

**COMPANY DOCUMENTS**

**Health and Safety Policy**

Version 3 – 1/5/12

**Enclosed:**  
Policy Document

## **bright\* (production services) ltd**

### **STATEMENT ON HEALTH AND SAFETY AT WORK**

It is the policy of **bright\*** (production services) Limited to ensure, at all times, so far as is reasonably practicable, the health, safety and welfare at work of their employees and others not employed or connected with the work, but who may be affected by the work being carried out. The greatest importance will be given to these functions.

It is the responsibility of the Directors of the Company to ensure that this policy is carried out effectively by:-

1. Setting Health and Safety standards and ensuring that new hazards are recognised and adequate controls are implemented.
2. Providing safe places of work with safe equipment and systems of working with adequate supervision.
3. Ensuring that employees are adequately briefed and trained safely to undertake their duties.
4. Providing suitable equipment including the provision of protective clothing where necessary to meet statutory requirements.
5. Providing adequate safety training of all levels and ensuring, through line management and supervision, that the appropriate training is given in accordance with statutory requirements.
6. Making employees of the Company aware of their own responsibility to do everything possible to prevent injury to themselves and others in the course of their work and to cooperate with management in the implementation of the safety policy.
7. Providing information on matters affecting health, safety and welfare.
8. Issuing detailed directives and instructions as necessary to update the policy.

It is the responsibility of the head of departments and management to ensure that all reasonable steps are taken to implement this Policy, and to check equipment, tools, etc., before allowing use on site and to ascertain local fire and emergency requirements and procedures.

The Company and employees shall comply with the requirement of the Law of Safety, Health and Welfare.

Signed



Director                      Managing Director

Date                              1/5/2012

Review date                      1/5/2013

References must be made to the J.I.B National working rules and the various statutory legislation including:-

- a) Health and Safety at Work Act 1974, and the codes of Regulation/Practice made or approved there under.
- b) The Factories Act 1961 and Regulations made under the Act.
- c) Construction (General Provisions) Regulations 1961/1962/1966
- d) Construction (Lifting Operations) Regulations 1961.
- e) The Health and Safety (First Aid) Regulations 1981.
- f) Construction (Working Places) Regulations 1966.
- g) Protection of Eyes Regulations 1974.
- h) The Offices, Shops and Railway Premises Act 1963.
- i) The Electricity at Work Regulation 1989.
- j) The Construction (Head Protection) Regulations 1980
- k) Health & Safety At Work 1992
- l) COSHH 1994
- m) PPE 1992

All the above documents are available in the office for inspection.

***Health and Safety Policy Statement – who is responsible for what!***

Overall and final responsibility for health and safety is that of Jason Larcombe

All employees have to:

- co-operate with supervisors and managers on health and safety matters;
- not interfere with anything provided to safeguard their health and safety;
- take reasonable care of their own health and safety; and report all health and safety concerns to an appropriate person (as detailed in this policy statement).

Any concerns or issues regarding Health & Safety should be addressed to the above person.

Reviewed: 01/05/2012

Roles and responsibilities as directed within this document are split as follows:

Managing Director: Jason Larcombe

Other roles: Joe Rockett\*

\*Joe Rockett is responsible for day to day management of warehouse, stock and projects and oversees project delivery on site co-ordinating 3<sup>rd</sup> parties and subcontractors.

In reference to Heads of Department, the document has been structured to assume that for site work bright\* will provide a project manager as head of department, with technical staff to support. For larger projects there may be a number of heads of department each focusing on a particular sector of project delivery.

## **RISK ASSESSMENTS**

- Risk assessments will be undertaken by senior heads of departments.
- The findings of the risk assessments will be reported to the Managing Director
- Action required to remove/control risks will be approved by the Managing Director and
- they will be responsible for ensuring the action required is implemented.

Assessments will be reviewed every six months or when the work activity changes, whichever is soonest.

Consultation with employees is provided by

- Regular Staff/department meetings
- E mail notification of changes of procedures
- Noticeboards
- As part of staff appraisals

## **PLANT & EQUIPMENT**

The Warehouse Manager will be responsible for identifying all equipment/plant needing maintenance.

The Technical Manager is responsible for ensuring effective maintenance procedures are drawn up and will be responsible for ensuring that all identified maintenance is implemented.

Any problems found with plant/equipment should be reported to a head of department, in conjunction who will also check that new plant and equipment meets health and safety standards before it is purchased.

## **COSHH**

The Managing Director will be responsible for identifying all substances which need a COSHH assessment, and undertaking COSHH assessments, as well as being responsible for ensuring that all actions identified in the assessments are implemented.

Assessments will be reviewed every six months or when the work activity changes, whichever is soonest.

## **INFORMATION**

The Health and Safety Law poster is displayed in the main warehouse.

Health and safety advice is available from the senior management team. Supervision of young workers/trainees will be arranged/undertaken/monitored by heads of departments.

They are responsible for ensuring that our employees working at locations under the control of other employers, are given relevant health and safety information.

## **TRAINING**

Induction training will be provided for all employees by the Office Manager assisted by the relevant Directors. Job specific training will be provided by Department Managers & Supervisors

Specific jobs/skills requiring special training are...

Fork Lift driving, Manual Handling, Access Equipment, Electrical Safety

Training records are kept by the personnel department

Training will be identified, arranged and monitored by heads of departments

## **ACCIDENTS, FIRST AID & WORK RELATED ILL HEALTH**

The first aid boxes are kept in the Kitchen and within all Vehicles.

All accidents and cases of work-related ill health are to be recorded in the accident book. The book is kept in the office.

The Managing Director is responsible for reporting accidents, diseases and dangerous occurrences to the enforcing authority.

To check our working conditions, and ensure our safe working practices are being followed, we will review these practices at regular H & S meetings.

The Managing Director and heads of departments are responsible for investigating accidents and work-related causes of sickness absences, setting up and modifying procedures as necessary.

