Health and Safety Procedures

For

Spectrum Electrical Group

Date of Issue

March 2010

Rev 16

Spectrum Electrical Group

Electrical Engineers, Contractors and Consultants

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Spectrum Electrical Group

HEALTH AND SAFETY POLICY STATEMENT

The company recognises that high standards of Health, Safety and Welfare are an integral part of efficient business management and contribute to the operational efficiency and profitability of the company. For such standards to be achieved, adequate financial and physical resources will be made available thereby ensuring continuing development of the competence of employees and the provision of any necessary expert advice.

Health and Safety is a management responsibility of equal importance to production and quality, thus managers will pursue progressive improvements in health and safety performance by establishing and maintaining control, communicating the necessary information, encouraging co-operation between individuals and groups thereby ensuring a positive health and safety culture is promoted and developed.

Equally, it is recognised the employees have a duty of care to themselves and others by avoiding hazards, preventing accidents and co-operating with the company by complying with all instructions and recommendations if the aims and objectives of this policy are to be achieved. To this end the assistance of all employees is required to ensure the maintenance of on-going high standards of health, safety and welfare.

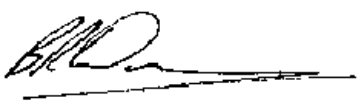
The company will ensure so far as is reasonably practicable that:

- Safe and healthy conditions of work are provided and safe working methods adopted.
- Statutory requirements are the minimum standards to be observed in all company activities.
- Adequate Information, Instruction, Training and Supervision will be provided to ensure that all employees understand the potential hazards present in their work and the precautions to be taken to eliminate or minimise these hazards.
- All accidents will be investigated to identify the immediate and underlying or hidden causes so that action can be taken to prevent a reoccurrence and identify where improved preventative measures are needed.
- Employees at all levels are encouraged to participate in the development of health and safety arrangements and put forward their ideas for further improvements.

This policy will be updated as a result of periodic review to make sure it remains relevant and effective. All employees will be informed about changes to this policy.

Any employee who wilfully disregards the health and safety policy may be subject to summary dismissal.

This policy will be updated and changed as necessary as the result of annual reviews carried out by management following consultation with employees.
The policy will also be reviewed following any changes in legislation or working conditions.



B. R. Wannell
Managing Director

Date 8th February 2010

Next review date February 2011

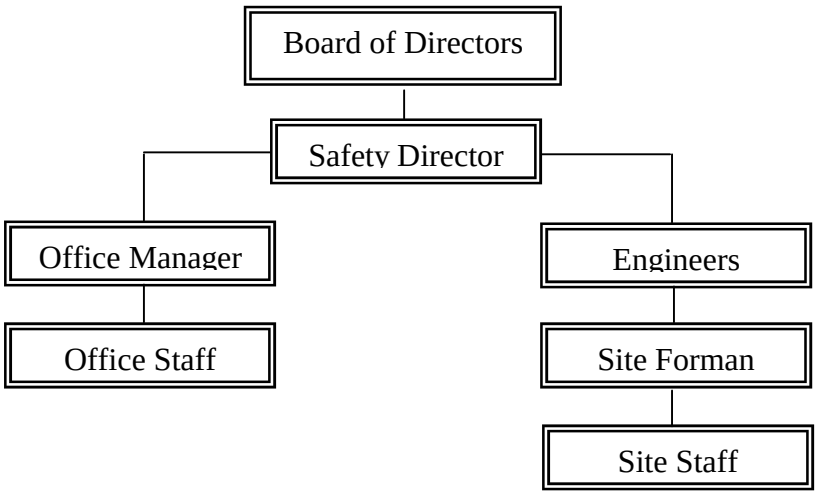
Organisation

Board of Directors

Directors are responsible for ensuring that this policy is effectively and fully implemented and for keeping the Director with responsibility for safety fully informed on issues affecting health and safety within the company.

Directors will discuss and decide policy and issue instructions regarding the implementation to line management accordingly.

Health and Safety Organisational Structure



Health and Safety Responsibilities

The Director with responsibility for co-ordinating and monitoring health, safety and welfare standards (Safety Director) will:

Keep the other company Directors informed of any necessary improvements to the health and safety management system by ensuring that sound policies and procedures are formulated so that realistic safety performance standards can be achieved and maintained.

Be assisted and advised upon those matters by obtaining expert advice where necessary.

Ensure that policy and procedures are clearly understood and effectively pursued. Foster an understanding in all employees that health and safety is an integral element of efficient business management and contributes to the operational efficiency, productivity and profitability of the company by reducing accidents, damage and financial loss.

Ensure adequate information, instruction and training is provided at all levels so that sufficient knowledge exists for implementation of procedures and protective measures.
Ensure that the management of health and safety within the company is periodically audited so that high standards of health and safety performance are maintained and areas where improvement is required are identified.

Ensure adequate planning, preparation and construction time is allowed for all work in order to ensure its organised and safe completion.

Ensure that adequate financial and physical resources are allowed to ensure the safe completion of all construction works

Chair safety review meetings with the Contracts Managers, Site Foremen and any other relevant person present and ensure the preparation and distribution of minutes of said meetings.

