HEALTH AND SAFETY POLICY

Adopted by Swanmore Parish Council 3rd August 2010
Reviewed and updated: 27th June 2023

CONTENTS

APPENDICES

1. Introduction

This document has been compiled to provide information and guidance to all members and employees on this Council's Health and Safety Policy and organisational arrangements for the implementation of that Policy.

2. General Statement of Policy

2.1 Swanmore Parish Council formally recognises and accepts its responsibility as an employer to take all reasonably practical steps to protect employees and all others who could be affected by Council activities and to comply with legal requirements. Our Policy is to provide and maintain safe and healthy working conditions, equipment, and systems of work for all our employees, and to provide such information, training and supervision as they need for this purpose.

2.2 The arrangements to implement the Policy are set out in this document.

2.3 The Policy will be kept up to date and reviewed on an annual basis.

3. Organisation

3.1 Responsibilities

3.1.1 Overall responsibility for ensuring the provision and implementation of the Health and Safety Policy is that of the Swanmore Parish Council.

REPORTING STRUCTURE

COUNCIL

EXECUTIVE OFFICER

EMPLOYEES CONTRACTORS HIRERS

3.1.2 All employees have the responsibility to co-operate in establishing safe systems of work to achieve a healthy and safe workplace; to take reasonable care of themselves and others; to carry out working procedures within the guidelines of the Health and Safety Policy, incorporating any Regulations, approved Codes of Practice and other relevant
legislation.

3.1.3 Whenever an employee notices a health or safety problem, which they are not able to put right they must straightaway inform the Executive Officer, who will if necessary inform the Chairman of the appropriate committee.

3.2 **Training**

3.2.1 All employees shall receive adequate training, information, and supervision to maintain safe standards and shall receive a copy of this Policy.

4. **Risk Assessments**

Risk Assessments will be carried out by a competent person to identify significant health and safety risks that could affect employees, visitors and others who could be affected by the activities of the Parish Council. Such risks will be eliminated or steps taken to reduce the risk to an acceptable level.

5. **Management**

5.1 The Workplace is the Parish Council Office, Suite a, Hollythorns House, New Road, Swanmore and the Pavilion.

5.1.1 The workplace shall be cleaned as necessary by members of staff as directed by the Executive Officer to the Council

5.1.2 The workplace shall be suitably ventilated, maintained at a reasonable temperature and have suitable and sufficient lighting.

5.1.3 Waste shall be deposited in the containers provided and emptied on a regular basis. Waste shall be placed in bins outside of Hollythorns House.

5.1.4 Suitable workstations shall be provided.

5.1.5 Floors must be safe and free from holes, slopes and unevenness. There should not be any obstructions or anything likely to cause a person to slip, trip or fall. People shall be protected against falls, falling objects and low ceilings.

5.1.6 Where a breakage could cause injury, windows and glazed doors must be of safety material or protected against such breakage.

5.1.7 Windows must be capable of being opened and cleaned safely.

5.1.8 The pedestrian access to the office, via the designated path must be used.

5.1.9 Doors and gates meet requirements.

5.1.10 Suitable and sufficient sanitary conveniences and washing facilities shall be provided.

5.1.11 An adequate supply of drinking water shall be provided.

5.1.12 Suitable facilities shall be provided for employees to rest and suitable arrangements shall be made for non-smokers, pregnant women and nursing mothers, as deemed necessary. A NO SMOKING Policy operates in the office.

5.2 Work Equipment

5.2.1 All equipment shall be suitable for the work for which it is used or provided, and is only used for this purpose. An annual safety certificate is to be obtained for all electrical equipment.

5.2.2 Manufacturers warning/safety guidelines must be adhered to at all times.

5.2.3 Adequate training shall be provided where required.

5.2.4 If appropriate, safety equipment must be used and protective clothing worn.

5.2.5 If safety guards are fitted the machinery must never be used without them in place.

5.2.6 Users of work equipment shall be protected from all hazards which may be associated with its use.

5.2.7 All equipment must be stable and have sufficient lighting.

5.2.8 Any warnings on equipment shall be clearly visible, unambiguous, easily perceived and easily understood.

5.2.9 Maintenance work will normally be carried out by a specialist contractor.

5.3 Personal Protective Equipment

5.3.1 There is, at present no requirement for Personal Protective equipment within the office environment. However, should a risk be established, suitable PPE shall be provided.

5.3.2 When conducting site visits or assisting with Council events, Councillors, officers and volunteers will be provided with suitable PPE to include high visibility jackets.

5.3.3 The Community Safety Officers will be provided with the necessary PPE for the safe conduct of their role.

5.4 Accident Reporting

5.4.1 If despite our best efforts an accident does occur, it must be reported as follows:

- Record details in the Accident Book
- Investigate and advise the enforcing authority of reportable incidents
- Keep full records of all details
- Inform insurance company of all incidents involving injury

5.4.2 All accidents and injuries to persons and damage to vehicles etc shall be reported immediately to the person responsible* and shall be duly recorded by that person (*see to 3.1).

5.4.3 All accidents and injuries shall be recorded on the appropriate form and entered in the Accident Book held at the Parish Office.

5.4.4 Reportable incidents shall be investigated and reported to the enforcing authority (Health and Safety Executive, Priestley House, Priestley Road, Basingstoke RG24 9NW Tel: 01256 404000) firstly by telephone followed by the appropriate form within 10 days.

5.4.5 Full records to be kept indefinitely.

5.4.6 The Insurance Company (Zurich) shall be informed of all incidents involving injury.

5.5 **First Aid**

5.5.1 First Aid Boxes will be kept fully stocked with approved items and are located at the Parish Council office and the pavilion at Broad Lane Recreation Ground.

5.5.2 Trained/qualified First Aiders:

Refer to local doctors (see 11).

5.6 **Hazards and Dangerous Substances**

5.6.1 Assessment sheets (including data assessment forms and any associated data sheets) shall be consulted and the contents applied to the particular circumstances. Adequate information, instruction and training in relation to the risks and the necessary precautions shall be given to employees.

5.6.2 Safety data sheets shall be kept in the vicinity of the substances. ***SEE APPENDIX A***

5.6.3 Where any chemical or other dangerous liquid, gas, or solid substance is stored or used the manufacturer's instructions for storage and use shall be observed at all times, and the appropriate protective clothing must be worn when dealing with such substances.

5.7 **Manual Handling and Lifting**

5.7.1 Any manual handling operation which involves a risk of injury must be avoided wherever possible. Employees have a duty to carry out manual handling operations in accordance with any training and instructions given. ***SEE APPENDIX B***

5.8 **Display Screen Equipment, Photocopiers and Printers**

5.8.1 All workstations shall meet the minimum requirements. Daily work routine should allow for adequate breaks or changes of activity to avoid fatigue, relieve eye strain and prevent any injuries associated with repetitive movements. If requested by DSE users, the employer shall arrange for eye tests.

5.8.2 Appropriate information, training and instruction shall be provided to users.

SEE APPENDIX C

5.9 **Electrical Equipment**

5.9.1 All electrical equipment at the Parish Office and Pavilion is inspected annually by a competent contractor.

5.9.2 Portable electrical equipment (all items with a plug) shall be recorded in a register and regularly checked by a competent person. 5.9.1 also applies.

5.9.3 Any items which have not been registered and checked shall not be connected to the Council's electrical supply, and contractors, hirers etc shall be required to provide proof of the electrical integrity of any appliances which they proposed to use on Council property.

5.9.4 Excess current protection – see 5.9.1.

5.9.5 Isolation can be achieved by main distribution board.

5.9.6 Only competent contractors will be employed to carry out electrical work.

SEE APPENDIX D

5.10 **Noise**

5.10.1 There is at present no requirement for protection against noise. However, should a need/risk be established, suitable training and equipment will be provided at the expense of the Council.

5.11 **Asbestos**

5.11.1 Any building in the ownership of the Parish Council, known to contain asbestos will be checked periodically to see that the condition has not deteriorated. Procedures will be put in place to ensure that the materials are not disturbed by builders etc.

5.13 **Safety Signs**

5.13.1 Safety signs shall be provided where required and that comply with the Regulations.

5.14 **Fire Safety**

5.14.1 Fire Extinguishers are located at:

- The Parish Council Office, on the wall between the main door and the door to the kitchen area: 1 x water, 1 x CO2 foam.

- The Pavilion, side fire exit: 1 x water, 1 x CO2, rear fire exit: 1 x water, 1 x CO2, front entrance: 1 x water.

- New Road Skate Park, in the accessible toilet: 1 x CO2.

5.14.2 Escape routes

- From the Parish Council Office: Through the front door to the assembly point in the front car park. This is checked by a competent person on a regular basis.

- From the Pavilion: From main areas either through main door or alternatively through changing rooms to side doors. From kitchen either through main door or alternatively through changing rooms to side doors. To the assembly point in the car park.

5.14.3 Employees should only attempt to extinguish small fires and even then only if it is felt safe to do so. Beforehand the alarm should be raised. The correct extinguisher for the type of fire should be used as indicated on the extinguisher. Fire extinguishers are serviced annually by: Christie Intruder Alarms, 212-218 London Road, Waterlooville. Tel: 02394 387808

6 Safety of Employees

6.1 Office

Although offices are not regarded as 'dangerous places' everyday objects are potential causes of injury to both employees and visitor. The common-sense approach should be applied with regard to:

- Furniture, equipment, leads:

  All items should be sensibly positioned so as not to impede movement around the office. Leads from telephones, computers, etc. should not be allowed to become tripping hazards. Faulty electrical equipment must be reported to the appropriate person (see 3.1). Employees should not attempt to carry out their own repairs.

- Floors and doorways:

  These should not be obstructed and should be kept clear of all items and refuse. Carpet defects should be reported to the relevant person and dealt with promptly.

- Filing cabinet and desk drawers:

  Leaving these open produced serious tripping hazards and this practice should be avoided. Heavy items should be placed in the lower filing cabinet drawers to avoid making the cabinet unstable.

- Developers and toners:

  These chemicals must be used in accordance with the instructions and skin contact should be avoided (see 5.6)

- Fire extinguishers and fire exits

  The correct type of fire extinguisher should be readily available and wall-mounted in a prominent position. Fire exits should be unobstructed and fire doors closed.

  The Parish Office is protected by an alarm system and key holders to alarm and doors are - the Executive Officer, Deputy Executive Officer, Responsible Financial Officer and the Community Safety Officers.

  The landlord is responsible for the deactivation/reactivation of the alarm system.

6.3 **Lone Working at the office**

Set procedures shall be followed to ensure safe working as far as is reasonably practicable. Generally, on the first signs of ill health the lone worker should alert a third party. If it is expected that a lone worker will be working outside of their normal hours, a third party should be alerted. If lone working, officers should lock the office door (and main building front door if working outside of office hours). Identification should be obtained from visitors to the office before they are let in. Please refer to the Council's separate Lone Working Policy.

6.4 **Gas**

There is no gas supply on site.

7. Safety of the Public

7.1 **Pavilion and hirers**

7.2 **Defects**

A defect form shall be completed at regular intervals and retained at the Parish Office. The form shall be completed and retained.

7.3 **Inspections**

A regular inspection of the premises shall be made and a record maintained. The form shall be completed and retained.

7.4 **Emergency Procedures**

Hirers shall be informed of the procedures regarding the evacuation of the building.

7.5 **Slips and Falls**

Floor polish should be avoided and hirers encouraged to mop up spillages immediately. Non – slip surfaces shall be provided in shower areas.

7.6 **Monitoring of users**

Users of Council facilities shall be monitored to ensure that the appropriate safety measures are in force and that there is adequate supervision of activities involving children.

7.7 **Electrical Equipment**

Hirers shall be asked to provide proof of electrical testing before their equipment is connected to the Council's power supply. RCD's should be used on the electrical supply to stages and bouncy castles.

7.8 **Insurance**

Hirers should have adequate public liability insurance. Advice as to the Limit of Indemnity should not be less than £5,000,000.

7.9 **Communal Areas**

All items provided by the Council or on Council owned land shall be inspected on a regular basis and a record maintained. Where defects are noted, they must be rectified as soon as possible. If equipment belongs to another party they should be notified promptly and asked to undertake the necessary repairs. If they fail to do this, or cannot be found, the Council may have to carry out repairs on their behalf.

7.10 **Playgrounds and Sports Facilities**

The grounds contractor is responsible for ensuring that litter is collected at the recreation grounds and placed for collection by WCC on a weekly basis.

Playground equipment at Broad Lane and New Road Recreation Ground and sports facilities (the pump and running tracks and skate park at New Road Recreation Ground) shall be inspected on a regular basis and monthly reports submitted to the Open Spaces and Amenities Committee. Agreed action will be put in hand.

An external inspection (by Winchester City Council and RoSPA) shall be carried out annually.

7.11 **Water Facilities**

Adequate recommended signage has been installed at the village pond. The Conservation Group continue to regularly monitor this facility.

