

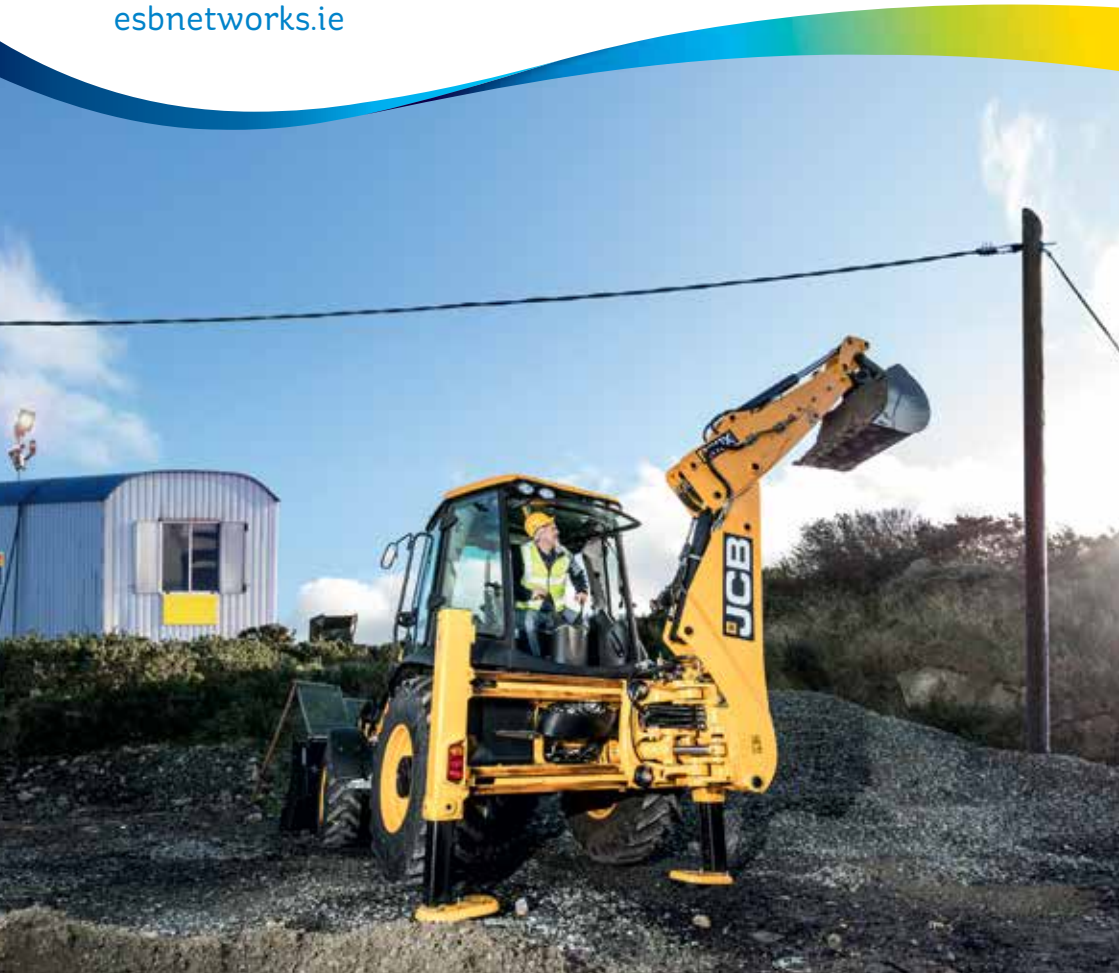


NETWORKS

Serving all electricity customers

# SAFE CONSTRUCTION WITH ELECTRICITY

[esbnetworks.ie](http://esbnetworks.ie)





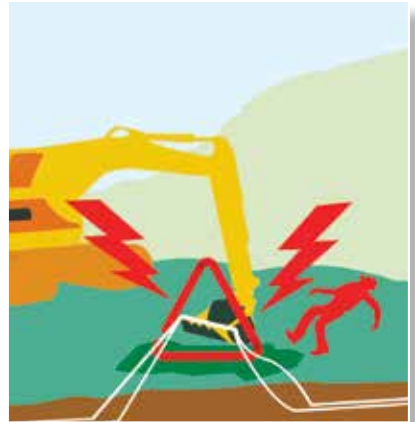
## INTRODUCTION

Electricity is essential for our economy and so much part of modern living that we often take it for granted. This booklet provides important safety and customer service information to help you stay safe when working near electricity networks and to explain the key steps when you require services from ESB Networks.

