

Department of Trade and Industry

Management of Vegetation Near Overhead Power Lines

1. Why trees need to be managed

We all rely on electricity for so much in our homes, offices and businesses. Electricity provides light; pumps heating and water around our homes; enables us to store, prepare and cook food; powers computers, other machinery and myriad of home entertainment equipment. Any loss of supply is inconvenient at best and any prolonged interruption can cause significant disruption to our everyday lives. So we look to electricity companies to ensure continuity and reliability of supply.

Trees near overhead lines can interfere with supply, especially in severe weather. It is of vital importance that they are managed to minimise potential problems.

2. What the law requires

Electricity companies (such as National Grid, Scottish & Southern Energy, ScottishPower, United Utilities, CE Electric UK, Central Networks, EDF Energy and Western Power Distribution) are currently required by law to keep trees clear of overhead lines for reasons of public safety. This is changing. New laws coming in that mean companies must **also** keep sufficient distance between trees and overhead lines to avoid them interfering with supply and so improve reliability.

The new requirements mean that more extensive tree cutting will be carried out than before, with trees that pose a high risk being removed. Some electricity companies may need to catch up with a backlog of works to improve supply reliability to the desired level. Hence, the new law will not be enforced until 2009 to give companies sufficient time to get up to date and to get regular tree cutting regimes in place.

3. Who does what

In theory, the owner of the land where the lines are situated is responsible for managing trees and can reclaim costs from the electricity companies. However, cutting trees in close proximity to live electricity overhead lines can be very dangerous if persons are not trained in this work. In fact some incidents have resulted in serious and fatal injuries to members of the public. Even professional tree workers need additional specialist skills and qualifications to do this work. In practice, the electricity companies are better equipped to come in and undertake the works at their own expense. Consequently most land owners normally leave such work to the electricity company to arrange. Most companies employ specialist contractors to carry out these works, whilst some use in-house staff.

All electricity companies have different methods for liaising with landowners. The notice period given may also vary according to whether the work is necessary in an emergency or not. However, the companies will always strive to secure voluntary agreements with landowners prior to carrying out any tree works. All companies recognise that sound relationships with landowners are very important and will do all they can to keep the landowner informed in advance of any works.

4. Extent of works

The electricity industry already works to a national standard for safe distances between overhead power lines and trees. These vary according to the voltage level at which the power lines operate but other factors also come into consideration, such as determining whether a tree is deemed to be climbable. The range of clearances that apply vary between 0.8m (for lower voltage lines close to non-climbable trees) and 5.3m (for 400kV lines close to climbable trees).

What more is needed to ensure continuity of supply will also vary according to circumstances. So it is not necessarily simply a question of felling everything that might fall or blow onto line. And it is not just simply an engineering judgement either - all key decisions in the process will be informed by tree experts (arboriculturists). All tree works must be carried out in accordance with good arboricultural practice and the relevant British Standard.

5. Safeguards

It is widely recognised that people value trees for all sorts of reasons (e.g. they are attractive, may be part of the character of the area, good for wildlife etc.) and that they also have various benefits for the environment (e.g. they help clean the air we breathe, prevent soil erosion, manage storm water, provide shade and shelter). In addition, electricity lines may also be located in areas that are protected by law such as National Parks and Areas of Outstanding Natural Beauty.

Companies are sensitive to environmental impacts and are legally obliged to minimise any harm caused. They aim for the best of all worlds - to safeguard electricity supply while also protecting environment and taking the community with them. This is a very difficult balance to strike and, to help companies adopt a consistent approach, they will be working with key organisations to develop a suitable code of good practice. One of the key aims of developing this code of practice is also to harness good practice in the area of improving communications with landowners.

6. If there's a dispute

While all companies will try to proceed by agreement with landowners, the voluntary approach does not always work. Given the importance of having a reliable supply, companies do have statutory powers (under paragraph 9 of Schedule 4 to the Electricity Act 1989 as amended) to require work to any tree that is so close to an overhead line that either:

- It obstructs or interferes with installation, maintenance or working of the line; or
- It poses an unacceptable level of danger.

These powers are invoked when a notice is served on the owner and occupier of the land where the trees are situated. This notice should specify the works to be carried out. The company then meets the owner's reasonable expenses.