Identify training needs within the company and make the necessary arrangements to ensure it is carried out within a reasonable time frame.

The Engineer/Contracts Managers will:

Monitor the implementation of the company's health and safety policy and compliance with statutory requirements on site.

Undertake original risk assessments and method statements.

Carry out H & S site inspections during site visits and submit report, amend / update risk assessments and method statements throughout the duration of the project

Ensure that notification has been sent to the HSE by others on projects carried out under the Construction (Design and Management) Regulations.

To liaise with Site Foremen, Safety Director and any other relevant person regarding safe construction methods welfare facilities to be provided on site etc.

To set a personal example by wearing appropriate PPE and following site rules when on site.

To ensure that all relevant documentation is sent to site including statutory notices, certificates etc.

Ensure that all statutory requirements are met following fatality, dangerous occurrence, major injury, three-day injury and any other reportable/notifiable occurrence.

Monitor the maintenance of all relevant safety records.

Site Foremen will:

Undertake ongoing risk assessments and method statements.

Be conversant and ensure implementation and compliance with the safety management systems and procedures.

Complete weekly site inspections sheets and follow up any non compliances

Establish and maintain control, co-operation, ensure communication of any necessary instructions and information, which leads to positive improvements in health and safety performance standards on site.

Ensure that persons have sufficient knowledge and are competent to undertake the work tasks safely.

Evaluate work activities to identify hazards and implement any necessary protective measures to ensure safe and healthy working conditions are maintained.

Monitor and review work activities to ensure that safe work methods and conditions are being achieved.

Ensure everyone on site receives precise instructions on site in respect of health and safety.

Ensure that construction sites under their control are maintained in accordance with all relevant codes of practice and statutory provisions.

Control and co-ordinate the work of sub-contractors on site.

The Office Manager/Health and Safety Co-ordinator will:

Ensure the office health and safety file is kept up to date.

Ensure that the office has a current fire risk assessment in place and that it is sufficient and suitable.

Ensure that adequate standards of health, safety and welfare are maintained by carrying out regular checks of the workplace and ensuring any necessary remedial action is taken.

Ensure that regular inspections are carried out to ensure the health, safety and welfare of all those who use the premises is not at risk as required by the Health and Safety at Work Act.

Liaise with the enforcing authority and action any notices issued or advice given during a visit.

Ensure that all the requirements of the Health and Safety (Display Screen Equipment) Regulations are fully implemented regarding eye tests, assessments etc.

Undertake regular testing of fire alarms, emergency lighting, fire extinguishers etc and ensure that a fire drill is carried out regularly.

Ensure adequate information, instruction and training is provided to office staff at induction and wherever the need is identified.

Employees will:

Comply with the policy and procedures of the company.

Co-operate with management in developing a personal awareness towards preventing injuries at work either to themselves or to others.

Wear and take care of any personal protective equipment provided and report any defects, damage or loss immediately.

Report to their line management immediately, any hazards or conditions which develop, including any defects in plant, machinery or other equipment or materials.

Comply with the health, safety and welfare responsibilities that are defined within their terms and conditions of employment and/or specific job descriptions.

IMPORTANT GENERAL INFORMATION

The DIRECTOR responsible for Health and Safety is:-

J. M. Jackson

The GROUP Health and Safety OFFICER IS:-

J. M. Jackson

The Local Health and Safety ADVISER is:-

……

IN THE EVENT OF AN ACCIDENT/INCIDENT OCCURRENCE,

CONTACT YOUR LINE MANAGER or THE GROUPS

HEALTH and SAFETY REPRESENTATIVE IMMEDIATELY

All accidents/incidents need to be recorded and investigated by us. Those of a reportable nature are referred to the Health and Safety Executive under procedures outlined in "The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations"

Health and Safety Executive Local Contact Point: -

Tel 0845 3009923

Email riddor@natbrit.com

OFFICE: HEALTH AND SAFETY INFORMATION

FIRST AID BOX: -

The first aid box is kept in the following location: -

……

The person responsible for the first aid box is: -

……

Persons trained in first aid: -

……

……

……

……

Person responsible for accident/ incident recording and reporting is:

……

Accident book location is: -

……

ACCIDENTS -THINK SAFETY!

OFFICE: HEALTH & SAFETY INFORMATION

FIRE SAFETY: -

IN THE EVENT OF A FIRE, ALL OCCUPANTS OF THE BUILDING ARE TO LEAVE THE BUILDING AND ASSEMBLE IN THE CAR PARK, WHERE FURTHER INSTRUCTIONS WILL BE GIVEN

FIRE FIGHTING EQUIPMENT: -

The building has fire extinguisher equipment maintained and operated as follows: -

EQUIPMENT MAINTAINED BY: -

……

PERSON RESPONSIBLE FOR EXTINGUISHERS: -

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PERSONS TRAINED TO USE EXTINGUISHERS: -

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GENERAL HEALTH AND SAFETY INFORMATION

VDU Work Station

The Health and Safety (Display Screen Equipment) Regulations 2002 regulate the use of display screen equipment within the workplace. These regulations apply to persons who regularly use VDUs as a significant part of their normal work. Those people who only use Visual Display Units (VDU's) occasionally are not covered by the regulations. However employers have a duty to protect their health under other health and safety legislation. If you work from home and habitually use a VDU for a significant part of your normal work then these regulation will apply. The regulations do not place any duty on self-employed persons, they only apply if they are using a workstation provided by a client employer. The client's employer has a duty to assess the risks.