## SAFETY ADVICE WHEN WORKING NEAR OVERHEAD ELECTRICITY WIRES AND UNDERGROUND CABLES

Electricity is delivered across the country using both overhead wires and buried cables. It is a powerful and versatile source of energy but it can be dangerous unless we use safe systems of work.

Serious accidents, including fatal electrical accidents have occurred where construction work is involved. In the past 21 years there have been 16 electrical fatalities due to accidental contact with overhead electricity wires and cables.



## Overhead Electricity Wires – Keep Your Distance

The power of electricity is such that any accidental contact with overhead wires, or coming too close, will cause serious injury and can be fatal. Serious accidents have occurred when using cranes, concrete delivery trucks, tipper lorries and scaffolding near overhead wires.

It is important to note the existence of overhead wires and to plan to safely carry out work. If possible keep machinery clear and guard against working close to the live wires. Always allow enough clearance to avoid contact and remember that electricity can jump gaps.

For more detailed information please refer to the ESB Networks Code of Practice For Avoiding Danger from Overhead Electricity Wires which can be downloaded from the [www.esbnetworks.ie](http://www.esbnetworks.ie)

## If the worst happens – take these steps and stay safe:

If a machine or its attachments come into contact with an overhead line, it could be fatal for anyone who touches the machine. Do not rely on rubber tyres or rubber-soled boots for protection – they will not insulate against a high-voltage shock. Tyres can burst into flames and boots can be destroyed. These are the steps that should be taken in the event of a hit on an overhead power line.

### Step 1: Keep Clear

- The driver of a vehicle that comes into contact with overhead lines will usually remain safe in the cab of the vehicle. Other people are at risk if they make simultaneous contact with the vehicle (and anything attached to it) and the ground.

### Step 2: Get Help

- You, or someone else, should contact ESB Networks' emergency number (1850 372 999) immediately.

### Step 3: Jump Clear

- If you have to leave the cab, jump well clear so that no simultaneous contact is made between you, the vehicle and the ground. Land on your feet and do not touch the ground with your hands. Move away at once using short steps or bunny hop with both feet together.

### Step 4: Stay Clear

- Do not go back to the vehicle, even if you think it is safe to do so. It may still be live.
- Nobody should approach the vehicle until ESB Networks has confirmed that it is safe to do so.

### Step 5: Safe Operation

- If the vehicle is not tangled with the overhead line, reverse away until contact is broken. Do not climb out of the vehicle or attempt to operate the vehicle while standing on the ground outside the vehicle.

# Avoidance of electrical hazards when working near overhead lines

At the planning stage and before starting work near an overhead line, consult ESB Networks.

## THERE ARE TWO GENERAL CASES

Site where there will be no work or passage of plant under a live overhead line.



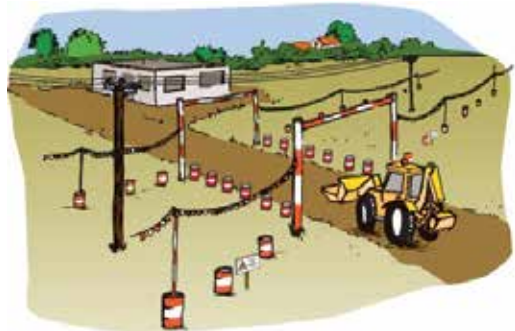
- A barrier should run parallel to the line (See below for distance from line)
- This may be fixed post fencing or steel drums filled with rubble spaced 1.5 metres apart.
- If cranes are in use a line of bunting at a height of 3 metres should supplement the barriers. (See below for distance from line)
- Danger notice stating "Danger Live Overhead Line" should be spaced at intervals.