### **FIRE PROCEDURES**

- The Managing Director is responsible for ensuring the fire risk assessment is undertaken and implemented.
- Escape routes are checked on a daily basis as part of the morning “walk round”
- Fire extinguishers are provided at key positions around the building with operatives instructed as to their use. These devices are regularly checked / maintained.
- Emergency evacuation will be tested every six months

### **FIRE PRECAUTIONS**

- Housekeeping (tidiness and waste bins). In the warehouse, please ensure you tidy your workspace and remove all refuse, particularly combustible waste and packing materials preferably outside in the refuse bins every night. The cleaners empty the office bins etc but please make sure that everything is in the your bin!
- Please ensure storage areas are properly kept tidy and clean, particularly on the floor where dust, foam granules, packing remains and waste paper seem to accumulate. Storage areas are prime areas for fires beginning. This should be done daily.
- Smoking is not permitted in any part of the building.
- Fire Extinguishers and hoses are available at all points in the warehouse. Please make sure you know where they are, how to and which one to use in the event of a fire. If you do not know – ask. There is a sprinkler system in place.
- All cylinders of CO2 and others must be kept in the cage by the control department. Proper control of flammable liquids, paints and dangerous chemicals is vital.
- Any ‘hot’ work, soldering etc should be limited to essential work and inspection of the surrounding work area is vital before leaving for the day. Likewise in any working area whether office or warehouse, please check carefully that you have not left on radios, task lighting, test equipment, fans, copiers and any other electrical appliance that should be turned off overnight.
- All exit routes must be clear. In the dark with only the exit sign lighting the way, any obstruction may well be the cause of a fatality. It could be you or a colleague.
- Arson is the major cause of fires in the UK. Increased diligence and security awareness will be important. Please challenge anyone you do not recognise or is not wearing a staff badge or visitors sticker.

## **SAFETY GUIDE NUMBER 1 SAFETY RULES**

### **1.1 FIRST AID**

All personnel shall be familiar with the location of first aid points on all sites.

### **1.2 PROTECTIVE CLOTHING AND EQUIPMENT**

Suitable protective clothing and equipment shall be worn when carrying out any work where such clothing and equipment is considered necessary. All protective clothing shall be maintained in a clean and ready-to-use condition.

### **1.3 SAFETY HELMETS**

A suitable safety helmet shall be provided for, and shall be worn by, each person whilst inside any area where there is a risk of receiving a head injury.

### **1.4 EYE PROTECTIONS**

Any person undertaking work where there is a risk of eye injury shall be provided with, and shall wear, suitable eye protectors.

Where other persons may risk eye injury because of a process being carried out suitable protective shields shall be erected around the process to prevent injury to the other persons.

Lost or broken eye protectors shall be immediately replaced.

### **1.5 HAND-HELD TOOLS**

All persons using hand-held tools shall ensure the tools are safe and stored safely and that they are trained / experienced in their use.

### **1.6 WORKING AT HEIGHTS**

Safe and secure means of access and working platforms shall be used at all times where any work is undertaken at heights.

### **1.7 LADDERS AND OTHER MEANS OF ACCESS**

All persons using ladders and other means of access shall ensure that they are safe to use. Ladders shall be located on a firm footing and securely lashed.

All persons working from a ladder, suspended walkway or similar means of access shall not overreach or otherwise put themselves into a dangerous situation.

### **1.8 SCAFFOLDING**

Scaffolding shall only be erected or altered by persons knowledgeable in the job.

Bent, damaged or faulty scaffolding material shall not be used.

Scaffolding shall be inspected by a competent person at least once every week after erection for faults or damage.

Walkways on scaffolding shall be kept clear of obstructions.

Mobile scaffolding shall be secured to prevent movement before being used.

### **1.9 TREATMENT IF HURT**

If you are injured at work, get treatment without delay. Minor cuts and scratches can usually be dealt with at the workplace by using the first aid box provided. Make sure you know where this is kept, but anything which is obviously serious should be reported as soon as possible to Accident/Emergency at your nearest hospital.

### **1.10 ACCIDENT REPORTING**

You are required, by law, to give notice to your employer of any accident at work in which you are injured. An entry in the official Accident Book is all that is necessary. If you cannot do it yourself, contact the Managing Director. In any case you must give

him/her full details of any accident in which you are involved, including any “near miss”, so that a report can be sent in and your manager can be alerted. Also, you should tell the appointed person if you have used anything from the first aid box so that it can be replaced.

### **1.11 LIFTING AND HANDLING**

Accidents when lifting and handling are the largest single cause of industrial injuries.

Nearly 30% of reportable accidents are due to wrong handling of materials.

We all move and lift things, both at work and at home, but few of us give any thought to the correct way of doing it. The result of using the wrong method could be back trouble, which may recur during the course of our lives.

A safe way of lifting uses what is called the Kinetic method. This places strain on those muscles and joints best suited to do the job and protect the vulnerable back. These instructions on lifting and handling are based on the Kinetic principles:-

- a) With feet about 12” apart and as close to the load as possible, bend the legs.
- b) Do not bend or arch the back. Keep it as straight as possible.
- c) Get a firm grip on the object so that it cannot slip, with the hands so positioned that they will be protected at all times. Use the roots of the fingers and the palms - this reduces stress in the arms. Wear protective gloves if there are sharp edges.
- d) Lift the load by straightening the legs. Keeping the back as straight and upright as possible all the time.
- e) To set the load down, bend the legs again - not the back.
- f) Objects that are heavy or awkward for one person to manage comfortably need a team effort in which all act together so that the burden is shared. For safety’s sake, agree who is to give the order to lift (or set down). That person should ask “Are you ready” - and then give the order to lift or set down.
- g) Never carry loads in such a way that you cannot see where you are going.
- h) Practice this method until it becomes automatic. Never use any other way - not even at home.
- i) Remember, too, that the Kinetic principles can be applied to other manual tasks. Wherever possible, keep the back straight and make the strong muscles in the thigh and legs do the work.

### **1.12 INJURY FROM FALLS**

Falling accounts for many accidents in industry. Most falls take place at ground level, not from great heights or into great depths.

Watch for any potentially dangerous, slippery, cracked or uneven surfaces and report them to your Head of Department. Any item of food dropped on the floor - in your staff room, for example - can cause a fall. Oil, grease and water are hazards and should be mopped up without delay. Frost, ice and snow are obvious hazards in winter, but still take their toll in broken limbs and/or bad bruising. Take extra care in cold weather and look out for slippery patches.