How can I avoid health problems?
Problems can often be avoided by good workplace design, so that you can work comfortably, and by good working practices. Prevention is easiest if action is taken early, before the problem has become serious.

How long can I safely work at a VDU screen?
There is no limit set out in legislation but it is important that you take regular breaks. How long you should work without a break depends on the work you are doing. Regulations require breaks or changes in activity but do not specify their timing or length. Guidance suggests that frequent short breaks are better than long infrequent breaks, for example, 5 minutes every hour or 15 minutes every 2 hours. It is best if the individual has discretion over when the breaks are taken as they are aware of how they are feeling.

Electrical Equipment

The Provision and Use of Work Equipment Regulations 1998 states

"Every employer shall ensure that work equipment is maintained in an efficient state, in efficient working order and in good repair."

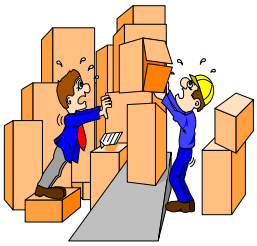
The PUWER 1998 covers most risks that can result from using work equipment. With respect to risks from electricity, compliance with the Electricity at Work Regulations 1989 is likely to achieve compliance with the PUWER 1998.

PUWER 1998 only applies to work equipment used by workers at work. This includes all work equipment (fixed, transportable or portable) connected to a source of electrical energy. PUWER does not apply to fixed installations in a building. The electrical safety of these installations is dealt with only by the Electricity at Work Regulations

Cleanliness

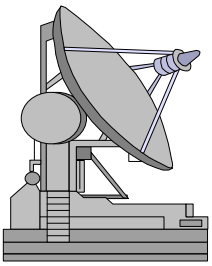
It is important that all work areas are kept clean and tidy
(particularly floor areas) This also helps maintain clear access and egress

HEALTH & SAFETY INFORMATION



Safe Stacking and Storage

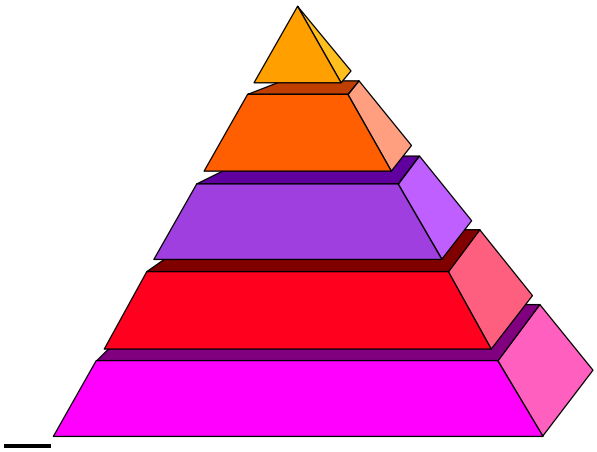
It is important that this risk is fully recognised even in an office environment. All items particularly those at high level, need to be safe and secure and a correct method of retrieval (e.g. steps) is to be employed.



Communications

To operate an efficient Health and Safety Plan requires good communication between all persons employed by the GROUP. It is the responsibility of all of us to ensure that everything we do, is done on the basis that we know what we are doing and that it is being done in line with GROUP safety procedures. IF IN DOUBT CONTACT YOUR Supervisor.

THE FIVE COMPONENTS OF SUCCESSFUL HEALTH AND SAFETY MANAGEMENT APPLIED TO THE SPECTRUM GROUP



1 - AUDIT AND REVIEW

2 - PERFORMANCE MEASUREMENT

3 - PLANNING AND STANDARDS

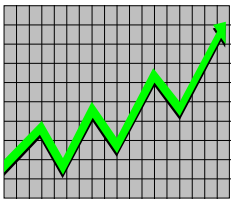
4 - EMPLOYEE ORGANISATION

5 - COMPANY POLICY

AUDIT AND REVIEW

The operation of our Group Health and Safety procedures will be subject to regular monitoring and will pay particular attention to:

- **The degree of compliance with health and safety performance standards (including legislation)**
- **Areas where standards are absent or inadequate**
- **Achievement of stated objectives within given time-scales**



PERFORMANCE MONITORING

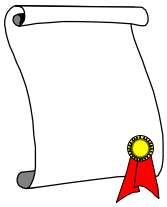
We will be continuously monitoring our health and safety performance within the Group to find out if we are being successful.