7.13 **Public Events**

Recommendations and requirements of our Insurance Company will be adhered to. It is necessary to ensure that before any activity goes ahead evidence of Insurance on the part of hirers' has been sent to the Council.

8. **Contractors and Visitors**

Where contractors and sub contractors are engaged by the Parish Council they must undertake to maintain safe and effective control of working practices and to comply with the Health and Safety at Work Etc Act 1974. Contractors shall be required to produce a Method Statement and for major works a copy of the contractor's safety Policy and codes of practice, and a risk assessment. These shall be checked by the appropriate committee.

9. **Temporary Workers**

Information relating to Health and Safety will be provided for temporary workers in the same manner as that provided for permanent staff.

10. **Young persons and new or expectant mothers**

Specific regulations for young persons and new or expectant mothers will be applied as and when required.

11. **Advice and Contact Arrangements**

11.1 Local Health and Safety Inspectors Office, Priestley House, Priestley Road, Basingstoke, RG24 9NW, Tel: 0300 003 1747

11.2 Environmental Health Department, Winchester City Council, City Offices, Colebrook Street, Winchester, Tel: 01962 840222

11.3 Local doctors and nurse

The Surgery, Lower Lane, Bishops Waltham, Tel: 01489 892288
The Surgery, Wickham, Tel: 01329 833121

Health and Safety at Work etc Act 1974

I certify that I have read the Health and Safety Policy of Swanmore Parish Council.

I certify that I fully understand all risks and procedures identified within the Policy and will be aware of these at all times.

Name

Position

Signature

Date

HEALTH AND SAFETY POLICY

Appendix A

COSHH Risk Assessment Template

Use our risk assessment template to simplify the COSHH risk assessment process for your common hazardous substances:

COSHH ASSESSMENT SHEET

Name of Substance:					COSHH Reference:	
Supplied by:					Date of Assessment:	
Persons at Risk:	Staff ☐	Public ☐	Young/Pregnant Workers ☐		Review Date:	
	Visitors ☐	Contractor ☐				
Assessor:	Print name:			Supervisor:	Print name:	
	Signed:				Signed:	
Description of Substance:				Method of Use:		
Site and Location of Substance:				Department:		

Hazards Identification and PPE

Routes of Entry:	Personal Protective Equipment (Tick Required Boxes):						Tick here for none ☐
Inhalation ☐							
Absorption ☐							
Ingestion ☐							
Location of PPE:	Hand Protection	Protective clothing	Protective Footwear	Safety Glasses	Face Shield	Face Mask	Respirator
	☐	☐	☐	☐	☐	☐	☐

Hazard & Precautionary Statements:	Occupational Exposure Standard (OES):	Maximum Exposure Limits (MEL):	Workplace Exposure Limits (WEL):

Frequency and Duration of Exposure

Amount Used:	**How Many Times per Day**:	**Duration**:
Small (millilitres) ☐	1–5 ☐	1–5 minutes ☐
Medium (litres) ☐	5–10 ☐	6– 0 minutes ☐
Large (cubic metres) ☐	More than 10 ☐	31– 60 minutes ☐
		1 hour+ ☐

Substance Properties (Tick all that apply)

You should review the current MSDS for your product and ensure that the correct symbols are ticked.

								
Oxidising	**Explosive**	**(Extremely) Flammable**	**Toxic**	**Harmful**	**Corrosive**	**Human Health**	**Dangerous for environment**	**Gas under pressure**
☐	☐	☐	☐	☐	☐	☐	☐	☐

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Control Measures	
General Precautions	**First Aid Measures**

Further Controls Required	Responsibility	By When	Date Done

Spillage Procedure	Fire and Explosion Prevention

Handling and Storage	Disposal Considerations

COSHH Assessment Comments

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Assessor Summary	YES/NO	Further Action
1. Has the assessment considered all factors pertinent to the use of the substance? If **NO**, please give details of further action required.		
2. Has the assessment considered the practicability of preventing exposure? If **NO**, please give details of further action required.		
3. Has the assessment considered the steps to be taken to achieve and maintain adequate control of exposure where prevention is not reasonably practicable? If **NO**, please give details of further action required.		
4. Has the assessment considered the need for monitoring exposure to the substance? If **NO**, please give details of further action required.		
5. Has the assessment identified all action required to comply with regulations? If **NO**, please give details of further action required.		

COSHH Assessment	Please tick	
The task is safe to be carried out with current control procedures.		Tick if no further action required.
The task is safe to be carried out subject to actions listed.		Tick if use of the substance is not causing significant problems but requires some action to bring it within COSHH guidelines. Action should be prioritised and specific dates set for completion.
Task/substance is **unsafe**, significant non-compliance with health & safety standards.		Tick if the task or substance has potential to cause significant problems to users; use of substance to be discontinued until problems have been rectified.

The task/process should be re-assessed on a regular basis either annually, or if there are significant changes to the task or process or if there is a significant change in personnel who carry it out it e.g. young/inexperienced workers, pregnancy, workers with pre-existing conditions such as asthma, dermatitis, etc.		
Assessor Name:	Date:	
This Assessment has been discussed with the user and their line manager and action agreed.	Signed:	
User:	Line Manager:	Date:

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HEALTH AND SAFETY POLICY

Appendix B

Manual handling at work

A brief guide

01/20 INDG143(rev4)

You can buy this leaflet at
https://books.hse.gov.uk/

This is a web version of the printed edition

TSO London

Introduction

As an employer, you must protect your workers from the risk of injury and ill health from hazardous manual handling tasks in the workplace. This leaflet will help you do that. It includes simple risk filters to help you identify which manual handling activities are hazardous.

Manual handling means transporting or supporting a load by hand or bodily force. It includes lifting, lowering, pushing, pulling, moving or carrying a load. A load is a moveable object, such as a box or package, a person or an animal, or something being pushed or pulled, such as a roll cage or pallet truck.

What's the problem?

Manual handling injuries are part of a wider group of musculoskeletal disorders (MSDs). The term 'musculoskeletal disorders' includes injuries and conditions that can cause pain to the back, joints and limbs.

This leaflet focuses on manual handling, which is one of the main causes in the development of musculoskeletal disorders, particularly back pain. For the latest statistics, visit the HSE website.

Manual handling risks can be found across all kinds of workplaces – on farms and building sites, in factories, offices, warehouses, hospitals and while making deliveries. Heavy manual labour, repetitive handling, awkward postures and previous or existing injuries or conditions are all risk factors for developing MSDs. Work may also make worse an injury which was not caused at work, such as a sports injury. There is more advice on MSDs on the HSE website.[1]

Taking the action described here will help prevent injuries and ill health, but you can't prevent all MSDs. Encourage workers to report any signs and symptoms to you or their worker representative at an early stage, before they become more serious, so you can take steps to reduce the risk.

If your workers have developed symptoms, consider taking advice from an occupational health provider on a worker's fitness for work and any restrictions or adaptations to their work that may be required.

What does the law say?

The Management of Health and Safety at Work Regulations[2] require you to assess the risks to the health and safety of your workers. Where this identifies hazardous manual handling of loads, you should also comply with the Manual Handling Operations Regulations (the Manual Handling Regulations).[3]

The Manual Handling Regulations set out a clear hierarchy of measures you must follow to prevent and manage the risks from hazardous manual handling:

- **avoid** hazardous manual handling operations, 'so far as reasonably practicable';*
- **assess** the risk of injury to workers from any hazardous manual handling that can't be avoided;
- **reduce** the risk of injury to workers from hazardous manual handling to as low as reasonably practicable.

Workers have duties too. They should:

- follow systems of work in place for their health and safety;
- use properly any equipment provided for their health and safety;
- cooperate with you on health and safety matters;
- inform you if things change or they identify hazardous handling activities;
- take care to make sure their activities do not put others at risk.

Consult and involve your workforce. Your workers and their representatives know first-hand what the risks in the workplace are and can often suggest practical solutions to control them.[4]

*This means balancing the level of risk against the measures needed to control the real risk in terms of money, time or trouble. However, you do not need to take action if it would be grossly disproportionate to the level of risk.

Avoid hazardous manual handling

Eliminate handling the load

Can you eliminate hazardous manual handling by not moving loads, for example, by looking at whether the work could be done in a different way:

- Does the item really need to be moved, or can the activity be done safely where it already is by redesigning the task?
- Can products or materials be delivered directly to where they will be used?

Automation or mechanisation

If handling the load cannot be avoided, consider whether the operations can be automated or mechanised to eliminate the manual part of the handling. The best time to make decisions about this is when plant or systems of work are being designed.

- Can you use materials handling equipment or mechanical aids to eliminate or reduce the risks you identify in your risk assessment? Can you use, for example, a conveyor, a chute, an electric-powered pallet truck, an electric or hand-powered hoist, or a lift truck to reduce the risk of injury? See *Making the best use of lifting and handling aids* for more information.[5]
- Can you use robotics technology, for example, in production lines?
- When introducing automation or mechanisation, make sure you avoid introducing new risks (for example, when maintaining equipment or when things break down).
- Make sure your workers are trained to use any equipment you introduce, such as lift trucks.

Assess the risks

Where you identify risks from hazardous manual handling in your workplace that cannot be avoided, you must do a manual handling risk assessment to help you decide what you need to do to manage these risks. Make sure your workforce is fully involved in the risk assessment process.

Consider risks arising from:

- the task;
- the load;
- the working environment;
- individual capacity;
- any materials handling equipment or handling aids used;
- how you organise and allocate work;
- the pace, frequency and duration of the work.

Make sure you take account of the individual requirements of workers who may be especially at risk, for example:

- new or expectant mothers;
- people with disabilities, which may make it more difficult to do a particular task;
- those returning to work after a recent manual handling injury, who may be on a phased return to work;
- inexperienced new, young or temporary workers;
- older workers;
- contractors, homeworkers or lone workers;
- migrant workers who may not have English as their first language.

You also need to take account of psychosocial risk factors. These may affect workers' psychological responses to their work and workplace conditions. Examples are high workloads, tight deadlines and lack of control over the work and working methods, which may make people more likely to develop MSDs.

How detailed should my risk assessment be?

The amount of detail required by your manual handling risk assessments will depend on a number of factors, including the level of risk and complexity of the tasks being carried out. Using HSE's simple risk filter(s) as a first step can help you to initially identify low- and high-risk tasks. This will help you decide your priorities for more detailed assessments of your higher-risk tasks.

HSE's guidance on the Manual Handling Regulations (L23) *Manual handling*[3] contains in-depth advice on risk assessment. If you choose to use HSE's suggested approach, there are three levels of detail:

- **simple filters** to distinguish low-risk tasks from those which need a more detailed assessment;
- **HSE's risk assessment tools**, the *Manual handling assessment charts (the MAC tool)*[6] and *Risk assessment of pushing and pulling (RAPP) tool*[7] which help you identify high-risk handling operations and prioritise action to control the risks if the tasks fall outside the simple risk filters;
- **a full risk assessment**. There are online checklists[8] available if you need to carry out a full risk assessment for lifting and carrying or pushing and pulling.

Simple filters

Use the guideline filters for lifting and lowering in Figure 1 to help you identify low-risk tasks. The Manual Handling Regulations do not set specific weight limits, so the guidelines are **not** 'safe limits' for lifting and carrying. They use broad assumptions or generalisations where, if met, the risk of injury is considered to be low. But working outside the limits is likely to increase the risk of injury, which can lead to ill health. The guidelines are derived from lifting capacity data which show differences between men and women in the population (rather than individuals).

The filter for pushing and pulling in Figure 2 looks at the posture of your workers during pushing or pulling operations.

Where the handling task falls within the filter guidelines, you do not normally need to do any other form of risk assessment unless you have individual workers who may be at significant risk. If you are unsure, complete a more detailed assessment.

Lifting and lowering risk filter

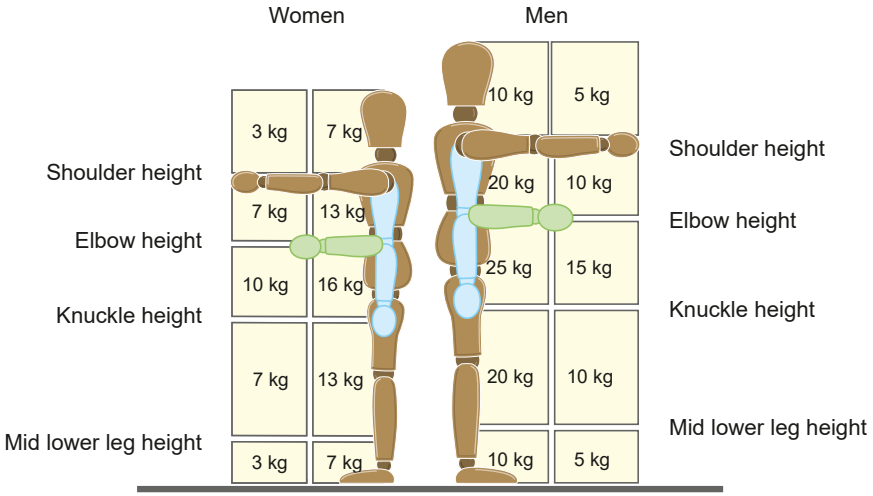

Figure 1 Lifting and lowering risk filter

- Figure 1 assumes that the load is easily grasped with both hands and is handled in reasonable working conditions, with the worker in a stable body position.
- Each box in Figure 1 contains a filter value for lifting and lowering in that zone. The filter values in the boxes are reduced if handling is done with arms extended, or at high or low levels, as that is where injuries are most likely to happen.
- Observe the work activity you are assessing and compare it to Figure 1. First, decide which zone or zones the worker's hands pass through when moving the load. Then assess the maximum weight being handled. If it is less than the value given in the matching box, it is within the guidelines.
- If the worker's hands enter more than one zone during the operation, use the smallest weight. Use an in-between weight if the hands are close to a boundary between zones.

