with living near powerlines and that it is the government's responsibility to protect the general public from being exposed to the increased risk.

Powerlines come in different shapes and sizes. The biggest are 400kV (kilovolt) lines, which leave a generating power station, and cross the countryside to places where the power is needed. The line voltage then gets smaller as the power is reduced.

Below we have photographic examples of typical pylons and cables at the different voltages. They are only typical examples and some near you may look rather different. However, these examples may help you identify the power line you are particularly interested in. You can get some idea by the size of the pylons, the way the cables are strung on the insulators and the length of the insulators.

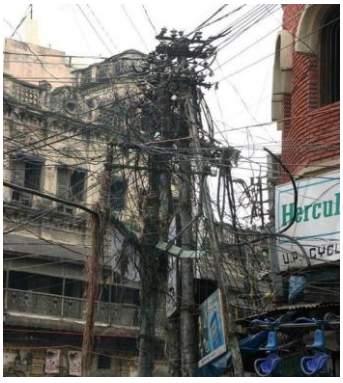
The large ones (400 kV and 275 kV) are owned and maintained by National Grid Electricity Transmission plc. 66 kV lines and smaller are owned and maintained by the local electricity distribution company. 132 kV lines can be owned by either, though most are owned by the local electricity distributor. If, after you have looked at the photographs you are unsure, you can contact the National Grid's EMF telephone helpline on 0845 702 3270 or email emfhelpine@uk.ngrid.com to find out.

400 kV

275 kV

33 kV

230 V



But not like this one in India!

The use of electricity produces electric and magnetic fields, together referred to as electromagnetic fields (EMFs). Electric fields are measured in volts per metre (V/m) and magnetic fields in the UK are usually measured in microtesla (μT). Gauss is the unit that is used in America and Australia. The Pocket PF5 meter shown below measures in microtesla or milligauss.

Electromagnetic fields come from the cables, not the metal or wooden transmission towers or pylons, as the insulators insulate them from the fields. The highest level of emissions is to either side of the middle wires of the cables. As you move away from the line, the fields begin to drop away. How long it takes depends on the voltage of the line (for the electric field) and the power it is supplying (the magnetic field). The higher the voltage, or power, the further away, more or less, you have to be for the field levels to be reduced significantly. One possible exception to this is the 132 kV lines. Often the 'load' carried by these lines is 'unbalanced', that is, different powers go down one side of the cables compared with the other. When this happens, the magnetic field levels can be higher, because of the way the fields interact, and can take longer to reduce as you move away. The only way to get a reliable idea of the field from powerline cables is to measure them. It is very difficult to calculate the estimated level because of the possible variability. The ELF (PF4) meter and the MagneMeter are easy-to-use and designed for the layperson to get instant readings readily and cheaply.

The level of EMFs varies throughout the day. It will be higher at times of peak electricity demand. These may be between 7.30 to 9.00 a.m and 3.30 to 7.00 p.m. during the week, in a residential area where the majority of residents are at work or at school. This may change during school holidays. Weekend peak times are likely to be different.

In winter, the levels will be higher than in the summer, due to the extra power demand for heating, including overnight for night storage heaters. It is important to allow for this difference in field levels when you take readings. If the electricity company takes readings for you (in some areas this is a possibility), they are unlikely to be taking readings at these peak times.

If you do not get a magnetic field or electric field reading under the line, it is likely that the powerline has been decommissioned at least temporarily. Contact the National Grid Electricity Transmission Plc or the local electricity company to find out when it will re-start and measure then.

Live cables going directly over a house or flat will ***always*** give the sort of field levels that have been associated with an increased risk of serious ill health. Sometimes the supply to houses in a small residential area can be routed right outside houses, especially when these have no front garden. There are likely to be quite high fields inside bedrooms from this wiring, see photo below.

The powerlines immediately above this house results in quite high magnetic fields, which cannot be screened against, in the bedrooms

As a ***very*** approximate rule of thumb, the fields are likely to drop away to below the 0.2 microtesla level at about 120 metres from 400kV and 275kV lines, 100 metres from 132kV lines, 50 metres from 66kV and 33kV lines, 25 metres from 11kV lines and closer with respect to local 400/230 volt lines. The magnetic field levels do vary considerably with the power the line is carrying at the time.

In a study by Maslanyj (2007) looking at the data from the UK Childhood Cancer Study, low-voltage EMF sources accounted for 77% of exposures above 0.2 microtesla and 57% of those above 0.4 microtesla, high-voltage sources accounted for 23% of the exposures above 0.2 microtesla, and 43% of those above 0.4 microtesla. In Australia, prolonged exposure to fields of more than 0.4 microtesla was due to close proximity of the house to transmission lines (Karipidis 2015). Struchen recorded in houses in Italy and Switzerland (2015), 24-hour measurements in the bedroom of children. They found 0.04 µT for personal and 0.05 µT for bedroom measurements. Living within 100 metres of a high voltage power line increased personal exposure by a factor of 3.3, and bedroom measurements by a factor 6.8 compared to a control group.