We need to know:

- **Where we are**
- **Where we want to be**
- **What is the difference-and why.**

Monitoring will be: -

1. **Active (before things go wrong)**
2. **Reactive (after things go wrong)**



PLANNING AND STANDARDS

Our Group health and safety planning will incorporate the following:-

- **Identification of hazards and assessing risks and deciding how they can be eliminated or controlled;**
- **Compliance with the health and safety laws that apply to our business;**
- **Agreement of health and safety targets with managers and supervisors;**
- **A purchase and supply policy which takes health and safety into account;**
- **A commitment to design control over all Group operations;**
- **Safe systems of work;**
- **Procedures for dealing with serious and imminent danger;**
- **A commitment to co-operation with neighbours, and/or sub-contractors;**
- **Agreed standards against which performance can be measured.**

GROUP HEALTH AND SAFETY STANDARDS

Agreed standards will identify who does what, when and with what result. They will apply to:

- **Our premises, place of work and environmental control,**
- **Our plant and substances, purchase, supply, transport, storage and use,**
- **Procedures, design of projects and the way work is done**
- **Our employees, training and supervision**
- **Services we deliver, design, delivery, transport and storage.**

The standards we set will be:

MEASURABLE
ACHIEVABLE
REALISTIC

THE SPECTRUM ELECTRICAL GROUP BELIEVE: -

- **That health and safety can contribute to business performance by preserving and developing human and physical resources, by reducing costs and liabilities and can be a means of expressing GROUP responsibility;**

- **That management has to develop appropriate organisational structures and a culture which supports risk control and enables the full participation of all people working for the GROUP;**

- **In the need to resource and plan policy implementation adequately;**

- **That the best way to control injury, ill health and loss prevention is based on continual risk assessment;**

- **That the GROUP has to be responsive to internal and external change;**

- **In the need to continually evaluate performance;**

- **In the connection between quality and health and safety.**

The Health and Safety Procedures of the Spectrum Electrical Group, are in line with the requirements and spirit of (among others), the following Regulations:-

Management of Health and Safety at Work Regulations 1999

Workplace (Health, Safety and Welfare) Regulations 1992

Health and Safety (Display Screen Equipment) Regulations 2002

Personal Protective Equipment (PPE) Regulations 1992

Manual Handling Operations Regulations 1992

Health and Safety (First Aid) Regulations 1981

Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995

Noise at Work Regulations 2005

Control of Substances Hazardous to Health Regulations 2002

Construction (Design and Management) Regulations 2007

Consultation and Dissemination of Safety Information

The Health and Safety (Consultation with Employees) Regulations(HSCER)1996

These regulations cover employees not represented by Trade Union appointed Safety Representatives

In order to meet the requirements of the Safety Representatives and Safety Committees

Consultation with employees will be carried out on all health and safety issues that could have an effect on employees, including:

- **changes in policies, procedures or processes**
- **arrangements for assistance by competent people**
- **hazards, risks and their control measures including policies, procedures and safe working practices**
- **planning of health and safety training**
- **consequences arising from the introduction of new technology and processes**

This communication and consultation will take place directly with the employees via as appropriate one or a combination of, safety meetings, tool-box talks or memos attached to the employees payslip

SITE HEALTH AND SAFETY INFORMATION

This information is supplied on the basis that the environment that we work in, (the construction sector), is one of the most hazardous.

THE SPECTRUM ELECTRICAL GROUP operate an aggressive health and safety programme to ensure that all it's employees who work on sites having various risks and hazards, are prepared through training, equipment and procedures to provide a quality service, that sensibly protects us, others who are carrying out tasks around us and the general public.

The health and safety notes included in this document are important and have been provided to assist in our GROUP campaign, designed to encourage everyone, to

THINK SAFETY!

Construction Specific Health and Safety Information

GENERAL NOTES

Most of Spectrum Electrical Groups contracts are on a site which is in the charge of a client or principle contractor, who will have a Health & Safety Policy in operation. Staff must make themselves aware of these regulations, and also hazards applicable to the site. Particular note should be taken of live operations on the site, and of part finished areas where fencing, flooring and stairways are incomplete.

Use safety equipment where required and as directed. You should also use equipment and protective clothing whenever you feel it is necessary and as reasonably practical.

Make sure the contractor and others know your presence on site, and use permit-to-work schemes as directed.

The requirements of this Policy must be understood and observed.

SAFETY OFFICER

Spectrum Electrical have a permanent Health and Safety Officer who will visit sites to monitor safety conditions and health risks. This is in addition to the Site Safety Officer or responsible person on site.

The Manager or Engineer responsible for the contract must appoint a member of the Spectrum Electrical site team to be Site Safety Officer. If there is only one engineer on site, then he/she is the Spectrum Electrical Site Safety Officer.

Clients and Contractors with whom we have a contract will appoint a member of their team as the Site Safety Officer. The identity of this officer should be posted on a Notice Board or other place on the site, and he/she will give Health and Safety instructions to all personnel on the site.

The Spectrum Electrical Site Safety Officer would normally accept safety instructions from the client or Managing Contractors' Safety officer. In the absence of any instructions, Spectrum Electrical staff must consider any reasonable safety action required of them and act upon it. If in doubt, contact your Manager or Engineer responsible for the contract, or the Health and Safety Manager.