Lifting and lowering: Do I need to make a more detailed assessment?

You will need to make a more detailed assessment using the MAC tool or full risk assessment checklists (or equivalent) if:

- the handling operation must take place with the hands outside the zones in Figure 1;
- the weight exceeds those in Figure 1;
- the handling involves torso twisting;
- the handling is more frequent than one lift every two minutes;
- the handling is done by a team;
- the handling operations are complex, for example, the weights vary significantly or there are several start and finish locations;
- the lift does not meet the conditions given for using the guidelines, for example, if the load is difficult to grasp or handle;
- the person lifting may be at significant risk, for example, new or expectant mothers, young workers, those new to the job, or those with a disability, significant health problem or recent injury.

Carrying risk filter

You can apply the filter weights for lifting and lowering in Figure 1 to carrying operations where the load:

- is held against the body;
- is carried no further than about 10 m without resting;
- does not prevent the person from walking normally;
- does not obstruct the view of the person carrying it;
- does not require the hands to be held below knuckle height or much above elbow height.

Where you can carry the load securely on the shoulder without lifting it first (for example, by sliding it onto your shoulder), you can apply the filter values up to 20 m.

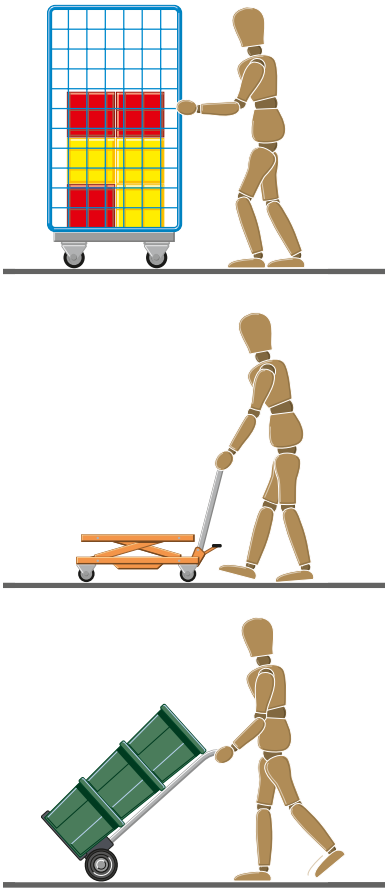

Figure 2 Acceptable push/pull postures

Pushing and pulling risk filter

In pushing and pulling operations, the load might be slid, rolled or moved on wheels. Observe the worker's general posture during the operation. Figure 2 shows some acceptable push/pull postures. The task is likely to be low risk if:

- the force is applied with the hands;
- the torso is largely upright and not twisted;
- the hands are between hip and shoulder height;
- the distance moved without a pause or break is no more than about 20 m.

Pushing and pulling: Do I need to make a more detailed assessment?

If the load can be moved and controlled very easily, for example with one hand, you do not need to do a more detailed assessment. You should make a more detailed assessment using, for example, the RAPP tool or full risk assessment checklists (or equivalent) if:

- the posture shows that the task requires significant forces, for example, leaning;
- there are extra risk factors like slopes, uneven floors, constricted spaces or trapping hazards.

Handling while seated

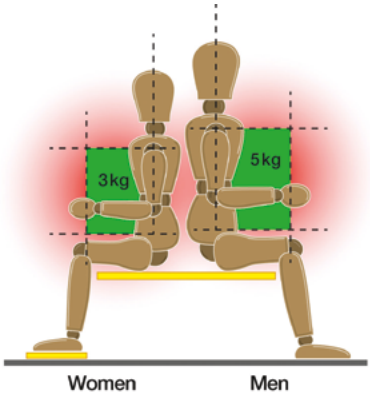

Figure 3 Handling while seated

The filter values for handling operations carried out while seated, as shown in Figure 3, are **Men: 5 kg** and **Women: 3 kg**. These values only apply for two-handed lifting and when the hands are within the green zone shown. If handling beyond the green zone is unavoidable, you should make a full assessment.

Record and review

Make a record of your significant findings – the hazards, how people might be harmed by them and what you have in place to control the risks. Any record should be simple and focused on controls. If you have fewer than five employees you do not have to write anything down, but it is useful to do this so you can review it later, for example, if something changes.

Regularly review your work activities to make sure the risks are being adequately controlled and that your risk assessment remains relevant – few workplaces stay the same because production processes or workers may change.

What about manual handling training?

Providing information and training alone will not ensure safe manual handling.[9] The first objective should always be to design the handling operations to be as safe as reasonably practicable. Manual handling training is important to further manage the risk of injury if the task cannot be avoided and you have already taken action to reduce the risk. However, on its own, it can't overcome:

- a lack of mechanical aids;
- badly designed tasks;
- unsuitable loads;
- an unsuitable working environment.

The information covered by manual handling training should be specific to the job and should include:

- manual handling risk factors and how injuries can happen;
- appropriate systems of work for the individual's tasks and environment;
- use of mechanical aids;
- how to carry out safe manual handling, including good handling techniques;[1]
- practical work relevant to the job to allow the trainer to identify and put right anything the trainee is not doing safely;
- how to report symptoms and injuries.

Risks and controls

Table 1 includes some practical advice on what to look for when making an assessment and suggests ways to control the risks.

Table 1 Risks and how to control them

Risks to look for when making an assessment	Ways of reducing the risk of injury
The tasks Do they involve: ■ holding loads away from the body? ■ twisting, stooping or reaching upwards? ■ large vertical movement? ■ long carrying distances? ■ strenuous pushing or pulling? ■ repetitive handling? ■ risk of sudden movement of loads? ■ insufficient rest or recovery time? ■ a work rate imposed by a process?	Can you: ■ use a lifting aid? ■ change workplace layout to improve efficiency? ■ reduce the amount of twisting and stooping? ■ avoid lifting from floor level or above shoulder height, especially heavy loads? ■ reduce carrying distances? ■ use powered handling devices to eliminate pushing and pulling? ■ avoid repetitive handling? ■ take steps to reduce fatigue? ■ vary the work, allowing one set of muscles to rest while another is used?
The loads Are they: ■ heavy or bulky? ■ difficult to grasp? ■ unstable or likely to move unpredictably? ■ harmful, eg sharp or hot? ■ awkwardly stacked? ■ too large for the handler to see over?	Can you make the load: ■ lighter or less bulky? ■ easier to grasp? ■ more stable? ■ less harmful? ■ evenly stacked? If the load comes in from elsewhere, have you asked the supplier to help, eg by providing handles or smaller packages?

Risks to look for when making an assessment	Ways of reducing the risk of injury
The working environment Are there: ■ restrictions on posture? ■ bumpy, obstructed or slippery floors? ■ variations in floor levels? ■ hot/cold/humid conditions? ■ gusts of wind or other strong air movements? ■ poor lighting conditions? ■ restrictions on movements from clothes or personal protective equipment (PPE)?	Can you: ■ remove obstructions to free movement? ■ provide better flooring and/or slip-resistant footwear? ■ avoid steps and steep ramps? ■ prevent extremes of hot and cold? ■ improve ventilation? ■ improve lighting? ■ provide suitable protective clothing or PPE that is less restrictive?
Individual capacity Does the job: ■ require unusual capability, eg above average strength or agility? ■ pose a risk to those with a health problem or learning/physical disability? ■ pose a risk to new or expectant mothers? ■ pose a risk to new or young workers? ■ call for special information or training?	Can you: ■ consider the design of the task? ■ pay particular attention to those who have a physical weakness? ■ take extra care of, eg new or expectant mothers and new/young workers? ■ give your workers more information, eg about the range of tasks? ■ provide more training? ■ get advice from an occupational health advisor if you need to?

Risks to look for when making an assessment	Ways of reducing the risk of injury
Handling aids and equipment Consider: ■ is the device the correct type for the job? ■ is it well maintained? ■ are the wheels on the device suited to the floor surface? ■ do the wheels run freely? ■ is the handle height between the waist and shoulders? ■ are the handle grips in good condition and comfortable? ■ are there any brakes? If so, do they work?	Can you: ■ provide equipment that is more suitable for the task? ■ carry out planned preventive maintenance to prevent problems? ■ change the wheels, tyres and/or flooring so that equipment moves easily? ■ provide better handles and handle grips? ■ make the brakes easier to use, reliable and effective?
Work organisation factors Consider: ■ is the work repetitive? ■ is the work machine or system-paced? ■ do workers feel the demands of the work are excessive? ■ do workers have little control of the work and working methods? ■ is there poor communication between managers and workers?	Can you: ■ change tasks to increase variety? ■ adjust the work rate? ■ make more use of workers' skills? ■ make workloads and deadlines more achievable? ■ involve workers in decisions? ■ encourage good communication and teamwork? ■ provide better training and information?

Find out more

1 HSE's website on musculoskeletal disorders:
www.hse.gov.uk/msd

2 *Risk assessment: A brief guide to controlling risks in the workplace* Leaflet INDG163(rev4) HSE 2014
www.hse.gov.uk/pubns/indg163.pdf

3 *Manual handling. Manual Handling Operations Regulations 1992. Guidance on Regulations* L23 (Fourth edition) HSE 2016
www.hse.gov.uk/pubns/books/l23.htm

4 *Consulting employees on health and safety: A brief guide to the law* Leaflet INDG232(rev2) HSE 2013
http://www.hse.gov.uk/pubns/indg232.pdf

5 *Making the best use of lifting and handling aids* Leaflet INDG398(rev1) HSE 2013
http://www.hse.gov.uk/pubns/indg398.pdf

6 *Manual handling assessment charts (the MAC tool)* Leaflet INDG383(rev3) HSE 2018
www.hse.gov.uk/pubns/indg383.htm

7 *Risk assessment of pushing and pulling (RAPP) tool* Leaflet INDG478 HSE 2016
www.hse.gov.uk/pubns/indg478.htm

8 *Full manual handling risk assessment: Examples of assessment checklists*
http://www.hse.gov.uk/pubns/ck5.pdf

9 For help seeking the right type of manual handling advice, see 'Getting help with manual handling risks in your business'
http://www.hse.gov.uk/msd/external-help.htm

Further information

For information about health and safety visit https://books.hse.gov.uk or http://www.hse.gov.uk.

You can view HSE guidance online and order priced publications from the website. HSE priced publications are also available from bookshops.

To report inconsistencies or inaccuracies in this guidance email commissioning@wlt.com.

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HEALTH AND SAFETY POLICY

Appendix C

Working with display screen equipment (DSE)

A brief guide

This is a web-friendly version of leaflet INDG36(rev4), published 04/13

Introduction

This leaflet will help you to comply with the Health and Safety (Display Screen Equipment) Regulations 1992 and explains what you, as an employer, may need to do to protect your employees from any risks associated with Display Screen Equipment (DSE) (ie computers and laptops). It will also be useful to employees and their representatives.

These Regulations only apply to employers whose workers regularly use DSE as a significant part of their normal work (daily, for continuous periods of an hour or more). These workers are known as DSE users.

These Regulations do **not** apply to workers who use DSE infrequently or for short periods of time. However, the controls described in 'How to control the risk' may still be useful for these workers.

If you have DSE users, you must:

- analyse workstations to assess and reduce risks;
- make sure controls are in place;
- provide information and training;
- provide eye and eyesight tests on request, and special spectacles if needed;
- review the assessment when the user or DSE changes.

For those who employ many users of DSE, this guidance also contains information that may help you manage your legal duties efficiently (see 'Using DSE assessors').

What is DSE?

DSE are devices or equipment that have an alphanumeric or graphic display screen and includes display screens, laptops, touch screens and other similar devices.

What are the health risks with DSE?

Some workers may experience fatigue, eye strain, upper limb problems and backache from overuse or improper use of DSE. These problems can also be experienced from poorly designed workstations or work environments. The causes may not always be obvious and can be due to a combination of factors.

Consulting your employees on DSE

Workplaces where employees are involved in taking decisions about health and safety are safer and healthier. Collaboration with your employees helps you to manage the potential health problems associated with DSE in a practical way by:

- helping spot the risks;
- making sure health and safety controls are practical;
- increasing the level of commitment to working in a healthy way.