## Site where plant will pass under a live overhead line

In addition to the above, Goal Posts should be erected as shown.

Dimensions as follows:

- Height of goalposts - *As advised by ESB*
- Width of Goalposts - *Max. 10 metres.*
- Height of bunting - *3 metres*
- Distance between steel drums - *1.5 metres*
- Distance between danger notices - *20 metres*
- Horizontal distance of barrier to outside conductor on line
  - *6 metres minimum for LV, 10kV, 20kV, 38kV.*
  - *10 metres minimum for 110kV, 220kV, 400kV.*



In general if work is to be undertaken directly under the line, ESB will insist that the line is switched off for the duration of the work.

## Underground Electricity Cables and Services – Do You Know

Damage to underground cables is extremely hazardous. Serious accidents have occurred resulting in life-threatening injuries when electricity cables have been struck or disturbed. Use of hand tools, and not just heavy machinery, has been responsible for serious safety incidents.

It is important to always take the essential safety precautions before carrying out digging work. There may be buried electricity cables close by.

Always check and identify the route and location of electricity cables, using competent and trained people. It is never safe to disturb or handle electricity cables. Always contact ESB Networks immediately.

When planning work which involves digging, always contact the Dial before U Dig service at dig@esb.ie or alternatively phone 1850 928 960.

For more detailed information please refer to the H.S.A Code of Practice For Avoiding Danger from Underground Services which can be downloaded from the H.S.A. website.

## Safe System of Work for Digging

**These Guidelines apply to all work that involves penetrating the ground at or below surface level**

### When working near buried services **USE**

- Maps
- CAT - Cable Avoidance Tool
- Safe Digging Practice
- Company Policies & Procedures

*All 4 complement each other*

Always be aware that the depth of cover may be very shallow and that there may be no bricks, warning tape or other protection in place. Always assume that there will be more services than you expect to find.

### BEFORE You Start Digging

- ✓ Complete Risk Assessment
- ✓ Ensure you have appropriate **Maps**
- ✓ Remember that service cables & public lights may not be shown.
- ✓ Look out for **Services**
- ✓ Always use **Cable Locator (CAT)** to trace all services
- ✓ **Mark** the positions of the cables using waterproof crayon, chalk or paint

*Manhole Covers, Valve Covers, Lamp Posts, Houses/buildings, Meters, Communications Network, Signs of Previous Digging*



# DO YOU KNOW WHAT LIES BELOW? Always dial before you dig

Avoid the dangers of underground electricity cables.

Contact us to get maps which show the locations of ESB Networks' underground cables.