At work your own footwear is important. Soles starting to become detached, rubber soles wearing smooth, badly worn heels, loose laces - all cause accidents. Check your footwear regularly to ensure you are not at risk and if in doubt consult your Head of Department. Vigilance and common-sense are the best safeguards against falling.

### **1.13 HAND TOOLS**

There is a correct tool for every job. Properly used, maintained and stored, tools should not give rise to accidents.

Watch out for split or splintered handles and do not try to patch-up with adhesive tape. Beware of loose heads of hammers, “mushroomed” cold chisels etc. These are dangerous and must not be used. The wrong size of screwdriver can easily slip from the slot and cause injury. Do not hold in the hand any object to which a screwdriver or chisel is being applied.

Practice good housekeeping. Clean all tools after use and put away tidily in a safe place.



Tools supplied by the Company which become faulty must be reported to your Head of Department. Tools you have provided yourself which become faulty should be exchanged immediately they become faulty.

## **SAFETY GUIDE NUMBER 2**

### **USE OF LADDERS, STEP LADDERS**

2.1 Ladders are dangerous, if not used properly, and accidents can cause fatalities and serious injuries. In the construction industry it has been found that many accidents happen to people who regard themselves skilled in the use of ladders and more than half of the ladders accidents occur when the ladders are being used unsecured! Slipping on the rungs (especially when carrying tools in the hand), overreaching and using defective ladders are the main causes. The following Guide Rules are issued for your own safety. PLEASE COMPLY WITH THEM.

2.2 Inspect ladder for damage before use. Do not use a ladder with any defect; tell you Head of Department if anything is wrong.

2.3 Do not attempt to erect ladder in high wind.

2.4 Place ladder on firm base. Resting the feet on anything movable, such as loose bricks or pieces of wood, is dangerous.

2.5 Set ladder at about 75 degrees. The working rule is one foot of distance out for every four feet of height.

2.6 Every effort should be made to tie the ladder in position, top and bottom. A second person should hold the ladder while you are tying top. Stakes should be driven into the ground to which the foot of the ladder can be lashed, if this is practical, or a suitable weight can be applied.

2.7 Make sure that the ladder projects at least three foot, six inches, (1.1 metres) above the level at which you will be working, so that you will have a good hand-hold.

2.8 Do not erect a ladder in front of any door which might be opened. If there is no alternative to this position for the ladder, lock the door and keep the key in your pocket while you are aloft. If the door cannot be locked, restrain it by use of wedge, etc., and put a warning notice on both sides of the door.

2.9 Wear only footwear in good condition, with clean soles. Soft shoes are not suitable for ladder work.

2.10 Make sure that all rungs are clean.

2.11 Use two hands when climbing. Carry tools in pocket or shoulder bag.

2.12 Use one hand to hold on while working. If the job requires two hands wear a safety belt clipped or tied to the ladder.

2.13 Do not overreach. It is safer to move the ladder, even if the job takes longer.

2.14 Only one person on one ladder at one time - with the exception of somebody standing on the bottom rung while the person ties the top of the ladder. A common-sense approach must be used in application of this instruction.

2.15 Take care not to drop objects while you are aloft. Many serious injuries are caused by people being hit by falling objects dropped by people working above them. Where possible all tools should have a safety line clipped onto your belt or harness. If this is not feasible then ensure that the area you are working over is clear of other people. If it is impossible to clear the area then hard hats should be worn by everybody at ground level, including anybody holding the ladder.

2.16 Get help when carrying, erecting, taking down or moving heavy ladders. Safety lines should be used when moving long ladders in order to keep them firmly under control. If carrying a ladder on your own round the corner of a building, wall etc., give a warning shout in case someone is on the other side. Raise the leading end to lift it above possible head height of people coming the opposite way.

2.17 In the case of all step ladders, spread them fully for maximum stability. Check that cords or other stabilising appliances are in good condition. Place the steps so that you will be leaning against them as you work, (never lean sideways), and do not stand on the top tread unless the stepladder is constructed with a platform top with secure hand-holds.

### **SAFETY GUIDE NUMBER 3**

#### **ELECTRICITY IN GENERAL**

3.1 This guide is intended for all staff, especially those who are NOT electrical craftsmen.

3.2 Electricity is dangerous and can KILL! Even non-fatal shocks can cause severe and permanent injury. Shocks from faulty equipment may lead to falls from heights. Those using electricity may not be the only ones at risk – poor electrical installations and faulty equipment may lead to fires causing death or injury to others. Careless use of extension cables may present a trip hazard to others. Plan all work carefully to minimise risk to others and seek assistance if you are not fully confident in your ability or training to safely complete the task.

3.3 Before connecting (i.e. plugging in) any electrical apparatus inspect cables to ensure there is no damage to the sheath (particularly on hand held tools) and also check for loose connections and damage to the plug. Ensure the equipment is turned off before plugging it in.

3.4 Any member of staff bringing electrical equipment on site, i.e. equipment that is leased or loaned, should ensure that it conforms to the appropriate current standards – seek guidance if at all unsure.

3.5 If in any doubt about the serviceability of any equipment, do not use it and mark it as faulty.

**REPORT THIS TO YOUR HEAD OF DEPARTMENT IMMEDIATELY**

3.6 Do NOT change electric lamps, clean or otherwise maintain any other electrical appliance without first switching off and/or fully isolating from the supply.

3.7 NEVER improvise with temporary wiring or modify installed wiring.

3.8 If using tools or other apparatus outside of the building use a supply protected by an RCD or use a portable RCD to provide additional safety.

3.9 Only suitably trained staff should attempt to design, construct or perform repairs upon any equipment to be connected to a mains voltage electricity supply.

**Special precautions should be observed by staff employed in specific electrical testing activities, refer to Safety Guideline 11, Electrical Testing**

## **SAFETY GUIDE NUMBER 4**

### **FIRE PRECAUTIONS**

4.1 You should be fully aware of what to do and what your responsibilities are in case of fire or a fire drill. If you are in any doubt, please ask your Head of Department to arrange a fire training session.

4.2 In case of fire, however small, always raise the fire alarm IMMEDIATELY. Either call 999 yourself or ensure that another member of staff is. You must know the quickest way of doing this and the fire alarm points are usually by exit doors.