PROCEDURE ON CUSTOMERS' PREMISES/SITES AND SITE COMMUNICATION

Personnel shall, upon arrival at customers' sites, shall make their presence known to official reception/security staff and comply with their recording systems (where no formal systems exist, report to site senior persons e.g. foremen, site agents). Where identity badges are issued, these shall be worn at all times until surrendered when leaving.

These precautions ensure that, in the event of a fire or other accident, prompt and effective action may be taken for the safety of all persons known to be on the premises.

Owners and occupiers of sites are responsible, under the Act, for your safety. Failure to comply with their reporting arrangements could be an offence under the Health and Safety at Work Act.

Staff must comply with site safety rules and with site requirements to wear safety hats, safety boots etc., and must ensure that Spectrum Electrical sub-contractors also comply.

If any special precautions are necessary such as NO SMOKING, etc., it is the site manager's responsibility to draw them to your attention. If in doubt, ask or take the safe option. Establish what action to take in the event of a fire and be familiar with escape routes.

Remember: you are your own Safety Representative.

If working alone, and in a remote situation, e.g. on a roof or in a plant room, establish a routine of making contact at certain times.

When leaving premises, make your departure known to the site contact or other responsible person, and leave equipment on which you have worked in a safe condition in compliance with all relevant safety standards.

Report verbally to the person in charge any lapses in safety standards, or defective plant or equipment, on the part of others (employers or employees); if this is ineffective report to your Manager. In an extreme case, where to continue working would be unreasonably hazardous or illegal, **stop work**, notify your manager, by telephone, of the details and await instructions (Managers shall resolve the situation and advise you how to proceed).

Skylarking, horseplay, and practical jokes are, because of their tendency to escalate, extremely dangerous on sites. On customers' premises it is also extremely bad manners. All cases of such behaviour should be reported, as an offence under the Health and Safety at Work Act may well have been committed.

Drinking of alcoholic beverages or the taking of non prescribed drugs at any time during the working day on sites is strictly forbidden.

INSTALLATION/COMMISSIONING/SERVICING

During these operations conditions on site can vary; plant could be operating, process plant and electrical boards can be live.

Areas where plant might be live, or motors running during commissioning, shall be designated as controlled areas. These areas shall be, in liaison with the resident operator, clearly defined by physical barriers and signs, as necessary.

Ensure:

Work is carried out on site in accordance with procedures prepared at the planning stage;

Permit-to-work procedures are adhered to;

Personnel on site are aware of correct procedures during the testing, commissioning, servicing;

Where access by operatives has to be gained to areas not having permanent means of access, scaffolding,, mobile access platforms or other safe means of access are provided. Other sections of the Policy applying to access equipment arrangements shall be complied with.

Where it is impracticable to provide scaffolding or other form of safe working position, personnel required to work on powered access booms shall wear safety harnesses at all times, secured to safe anchorages. Where movement is required at heights, inertia reel or sliding type anchorages shall be used where this method is considered safe for use

During installation/commissioning/servicing, the work is subject to all the statutory requirements applicable to normal working for machinery, means of access, entry into confined spaces, electrical work, etc.

WORK IN OCCUPIED PREMISES

In addition to the usual requirements of clients and owners for work without interruption to existing operations, etc., staff should consider any danger or hazard they might impose, or be subjected to, during their work on site. If there is any interruption or hazard, such as for a requirement for power off, Engineers would normally liaise with the resident authority and arrange warnings, barriers, notices, etc., for personnel and property protection.

(Note: persons in control of premises (other than domestic), e.g. Local Authorities, companies Education or Health Authorities, etc. have a duty to ensure, so far as is reasonably practicable, that premises do not present a risk to the health & safety of persons coming on to the premises to carry out work).

Special requirements shall be recorded in writing and issued to site personnel and representatives of the owner or occupier.

Work shall be planned taking particular note to the health & safety precautions necessary to prevent risk to the occupiers of the premises during operations.

Owners/occupiers shall be informed of work to be carried out, hazards involved and precautions to be taken, and be given names of persons to contact in the event of queries.

Site personnel shall be fully instructed in specific requirements of premises where work is to be carried out.

Local Authorities, Private Companies, Nationalised Industries, Health Authorities or other bodies owning occupied premises where work is to be carried out may have specific rules for contractors on their premises which can include Permit-to-Work Systems.

Copies of applicable regulations shall be available to operatives and maintained at Head office. Guidance and Codes of Practice are available from the Safety Co-ordinators, as required.

Engineers shall ensure all necessary equipment is available on sites, that information relating to the existing installation is checked, and occupiers are aware of work to be carried out and any precautions necessary to ensure the Health and Safety of occupants of the premises during the work.

All planned protected measures shall be arranged before work commences, e.g. enclosures, barriers, fencing, etc.

Engineers appointed, as the Spectrum Electrical Site Safety Officer shall ensure that work is carried out as planned and ensure that there are no unsafe areas or conditions that would affect the occupants at the end of each working shift.

All work in occupied premises shall be carried out in accordance with the appropriate sections of the policy for access equipment, electrical equipment, health hazards, noise, LPG etc., and account shall be taken of the safety of the occupants which will require a consideration of their lack of awareness of the hazards involved in the work, their curiosity and any disablement.