You must consult all your employees, in good time, on health and safety matters. In workplaces where a trade union is recognised, this will be through union health and safety representatives. In non-unionised workplaces, you can consult either directly or through other elected representatives.

Consultation involves employers not only giving information to employees, but also listening to them and taking account of what they say before making health and safety decisions.

For further information on your legal duties, see the HSE leaflet *Consulting employees on health and safety: A brief guide to the law* (see 'Further information').

How to control the risk

As an employer, you need to assess the risks associated with using DSE equipment and any special needs of individual staff. You may find the *DSE workstation checklist* (see 'Further information') helpful. This gives practical guidance on workstation assessments and is designed to encourage users to take an active part. If users are suitably trained, they can fill in the checklist themselves.

You should use your assessment to decide what needs to be done and check that action is taken.

Make a record of your significant findings. Any record you produce should be simple and focused on controls. If you have fewer than five employees, you do not have to write anything down. But it is useful to do this, so you can review it at a later date, for example if something changes. If you have five or more employees, you are required by law to write it down.

Few workplaces stay the same, so it makes sense to review what you are doing on an ongoing basis.

The risks from DSE can be controlled using the following straightforward, low-cost controls.

Getting comfortable

The following may help users:

- Forearms should be approximately horizontal and the user's eyes should be the same height as the top of the screen.
- Make sure there is enough work space to accommodate all documents or other equipment. A document holder may help avoid awkward neck and eye movements.
- Arrange the desk and screen to avoid glare, or bright reflections. This is often easiest if the screen is not directly facing windows or bright lights.

- Adjust curtains or blinds to prevent intrusive light.
- Make sure there is space under the desk to move legs.
- Avoid excess pressure from the edge of seats on the backs of legs and knees. A footrest may be helpful, particularly for smaller users.

Well-designed workstations

Keyboards and keying in (typing)

- A space in front of the keyboard can help you rest your hands and wrists when not keying.
- Try to keep wrists straight when keying.
- Good keyboard technique is important – you can do this by keeping a soft touch on the keys and not overstretching the fingers.

Using a mouse

- Position the mouse within easy reach, so it can be used with a straight wrist.
- Sit upright and close to the desk to reduce working with the mouse arm stretched.
- Move the keyboard out of the way if it is not being used.
- Support the forearm on the desk, and don't grip the mouse too tightly.
- Rest fingers lightly on the buttons and do not press them hard.

Reading the screen

- Make sure individual characters on the screen are sharp, in focus and don't flicker or move. If they do, the DSE may need servicing or adjustment.
- Adjust the brightness and contrast controls on the screen to suit lighting conditions in the room.
- Make sure the screen surface is clean.
- When setting up software, choose text that is large enough to read easily on screen when sitting in a normal comfortable working position.
- Select colours that are easy on the eye (avoid red text on a blue background, or vice versa).

Changes in activity

Breaking up long spells of DSE work helps prevent fatigue, eye strain, upper limb problems and backache. As the employer you need to plan, so users can interrupt prolonged use of DSE with changes of activity. Organised or scheduled rest breaks may sometimes be a solution.

The following may help users:

- Stretch and change position.
- Look into the distance from time to time, and blink often.
- Change activity before users get tired, rather than to recover.
- Short, frequent breaks are better than longer, infrequent ones.

Timing and length of changes in activity or breaks for DSE use is not set down in law and arrangements will vary depending on a particular situation. Employers are not responsible for providing breaks for the self-employed.

Portable computers

These same controls will also reduce the DSE risks associated with portable computers. However, the following may also help reduce manual handling, fatigue and postural problems:

- Consider potential risks from manual handling if users have to carry heavy equipment and papers.

- Whenever possible, users should be encouraged to use a docking station or firm surface and a full-sized keyboard and mouse.
- The height and position of the portable's screen should be angled so that the user is sitting comfortably and reflection is minimised (raiser blocks are commonly used to help with screen height).
- More changes in activity may be needed if the user cannot minimise the risks of prolonged use and awkward postures to suitable levels.
- While portable systems not in prolonged use are excluded from the regulations some jobs will use such devices intermittently and to support the main tasks. The degree and intensity of use may vary. Any employer who provides such equipment still has to risk assess and take steps to reduce residual risks.

DSE user training

You must provide information, instruction and health and safety training to users to help them identify risks and safe work practices. When training users, consider explaining:

- the risks from DSE work and the controls you have put in place;
- how to adjust furniture;
- how to organise the workplace to avoid awkward or frequently repeated stretching movements;
- how to clean the screen and mouse;
- who to contact for help and to report problems or symptoms;
- how to use the *Display screen equipment (DSE) workstation checklist* (see 'Further information') if users are going to make their own assessment.

You may need to retrain users if you make significant changes to workstations.

Providing eye tests and any necessary spectacles for DSE work

There is no evidence to suggest that DSE work will cause permanent damage to eyes or eyesight. Eye tests are provided to ensure users can comfortably see the screen and work effectively without visual fatigue.

If a user or a potential user requests an eye test you are required to provide one. If the test shows that the user needs glasses specifically for DSE work, you must pay for a basic pair of frames and lenses. Eye tests are not an entitlement for the self-employed.

Users are entitled to further tests if DSE work is considered to cause them visual fatigue and at regular intervals after the first test.

The arrangements you make to provide eye and eyesight tests can vary. For example, some employers let users arrange tests for themselves (and give the employer the bill); others prefer to send all their staff to be tested by one optician. The following may help you when setting up your arrangements:

- contact a number of opticians to make sure you get a competitive rate;
- ask if they will come to you to carry out the eye tests;
- ask for standard information about each user test. This should say if the user needs glasses for DSE work, and when they should be retested;
- tell users what arrangements you have made;

- make sure users understand what you will and won't pay for.

You only need to provide glasses for the DSE work. If users' normal glasses are suitable for DSE work, you don't need to pay for them. You don't have to pay for expensive frames or lenses.

Review

DSE assessments need to be reviewed when:

- major changes are made to the equipment, furniture, work environment or software;
- users change workstations;
- the nature of work tasks change considerably;
- it is thought that the controls in place may be causing other problems.

Using DSE assessors

If you employ many users of DSE, it may help to appoint someone competent to act as an assessor. The assessor can help to:

- identify who is covered by the Regulations;
- assess workstation risks and put control measures in place;
- provide training.

Training assessors

Trained assessors can help you recognise risky workstation layouts, environments and practices. Make sure whoever you choose to become an assessor (it may be more than one person) knows what is expected of them. You will also need to make sure assessors have taken any necessary actions to tackle the problems that have been identified.

It is worth providing assessor training on the following:

- how to review user assessments or checklists to identify any additional controls;
- how to tackle problems the user is unable to solve;
- deciding when additional information and help is needed, and where to go for it;
- how to record significant findings.

Training products for assessors are available from many organisations and whatever training methods you use, you should check afterwards that assessors have understood the information and reached an adequate level of competence.

When analysing the completed checklists, it may be useful for assessors to consider the following:

- deal with the biggest problems first;
- investigate all reports of aches and pains from users;
- try to identify the causes of risk by looking at all potential causes. For example poor posture may be due to bad seating, **or** sitting awkwardly to avoid glare on the screen, **or** leaning forward to use the keyboard because the chair arm rests prevent it from being close enough to the workstation, **or** a poorly positioned mouse;

- remember to assess all the risks – look at things like task demands and changes in activity, as well as the physical aspects of the workstation;
- take account of individuals' special needs, such as users with a disability.

Further reading

Aching arms (or RSI) in small businesses: Is ill health due to upper limb disorders a problem in your workplace? Leaflet INDG171(rev1) HSE Books 2003 www.hse.gov.uk/pubns/indg171.pdf

Consulting employees on health and safety: A brief guide to the law Leaflet INDG232(rev2) HSE Books 2013 www.hse.gov.uk/pubns/indg232.htm

Display screen equipment (DSE) workstation checklist Leaflet CK1 HSE Books 2013 www.hse.gov.uk/pubns/ck1.htm

Work with display screen equipment: Health and Safety (Display Screen Equipment) Regulations 1992 as amended by the Health and Safety (Miscellaneous Amendments) Regulations 2002: Guidance on Regulations L26 (Second edition) HSE Books 2003 ISBN 978 0 7176 2582 6 www.hse.gov.uk/pubns/books/l26.htm

For businesses in office or retail premises, contact your local authority to speak to an Environmental Health Officer.

Further information

For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit www.hse.gov.uk. You can view HSE guidance online and order priced publications from the website. HSE priced publications are also available from bookshops.

This guidance is issued by the Health and Safety Executive. Following the guidance is not compulsory, unless specifically stated, and you are free to take other action. But if you do follow the guidance you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance.

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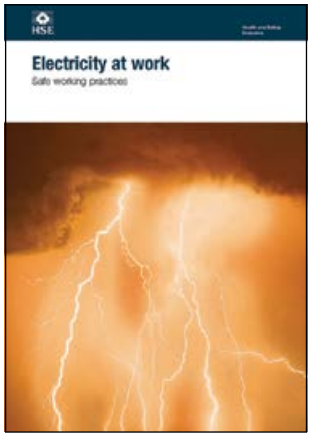
HEALTH AND SAFETY POLICY

Appendix D

Electricity at work

Safe working practices



HSG85 (Third edition)
Published 2013

The guidance covers the key elements to consider when devising safe working practices and is for people who carry out work on or near electrical equipment.

It includes advice for managers and supervisors who control or influence the design, specification, selection, installation, commissioning, maintenance or operation of electrical equipment.

This third edition updates the guidance and provides sources of further information.

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Contents

Introduction

1 This guidance is for people, including the self-employed, who carry out work on or near electrical equipment. It includes advice on safe working practices for managers and supervisors who control or influence the design, specification, selection, installation, commissioning, maintenance or operation of electrical equipment. Organisations that already have industry-specific rules or guidance for safe working practices should ensure that all aspects addressed in this guidance are adequately covered. Those that have no such internal rules should use this guidance to devise safe working practices relating to their own specific circumstances and activities.

2 The Electricity at Work Regulations 1989 (EAW Regulations) apply to almost all places of work. The *Memorandum of guidance on the Electricity at Work Regulations 1989*[1] (the Memorandum) is intended to help dutyholders meet the requirements of the Regulations. This guidance supplements the Memorandum with further advice on safe working practices. Where regulation numbers are given in Figures 1–5, these refer to the EAW Regulations. There is also an Approved Code of Practice covering the use of electricity at mines that provides additional guidance relevant to mining.[2] Other legislation can also apply to electrical work and some of this is listed in the 'References' or 'Further reading' sections, as are all other publications referred to in this guidance.

Definitions

3 Unless the context otherwise requires, in this guidance the following words and terms have meanings as given below (note: some of these terms are defined in the EAW Regulations):

- **charged:** the item has acquired a charge either because it is live or because it has become charged by other means such as by static or induction charging, or has retained or regained a charge due to capacitance effects even though it may be disconnected from the rest of the system;
- **dead:** not electrically 'live' or 'charged';
- **designated competent person (also known in some industries as 'authorised person' and 'senior authorised person')**: a competent person appointed by the employer, preferably in writing, to undertake certain specific responsibilities and duties, which may include the issue and/or receipt of safety documents such as permits-to-work. The person must be competent by way of training, qualifications and/or experience and knowledge of the system to be worked on;
- **disconnected:** equipment (or a part of an electrical system) that is not connected to any source of electrical energy;
- **equipment:** electrical equipment including anything used, intended to be used or installed for use, to generate, provide, transmit, transform, rectify, convert, conduct, distribute, control, store, measure or use electrical energy (as defined in the EAW Regulations);

- **high voltage:** a voltage in excess of 1000 V ac or 1500 V dc. Voltages below these values are 'low voltage';
- **isolated:** equipment (or part of an electrical system) which is disconnected and separated by a safe distance (the isolating gap) from all sources of electrical energy in such a way that the disconnection is secure, ie it cannot be re-energised accidentally or inadvertently;
- **live:** equipment that is at a voltage by being connected to a source of electricity. Live parts that are uninsulated and exposed so that they can be touched either directly or indirectly by a conducting object are hazardous if the voltage exceeds 50 V ac or 120 V dc in dry conditions – see BSI publication PD 6519[3] – and/or if the fault energy level is high;
- **live work:** work on or near conductors that are accessible and 'live' or 'charged'. Live work includes live testing, such as using a test instrument to measure voltage on a live power distribution or control system.

What are the hazards?

4 Electricity can kill or severely injure people and cause damage to property from the effects of fires and explosions. Every year accidents at work involving electric shock or burns are reported to the Health and Safety Executive (HSE). Electric shocks do not always cause lasting injury but in certain circumstances can result in death, known as electrocution. The sudden muscular contraction during the shock can result in injuries from, for example, falling. Electric current flowing through the body can cause deep burns.