4.3 Any fire depends on three things: a supply of combustible material, a supply of air and heat. Remove any one of these elements and the fire must go out. Most extinguishers work on the basis of cutting off the air supply, but water also has a cooling effect.

4.4 Find out where the fire appliances are kept at the place where you work and how to use them. When a fire is discovered it is usually too late to start reading the instructions on the extinguisher.

4.5 When using an extinguisher aim the jet low, at the base of the fire and not at the flame above it. Sweep the jet to and fro, driving fire back until extinguished. Damp the area down with water at once to cool it - and pay special attention to any area still smouldering.

4.6 Do not use water on burning oils or fat. Cooking fires are best dealt with by smothering with a fire blanket or other thick material. This cuts off the air supply. Do not attempt to carry a pan of burning fat or oil out of the canteen or kitchen; it is dangerous.

4.7 Materials and liquids which are easily set on fire, such as petrol, diesel oil or paraffin, must not be stored or handled in any building where there is a naked flame, electrical appliances or other source of fire and sparks.

4.8 The occasion of a fire is too late to discover that your nearest fire exit is blocked. Ensure all exits are kept clear.

4.9 Portable foam or water fire fighting equipment shall not be used for electrical apparatus, unless the apparatus is disconnected from the supply. Portable CO2 dry chemical or vaporising liquid extinguisher may be used on live electrical apparatus, providing that safety clearances of at least one metre are maintained. After discharge of extinguishers in a confined space, you should leave the area without delay and should not re-enter until it has been thoroughly ventilated.

**SAFETY GUIDE NUMBER 5**  
**LOW VOLTAGE ELECTRICAL INSTALLATION**

**5.1 SCOPE**

This guide applies to all work carried out on medium or low voltage electrical installation, commencing at the outgoing side of the main switch that is supplied by the Electricity Authority.

**5.2 DEFINITIONS**

Attention is drawn to internationally agreed definition of low voltage, which includes the range of voltage formally known as “medium voltage”. The following ranges of nominal voltage (r.m.s. value for A.C.) are defined:-

**EXTRA LOW VOLTAGE (BAND ONE)**

Normally not exceeding 50 volts and (100 volts for D.C.) between conductors and earth.

**LOW VOLTAGE (BAND TWO)**

Normally exceeding extra low voltage, but not exceeding 1000 Volts and (1500 volts for D.C.) between conductors or 600 volts (900 volts for D.C.) between conductors and earth.

**5.3 GENERAL REQUIREMENTS**

All persons working on low voltage electrical installation shall be conversant with the understanding and interpretations of the Electricity at Work Regulation 1989 (relevant extract attached) and the current edition of the Institution of Electrical Engineers’ Regulations for electrical installations, and other relevant Codes of Practice.

## **ELECTRICITY AT WORK REGULATION 1989**

### **PART 1**

#### **INTRODUCTION**

##### **CITATION AND COMMENCEMENT**

1. These Regulations may be cited as the Electricity at Work Regulations 1989 and shall come into force on 1st April 1990.

2.(1) In these Regulations, unless the context otherwise requires:-

**“approved”** means approved in writing for the time being by the Health and Safety Executive for the purposes of these Regulations or conforming with a specification approved in writing by the Health and Safety Executive for the purposes of these Regulations.

**“circuit conductor”** means any conductor in a system which is intended to carry electrical current in normal conditions, or to be energised in normal conditions, and includes a combined neutral and earth conductor, but does not include a conductor provided solely to perform a protective function by connection to earth or other reference point.

**“conductor”** means a conductor of electrical energy.

**“danger”** means risk of injury.

**“electrical equipment”** includes 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.

**“injury”** means death or personal injury from electric shock, electric burn, electrical explosion or arcing, or from fire or explosion initiated by electrical energy, where any such death or injury is associated with the generation, provision, transmission, transformation, rectification, conversion, conduction, distribution, control, storage, measurement or use of electrical energy.

**“system”** means an electrical system in which all the electrical equipment is, or may be, electrically connected to a common source of electrical energy, and includes such source and equipment.

2.(2) Unless the context otherwise requires, any references in these Regulations to:-

(a) a numbered regulation or Schedule is a reference to the regulation or Schedule in these Regulations so numbered.

(b) a numbered paragraph is a reference to the paragraph so numbered in the regulation of Schedule in which the reference appears.

##### **PERSONS ON WHOM DUTIES ARE IMPOSED BY THESE REGULATIONS**

3.(1) Except where otherwise expressly provided in these Regulations, it shall be the duty of every employer and self-employed person to comply with the provisions of these Regulations in so far as they relate to matters which are within his control.

3.(2) It shall be the duty of every employee while at work:-

(a) to co-operate with his employer so far as is necessary to enable any duty placed on that employer by the provisions of these Regulations to be complied with, and

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(b) to comply with the provisions of these Regulations in so far as they relate to matters which are within his control.

### **PART II**

#### **GENERAL**

##### **SYSTEMS, WORK ACTIVITIES AND PROTECTIVE EQUIPMENT**

4.(1) All systems shall at all times be of such construction as to prevent, so far as is reasonably practicable, danger.

4.(2) As may be necessary to prevent danger, all systems shall be maintained so as to prevent, so far as is reasonably practicable, such danger.

4.(3) Every work activity, including operation, use and maintenance of a system and work near a system, shall be carried out in such a manner as not to give rise, so far as is

reasonably practicable, to danger.

4.(4) Any equipment provided under these Regulations for the purpose of protecting persons at work on or near electrical equipment shall be suitable for the use for which it is provided, be maintained in a condition suitable for that use, and be properly used.

#### STRENGTH AND CAPABILITY OF ELECTRICAL EQUIPMENT

5. No electrical equipment shall be put into use where its strength and capability may be exceeded in such a way as may give rise to danger.

#### ADVERSE OR HAZARDOUS ENVIRONMENTS

6. Electrical equipment which may reasonably foreseeably be exposed to:-

- (a) Mechanical damage
- (b) the effects of weather, natural hazards, temperature or pressure
- (c) the effects of wet, dirty, dusty or corrosive conditions
- (d) any flammable or explosive substance, including dusts, vapours or gases, shall be of such construction of as necessary protected as to prevent, so far as is reasonable practicable, danger arising from such exposure.