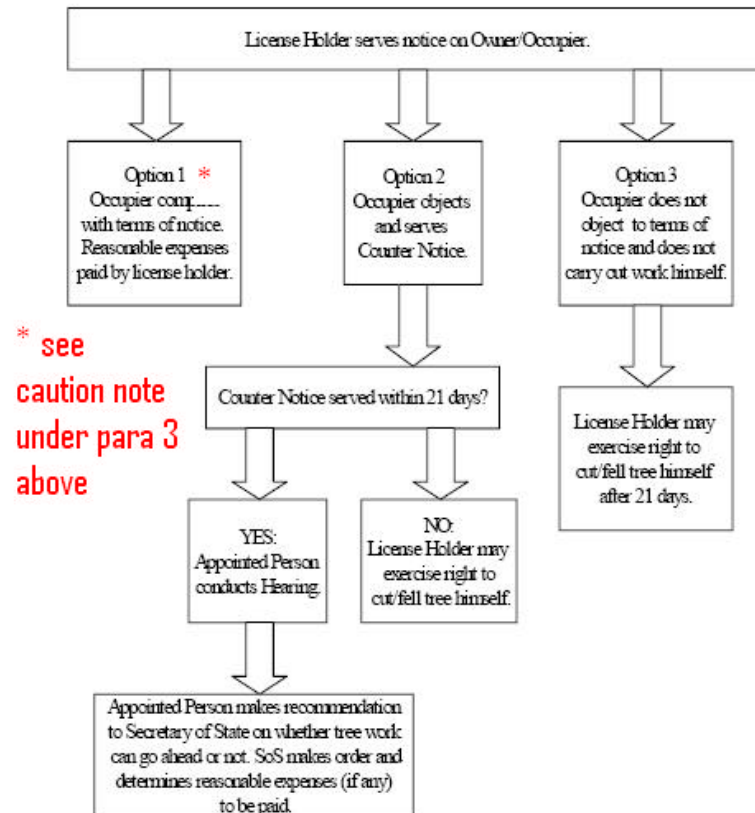
If the owner is unhappy with the terms of the notice, they have 21 days to give a counter notice to the company, setting out the objections. The matter is then referred to the Secretary of State for Trade and Industry who will appoint someone to hear the case in the form of a formal hearing. A decision is then issued in the form of an order. The order can cover works to be carried out and issues about expenses.

If, after 21 days, the owner has not given counter notice but has still not carried out the works, then the company has the power to enter the land and carry out the necessary works itself.

The flowchart overleaf summarises the key stages of the statutory process.

**Flowchart 1:
Summary of Statutory Process relating to Felling & Lopping of Trees**

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Where the company has exercised these statutory powers, the company shall ensure that any works have been carried out in accordance with good arboricultural practice. In addition to this, as little damage as possible should be inflicted on other trees, nearby fences, hedges or growing crops. Any felled trees, lopped boughs or root cuttings should be removed in accordance with the owner's wishes. The company also has the obligation to make good any damage done to the land.

7. To find out more

? Contact

Should you require any further information or clarification as regards to the statutory procedure, then please contact:

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Useful websites

The Regulations that currently apply to the Electricity Industry are the Electricity Safety, Quality and Continuity Regulations 2002. These can be viewed at:

<http://www.opsi.gov.uk/si/si2002/20022665.htm>

In 2005, the DTI conducted a public consultation into proposed amendments to the above Regulations. All relevant documentation including the Full Regulatory Impact Assessment can be viewed at: <http://www.dti.gov.uk/consultations/page15238.html>

From 1 October 2006, these Regulations will be amended by the Electricity Safety, Quality and Continuity (Amendment) Regulations 2006. These can be viewed at:

http://www.opsi.gov.uk/si/si2006/uksi_20061521_en.pdf

The statutory powers available to electricity companies in respect of tree works are available under Schedule 4, paragraph 9 of the Electricity Act 1989 (as amended).

Schedule 4 can be viewed at:

http://www.opsi.gov.uk/acts/acts1989/Ukpga_19890029_en_8.htm#sdiv4

The Arboricultural Association's Utility Arboriculture Group website can be viewed at:

<http://www.trees.org.uk/uag.php>

Additional Reading – Standards

The national standards that apply to the industry in relation to tree works are:

1. Technical Specification 43-8 - 'Overhead Line Clearances' (Issue 3, dated 2004), and
 2. Engineering Technical Report 132 – 'Improving Network Performance under Abnormal Weather Conditions by use of a Risk Based Approach to Vegetation Management near Electric Overhead Lines' (dated March 2006).
- Both standards are administered by the trade association for the electricity distribution and transmission sectors - the Energy Networks Association.

(www.energynetworks.org)

Additional Reading – Reports

There have been many instances at home and abroad where poor management of trees has led to prolonged supply interruption. Useful reports are listed below:

1. DTI/British Power International - October 2002: Power System Emergency Post Event Investigation – Overview Report (Dec 2002).
2. Network Resilience Working Group Report 'Proposals for Improved Storm Performance for Electricity Distribution Networks' (Dec 2003).
3. Department of Energy – 'Review of Technical Standards for Overhead Lines following Storm Damage in December 1981 and January 1982' (Sept 1982).
4. JESS (Joint Energy Security of Supply Working Group) considered the blackouts that occurred in North America/Canada, Sweden/Denmark and Italy in 2003 and the possible implications for the UK.

<http://www.dti.gov.uk/files.file32758.pdf>