5 Electrical arcing (sometimes called a 'flashover' or 'arc flash'), perhaps as a result of a short circuit caused by unsafe working practices, can generate intense heat leading to deep-seated and slow-healing burns, even if it persists for a short time. The intense ultraviolet radiation from an electric arc can also cause damage to the eyes. Often those working with or near electricity do not appreciate the risk of serious injury and consequential damage to equipment that can arise from arcing.

6 Arcing, overheating and, in some cases, electrical leakage currents can cause fire or explosion by igniting flammable materials. This can cause death, injury and considerable financial loss.

7 Most electrical accidents occur because people are working on or near equipment that is:

- thought to be dead but which is live;
- known to be live but those involved do not have adequate training or appropriate equipment to prevent injury, or they have not taken adequate precautions.

Correct selection and use of equipment

8 Equipment must be properly designed, constructed, installed and maintained so that it does not present a risk of electric shock, burns, fire or explosion when properly used. There are many equipment-specific standards that include safety-related requirements which, if followed, will ensure that the electrical risks are adequately controlled.

9 The main standard for low-voltage electrical installations is BS 7671 *Requirements for electrical installations.*[4] It describes how systems and equipment can be designed, constructed and installed so that they can be used safely. The standard covers installations that operate at low voltage (up to 1000 V ac). Meeting the requirements of this standard is likely to achieve compliance with the relevant parts of the EAW Regulations.

10 Some old equipment that is still in use, including open-type switchboards and fuseboards used by electricity distributors and in industrial premises such as steelworks, is not designed or constructed to prevent people touching live conductors and suffering injuries from shock or burns. In these cases, the user must have sufficient knowledge and experience to recognise the danger and avoid it. This type of equipment should be located in a secure room or area, with access available only to those who have specific authority and are competent to prevent danger. Even then, you will need to further protect this type of open, uninsulated equipment to prevent accidental contact with live parts when competent persons are working near it.

11 Some equipment operates at voltages that are so low that they cannot cause a harmful electric shock but even at these extra-low voltages an arc can occur, burns can result from overheated conductors, or an explosive atmosphere can be ignited. A short-circuited car battery, for example, may cause the conductors to overheat and even cause the battery to explode. The following advice also applies to self-contained sources of electrical energy, whether the risk is from electric shock, burn, arcing, or explosion.

12 You must select equipment that is suitable for the environment in which it is used, for example cables and equipment in heavy industries such as sheet metal works need to be protected against mechanical damage. You should consider adverse environmental factors when working on equipment. For example, excessively damp or humid conditions will increase the risk of injury because of reduced effectiveness of insulation, which may undermine the effectiveness of devices used for isolation, or increase the severity should an electric shock occur. Equipment that has corroded may not function as intended.

13 Certified explosion-protected equipment must be used in places where there could be potentially explosive atmospheres, for example if there has been a leak of flammable gas or build-up of combustible dust that could be ignited by an electric spark; more information is available in the Dangerous Substances and Explosive Atmospheres Regulations 2002[5] and, for offshore installations, the Offshore

Installations (Prevention of Fire and Explosion, and Emergency Response) Regulations 1995.[6]

14 You must assess the situation before work is carried out on or near equipment. Working on equipment may result in removal of components and parts that provide protection for people against electric shock when the equipment is in normal use.

15 You should ensure safety by the careful design and selection of electrical equipment. For example:

- switch disconnectors should have a locking-off facility or other means of securing them in the OFF position;
- circuits and equipment should be installed so that all sections of the system can be isolated as necessary;
- switch disconnectors should be suitably located and arranged so that circuits and equipment can be isolated without disconnecting other circuits that are required to continue in service;
- devices used for isolating circuits must be clearly marked to show their relationship to the equipment they control, unless there could be no doubt that this would be obvious to anyone who may need to operate them.

HSG230 *Keeping electrical switchgear safe*[7] includes guidance on the selection, use, care and maintenance of high-voltage and low-voltage switchgear.

16 Control panels should be designed with insulated conductors and shrouded terminals so that commissioning tests, fault-finding, calibration etc can be carried out with a minimum of risk. The Engineering Equipment and Materials Users' Association (EEMUA) has produced a design guide for electrical safety.[8] Interlocking is recommended to reduce the risk of injury from contact with live parts. Equipment with segregated power and control circuits is preferred.

17 Where possible, you must avoid live working during commissioning and fault-finding; eg by using suitably designed equipment with in-built test facilities and diagnostic aids. There must be adequate space, access and lighting to work safely. Temporary systems and equipment should be designed, constructed, installed and maintained to avoid danger.

Actions for managers and supervisors

18 Managers should establish a system of rules and procedures wherever electrical work is to be carried out, or ensure that contractors brought in to do electrical work have appropriate rules and procedures. These should be written down and everybody involved must be made aware of them as they will form the basis of task-specific risk assessments. The amount of detail depends on the circumstances; the simplest form may be a brief policy statement (perhaps reflecting a policy of always switching off, securing the isolation, working dead, and never working on live equipment) backed up by a set of simple instructions to reflect that policy. Where there are extensive or complex electrical systems, especially high-voltage systems, this will be reflected in the safety rules, which should embody a methodical approach so that the safety principles involved can be clearly understood by everyone.

19 Safety rules should set out the principles and general practices clearly and in a compact format. Those carrying out the work should be instructed to carry the safety rules with them. Workers should know the limitations of their work allowed under the safety rules. Detailed procedures for safe working on particular equipment, or under particular circumstances, should be the subject of separate documents, including task-specific risk assessments or method statements, which should be readily available when required (even in out-of-hours emergencies). These safety rules should be devised to reflect, among other things, the relevant organisation, personnel, the electrical system to be worked on, and the working environment. Further guidance can be obtained from three British Standards – BS 6423,[9] BS 6626[10] and BS 6867.[11]

20 If something unforeseen occurs during a working procedure, there should be a review of the work. Even a properly trained, competent worker may not always be aware of what to do when things go wrong. The worker should have been trained to recognise that there may be a need to change to a new system of work. It will normally be necessary for the worker to know how to refer a changed situation to the correct people, by communicating both up and down the management structure in the organisation.

21 If you have managerial or supervisory responsibilities, it is important that you ensure that everyone knows how to work safely and without risk to their health, and that all workers follow the safety rules and control measures identified in risk assessments:

- you should be involved in planning the work and in the risk assessment process, coordinating the work where more than one group is involved, and discussing the necessary precautions and emergency procedures with the workers;
- you must clearly define the roles and responsibilities of the supervisors and workers, including those of any contractors who may be employed;
- you must ensure that supervisors are competent to supervise the work, with the level of supervision being appropriate to the danger and the competence of those carrying out the work;

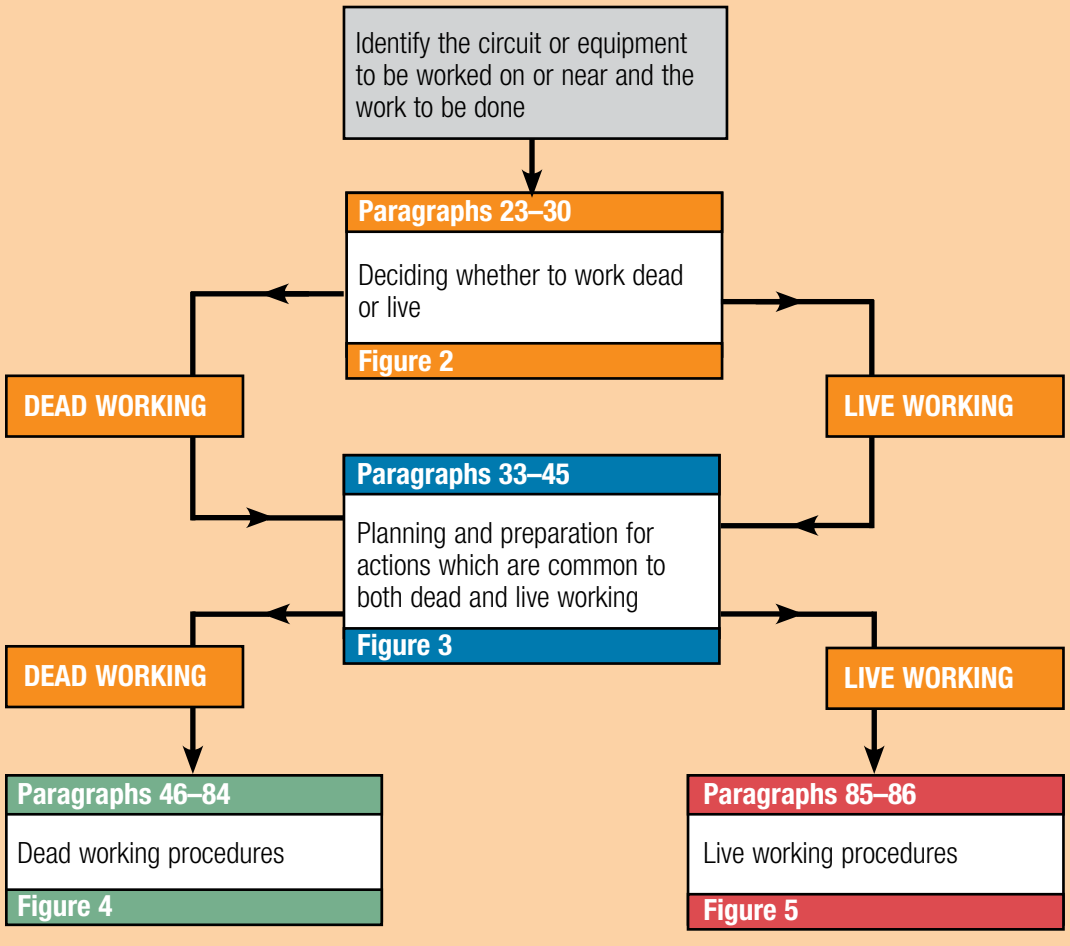
- you must identify those people who are competent and have knowledge and experience of the electrical system to be worked on. Anyone who does not have this will need a greater level of supervision, or will need to be given adequate training to make sure that they have the correct skills, knowledge and risk awareness for the task. Do not let unauthorised, unqualified or untrained people work on electrical systems.

Assessing safe working practices

22 Figure 1 illustrates the sequence of the planning steps. The procedure can be divided into four stages as follows:

- deciding whether to work dead or work live (coloured orange), see Figure 2;
- planning and preparation for actions which are common to both dead and live working (coloured blue), see Figure 3;
- procedures for working dead (coloured green), see Figure 4;
- procedures for working live (coloured red), see Figure 5.

Figure 1 Basic flow chart for assessing safe working practices



Deciding whether to work dead or live

Can the normal policy of dead working be carried out?

23 The factors to consider are illustrated in Figure 2. Work on or near live exposed conductors should rarely be permitted. Many accidents to electricians, fitters, technicians and engineers occur when they are working on equipment that could have been isolated. You should plan and programme the work to allow all jobs to be carried out where possible with the equipment dead. Three conditions must be met for live working to be permitted where danger may arise. **If just one of these conditions cannot be met, live working must not be permitted and dead working is essential.** The assessment procedure illustrates this. The conditions are:

- it is unreasonable in all the circumstances for the conductor to be dead; and
- it is reasonable in all the circumstances for the person to be at work on or near that conductor while it is live; and
- suitable precautions (including, where necessary, the provision of personal protective equipment) have been taken to prevent injury.

Is it unreasonable for the work to be done dead?