PHONE: **1850 928 960**

EMAIL: **dig@esb.ie**

FAX: **01 6388169**

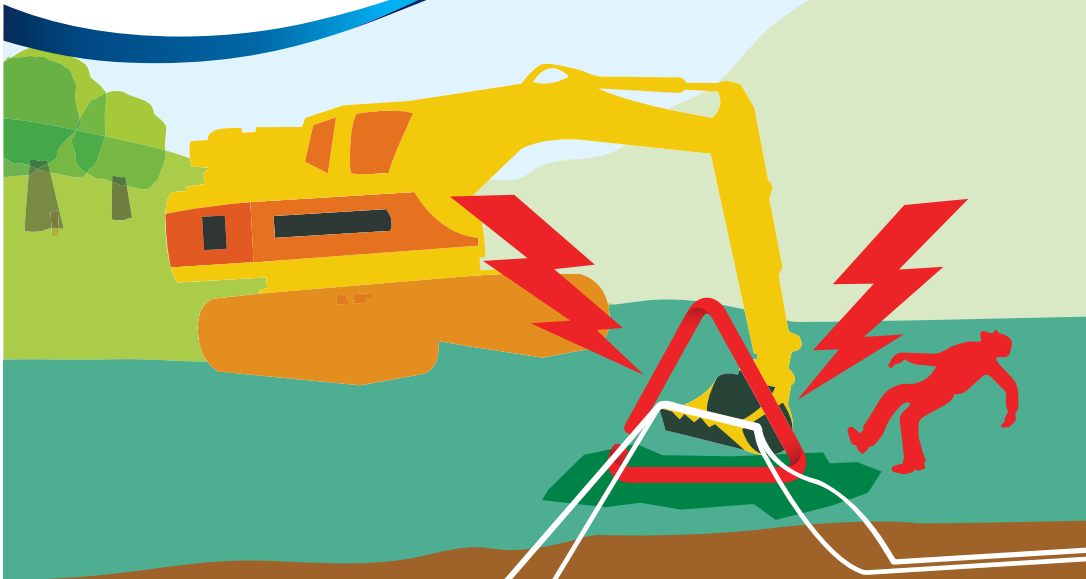
In case of emergency, phone

**1850 372 999** (24 HOUR/7 DAY SERVICE)

[www.esbnetworks.ie](http://www.esbnetworks.ie)



IMPORTANT: Please refer to the HSA "Code of Practice For Avoiding Danger From Underground Services" on how to safely carry out excavation work in the vicinity of underground cables. Available at [www.hsa.ie](http://www.hsa.ie)





### INFORMATION AND RESOURCES:

ESB Networks provides a range of safety materials.

Cab stickers should be displayed prominently on the vehicle to remind everyone of the dangers.

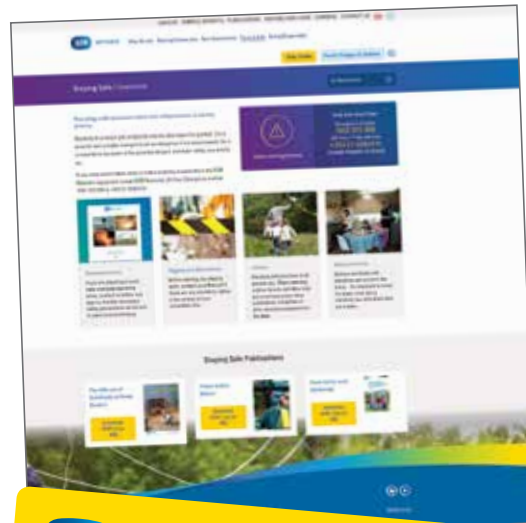
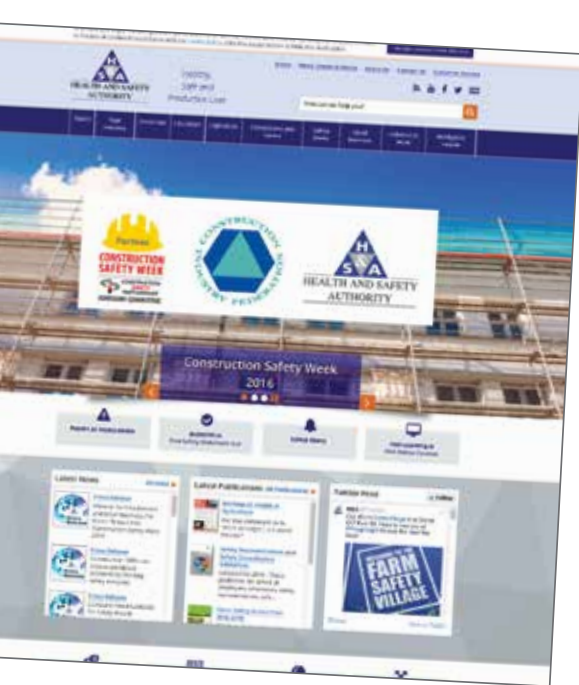
Log on to [www.esbnetworks.ie](http://www.esbnetworks.ie) and find out more about safety and electricity.

