

# Control of Electrical Works – Guidelines and Best Practices

## Purpose

This document outlines the procedures for managing electrical installation, repair, testing, and maintenance on construction and utility sites. It aims to protect workers and the public from electrical hazards through effective planning, supervision, and control of electrical works, in accordance with UK law and HSE guidance.

## Legal Framework

- **Health and Safety at Work etc. Act 1974**  
Requires employers to ensure, so far as is reasonably practicable, the safety of employees and others affected by electrical work.
- **Electricity at Work Regulations 1989**  
Requires that all electrical systems are constructed, maintained, and operated safely, and that work on or near electrical systems is done only by competent persons.
- **Provision and Use of Work Equipment Regulations 1998 (PUWER)**  
Applies to electrical tools and systems, requiring that they are safe to use, maintained, and operated by trained personnel.
- **Construction (Design and Management) Regulations 2015 (CDM 2015)**  
Requires that electrical work is identified as a risk during planning, and managed accordingly through safe systems of work.

## What is Electrical Work?

Electrical work includes any task involving the installation, maintenance, modification, or testing of:

- Temporary site electrics and distribution boards.
- Fixed wiring and consumer units.
- Electrical panels, circuits, sockets, and lighting.
- Portable tools and generators.
- High-voltage or live systems.
- EV chargers, plant power supplies, and sub-mains.

## Key Electrical Hazards

- Electric shock or electrocution.
- Fire or arc flash.
- Burns from live parts.
- Explosions from fault currents.
- Tripping from damaged or trailing cables.

## Core Components of Safe Electrical Work

- Planning and Risk Assessment.
- Identify and assess all electrical risks.
- Consider location, weather, voltage, load, and adjacent systems.
- Use schematic diagrams and plans to identify buried or live services.

## Authorisation and Competency

- Only authorised, trained, and qualified electricians may carry out electrical work.
- Verify ECS Gold Card or equivalent qualifications.
- Unqualified operatives must not test, isolate, or alter live systems.

## Permits and Isolation

- Use a Permit-to-Work for high-risk or live electrical work.
- Apply Lockout & Tagout (LOTO) for safe isolation.
- Display warning signage at distribution boards and isolators.

## Use of Suitable Equipment

- Use only 110V tools and transformers where possible on site.
- Ensure tools and cables are CE / UKCA marked and suitable for outdoor use.
- Avoid the use of domestic-rated equipment on construction sites.

## Inspections and Testing

- Inspect all electrical installations to BS 7671 (IET Wiring Regulations).
- Carry out EICR (Electrical Installation Condition Reports) and PAT testing as required.
- Visually inspect portable tools weekly or before use.
- Earthing and Circuit Protection.
- Ensure RCD (residual current device) protection on all circuits.
- Confirm proper earthing and bonding on temporary and fixed systems.
- Use double-insulated equipment where earthing is not possible.

## Best Practice Recommendations

- Avoid live work unless absolutely necessary – isolate first.
- Include electrical hazards in toolbox talks and site inductions.
- Keep cables off the ground where practical using cable ramps or cable trays.
- Record all inspections and tests within Site Sync’s HSQE documentation system.
- Regularly review temporary electrical layouts as works progress.

## CDM Compliance – Electrical Safety Responsibilities

- Principal Designer:
  - Identify electrical hazards at design stage
  - Eliminate or reduce live work requirements through design changes
  - Share information on buried or existing services
- Principal Contractor:
  - Coordinate and control all electrical work on site
  - Appoint a competent person to oversee electrical safety
  - Maintain a site electrical layout and inspection log
  - Prevent unauthorised access to panels or enclosures
- Contractors:
  - Provide competent electricians for all electrical tasks
  - Supply safe, tested equipment
  - Comply with permit and isolation procedures
- Workers:
  - Do not carry out electrical work unless trained and authorised
  - Report damaged cables, equipment, or systems immediately
  - Follow signage and warning notices without exception

## Useful HSE Resources

- [HSE Construction Landing Page](#)
- [Electricity at Work Regulations 1989](#)
- [HSE Electrical Safety Guidance](#)