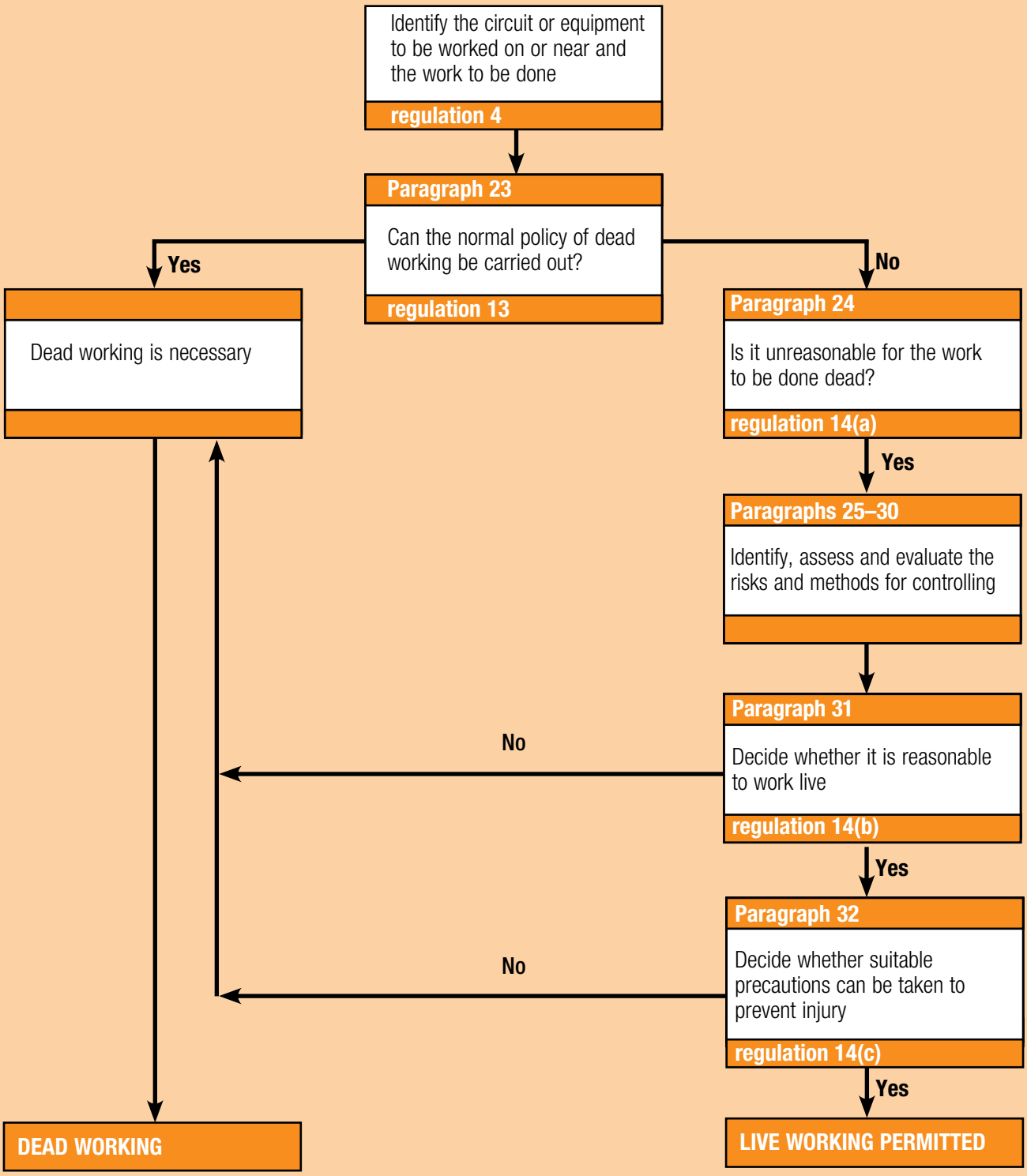
24 There are some circumstances where it is unreasonable to make equipment dead because of the difficulties it would cause. For example:

- it may be difficult, if not impossible, to commission a complex control cabinet without having it energised at some time with parts live (but not exposed so that they may be easily touched);
- it may not be technically feasible to monitor the operation and performance of a control system or to trace a malfunction of such equipment with it dead, ie fault-finding;
- a distribution network operator (DNO) needs to connect a new low-voltage service to an existing main, but it might be unreasonable to disconnect many customers. In recognition of the dangers associated with live working, the DNO must have a very strict code of safety rules and procedures to prevent injury;
- switching off a system, such as the supply to an electric railway track, to carry out maintenance or repair work may cause disproportionate disruption and cost.

Identify, assess and evaluate the risks and methods for controlling them

25 If you have decided that it is unreasonable for the work to be done dead, a risk assessment[12] is necessary. The risk assessment must cover the work on or near the specific equipment and it must be carried out by someone with comprehensive knowledge and experience of the type of work and the means of controlling the risks.

Figure 2 Deciding whether to work dead or live



26 A risk assessment is about identifying and taking sensible and proportionate measures to control the risks in your workplace, not about creating huge amounts of paperwork. Ask your employees what they think the hazards are, as they may notice things that are not obvious to you and may have some good ideas on how to control the risks.

27 Having identified the hazards arising from the live work, you then have to decide how likely it is that harm will occur and the severity of injury that might occur. Risk is a part of everyday life and you are not expected to eliminate all risks but you need to take account of the fact that electricity can cause very serious injuries and death. What you must do is make sure you know about the main risks and the things you need to do to manage them responsibly. Generally, you need to do everything reasonably practicable to protect people from harm.

28 As part of this process, you will need to consider the competence of the people who will be carrying out the work and their ability to avoid danger, taking into account the available precautions.

29 Make a record of your significant findings – the hazards, how people might be harmed by them and what you have in place to control the risks. Any record produced should be simple and focused on controls. If you have fewer than five employees, you do not have to write anything down. But it is useful to do this so you can review it at a later date, for example if something changes. If you have five or more employees, you are required by law to write it down.

30 Few workplaces stay the same, and you should review what you are doing on an ongoing basis.

Decide whether it is reasonable to work live

31 The risk assessment should inform managers and supervisors whether it is reasonable in all the circumstances to work live. The decision should not be taken lightly. At this stage the economic and operational factors should be evaluated against the risks involved before making a decision, bearing in mind that the risks associated with working live can be very serious. Minor inconveniences arising from working with the equipment dead, sometimes arising from commercial and time pressures, will very rarely outweigh the risks associated with live work.

Decide whether suitable precautions can be taken to prevent injury

32 Providing the requirements above have been met, live working can still only be justified if suitable precautions are taken to prevent injury arising from the hazards identified in the risk assessment. The precautions should have been identified in the risk assessment and might include:

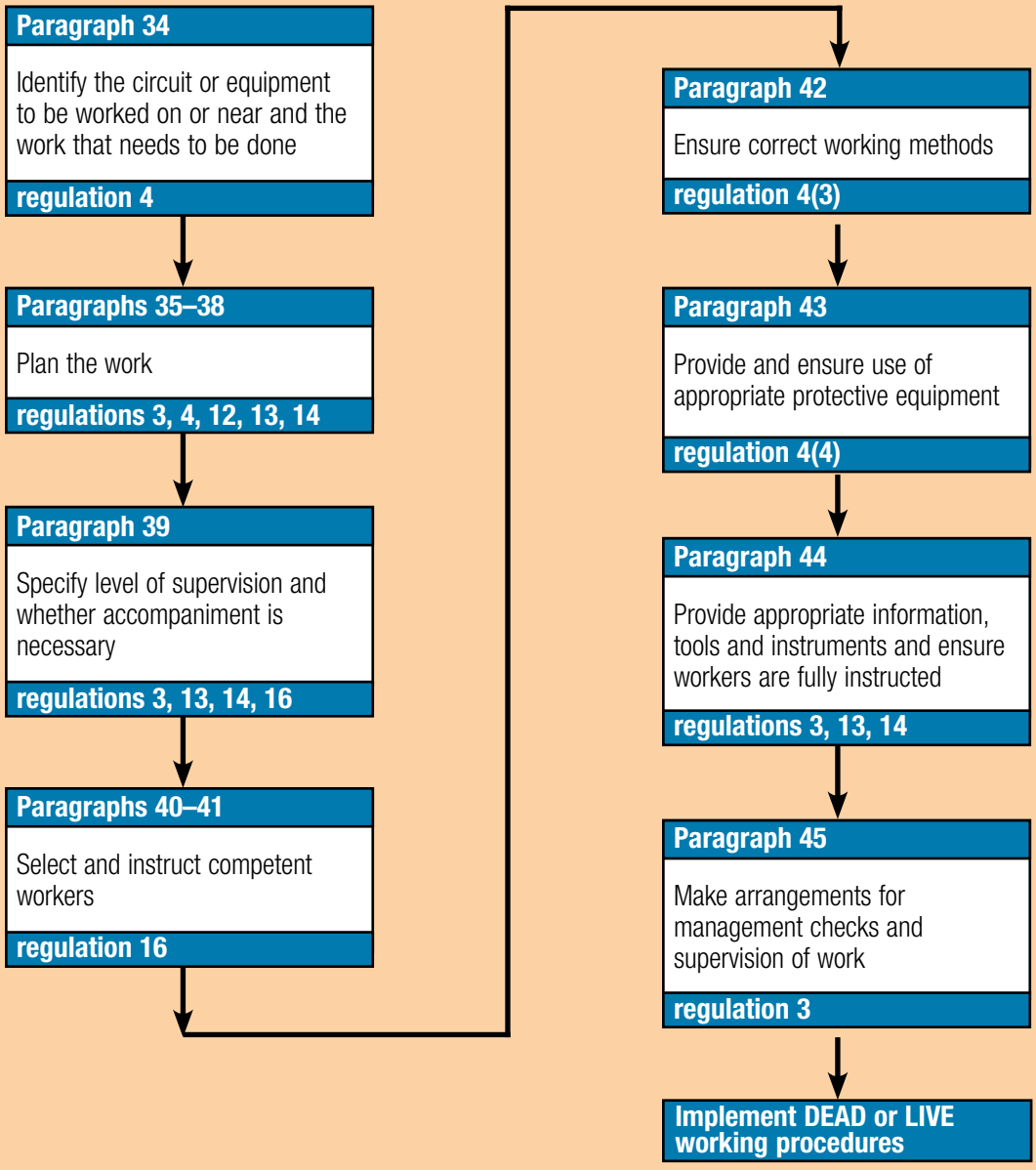
- installing temporary insulation, protective enclosures, or screens to prevent parts at different potentials being touched at the same time;
- using temporary barriers with warning notices affixed to keep unauthorised people away from the work area;
- ensuring that adequate clearances are established and maintained when working near to live equipment (see Appendix 3 of the Memorandum and Section 729 of BS 7671:2008 (+A1:2011) for information on clearances). For work near live overhead power lines, see GS6 *Avoiding danger from overhead power lines*;[13]

- making sure that workers understand the task and the system to be worked on (clarity of instructions is essential), are trained and experienced, and follow the correct procedures. They must be competent to realise their own limitations and know when to seek help;
- providing lighting and working space that is adequate and free from trip hazards. Further details on lighting at work can be found in HSG38 *Lighting at work*;[14]
- using robust and properly insulated tools (see BS EN 60900[15]);
- using test instruments with insulated probes and fused leads (see GS38 *Electrical test equipment for use by electricians*[16]);
- maintaining tools and test equipment in good condition and replacing them if damaged;
- storing tools correctly – horizontal surfaces and projections inside control cabinets should not be used – and ensuring that objects such as tools and bolts cannot fall onto exposed live parts;
- avoiding lone live working. Quick action is needed in the event of an electric shock to disconnect the supply and give assistance, so it will usually be necessary to be accompanied by someone who is competent to make the system safe and avoid injury;
- providing and using correct personal protective equipment (PPE) to reduce the risk of contact with live parts or earth, eg insulating gloves, insulating matting (see BS EN 61111:2009[17]). If there is a risk of burns from arcing or flashover that cannot be avoided, consider the use of adequately rated, thermally insulating, flame-resistant PPE (including face/eye protection). PPE should be frequently inspected and replaced if damaged. Requirements relating to PPE are covered by the Personal Protective Equipment at Work Regulations 1992.[18]

Actions common to both dead and live working

33 The actions common to both dead and live working are illustrated in Figure 3 and described below.

Figure 3 Planning and preparation for actions which are common to both dead and live working



Identify the circuit or equipment to be worked on or near and the work that needs to be done

34 These tasks should be carried out before the work starts. Factors that may affect the safe system of work should also be taken into account. In many cases, actual physical identification will be necessary and this may be aided by the use of appropriate drawings, diagrams and other written information. The features of equipment mentioned in paragraphs 8–17 should be taken into account.

Plan the work

35 Many electrical accidents are due to a failure to plan ahead. Planning should consider the management, supervision, implementation and completion of the work, and should lead to a formal system of work based on information in the safety rules and a task-specific risk assessment. In some instances, the planning requirements of the Construction (Design and Management) Regulations[19] will apply. You should consider the following:

- the work to be done;
- the hazards of the system or equipment to be worked on and the risks associated with the work;
- the people doing the work, their competence and the level of supervision necessary;
- the precautions to be taken and the system of work to be employed;
- the possibility that the nature of the work may change, eg a testing job may turn into fault finding.

36 There must be adequate information available about the electrical system and the work to be done. In the case of a newly constructed electrical system (or newly installed equipment), there should be drawings and schedules relating to the design and these should have been updated, if necessary, by the people carrying out the installation.

37 Records in the form of drawings and/or schedules should be kept for all but the most basic of installations. In the case of old installations where records may be poor, you should attempt to improve the records, eg by a combination of surveying, testing and labelling. However, when checking records before working on an installation it is unwise to rely solely on one source of information, eg a label. Labels should be securely fixed to equipment to clearly identify their function.

38 Electrical accidents often occur during fault-finding after a plant breakdown when pressure to repair the equipment results in risks being taken. To anticipate this, you should plan and establish safe fault-finding procedures to be implemented during breakdown maintenance.

Specify level of supervision and whether accompaniment is necessary

39 The planning process will have indicated the level of supervision required. An important factor to consider is the amount of training and experience workers have had to do the specific jobs – the less experienced or knowledgeable the worker is, including the level of familiarity with the system to be worked on, the greater will be the need for supervision. There will also be a greater need for supervision when working live. The need for accompaniment is also greater for live work, although it may still be necessary for some cases of working dead, especially if there are

adjacent live parts. The accompanying person should be trained to recognise danger, to switch off and, if necessary, to give assistance in the event of an emergency.