Particular attention shall be paid to housekeeping. All accesses, fire escape routes and other areas in use by occupants shall be kept clear of materials, waste, tools and equipment, trailing leads, etc. Spills of water, oil or other substances that could create slippery conditions must be cleared up immediately.

Areas where work is taking place shall not be left unattended unless all tools, materials, equipment, etc. have been removed or placed in a safe position, or access to the area by occupants has been prevented.

WORKING ON ELECTRICAL EQUIPMENT

Introduction

The Electricity at Work Regulations, require precautions to be taken against the risk of death or personal injury from electricity in work activities. They impose duties on employee and employers (duty holders) in respect of electrical systems, electrical equipment and conductors in respect of work activities on or near electrical equipment. The duties are in addition to those imposed by the H S W Act 1974

Good Practice

Work on live equipment should not be carried out unless there is no other practical way of carrying out the job.

Whenever possible, isolate equipment prior to work, and prove dead. Proving instruments shall be checked immediately before and immediately after proving tests.

When working on live apparatus, engineers shall:-

a) fence themselves off;
b) display warning signs;
c) not wear jewellery, watches, etc.;
d) not use metal ladders or stools to gain access to high level;
e) use only tools insulated to withstand a sufficiently high voltage, and stand on insulating mats to BS 921, and wear insulating gloves to BS 697.

Work on live apparatus only where the work is limited to testing and/or fault finding and where metal parts likely to be touched are fully shrouded.

Operatives shall not work unaccompanied where the work extends to repairs or alterations and it is not possible to isolate the equipment.

Where the live working requires the engineer and a "second man", he may be an employee of the site being visited. The "second man" shall have been instructed on action required in emergencies.

A card detailing this emergency action shall be handed to a "second man" and read be him before work commences

Operatives shall ensure that:

A "second man" is fully aware that his function is to be available to aid the engineer in the event of an accident.

and

***That he has read and understood his instructions*.**

Safe System of Work

Under the Health and Safety at Work Act, Spectrum Electrical requires personnel to operate a safe System of Work. We believe that through training, our operatives have the necessary knowledge, qualifications, or experience to operate a "Safe System of Work". If you are in any doubt regarding the safety of any task you are expected to carry out, the advice of the supervising engineer or the H&S officer should be sought.

Operatives shall, if uncertain about the state of a power supply or circuit:-

(i) exclude unauthorised persons from the immediate vicinity.

(ii) make arrangements for isolating and "proving dead".

(iii) conform to procedures for Testing (see "Testing", below).

(iv) ensure inadvertent restoration of supply by, e.g. Permits to Work, warning notices, locked "OFF" isolators, retention of fuse links.

Testing of Electrical Equipment

The Test equipment be properly selected and maintained for the operation.

The use of a tool or piece of wire as a means of making contact between a test lead and a live terminal is prohibited.

Warning Signs

When plant, distribution boards or panels are being worked on, display prominently, danger signs warning others to keep well away. Where distribution boards or plant is being commissioned and may be operating under automatic control, attach suitable signs to all areas of access, warning people that the plants are under automatic control and may start up at any time.

ELECTRIC SHOCK

General

Engineers shall always fully isolate and test circuits before carrying out any adjustments or modifications to wiring.

PERMIT TO WORK SYSTEMS

If a Permit to Work system is in operation on a site, Spectrum Electrical staff must conform with its requirements.

The Permit to Work form is usually raised by the resident authority, who has charge of the works and is best qualified to determine the conditions of issue. This may be a client or main Contractor.

Spectrum Electrical staff will sign in as required by the Permit and follow the instructions given. When the work is complete, and checks have been made to ensure the equipment has been left in a safe state, the Permit-to-Work form shall be signed off with the agreement of the authorising person.

If there is no system in operation, and the staff are unsure about the safety of working, or of power shutdown at the works, etc. they must consult with the resident authority or their manager to ensure that work may proceed without hazard.

Where appropriate, a Spectrum Electrical Permit to Work system should be implemented.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

The provision of safety equipment and clothing by Spectrum Electrical will be in accordance with the following guidelines:

Safety Helmets	**}**	To all site staff on permanent loan.
Protective Glasses	**}**	To staff visiting site as required by regulation
Ear Defenders		As required to site staff or visitors. Managers to issue in accordance with regulations.
Protective Overalls	**}**	Issues to site staff as directed by Manager in
Gloves	**}**	accordance with statutory requirements and Spectrum
Uniforms	**}**	Electrical public relations. operatives will normally
Weatherproof Jackets	**}**	wear their own jackets and visitors their own jacket
Protective Shoes	**}**	and shoes, high visibility vests shall be provided to all.

Provision of clothing by Spectrum Electrical will be in accordance with the Company Purchasing procedure.

Requirements for specialised safety equipment must be arranged by the Contracts Engineer before site work commences.

Visitors to site must arrange provision of Safety Helmets, etc., before departure.

Staff must take reasonable core to protect themselves against extreme climactic conditions such as sun glare or frost and ice.

