

EMFs.info



Living near EMFs

Developing near overhead lines or substations

Are you considering building or developing near a substation or overhead line?

You may be a homeowner considering an extension, or you may be considering developing a brownfield or greenfield site. If your development is near a substation or overhead line, what are the issues you need to consider?

For electrical assets, National Grid does not authorise or agree safe systems of work with developers and contractors. However, National Grid will advise on issues such as electrical safety clearances and the location of towers and cables. National Grid also works with developers to minimise the impact of any of its assets that are nearby.

You can find out more about the basic safety and location of National Grid's assets by downloading the guidance document for working near electricity equipment.

[Download the guidance document](#) 

Safety clearance distances

If you are building near an overhead line, you must preserve the voltage safety clearance distances (refer to the guidance document), both for the finished

development and during construction (e.g. for scaffolding or cranes). If the development is near a substation, you must be very careful about buried cables.

Contact the relevant electricity company at an early stage and talk to them.

[Energy Networks Association - Who's my network operator? >](#)

[Line search - A free to use safe digging service providing utility asset maps >](#)

EMFs

Your development will also need to comply with the relevant [exposure limits](#) for electric and magnetic fields (EMFs) In most cases, this will automatically be the case. For any questions beyond the information here:

[Contact us >](#)



Substations

Substations always comply with the exposure limits. There is a possible exception for substations that contain a specific piece of apparatus called a "static var compensator", but that only applies to a few of the largest substations, so is unlikely to affect you.

Substations can also be a source of noise. This should be considered when planning homes in close proximity.



Overhead lines

Overhead lines at 132 kV and below are inherently compliant, even directly underneath the conductors.

The UK's Code of Practice says that compliance with overhead lines at 275 kV and 400 kV should be demonstrated on a case-by-case basis. Contact the EMF helpline if this applies to you.

Another consideration is microshocks, which can occur below the exposure limits. These are most likely to occur within 10 metres either side of the conductors, where the electric field is highest. If your development has gardens or areas where people are likely to frequent, please contact the EMF helpline for further details.

[View the formal statement of compliance for substations and overhead lines >](#)

How a planning authority should handle an application

A planning authority receiving an application needs to be satisfied it complies with the safety clearance distances and with the EMF limits.

There are no other restrictions on development near power lines, and a planning authority should not introduce restrictions.

How can a planning authority satisfy itself about compliance?

As set out above, the vast majority of substations, and all overhead lines at 132 kV or below, are inherently compliant with EMF exposure limits. The relevant Code of Practice sets out that the evidence for this is provided centrally and planning authorities should rely on this and should not require any additional information in individual cases.

[Read the Code of Practice >](#)

For 275 kV and 400 kV lines, these are nearly always compliant with EMF exposure limits too. However, in these cases the planning authority would be entitled to ask for evidence specific to a particular application. This applies only if the development is directly under the conductors - even just a few metres to the sides, compliance is ensured without needing specific evidence.

Statement of compliance with public exposure limits

The button below takes you to a formal statement of compliance by the UK electricity industry for all equipment used on UK electricity networks with the EMF public exposure limits in force in the UK. This includes explanations of why technologies are compliant, and certificates of compliance.

[Compliance with public limits >](#)

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Electric and magnetic fields and health

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Contact us

To contact the electricity industry's EMF Unit Public Information Line (UK only):

Telephone: 0845 7023270

Email: EMFHelpLine@nationalgrid.com