

# Railway Network

showing electrified tracks



# Electricity Dangers on the railway network

Over 7,000 miles of the main railway network in Britain are electrified - a third of the total network.

Electrified railways pose unique dangers to adults and children trespassing or misbehaving on the railways.

Trains running on electrified railways usually take their power from overhead power cables. In some areas of the country, mainly in the South East and Merseyside, electric trains take their power from a live conductor rail, sometimes called a third rail, at the side of the track.

## High voltage

Overhead power cables have high voltage electricity passing through them at 25,000 volts - 100 times more powerful than the electricity supply in your home.

Live rails have electricity at 750 volts passing through them. They are potentially the most dangerous to someone trespassing on railway tracks because they look as if they are part of the track itself.

Electricity flows through these systems at all times. They are NEVER switched off - even on Christmas Day.

## Electricity can jump

You do not have to actually touch the overhead electric cable or live rail with your hand to receive a massive, often fatal, electric shock. Electricity used on overhead powerlines can 'jump' across gaps.

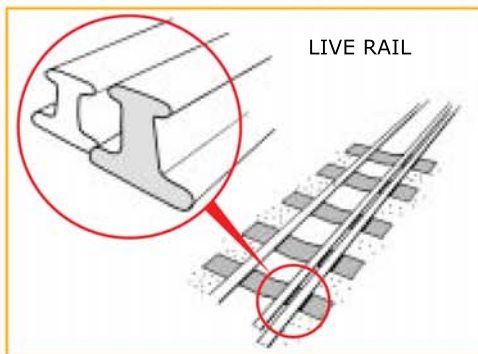
Electricity can pass through an object such as a stick or chain that is touching a live rail or through the string of a kite hanging from an overhead electric cable.

## Warning signs

Near electrified tracks there are warning signs that may come in a variety of forms.

Despite the warning signs, adults and children have been killed or seriously burnt and scarred for life as a result of trespassing on electrified railway tracks.

Some have died or been seriously injured by walking on live rails or climbing on carriages or wagons and getting close to overhead cables. Others have been seriously injured or killed when they have dangled objects from railway bridges that have come into contact with overhead power cables or live rails.



Live rail system



**Danger**  
High Voltage



**Danger**  
Do not touch  
the live rail



**Danger**  
Live rails



**Danger**  
Overhead  
live wires  
Live rails

**R E M E M B E R**  
**ELECTRICITY ON THE RAILWAY**  
**TRACKS IS DANGEROUS.**  
**STAY OFF, STAY SAFE**