Select and instruct competent workers

40 Training as part of making a person competent is very important. Even the most highly qualified and capable people may not be competent to carry out specific types of work without suitable training. Competent workers will be self-disciplined and aware that reckless behaviour with electricity can lead to injury and death.

41 Those in control of the work should:

- assess the degree of competence of individual workers against the **specific** type of work to be done;
- provide clear instructions, information and adequate training for employees on:
  - the risks they may face;
  - the measures in place to control the risks, emphasising the safe system of work to be used;
  - how to follow emergency procedures;
- arrange for those being trained or those newly trained to be accompanied and supervised.

Ensure correct working methods

42 Managers and supervisors should ensure that workers understand the correct working methods, related to the specific work in hand. People doing the work should be aware of the limitations of that work and the constraints as to how they carry out the work. This includes recognising when it is unsafe to continue with the work and knowing how to deal with any contingencies that may arise.

Provide and ensure use of appropriate protective equipment

43 Managers, supervisors and workers have a responsibility to provide the protective equipment identified in the task-specific risk assessment and make sure that it is:

- suitable for the use for which it is provided;
- maintained in a condition suitable for that use; and
- used properly.

Provide information, tools and instruments and ensure workers are fully instructed

44 The workers must be supplied with and use correct and appropriate information, such as electrical drawings, tools, instruments.

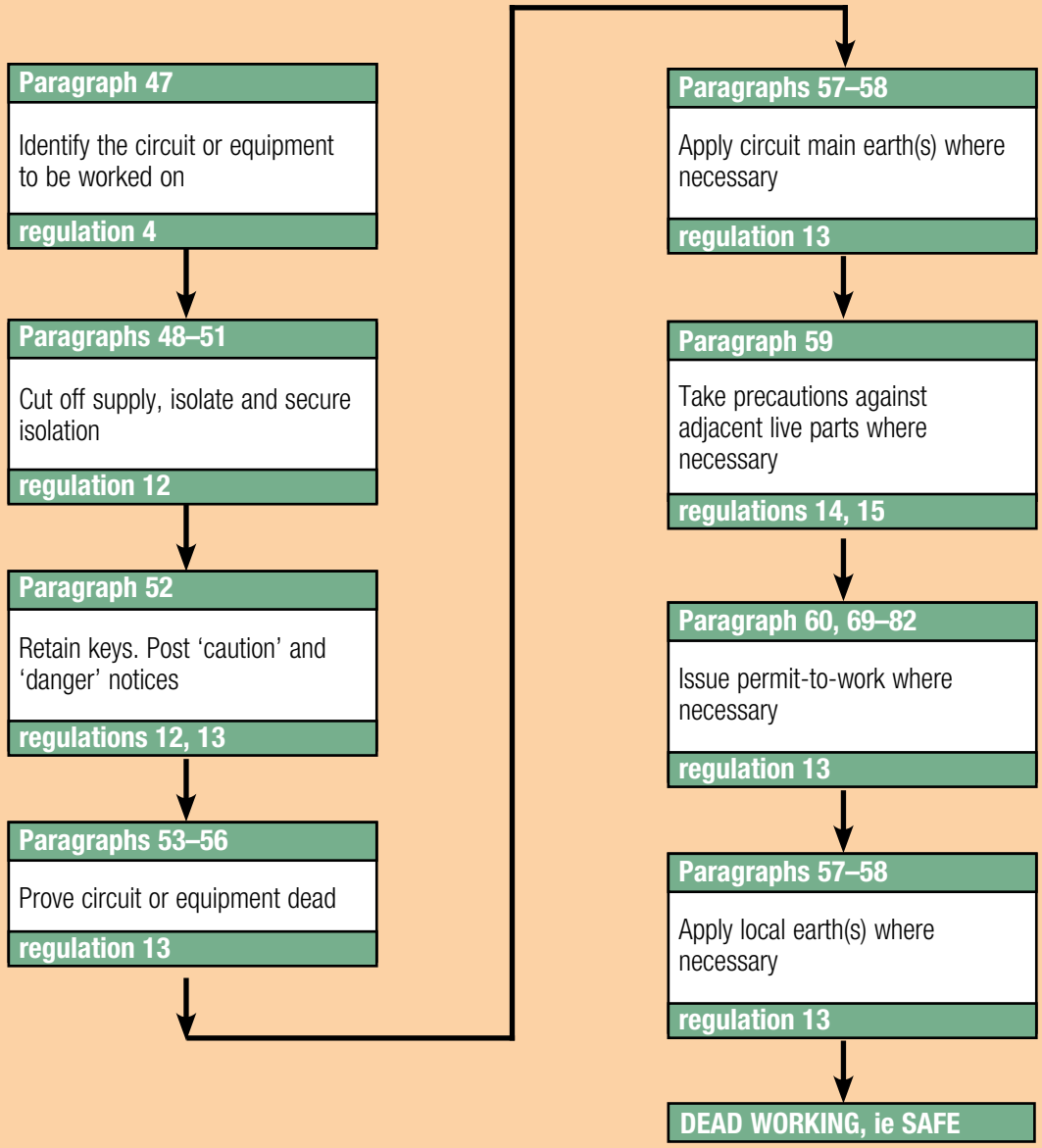
Make arrangements for management checks and supervision of work

45 Employers and workers must comply with the EAW Regulations in so far as they relate to matters within their control. You should check that workers are following the rules and correct procedures. Sometimes, some or all of these checks may be delegated to the supervisor of the work. Even in organisations with effective written safety rules and safe systems of work, regular and systematic management checks of the work are necessary. This is particularly important if the work is being done in the field, on another occupier's premises, or by peripatetic workers.

Working dead

46 While it is not always possible to follow a set procedure rigidly in every situation, the sequence illustrated in Figure 4 is recommended as a guide.

Figure 4 Dead working procedures



Identification

47 Adequate information should be supplied to identify equipment correctly (see paragraph 36). For most circuits and equipment correct labelling is important, but it should never be assumed that labelling is correct and that work can be started without having first proved that the equipment or circuit is dead. In some special cases, eg underground cables, cable-locating techniques using specialised instruments may be necessary and it may also be necessary to identify the cable both before and after switching operations and cable spiking.

Disconnection

48 Disconnect the equipment from every source of electrical energy before working on, or near, any part which has been live or is likely to be live. On equipment that is capable of storing charge, such as capacitors and high-voltage cables, ensure that any stored charge has been safely discharged.

Secure isolation

49 For adequate isolation, the disconnecting device should have an isolating gap sufficient for the voltage levels present or likely to occur. Make sure that any switch disconnector or other means of disconnection is secure. Switches, including circuit breakers, should be locked in the OFF position preferably using a 'safety' lock, ie a lock or padlock having a unique key or combination. Lockout devices that can be attached to the actuators of circuit breakers are available and should be used where appropriate. All keys should be retained in a secure place. If a plug has been withdrawn, make sure that it cannot be reconnected to the electrical supply while work is taking place on the circuits or apparatus – the use of proprietary lock-out devices for this purpose is encouraged.

50 If a fuse is removed, make sure that it or a similar one cannot be reinserted by taking it away or by locking the box or enclosure until work is completed. Some manufacturers produce lockable insulating blanks that you can insert in an empty fuseway. These prevent inadvertent fitting of a fuse while the associated circuit is being worked on.

51 If you rely on locking off where a number of people are working, the use of a multiple locking hasp attachment, lock-out box or key-safe may be appropriate to ensure that all the locks have to be removed before the equipment can be re-energised. Everyone involved in the work should apply a lock to the multiple locking hasp and keep personal possession of the key.

Post notices

52 You should put a notice or label at the place of disconnection so everyone else knows that work is being done. For example, a 'caution' notice can be used to indicate that someone is working on the apparatus and may be injured if it is re-energised, and 'danger' notices attached to live equipment adjacent to the place of work will indicate that the apparatus is still energised. Notices or labels should be easily understood by anyone in the area. You should remove labels or notices when they no longer apply so that the system does not fall into disrepute. It is often useful for the 'caution' and 'danger' notices to have a space for the name of the person responsible for the work and for the date.

Proving dead

53 Having isolated the circuit or equipment, and before working on it, check that the parts to be worked on or near really are dead, even if the isolation has been achieved automatically through an interlocking system. If it is a three-phase system or equipment with more than one supply, prove that all supply conductors are dead.

54 The instrument to do this should be properly constructed to protect against electric shock and designed to prevent short circuits occurring during use. For low voltages, proprietary voltage detectors such as two-pole voltage detectors, test lamps, or voltmeters with insulated probes and fused leads can be used (see HSE Guidance Note GS38). The use of multimeters, which can be set to the wrong function, is not recommended for proving dead on low-voltage systems, neither is the use of non-contact devices such as 'volt sticks' (note: in coal mines the use of appropriately certified non-contact devices is permitted).

55 It will be necessary to test the instrument before and after use. This may be done by means of a proving unit with a low power output. If live circuits are used to prove instruments, adequate precautions against electric shock and short circuits should be taken (see paragraphs 25–32). Training in the correct use of voltage detectors is essential to avoid risk in the event of unexpected use on a live conductor. All instruments used for checking circuits should be maintained and inspected frequently (note: in coal mines appropriately certified non-contact devices must be tested daily before they are taken underground).

56 Where underground cables cannot be positively identified and proved dead at the point of work, it may be necessary to spike the cable using a properly designed, cartridge-operated spiking gun.

Earthing

57 The risk to people if the above precautions fail can be minimised by securely earthing all the conductors using properly designed earthing devices or earthing leads, usually applied to all points where the circuit or equipment is isolated from the supply. Additional local earths at the point of work may also be necessary if this is remote from the point of isolation, but these should be applied only after proving dead at the point of work. This procedure is essential for high-voltage apparatus and stored energy equipment (eg capacitors). The earthing conductors and their connections should be suitable for the energy that may flow in the event of a failure of the above precautions.

58 Earthing low-voltage equipment is desirable if there is a risk of re-energisation, eg from a generator under someone else's control. In other low-voltage equipment, however, it may be physically impractical to apply earths, or the risk of short circuit from introducing an earth near adjacent live parts may outweigh the benefit of earthing the apparatus being worked on.

Adjacent parts

59 When the circuit or equipment to be worked on has been made dead or where the work is non-electrical, you must still protect against danger from inadvertent contact with other live parts nearby. This should preferably be done by erecting physical barriers and/or the use of temporary insulation and posting 'danger' notices. The requirements regarding adequate working space, access and lighting must also be met.

Additional procedures

60 On high-voltage systems (and often on high-energy systems) a permit-to-work should be issued but only after all the actions described in paragraphs 47–59 have been carried out. It is not common practice to issue permits-to-work for work on low-voltage systems but they should be considered if their use would contribute to safety in specific circumstances. (See paragraphs 69–84 for more information on permit-to-work systems.)

Extra precautions for high-voltage work

61 The following paragraphs apply to equipment and circuits operating at high voltage. They should also be applied to low-voltage installations where high fault power gives rise to a risk of serious burns. There are a few exceptional circumstances where high voltages will not give rise to danger, for example if the maximum possible current is reliably limited to a safe level (see PD 6519 Parts 1 and 2).

62 High-voltage equipment should be designed and installed so that it is not necessary to work on exposed live parts. However, it is commonly necessary for voltage checks or tests to be carried out, and for observations to be made from safe distances such as when carrying out phase rotation tests.

63 Because high voltages can arc across an air gap, you can suffer a shock or burn without touching live voltage parts. The dead working procedure in paragraphs 46–59 must therefore be followed. Isolation should be by means of a device that has a safe isolating gap between live parts and those that have been made dead for work to be carried out (see relevant British Standards). Earthing conductors at the point where the supply is disconnected are essential and additional earths may be necessary at the place of work.

64 The system of locking OFF while work is in progress should use safety locks which have unique keys so that the apparatus cannot be inadvertently re-energised. The keys should be retained in a key safe or other suitable place available only to the person in charge of the activity; see paragraphs 49–51. The precautions should be backed up with a disciplined documentation system; the electrical permit-to-work is an established system that has proved to work well in practice and is described in paragraphs 69–84.

65 Additional procedures will be necessary to adequately cover shift changes or work extending over long periods. It may also be necessary to have special rules or procedures for particular items of equipment and for particular working practices such as testing (eg it may be necessary to remove earths to facilitate testing under a clearly defined sanction-to-test procedure).

66 Precautions must be taken to prevent people approaching dangerously close to uninsulated high-voltage conductors. This will normally mean that any work on high-voltage equipment is undertaken only after all the precautions set out in paragraphs 47–54 have been taken. There are, however, some special situations where, by the use of appropriate tools, apparatus, and precautions, work on live high-voltage conductors may be permissible while the people involved are at a safe distance. Two examples are work on overhead conductors by DNOs or work on railways using long, specially designed, insulated tools.

67 Some transmission and distribution network operators carry out live, hands-on working on overhead conductors. For this type of work special vehicles, work

equipment, tools, clothing etc, together with exacting working methods, are necessary to ensure safe working. For all the special situations referred to, specific work procedures need to be devised and a very high degree of competence and discipline are essential for everyone involved. These special situations are not within the scope of this document.