#### INSULATION, PROTECTION AND PLACING OF CONDUCTORS

7. All conductors in a system which may give rise to danger shall either:-

- (a) be suitably covered with insulating material and as necessary protected so as to prevent, so far as is reasonably practicable, danger, or
- (b) have such precautions taken in respect of them (including, where appropriate, their being suitably placed) as will prevent, so far as is reasonably practicable, danger.

#### EARTHING OR OTHER SUITABLE PRECAUTIONS

8. Precautions shall be taken, either by earthing or by other suitable means, to prevent danger arising when any conductor (other than a circuit conductor) which may reasonably foreseeably become charged as a result of either the use of a system, or a fault in a system, becomes so charged; and, for the purposes of ensuring compliance with this regulation, a conductor shall be regarded as earthed when it is connected to the general mass of earth by conductors of sufficient strength and current-carrying capability to discharge electrical energy to earth.

#### INTEGRITY OF REFERENCED CONDUCTORS

9. If a circuit conductor is connected to earth or to any other referenced point, nothing which might reasonably be expected to give rise to danger by breaking the electrical continuity or introducing high impedance shall be placed in that conductor unless suitable precautions are taken to prevent that danger.

#### CONNECTIONS

10. Where necessary to prevent danger, every joint and connection in a system shall be mechanically and electrically suitable for use.

#### MEANS FOR PROTECTING FROM EXCESS OF CURRENT

11. Efficient means, suitably located, shall be provided for protecting from excess of current every part of a system as may be necessary to prevent danger.

#### MEANS FOR CUTTING OFF THE SUPPLY AND FOR ISOLATION

12.(1) Subject to paragraph (3), where necessary to prevent danger, suitable means (including, where appropriate, methods of identifying circuits) shall be available for:-

- (a) cutting off the supply of electrical energy to any electrical equipment and
- (b) the isolation of any electrical equipment.

12.(2) In paragraph (1), "isolation" means the disconnection and separation of the electrical equipment from every source of electrical energy in such a way that this disconnection and separation is secure.

12.(3) Paragraph (1) shall not apply to electrical equipment which is itself a source of electrical

energy but, in such a case as is necessary, precautions shall be taken to prevent, so far as is reasonably practicable, danger.

**PRECAUTIONS FOR WORK ON EQUIPMENT MADE DEAD**

13. Adequate precautions shall be taken to prevent electrical equipment, which has been made dead in order to prevent danger while work is carried out on or near that equipment, from becoming electrically charged during that work if danger may thereby arise.

**WORK ON OR NEAR LIVE CONDUCTORS**

14. No person shall be engaged in any work activity on or so near any live conductor (other than one suitably covered with insulating material so as to prevent danger) that danger may arise unless:-

- (a) it is unreasonable in all the circumstances for it to be dead, and
- (b) it is reasonable in all the circumstances for him to be at work on or near it while it is live, and
- (c) suitable precautions (including where necessary the provision of suitable protective equipment) are taken to prevent injury.

**WORKING SPACE, ACCESS AND LIGHTING**

15. For the purpose of enabling injury to be prevented, adequate working space, adequate means of access and adequate lighting shall be provided at all electrical equipment on which or near which work is being done in circumstances which may give rise to danger.

**PERSONS TO BE COMPETENT TO PREVENT DANGER AND INJURY**

16. No person shall be engaged in any work activity where technical knowledge or experience is necessary to prevent danger or, where appropriate, injury, unless he possesses such knowledge or experience, or is under such degree of supervision as may be appropriate having regard to the nature of the work.



## **SAFETY GUIDE NUMBER 6**

### **ASBESTOS AND POLYCHLORINATED BIPHENYLS (PCB'S)**

#### **6.1 ASBESTOS**

Generally, materials containing asbestos only present a hazard when asbestos fibres are released and dispersed so that they can be inhaled.

Dangers from asbestos in existing buildings are likely to arise only when products containing asbestos are damaged, either accidentally or during maintenance or repair, and the asbestos fibres are released.

Where friable materials, e.g. sprayed asbestos insulation, have become or could become damaged, they should either be removed or protected by a suitable coating or covering by Specialist Contractors.

Should you encounter asbestos either damaged or untreated on any site where you have been asked to work you must cease work immediately, withdraw from the area and report your findings to both the site management or client and to your Head of Department or other responsible person at the office who shall advise the appropriate Authority.

Do not return to the affected area until advised to do so.

#### **6.1 POLYCHLORINATED BIPHENYLS (PCB'S)**

Old electric equipment may look harmless, but it may contain chemicals which can cause a skin rash or other ailments to people who work with them.

PCB's have very good electrical properties and do not burn. They have been used as dielectric filler fluids in transformers and capacitors and in the small capacitors and chokes in some older fluorescent fittings.

You are likely to find PCB's in older equipment which may not be labelled or the label may refer to the trade name. If in doubt do not dispose of the fluid or damage the equipment but contact your Head of Department or other responsible persons at the office who shall arrange for a Specialist Contractor to remove and dispose of the chemicals.

**SAFETY GUIDE NUMBER 7**  
**GUIDANCE FOR EXPERIENCED CRAFTSMEN ENGAGED IN**  
**ON THE JOB TRAINING IN ELECTRICAL SKILLS**

7.1 As an experienced craftsman, you will often be involved in on-the-job training. This involves passing on your skills, your knowledge, your standards and your attitudes on electrical safety to the next generation of competent craftsmen.

7.2 It is dangerous to assume that trainees know how to do certain tasks.

They may have done similar work in a training centre but may not appreciate the additional problems and hazards of a work environment. The tools and equipment used in previous training may be different from those you will use. In addition there may be asks which a trainee must not attempt, or may only attempt while you are with him. **DON'T ASSUME, CHECK !!**

7.3 Before trainees start work make sure that they fully understand what they have to do and how to do it. Avoid asking trainees questions which require just a YES or NO answer, or which involves the repetition of facts. As questions which make them show their understanding of the work, such as:

\* What is the first thing to do?

\* What would happen if .....?

\* How would you .....?