In an emergency or where there is a public safety concern with electricity wires or cables, contact us immediately on our 24/7 emergency number: 1850 372 999

Safety DVD's, Cab stickers and keyrings - please contact us for materials at 1850 372 757

ESB Networks safety website: [esbnetworks.ie](http://esbnetworks.ie)

H.S.A website: [www.hsa.ie](http://www.hsa.ie)



ESB NETWORKS Serving all electricity customers

**Emergency No.**  
24 hour - 7 day - 365 days

**1850 372 999**  
Safety with electricity



## HOW TO CONTACT ESB NETWORKS

- **If you have a general query**

You can contact us at 1850 372 757 or +353 21 2386555

Lines are open Monday to Friday 8.30am to 6pm and Saturday 8.30am to 1.30pm .

If possible please have your MPRN number to hand when calling us.

Email: [esbnetworks@esb.ie](mailto:esbnetworks@esb.ie)

Our target is to have your query addressed within two working days.

- **Faults/Emergencies and Interruptions in Supply**

For Real Time Information on Faults and Outages go to ESB PowerCheck  
[www.powercheck.ie](http://www.powercheck.ie)

For Faults/Emergencies (24 hours/7days service) Ring 1850 372 999 or  
+353 21 2382410

Follow us on [www.twitter.com/esbnetworks](http://www.twitter.com/esbnetworks)

- **Safe Digging**

Email your request , with your site map to [dig@esb.ie](mailto:dig@esb.ie)

Call 1850 928960

Fax 01 6388169

Alternatively, you can make a postal request to:

Central Site

ESB Networks

St. Margaret's Road

Finglas

Dublin 11

- **Meter Reading**

You can send in a meter reading online [www.esbnetworks/readings](http://www.esbnetworks/readings).

Or ring our 24 hour automated meter reading service 1850 33 77 77 or +353 21 2386444

You can also text us a reading at 087 9609223 in the format:

MPRN (space) reading

Or Email: [reading@esb.ie](mailto:reading@esb.ie)

- **Feedback & Complaints**

### **How do I register a complaint?**

You can register your complaint with us in the following ways:

- You can phone our National Customer Care Centre on 1850 372 757 or +353 21 2386555 (outside of Ireland)

## NEW CONNECTIONS PROCESS

### STEP BY STEP GUIDE

#### Step 1 - Get an Ordnance Survey Map and Site Plan

- You need an ordnance survey map (scale 1:2500-1:10560) showing the location of your new unit/premise. Mark the location of your new premises with a red pen.
- You will also need a detailed site plan (scale 1:100-1:500) showing your new premises.
- Your builder or architect should be able to provide you with both of these. Photocopies are acceptable.
- For multi-unit developments you will also need a letter from the Local Authority confirming the final name of your development.

#### Step 2 - Apply

Apply by post. Download the New Connection or Increased/Reduced Capacity (MIC) Application form from [www.esbnetworks.ie](http://www.esbnetworks.ie) or call 1850 372 757 or +353 21 2386555 to request a copy.

Send the completed form together with the ordnance survey map and the site plan to:

ESB Networks DAC, Customer Services Bureau,  
PO Box 29, Garrycastle, Athlone, Westmeath, Ireland

#### Step 3 - Receive an Acknowledgement

Once we get your completed application, we put your details on the system and send you an acknowledgement and reference number.

**Step 4 - After this preparatory work, network installation work can be planned and scheduled.**

#### Step 5 - Make a payment and send back the Agreement

After this preparatory work, network installation work can be planned and scheduled.



## KEY SAFETY MESSAGES

- Watch out for overhead electricity wires
- Identify the location of buried cables
- Follow the requirements set down in the Codes of Practice
- Never work close to overhead wires
- Never disturb cables
- Never undermine pole/mast foundations.
- Electricity wires are always live
- Never touch fallen wires.
- Never handle anything that may be in contact with electricity wires.
- Display safety stickers on machinery to remind everyone to be “electricity safe”.
- In an emergency, phone immediately 1850 372 999.

ESB Networks Emergency Number:

In case of emergency

phone 1850 372 999

(24 hour/7 day service)

[www.esbnetworks.ie](http://www.esbnetworks.ie)



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