PPE *cont*

Make sure equipment is:

Well looked after and properly stored when it is not being used, for example in a dry, clean cupboard, or in the case of smaller items, such as eye protection, in a box or case; kept clean and in good repair - follow the manufacturer's maintenance schedule (including recommended replacement periods and shelf lives).

Simple maintenance can be carried out by the trained wearer, but more intricate repairs should only be done by specialists.

Ensure any PPE you are wearing is in good condition, if a site hat is damaged or goggles are scratched then change them

Remember PPE is there to protect you, use it and look after it

GENERAL GUARDING AND BUILDING SITE RISKS

Introduction

Construction sites are acknowledged as being dangerous work environments. Accident records indicate more incidents, fatal and reportable in construction than in any other industry. Special vigilance is, therefore, required to eliminate accidents.

Safety precautions on construction sites generally are laid down in the Construction Health Safety and Welfare Regulations which meets the requirements of the HS&W Act Section 2 (Safe Place of Work).

Holes in Floors

A Common hazard is unfinished floor areas. Where a person may fall, holes must be guarded. Where persons are working below such a hole, the hole must be covered, guarded and a sign 'hole below', erected. Report such hazards to the main contractor before commencing work in the area.

Arrangements for safety barriers and covers must be made, and Contracts Engineers must ensure that they are provided by the principle contractor or responsible authority.

New Working at Height Regulations

INTERPRETATION

The new Regulations define work at height as:

a) Work in any place, including a place at or below ground level.

b) Obtaining access to or egress from such a place while at work, except by a staircase in a permanent workplace,

where, if the measures required by these Regulations were not taken, a person could fall a distance liable to cause personal injury.

THE 'TWO METRE RULE'

Following on from above, the Regulations specifically do not retain the 'Two Metre Rule', the distance previously identified as the height above which specific measures were prescribed. The only reference in the new Regulations is that a platform, used in construction work and where a person is liable to fall two metres or more, must be inspected at prescribed intervals.

The Regulations adopt a 'goal setting' approach and do not prescribe specific measures. Rather they seek to reduce accidents by specifying that all work at height must be assessed for risks (including that where a person could fall up to two metres) if there is a risk of injury.

It is therefore expected that any and all work at height to be assessed for risks, a safe method of working to be developed and this safe method of work to be documented

The Regulations state that when selecting work equipment for work at height, employers shall:

Give collective measures priority over personal protection measure

Take account of:

- The working conditions and consequent risks at the place the equipment may be used.
- The distance to be negotiated, in the case of access equipment.
- The distance and consequences of a fall.
- The duration and frequency of use.
- The need for easy and timely evacuation and rescue in an emergency.
- Any additional risks posed by the installation or removal of the work equipment or by evacuation or rescue from it.

Work equipment should be selected which:

- Has dimensions appropriate to the nature of the work to be done and the loading.
- Allows passage without risks.
- Is in other respects the most suitable.

Allow for these factors to be identified in any risk assessment or method statement and provide a justification for the selection made.

COSHH (Control of substances hazardous to health)

Hazardous substances

COSHH assessments are provided for items generally used in our day to day working, however the following points must also be considered

Not only substances used directly in work activities (e.g. adhesives, paints, cleaning agents); but

Substances generated during work activities (e.g. fumes from soldering and welding);

Naturally occurring substances (e.g. grain dust);

Biological agents such as bacteria and other micro-organisms.

You must remember to include all groups of people who could come into contact with the substance, i.e. other contractors, visitors and members of the public,

If you are unsure about a substance you are using, or that you are generating by your work actions –

Stop and request a COSHH assessment from your site foreman or the Health and Safety Manager

SPECIFIC REQUIREMENTS FOR WORK EQUIPMENT

a. Guard Rails, Toe Boards, Barriers and similar means of protection

There are some changes to the specifications of this equipment. These are in addition to those already specified under the Construction (Health, Safety and Welfare) Regulations 1996. There is one change in that the top guard rail of a working platform should, for any platform erected after the Regulation comes into force, now be at least 950mm above the edge from which any person is liable to fall.

Additional emphasis is placed on the openings in means of protection:

- There must not be a lateral opening save at a point of access to a ladder or stairway.
- If an opening has to be provided to work or to gain access or egress, it must be replaced as soon as practicable.
- If the means of protection has to be removed, as above, 'effective compensatory safety measures' must be in place.

b. Additional requirements for Scaffolds

In addition to establish practice, there is a restatement of the need for scaffolds not available for use, including during assembly, dismantling or alteration to be marked with warning signs in accordance with the Health and Safety (Safety Signs and Signals) Regulations 1996 and for access to such scaffolds to be denied by physical means.

Similarly, there is a definition of the competence of a person who is authorised, or who may supervise a person, to assemble, dismantle or significantly alter a scaffold.

Whilst this has no direct bearing on us, remember we are still responsible for our own actions when working on scaffold

c. Working Platforms

This section includes work equipment described as a structure used to support a working platform and includes items of plant. Of particular relevance is the section on stability of the supporting structure where it is specifically stated that:

§ A wheeled structure must be prevented by appropriate devices from moving inadvertently during work at height.