68 Similar procedures may also be necessary if high-voltage apparatus is to be tested. In every case, the objective is to prevent anyone coming near to live, high-voltage conductors and the procedure should reflect this.

Electrical permits-to-work

69 A typical example of an electrical permit-to-work form is given in the Appendix. Further information is available in BS 6626 and BS 6867. An electrical permit-to-work is primarily a statement that a circuit or item of equipment is safe to work on – it has been isolated and, where appropriate, earthed. You must never issue an electrical permit-to-work for work on equipment that is still live or to authorise live work. The information it contains should be precise, detailed and accurate. It should state which equipment etc has been made safe, the steps by which this safety has been achieved, and exactly what work is to be done.

70 An electrical permit-to-work differs to the more general permit-to-work systems used in, for example, the petroleum and chemical industries (see HSG250 *Guidance on permit-to-work systems: A guide for the petroleum, chemical and allied industries*[20]). These more general permit-to-work systems are an integral part of safety management arrangements covering a wide range of activities and hazards. It is common for the requirement for an electrical permit-to-work to be identified through the application of a general permit-to-work system.

71 You should not allow anyone to work on equipment that is not specified in the electrical permit-to-work as having been made safe. This restriction should be understood and complied with by everyone in the premises, including directors and senior staff.

72 If a programme of work must be changed, the existing electrical permit-to-work should be cancelled and a new one issued before any variation is made to the work. The only person who has the authority to agree the change in programme and issue the new electrical permit-to-work is either the person who issued the original permit or the person nominated by management to take over the responsibility, eg at the end of a shift or during absence on leave.

73 An electrical permit-to-work should be issued by only a designated competent person (see paragraph 3) who has been assessed to be so by means of technical knowledge and/or experience and who is familiar with the system and equipment. The person should be authorised, in writing, by the employer to issue safety documents such as electrical permits-to-work relating to specified equipment or systems. Before issuing the permit, they should work out, in detail and in writing, what the various steps are to disconnect, isolate, prove dead, lock OFF, earth the equipment, post warning notices, and identify the equipment to be worked on and adjacent equipment which will still be live.

74 The electrical permit-to-work should state clearly:

- the person the permit is addressed to, ie the leader of the group or working party, who will be present throughout the work;
- the exact equipment which has been made dead and its precise location;

- the points of isolation;
- where the conductors are earthed;
- where warning notices are posted and special safety locks fitted;
- the nature of the work to be carried out;
- the presence of any other source of hazard, with cross-reference to other relevant permits;
- further precautions to be taken during the course of the work.

75 In most cases it is preferable to include a diagram on, or attached to, the permit confirming the above information and showing the zone for work.

76 It is strongly recommended that the electrical permit-to-work is issued at the place where the work is being done. The designated competent person issuing the permit should explain the work and agree the accuracy and completeness of the details with the person doing the work before they both sign the permit. The person issuing the permit must be sure that all necessary action has been taken to make the equipment safe. As a general rule, a personal inspection should be made but in geographically very large undertakings, such as the electricity supply industry, it may occasionally be necessary to make an exception to this.

77 In cases where there may be divided responsibility, roles must be defined to ensure there is no confusion over respective responsibilities, for instance:

- between a DNO and a dutyholder at the customer's premises, the electrical permit-to-work form should be countersigned by a person nominated in the joint ownership schedule or interface agreement and by the dutyholder for the premises; or
- where contractors may need to work on an occupier's system or equipment.

78 At the time the person in immediate charge of the operation accepts the permit they become responsible for ensuring that all the specified safety precautions are followed that:

- only permitted work is done; and
- the work is confined to the area defined in the permit.

79 If the permit is issued to the leader of a group, the leader accepts responsibility for the people in the group and should explain to them – before the work begins – the scope of work and the means by which safety has been achieved.

80 If the person issuing the electrical permit-to-work will also be doing the work, it is strongly recommended that someone else makes an independent check of the precautions taken. The person doing the work should then issue a permit to themselves. This routine helps to ensure that the full safety procedure is applied.

81 The recipient of an electrical permit-to-work should keep it for reference while the work is in progress and to prevent inadvertent cancellation and re-energisation of the equipment.

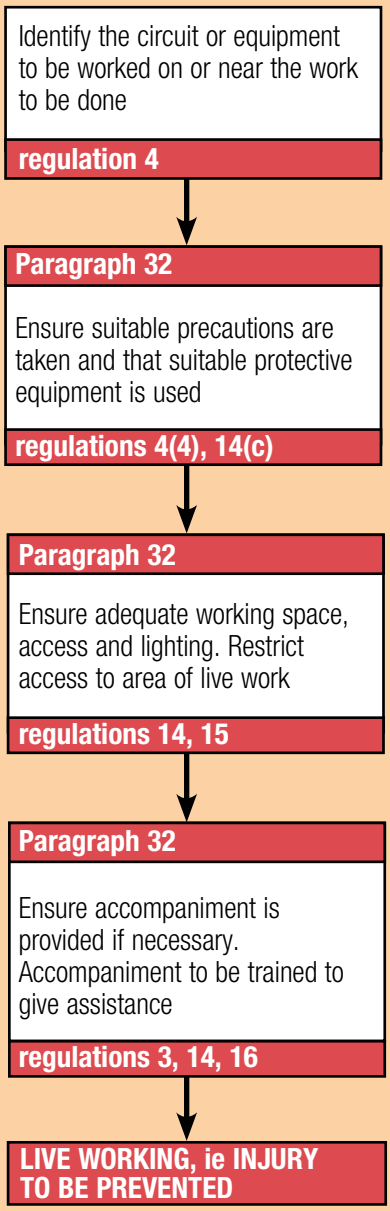
82 When the work is complete, whoever the permit was issued to should sign it to declare that any additional earths and tools have been removed and people in the group have been withdrawn and instructed not to approach the equipment again. The person clearing the permit should also indicate whether or not the equipment is fit for service. The permit is then returned, preferably to the designated competent person who originally issued it, for cancellation before the equipment is re-energised.

83 To reduce misunderstandings during suspension of work, it is better to cancel the original permit and issue a new one when required. The suspension of electrical permits-to-work is not generally recommended. Where this is necessary, it is essential to have a written procedure to ensure that tools and additional local earths are withdrawn and everyone is aware that the permit has been suspended.

84 Any electrical permit-to-work system should have a procedure for monitoring (audit) to ensure that the safety rules are followed and the documents are completed accurately. The monitoring should preferably be carried out by someone with managerial responsibilities, who is not involved in the day-to-day issuing of permits, and should be random and ongoing so that bad habits and inaccuracies can be identified and eliminated quickly.

Working live

Figure 5 Live working procedures



85 The procedures associated with live working are illustrated in Figure 5. While it is not always possible to follow rigidly a set procedure to cover all situations, you should follow the management principles described in this guidance and the safe system of work criteria set out in paragraphs 25–32.

86 The most common live working activity is testing, typically carried out as part of routine preventative maintenance, diagnostic testing, product testing, commissioning, or fault finding. Guidance on safety during electrical testing is available in INDG354 *Safety in electrical testing at work*.[21]

Appendix: Typical example of an electrical permit-to-work

1 Issue

To _____ in charge of this work.

I hereby declare that the following high-voltage apparatus in the area specified is dead, isolated from all live conductors and is connected to earth:

_____

_____

_____

Treat all other apparatus and areas as dangerous

The apparatus is efficiently connected to EARTH at the following points:

_____

_____

_____

The points of isolation are:

_____

_____

_____

CAUTION NOTICES have been posted at the following points:

_____

_____

_____

SAFETY LOCKS have been fitted at the following points:

_____

_____

_____

The following work is to be carried out:

_____

_____

_____

Diagram

Signed _____Time_____Date_____

Permit-to-work (front)

2 Receipt

I accept responsibility for carrying out the work on the apparatus detailed on this permit-to-work and no attempt will be made by me or by people under my charge to work on any other apparatus or in any other area.

Signed _____Time_____Date_____

Note: After signing the receipt, this permit-to-work should be retained by the person in charge at the place where the work is being carried out until work is complete and the clearance section is signed.

3 Clearance

The work for which this permit-to-work was issued is now suspended*/completed* and all people under my charge have been withdrawn and warned that it is no longer safe to work on the apparatus detailed on this permit-to-work.

All work equipment, tools, test instruments etc have been removed.

Additional earths have been removed.

*Delete words not applicable and where appropriate state:

The work is complete*/incomplete* as follows:

Signed _____Time_____Date_____

4 Cancellation

This permit-to-work is cancelled.

Signed _____Time_____Date_____

Permit-to-work (back)

References

1 *Memorandum of guidance on the Electricity at Work Regulations 1989. Guidance on Regulations* HSR25 HSE Books www.hse.gov.uk/pubns/books/hsr25.htm

2 *The use of electricity in mines. Electricity at Work Regulations 1989. Approved Code of Practice* L128 HSE Books www.hse.gov.uk/pubns/books/l128.htm

3 PD 6519-2:1988 *Guide to effects of current on human beings and livestock. Special aspects relating to human beings* British Standards Institution (IEC 60479 Part 2), DD IEC/TS 60479-1:2005 *Effects of current on human beings and livestock. General aspects* British Standards Institution

4 BS 7671:2008 (+A1:2011) *Requirements for electrical installations. IET Wiring Regulations. Seventeenth edition* British Standards Institution (available from the Institution of Engineering and Technology (IET))

5 *Dangerous Substances and Explosive Atmospheres. Dangerous Substances and Explosive Atmospheres Regulations 2002. Approved Code of Practice and guidance* L138 HSE Books www.hse.gov.uk/pubns/books/l138.htm

6 *Prevention of fire and explosion and emergency response on offshore installations. Offshore Installations (Prevention of Fire and Explosion, and Emergency Response) Regulations 1995. Approved Code of Practice and guidance* L65 HSE Books www.hse.gov.uk/pubns/books/l65.htm

7 *Keeping electrical switchgear safe* HSG230 HSE Books www.hse.gov.uk/pubns/books/hsg230.htm

8 *A design guide for the electrical safety of instruments, instrument/control panels and control systems* EEMUA PUB No 178 (Second edition) Engineering Equipment and Materials Users Association 2009

9 BS 6423 *Code of practice for maintenance of electrical switchgear and controlgear for voltages up to and including 1 kV* British Standards Institution

10 BS 6626:2010 *Maintenance of electrical switchgear and controlgear for voltages above 1 kV and up to and including 36 kV. Code of practice* British Standards Institution

11 BS 6867:1987 *Code of practice for maintenance of electrical switchgear for voltages above 36 kV* British Standards Institution (New edition due for publication in 2013)

12 *Controlling the risks* www.hse.gov.uk/toolbox/managing/managingtherisks.htm

13 *Avoiding danger from overhead power lines* General Guidance Note GS6 (Fourth edition) HSE 2013 www.hse.gov.uk/pubns/gs6.htm

14 *Lighting at work* HSG38 HSE Books 1998
www.hse.gov.uk/pubns/books/hsg38.htm

15 BS EN 60900:2012 *Live working. Hand tools for use up to 1000 V ac and 1500 V dc* British Standards Institution

16 *Electrical test equipment for use by electricians* General Guidance Note GS38
www.hse.gov.uk/pubns/gs38.htm

17 BS EN 61111:2009 *Live working. Electrical insulating matting* British Standards Institution

18 *Personal protective equipment at work (Second edition). Personal Protective Equipment at Work Regulations 1992 (as amended). Guidance on Regulations* L25 HSE Books www.hse.gov.uk/pubns/books/l25.htm

19 *Managing health and safety in construction. Construction (Design and Management) Regulations 2007. Approved Code of Practice* L144 HSE Books www.hse.gov.uk/pubns/books/l144.htm

20 *Guidance on permit-to-work systems: A guide for the petroleum, chemical and allied industries* HSG250 HSE Books www.hse.gov.uk/pubns/books/hsg250.htm

21 *Safety in electrical testing at work* Leaflet INDG354
HSE www.hse.gov.uk/pubns/indg354.htm

Further reading

HSE publications

Safe use of work equipment. Provision and Use of Work Equipment Regulations 1998. Approved Code of Practice and guidance L22 HSE Books www.hse.gov.uk/pubns/books/l22.htm

Avoiding danger from underground services HSG47 HSE Books www.hse.gov.uk/pubns/books/hsg47.htm

Electrical safety at places of entertainment General Guidance Note GS50 HSE www.hse.gov.uk/pubns/gs50.htm

Maintaining portable and transportable electrical equipment HSG107 HSE Books www.hse.gov.uk/pubns/books/hsg107.htm

Managing for health and safety www.hse.gov.uk/managing

Further information

For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit www.hse.gov.uk/. You can view HSE guidance online and order priced publications from the website. HSE priced publications are also available from bookshops.

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This guidance is available at: www.hse.gov.uk/pubns/books/hsg85.htm.

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