7.4 Don't confine yourself just to electrical aspects of the work. Explain what you are doing and why, for example checking that a ladder is properly tied off before using it. Get trainees to ask questions; the more questions they ask the more you will discover about their abilities and the quicker they will learn.

7.5 Make sure that trainees know what to do if an emergency arises. Show them the location of the nearest telephone, the main isolating switches, the first aid point, and other important safety features: explain the arrangements for fire and emergency situations. This doesn't take long and could save a life.

7.6 Remember that your skills have been acquired over a long period of time and trainees will be much slower than you. Show the trainees how to do the task and then watch them to it; if necessary show them again, pointing out any errors; train them to your standards. Except for safety reasons of where time is very important, try to avoid taking over a job and correcting the work yourself.

7.7 Many of the things you do have become automatic, like isolating a circuit before starting work, or instinctive like noting the position of switches, discoloration, physical damage, or other signs which alert you to danger. Help trainees to become good craftsmen by thinking quite deliberately about what you do and why you do it. Break tasks into simple steps which trainees can readily understand and make sure they know why it is done in a particular way. This approach will develop the trainees ability to think logically and to solve problems.

7.8 Set an example to trainees by always using safe practices. Never take short cuts as trainees will assume that these are safe and acceptable methods of working and if they try to copy your actions it could lead to an accident. At all times demonstrate by your behaviour a active attitude to safety. Do not permit such things as 'skylarking' in a work area and insist on protective clothing and equipment being used where appropriate.

7.9 If you are called away or if a job becomes so demanding that they presence of any trainees could be too distracting, you must make sure that they are not put at risk. Where possible, arrange for another experience craftsman to look after them, or give very clear instructions about what may and may not be done.

7.10 The development of trainees into good craftsmen depends on you. Keep management informed about progress and any problems.

**SAFETY GUIDE NUMBER 8**

**ELECTRICITY ON BUILDING SITES**

**WIRING IN TEMPORARY BUILDINGS & WORK UNDER CONSTRUCTION**

**415 VOLTS 240 VOLTS 110 VOLTS**

**3 PHASE (RED) SINGLE PHASE (BLUE) SINGLE OR THREE PHASE**

**(YELLOW)**

Supply to distribution unit. Heavy machinery such as tower cranes, mixers, hoists, saw benches and other machinery with motors of 2KW and over.

Supply to distribution unit. Fixed floor lighting. Some small static machines.

Lighting heating and cooking in site offices, stores, kitchens, canteens etc.

Light movable plant and portable hand tools (single or three phase). Site lighting other than fixed flood lighting (single phase). Portable hand lamps (single phase) in confined or damp situations should be supplied at 50 or 25 volts (single phase) - battery operated hand lamps are safest.

**TYPE OF CABLE TYPE OF CABLE TYPE OF CABLE**

Continuous metal sheathed or armoured with PVC PCP or HOFR covering.

**EARTHING EARTHING EARTHING**

Metal sheath or armour must be earthed. For flexible cables earth core in a cable required in addition and earth monitoring is recommended.

Metal sheath or armour must be earthed. For flexible cables earth core in a cable required in addition.

(Standard Installations which must conform to the IEE Regulations)

110v single phase – supplied from a double – wound transformer with the center tap of the secondary winding connected to earth so nominal voltage to earth is 55 volts 110v three phase supplied from a double-wound transformer with neutral point of star connected secondary winding connected to earth so nominal volt to earth is 65 volts

**SAFETY GUIDE NUMBER 9**

**TEMPORARY INSTALLATIONS FOR THEATRICAL PRODUCTIONS**

9.1 A temporary installation is one that is deemed to be disconnected and removed after a period not exceeding three months duration.

9.2 It should be borne in mind that a permit or certificate may be necessary from the local Licensing Authority even for very short duration installations.

9.3 Any temporary installation that forms part of an installation for entertainment or location lighting must conform to the Code of Practice BS 7909:1998

9.4 Any temporary installation not covered by BS 7909 must conform to current I.E.E. Wiring Regulations.

9.5 Use of single pole high-current mains connectors shall be in accordance with the attached information sheet.

9.6 Many lamps in common use reach extremely high envelope temperatures and at least 15 minutes must be allowed for the lamp to cool before replacement.

9.7 Before removing or replacing lamp or fuse, the equipment must be disconnected from power supply.

## **SAFETY GUIDE NUMBER 10**

### **HOW TO HANDLE WIRE ROPE FROM COIL OR REEL**

Wire ropes are supplied in coil or reel, and there are right and wrong methods of uncoiling and unreeling.

#### **10.1. UNCOILING - RIGHT METHOD**

Cut and remove the tie-bands and roll the coil along the ground, leaving the rope lying straight on the ground.

#### **10.2. UNCOILING - WRONG METHOD**

Do not uncoil by placing the coil on the ground and pulling either the outside or inside ends of the rope away. Kinks will be formed and the rope may be ruined.

#### **10.3. UNREELING - RIGHT METHOD**

Put a shaft through the reel and jack up both ends to allow it to rotate freely, alternatively, place the reel on its side on a vertical spindle and pull the free end of the rope in a straight line.

#### **10.4. UNREELING - WRONG METHOD**

Do not tilt the reel and “lap-off” the rope from the top side as kinks will be formed.

## **SAFETY GUIDE NUMBER 11**

### **PYROTECHNICS**

11.1 Pyrotechnics must only be stored in a suitable container.

11.2 The opening external face of the container shall bear a notice reading “DANGER - NO SMOKING - NO NAKED FLAME” in black capitals.

11.3 The receptacle must be kept closed and locked shut at all times other than when necessary to gain access to the interior.

11.4 The Head of Department or Supervisor must ensure that there is no source of ignition or smoking before withdrawing any explosive or pyrotechnic device from the main storage receptacle.

11.5. Only withdraw sufficient pyrotechnic supplies for one performance and ensure that all containers are replaced within the main storage receptacle and that it is locked.

11.6 The firing of pyrotechnic devices shall be carried out from a control/firing box which may be either mains or battery powered and the means of isolating the firing circuit (the key or fly lead) must always be kept in the possession of the operator responsible for firing the device.