Men and women were both at increased risk of breast cancer if they had lived within 200 metres of high-voltage powerlines. Among oestrogen receptor-positive women younger than 50 years at diagnosis, the relative risk increased to 7.4 (Feychting 1998).

Local electricity supplies are usually on wooden poles. The cables can be either 4 individual ones running between the poles, or sometimes they are 'twisted' together, forming what is known as ABC (aerial bundled conductor) cabling. Field levels will be lower from ABC cabling than from the 4 individual cables - as running them close together and 'twisting' them 'neutralises' some of the radiation emissions.

The only way to know for sure if the property you are interested in is exposed to field levels higher than the precautionary levels recommended by the health research, is to measure them using an appropriate power-frequency meter. For details of how to buy or hire a meter that can do this, see the equipment part below. They are very easy to use, and hiring is inexpensive.

Many powerlines have to cover a large distance from the electricity generating power station to the cities, towns, villages and homes where the power is to be used. Could powerlines be put underground? The answer is 'yes' they could, but at a cost. The Electricity Association says that underground power lines cost twenty times as much to install (£16 million per mile) as overhead lines. There is much less difference in cost with voltages of 33 kV and below, and underground cables are more reliable in the long term.

Electric fields will be absorbed by the earth above a buried cable. Magnetic fields travel through almost anything. As you will stand closer to an underground cable than an overhead cable, you will be exposed to much higher fields immediately above them. Because of the way that they are laid in cable trenches, the fields drop away much more rapidly than the fields from overhead cables. If there is a buried cable under the pavement in front of a house where there is a very small garden, or no garden at all, the magnetic fields in the room(s) at the front of the house, especially on the ground floor, could be high.

One of the other points to bear in mind when considering a property near to a powerline, is that following work done at Bristol University (Fews 1999), it has clearly been shown that the high electric fields around power cables attract all sorts of airborne pollutant particles, including those associated with cancer, which may be in the air. They then charge these up, making them more dangerous, as they become 'sticky' and are more likely to attach themselves to skin or lungs. Depending on the prevailing wind (south westerly across most of Britain a lot of the time, when there are not too many hills or buildings nearby to distort the wind direction), the particles can be

blown up to 5 kilometres away from the powerlines. If the property you are interested in is in an area where there is pollution from local industry or busy roads such as motorways, there would be an increased risk of toxic particle and aerosol contamination.

Pylons and powerlines affect the value of properties. In wet weather they can be heard to 'hum' or 'sizzle' and can be concerning to some people. There has been enough publicity over the years in the media for people to question whether their health may be affected by living close to a high voltage powerline. This health concern has overtaken visual impact and concern over future value in importance to potential buyers.

Boasting sea views and a panorama of an historic seaside town, this three-bedroom semi-detached bungalow is close to the town centre, the railway station and local schools in a popular tourist destination on the Sussex coast, a very reasonable £99,950. Similar properties in the seaside town would go for at least £250,000 and one on the same street sold for nearly a million.

A study done by Sally Sims and Peter Dent (2005) at Oxford Brookes University showed that the visible presence of overhead powerline cables or pylons could reduce the number of potential buyers by up to 80%, depending on the type of property concerned, and the distance from the pylon or cable. Any house within about 75 metres of a high-voltage powerline will be discounted in price. The amount of discount varies from a few percent for a small terraced house to being almost unsellable for a very large upmarket house. Up to 46% of buyers had problems with obtaining mortgages, depending on proximity to, and size of, the powerline. It was discovered that valuers underestimated the impact of powerlines on property, the value of which was reduced by up to 38% at 100 metres away, but averaged about 11.5% depending on property type, size and proximity to other features.

In a real life situation, a period cottage in half an acre of garden was valued at £400,000. It is 30 metres from a high voltage overhead line. Then priced at £345,000 in order to try to get a buyer, the owners had one interested party, who was concerned about the cables and did not complete. The owners felt they would have cleared £400k in 2-3 weeks without the cables.

The National Association of Estate Agents (NAEA) said to the Cross Party Inquiry (above), that some of their members were finding it 'increasingly difficult' to sell houses which lie close to, or under, High Voltage Overhead Transmission Lines (HVOTL) – and stated that in some cases it is 'almost impossible to sell such houses'. Barratt Homes and George Wimpey suggest that a discount of between 10% and 25% was needed to sell homes close to HVOTL.

So, if you want to go ahead with the purchase of a property, near or under a powerline, or if you already live in one, a question people often ask is, *"what can I do to protect my family from electric and magnetic fields?"*

Electric fields are reduced significantly by almost all building materials, with the exception of windows, whether they are double, triple or single glazed. If there are high electric fields coming in from an external source through the window, you can stop them with special screening material hung as a net curtain which then needs to be earthed. More information about the material is in the article "Powerfrequency Protection for you and your family". Trees and bushes also reduce electric fields that you may measure in your garden. Deciduous trees are less good in winter when they lose their leaves. 'Sappy' trees (some pines, cherry, etc) are better than non-sappy trees at reducing field levels. Depending on the rules (if any) where you live, a 6-foot close-mesh wire fence behind or in the middle of two rows of tress, could also help considerably.

There is absolutely nothing you can do about magnetic fields. Lead sheets do not reduce fields, and steel sheets are not effective. There is a metal called mu-metal which reduces, but does not eliminate, the fields, but it is very expensive, and there is usually no practical way of effectively reducing magnetic field exposure from powerlines.

If the cables from a powerline actually cross the property you are interested in, there are two forms of agreement that may have been entered into by a previous owner with an electricity supply company, giving the company the right to cross the land 1) an easement and 2) a wayleave.

An Easement

This is an agreement whereby the property owner gives the company the right in perpetuity to cross the land in question in return for the amount of money specified in the easement agreement. When the land is sold to the next owner, the easement agreement is still valid. It must be attached to the property deeds as it has legal implications for value and use of the property.

If a powerline goes over your land, it would ***not*** be a good idea to agree to a permanent easement unless it gives you enough money to sell up and move away from the powerline (assuming you can get a buyer). As more restrictions are brought in regarding high voltage overhead powerlines and housing, then people with permanent easements will do worst of all as that has meant signing over the rights forever.

A Wayleave

This is an agreement made between the landowner and the electricity supply company to cross the land for a specified length of time, often 5 to 25 years, for a specified amount of money as annual rent. This is an agreement between the two parties, and when the land is sold to another owner, the agreement is void, and needs to be re-made. The wayleave agreement should be attached to the property deeds, or may be held by the landowner. A prospective purchaser should be told of the existence of such an agreement and a copy produced when legal searches are done prior to completing the contract of sale.

Should the property owner no longer wish to have the line across the property, he or she can give the company notice to quit. The company will normally apply for a 'necessary wayleave' in which they plead that crossing this particular piece of land is the only reasonable way to provide electricity to other consumers. In many cases this will be granted to them, but if you can make the case for an alternative route the company will have to justify why they can't use that. Cost can be a valid factor and you (or the seller) may have to pay part of the cost of moving the cables to the new route.

Sometimes (rarely), cables run underneath houses. This results in very high magnetic fields in the houses concerned. Legal advice would be required as to whether the company can continue to supply electricity in this way, as the field levels, although high from the point of view of international research into health issues, would almost certainly be under the Public Health England (PHE) UK guidelines. Cables usually only run under houses when the house was built over them without consulting the electricity company, who always try to avoid this, and may be illegal for safety reasons and require the current owner to pay to have the cables re-routed.

References

Fews AP et al 1999 - *Corona ions from powerlines and increased exposure to pollutant aerosols* International Journal of Radiation Biology 75(12), 1523-1531

Feychting M et al 1998 – *Magnetic fields and breast cancer in Swedish adults residing near high-voltage power lines* Epidemiology 9(4):392-7 PMID: 9647902

Kandel S et al 2016 – *Health-Economics Analyses applied to ELF electric and magnetic fields* Risk Anal 36(6):1277-86 PMID: 26800316

Karipidis KK 2015 – *Survey of residential power-frequency magnetic fields in Melbourne, Australia* Radiat Prot Dosimetry 163(1):81-91 PMID: 24789915

Maslanyj MP et al 2007 - *Investigation of the sources of residential power frequency magnetic field exposure in the UK Childhood Cancer Study* J Radiol Prot 27(1):41-58 PMID: 17341803

Navrud S et al 2008 - *Valuing the social benefits of avoiding landscape degradation from overhead power transmission lines: Do underground cables pass the benefit–cost test?* Landscape Research 33(3):281-296

Sims S & **Dent** P 2005 - Urban Studies Journal, April

Struchen B et al 2015 – *Analysis of personal and bedroom exposure to ELF-MFs in children in Italy and Switzerland* J Expo Sci Environ Epidemiol Dec 16 PMID: 26669849

Equipment for measuring electric and magnetic fields

The Pocket PF5 meter

To measure both electric and magnetic fields, you can buy the Pocket PF5 meter. It has been designed by Alasdair Philips (Powerwatch) and Andrew Cohen (EMFields).

The PF5 meter measures 5 - 200 V/m electric fields and 0.02 – 2.0 microtesla magnetic fields or (0.2 – 20 milligauss magnetic fields).