11.7 All associated flexible cables must comply with the Regulations of the I.E.E.

11.8 Ensure that the operator has direct view of the device from the firing point.

11.9 Do not energise the control/firing box until immediately before the device is to be fired.

11.10 Do not fire the device if there could be danger to anyone.

11.11 In the event of misfires, switch off or disconnect the circuit and ensure that no further attempt is made to fire the device.

## **SAFETY GUIDE NUMBER 12**

Guidelines for safe use of single pole high current mains connectors  
(Eg Camlok or Powerlok)

12.1 The system must only be assembled and used by a competent person in accordance with current regulations

12.2 The connectors should not be used in damp conditions unless further protection is provided to prevent water ingress into the connectors

12.3 Ensure all main breakers are turned off before connecting any cables

12.4 The colour coding system on White Light equipment utilising single pole high current connectors is shown below. This refers only to the colour of the rubber cover enclosing the connector in the case of a camlok.

**Always** verify the colour coding employed on equipment from third party suppliers or provided by a venue before interconnecting with WL equipment. Connection should always be made in the order shown, and disconnection in reverse order (ie always connect EARTH first, followed by NEUTRAL etc. Disconnect the PHASES first, followed by NEUTRAL then EARTH last)

12.5 All unused through connectors or outputs should be fitted with protective covers supplied

12.6 The supply must not be energised until the system is completely assembled

12.7 The competent person should satisfy themselves that the polarity of all connections is correct BEFORE energising the supply. Once the supply is energised a further test should be made to verify correct polarity of connections and presence of sound neutral and earth BEFORE turning on any equipment connected to that supply

12.8 Connections must never be made or broken under load or whilst the supply is energised

### **SAFETY GUIDE NUMBER 13**

#### **GENERAL WAREHOUSE SAFETY**

- 13.1 Aerosols must be used with extreme caution, NEVER point them at anybody. Use a face mask where appropriate. Read instructions before using aerosols.
- 13.2 Take extreme care when manoeuvring vehicles in the car park, ensure that no-one is behind and get someone to guide you if necessary.
- 13.3 Never carry equipment that is too heavy for you or restricts your view of where you are going. Take particular care in the yard.
- 13.4 Ensure that music/radio volume is kept to a safe limit such that warnings/alarms etc can be heard. Care must be taken with personal stereos especially.
- 13.5 A clean and tidy warehouse is safer than an untidy one!
- 13.6 Care should be taken when loading vans and lorries to ensure that the load is safe and will not move in transit.
- 13.7 Throwing both small and large items is one of the most dangerous activities possible. Avoid it!!
- 13.8 Aisles and walkways MUST be kept clear at all times.
- 13.9 The forklifts are Company property and can only be driven by permission from the Company. Permission will be given after suitable training. Under no circumstances should any employee attempt to drive a fork lift without suitable training and permission.
- 13.10 Access equipment such as Genie personnel lifts should only be used after suitable training. Bear in mind that the ceiling of the warehouse contains hazards such as rotating ventilation fans and automatic sprinkler heads
- 13.11 The stacking of “meatracks” should only be carried out by suitably trained staff using the approved method.
- 13.12 Compressed gas cylinders should only be stored in the caged area adjacent to the control department.
- 13.13 Smoke machines should only be tested near to a ventilation point or in a manner that presents no danger to staff working nearby due to lowered visibility or spilt fluids/residue.
- 13.14 When working near the edges of the mezzanine levels take care that no hazard is presented to staff working below. All access gates to the mezzanines should be kept clear and closed immediately after use.
- 13.15 Mobile phone use in warehouse is permissible except where individuals are placing themselves or others at risk. For example mobiles should not be used when climbing ladders, driving fork lift trucks, handing pyrotechnics, using spray paint, the spray booth or dealing with customers.



## SAFETY GUIDE NUMBER 14

### **ELECTRICAL TESTING**

All portable appliances both for use as hire equipment and for our own use must be regularly tested as detailed in the 'Electricity at Work' regulations.

The term Portable Appliance includes all kinds of electrical equipment that require an electrical supply.

Regular planned inspection and testing is required, this should take the form of:

a. Visual Inspection

b. A 500V insulation test and an earth continuity test with a substantial current capable of revealing a partially severed conductor

Once a piece of equipment has passed the tests it should be moved to the controlled test area.

These tests must be repeated every time the equipment leaves the building on any hire job.

Every failed item must be marked as such and either repaired and re-tested or taken out of service to await repair at a later date.

Using the appliance testers provided there are two basic tests, with visual pass/fail indicators needing no interpretation of results.

Earth Bond Test - Applies a substantial test current (typically around 25A) down the earth pin of the appliance to an earth test probe which is connected to the metalwork on the casing. The resistance is then measured. A pass value is < 0.3 ohm

Insulation Test - Applies a test voltage (typically 550V DC) between the live and neutral conductors together and the earth conductor, from which the insulation resistance is calculated. A pass value is > 2Mohm

Equipment tested is visibly marked with a test sticker. Where items may be away from premises for periods (such as on tour) items are tested before they leave the premises and then at a minimum of 6 monthly intervals therein.

SELV equipment is exempt from portable appliance test criteria.

### **Visual Inspection of Equipment**

The following list is not exhaustive, but is intended as a guideline when visually inspecting equipment.

- External condition of casings, cables and connectors
- Physical damage
- Signs of overheating
- Signs of arcing
- Signs of tampering with the equipment
- Signs of ingress of liquid or foreign materials
- Cuts, fraying and other damage to cables
- Damaged, loose or missing glands
- Interior of any 13A plug should be inspected to determine that it contains the correct fuse (a tamperproof sticker is used to indicate this has been checked)
- Fuses and MCBs should be checked for correct type and rating
- Ensure that properly manufactured cartridge fuses are used and that fuses have not been replaced with a metal bar, or wrapped in metallic foil or similar non-standard methods.
- If a piece of equipment fails the visual inspection, a FULL inspection MUST follow, including an internal inspection of ALL connectors. The equipment should be marked and removed from service or the fault should be rectified by a competent person and the equipment retested.

### **Personnel Carrying Out Tests**

Personnel to carry out Portable appliance testing are to be suitably trained / qualified. We use the plugtest City & Guilds 2377-22 as a benchmark qualification.