With this meter you can measure the EMFs in your property or the property you are considering buying, outside in the garden, inside your car and in other places of concern (schools, nurseries, workplaces, etc.) from pylons and other external sources of power frequency EMFs.

Contact: EMFields, 12, Mepal Road, Sutton, Ely, Cambs. CB6 2PZ www.emfields-solutions.com; or email info@emfields-solutions.com; meters are usually sent by 1st class recorded delivery, though they can be sent by Special Delivery (next day guaranteed) if your need is urgent.

Summary of safety points to do with powerlines

- Electromagnetic fields come from the *cables* not the *pylons*. The bigger the powerline, the higher the fields underneath the cables are likely to be and the further away a property has to be, to be in low fields. The fields vary according to the time of day and the time of year.

- If you are unsure of the voltage; or the line is a 132kV one; or you are within the guideline distance, measure the field levels in the house and the part of the garden nearest the line, don't just rely on distance. Typical and maximum levels are shown on National Grid's EMF information website:: www.emfs.info/Sources+of+EMFs/Overhead+power+lines

- Check whether the cables running close by the house are telephone wires or power cables (sometimes people confuse the two types of cables). This is especially important for terraced houses without front gardens, where close power cabling is most commonly found.

- Magnetic field levels of 0.3 microtesla and more have been associated with cancer, depression, miscarriages, Alzheimer's Disease etc.

- There are high EMFs above underground cables, but they do not extend as far from the cable as when the cables are overhead.

- Those companies which are responsible for the cables under the street can be found here: http://www.nationalgrid.com/uk/Electricity/AboutElectricity/DistributionCompanies/

- Land, garden and buildings downwind of the prevailing wind direction will be exposed to toxic particles from high voltage lines of 33 kV or higher, in areas of pollution, such as some types of factories, or busy roads, such as motorways.

- Pylons and powerlines reduce the value of properties and the number of people interested in buying and the length of time taken to sell. Mortgages can be harder to obtain.

- Cables can be noisy, especially in wet weather.

- Building materials and some trees reduce electric fields, but magnetic fields travel through pretty well everything.

- If there is a powerline passing over any part of a property and / or land which you own or are interested in buying, check the property deeds, and check with the property owner.

- If it is an 'easement' you are most likely stuck with it. Certainly the owner of the property would have to pay the full cost of any re-routing work that might be agreed with the electricity company.

- If it is a 'wayleave' agreement, check the details for when it expires as it should need to be re-negotiated before you purchase the property.

- Look around the property to see if there is an alternative pathway for the line that would mean that the company may not press for a 'necessary wayleave.'

- Contact the electricity company and re-negotiate the deal, check out the reaction to 'notice to quit'. Remember they do have "the upper hand" as they already have an agreement and they will normally expect significant contributions to costs involved in re-routing.

Powerlines worksheet (2 Sides)

What size is the powerline you are concerned about?

400kV 275kV 132kV 66kV 33kV 11kV 450V 230V other ……

Who owns and maintains it?

National Grid? National Grid Electricity Transmissions Plc's EMF helpline telephone number is 0845 702 3270

Local Electricity Company?

Address ……

Tel ……

How far away is the closest cable?

…… Metres

Is this in the area of concern according to the guidelines? Yes / No

Is the cable underground? Yes / No

Is there a power cable running alongside the house wall? Yes / No

Maximum field level measured at the nearest point of the property to the line.

Garden

Electric field …… V/m

Magnetic field …… microtesla

Property

Electric field …… V/m

Magnetic field …… microtesla

What time of day was the measurement taken? …… a.m. / p.m.

Is this likely to be the highest reading of the day? Yes / No

Is this likely to be the highest reading of the year? Yes / No

Does the line cross your property? Yes / No

If yes, is there an easement agreement? Yes / No

or a wayleave agreement? Yes / No

If yes, when does the wayleave expire? ……

What is the prevailing wind direction? ……

Is the property downwind of the powerlines? Yes / No

What is the main industry upwind? ……

Is there a main road nearby? Yes / No

Upwind? Yes / No

Is there any crop spraying carried out nearby? Yes / No

Upwind? Yes / No

Are there any other nearby sources of airborne pollution? Yes / No

Is the property price appropriately discounted? Yes / No

Could there be a problem with obtaining a mortgage on this property? Yes / No

Are the magnetic field levels lower than 0.2 microtesla

In the garden? **On the patio?** **In the conservatory / sun lounge?**

Children's play area?

If any part of the garden is 0.2 microtesla or higher, draw a plan in the space below to show where this high field area extends to.

In the house?

List any rooms in the house that are above 0.2 microtesla.

……

……

- Are any of these places in bedrooms? Yes / No
- Where people are likely to spend any length of time? Chairs, etc. Yes / No