**SAFETY GUIDE NUMBER 14 contd.**

**ELECTRICAL TESTING - TEST AREAS**

Certain areas of the company are designated as Electrical Test areas. It is possible that in these areas equipment will be tested in a partially dismantled state with exposed live conductors.

Do not enter these areas unless you have been trained to work upon equipment with exposed live conductors or you are informed it is safe to do so by a suitably trained member of staff.

Never interrupt or distract a technician involved in work upon a piece of live electrical apparatus

Equipment should only be tested on a RCD protected supply.

Equipment under test must be secured in a safe state and adequately supported.

Partially dismantled equipment should not be left under test without supervision.

Any exposed conductors in dismantled equipment under test should be protected where possible with temporary insulation to avoid direct contact.

Equipment test areas should observe good housekeeping arrangements including adequate clear working space.

Staff must never work alone in the warehouse on live equipment (eg during the evenings or at the weekend).

If the equipment has not been used for over 1 year or belongs to a third party extra care should be taken when testing.

Never lean over equipment on test.

Eye protection must be used when working on switch mode power supplies.

Ensure all components of a circuit have fully discharged before work is performed upon it, this applies particularly to switch mode power supplies and discharge lamp circuits.

## **SAFETY GUIDE NUMBER 15**

### **VDU's**

15.01 VDU's have been blamed - often wrongly - for a wide range of health problems. Only a small proportion of people using them suffer health problems as a result, but because there are so many users this can be a significant number. You should remember that in most cases the problems do not arise directly from the VDU's.

15.02 There are no indications, from extensive research, that VDU's will cause disease or permanent damage to eyes. But the fatigue of intensive VDU work can cause discomfort, even to healthy eyes. Because it gives your eyes more demanding tasks, it might also make you aware of an eye problem that you did not know about before.

15.03 It is important that you can see the screen comfortably without having to raise or lower your head, so bi-focals might not be ideal for VDU work. You may find you need a different type of glasses to work comfortably. You should consult your doctor or optician if in doubt.

15.04 Some VDU users may experience aches and pains in their hands, wrists, arms, neck, shoulders or back (that is to their musculoskeletal system), especially after long periods of uninterrupted VDU work. If this happens you should alert your Manager or Supervisor. Usually these aches and pains do not last, but in a few cases they may become more persistent or even disabling. Most problems of this nature can be prevented by good workplace design and good working practices.

15.05 VDU's give out both visible light (which enables us to see the screen) and other forms of electromagnetic radiation which can be harmful above certain levels. However, the levels emitted from VDU's are well below the safe levels set out in international recommendations. You don't need special devices such as protective spectacles, screens or aprons when using them.

15.06 There has been some concern about reports of higher levels of miscarriage and birth defects among some groups of VDU workers. Many scientific studies have been carried out which, taken as a whole, do not show any link between miscarriages or birth defects and working with VDU's. If you are anxious about working the VDU's or about work generally during pregnancy, you should contact your doctor or talk to someone who is well-informed of current authoritative scientific information and advice on VDU's.

15.07 There are no drugs which cannot be safely combined with VDU work. A few tranquillisers, other psychoactive drugs and certain eye drops prescribed for glaucoma can temporarily affect the way your eyes change focus, but this is not harmful.

### **15.08 ADJUSTING YOUR WORKSTATION TO SUIT YOU**

(a) Adjust your chair and VDU to find the most comfortable position for your work. As a broad guide, your arms should be approximately horizontal and your eyes at the same height as the top of the VDU casing.

(b) Make sure there is enough space underneath your desk to move your legs freely. Move any obstacles such as boxes or equipment.

(c) Avoid excess pressure on the backs of your legs and knees. A footrest, particularly for smaller users, may be helpful.

(d) Don't sit in the same position for long periods. Make sure you change your posture as often as practicable. Some movement is desirable, but avoid repeat stretching movements.

(e) Adjust your keyboard and screen to get a good keying and viewing position. A space in front of the keyboard is sometimes helpful for resting the hands and wrists while not keying.

(f) Don't bend your hands up at the wrist when keying. Try to keep a soft touch on the keys and don't overstretch your fingers. Good keyboard technique is important.

(g) Try different layouts of keyboard, screen and document holder to find the best arrangement for you.

(h) Make sure you have enough work space to take whatever documents you need. A document holder may help you to avoid awkward neck movements.

(i) Arrange your desk and screen so that bright lights are not reflected in the screen.

You shouldn't be directly facing windows or bright lights. Adjust curtains or blinds to prevent unwanted light.

(j) Make sure the characters on your screen are sharply focussed and can be read easily. They shouldn't flicker or move. If they do – please contact the IT dept.

(k) Make sure there are no layers of dirt, grime or finger marks on the screen.

(l) Use the brightness control on the screen to suit the lighting conditions in the room.

15.09 If you have problems you think might be connected with your VDU work you should talk to your Manager or Supervisor.

## **SAFETY GUIDE NUMBER 16**

### **WINTER PRECAUTIONS**

16.1 Everyone should have a space or access for wet clothing on arrival. If you haven't please talk to your line manager. If it is raining during the day, the warehouse floor becomes wet from vehicles being loaded or unloaded. The floor can become quite slippery so please take care. Excessive amounts of water should be mopped up.

16.2 Try to keep the doors, windows and shutters etc closed when it is cold outside (unless you are overheating through excessive work!) This includes turning off lights or equipment not being tested or used.

16.3 Be aware that under extremely cold conditions, ice will form underfoot in the car park, paths and access areas to the building. We will try to obtain some grit containers shortly. Make sure of your footing from your car or before arriving or leaving the building. Advise customers accordingly. Car drivers, please do not use the frozen car park as a skid pan!

16.4 Do not use the external hose during cold spells since the residue will certainly freeze and be dangerous.

16.5 Whilst we have certain protection of pipe work, extreme cold could freeze pipes. Please keep an eye out and more importantly tell Admin that a tap or toilet, sink or dishwasher is not working properly.

16.6 Transport is also subject to freezing, so take care handling equipment and vehicles that have been outside in extreme temperatures.

16.7 Under heavy rain, please keep a look out for leaks from the warehouse roof, office ceilings etc. These need to be repaired urgently. Also the down pipes in the warehouse are subject to blocking and flood the floor very quickly.