§ In other cases, slipping must be prevented by use of an anti-slip device, tying to a structure or other means.

Safety on working platforms states that working platforms shall:

§ Possess a suitable surface and be so constructed that the surface has no gap:

- Through which a person could fall.
- Through which any material or object could fall and injure a person.
- Give rise to any other risk of injury.

We should only use scissor lifts with gated access and egress, any requirement for MEWPs not having this facility should be accompanied by an additional risk assessment and explanation why this method has been used

d. Collective Safeguards for Arresting Falls

This section covers the use of collective fall arrest systems such as nets and airbags etc. Specific reference is made to the selection and use of these measures only if:

§ As a result of a risk assessment having been carried out it is demonstrated that the work can be carried out safely while using it and without its effectiveness being affected.

§ Other safer work equipment is not reasonably practicable.

§ There are suitable numbers of person who have been trained in the safeguard including any rescue procedures.

The safeguards must be suitable and have sufficient strength to safely arrest the fall.

The safeguard must be:

§ Securely attached to an anchor point which can support the foreseeable load.

§ Stable if it is an airbag or landing mat etc.

§ Provided with sufficient clearance if it is of the type that distorts when deployed.

Finally and critically, suitable and sufficient steps must be taken to ensure that in the event of a fall, the safeguard itself does not cause injury to the person.

Again work requiring this is not generally within our remit, however we or the main contractor should permit the use of collective fall arrest equipment only where safer work equipment is not reasonably practicable or when sufficient residual risk remains, after other safeguards have been put in place, such that this type of measure is used in conjunction with other safer work equipment, and a risk assessment must fully justify the use of fall arrest equipment.

e. Person Fall Protection Systems

Initial statements within the Regulation restate the need for a risk assessment and the provision of trained operatives. It emphasises the 'last resort' selection associated with all Personal Protective Equipment (PPE) and the general requirements for all PPE to be correctly specified, fit the user and be correctly fitted etc. However, some other significant statements are made with respect to it being designed to minimise injury to the user and the requirement for it to be used with at least one anchor point at all times, each anchor being of suitable and sufficient strength and stability.

f. Use of Ladders

The opening statement in Schedule 6 of the Regulations states that a ladder may be used only if a risk assessment has demonstrated that the use of more suitable work equipment is not justified because of:

- The low risk
- The short duration of use
- Existing features on the site that cannot altered

Ladders shall be used in such a way that:

- A secure handhold and secure support are always available
- The user can maintain a safe handhold when carrying a load unless, in the case of a stepladder, a handhold is not available when carrying a load and the risk assessment states that this is justified due to:
  - **Low risk or short duration of risk**

g. Plant Inspection

All items of plant as listed within the company's plant / equipment register are recalled for inspection annually. The plant inspection sheets will then be updated.

Inspections will also be carried out whenever plant is returned to the central stores, with the plant inspection sheet updated, this shall be implemented prior the item of plant being released from the stores

The person responsible for the inspection of plant is the Stores Manager

<u>Tripping, Falling, Falling Objects</u>

Section 7 of the Act requires individuals to take care of their <u>own and others</u> safety. It is the responsibility of the engineer to ensure that:

a) Suitable clothing is worn for the conditions prevailing. This assumes that the safety wear may be available by the Company, i.e. safety footwear, safety helmets, safety spectacles, etc., will be worn when necessary.

b) No unnecessary risks or hazards are placed in the way of others,
Persons in charge of building sites have a duty to designate high risk areas as "hard hat areas". It is an offence under the Head Protection Regulations 1990 not to wear suitable head protection in such areas.

Access and Egress

All workplaces must have safe and suitable access and egress. Separate routes must be provided for persons and vehicles. Personnel entrance/exits must be identifiable and properly lit. No rubbish or other goods must be allowed to obstruct them. Take care to note when and if the access point changes during building progress and observe the new signs. Do not take short cuts along single planks or through restricted areas.

LIFTING OPERATIONS

General

All site lifting operations using mechanical aids must conform to the "Construction (Lifting Operations) Regulations. These regulations cover the use of Cranes, Derricks, Hoists, Slings, Chairs and ropes, etc., and their main effect is that a current certificate must be in force for the equipment condition.

Lifting of Panels, etc., by Mechanical Means

These operations will normally be carried out by a specialist operator who will be hired-in, complete with his crane, etc., ensure adequate risk assessments are obtained from the contractor and as required by us and that any safeguards put into place.

Spectrum Electrical staff or their Sub-contractor will specify where the panel, etc., is to go and may fix it when it is lifted into position.

Manual Handling

The Regulations require employers to:

avoid the need for hazardous manual handling, so far as is reasonably practicable;

assess the risk of injury from any hazardous manual handling that can't be avoided; and

reduce the risk of injury from hazardous manual handling, so far as is reasonably practicable.

Note: **It is important to understand that the guideline figures given below are not limits, neither can they be regarded as 'Safe' for any application or person**.

Guidelines for lifting and lowering
Basic guideline figures for manual handling operations involving lifting and lowering are set out in Figure 1. They assume that the load is readily grasped with both hands and that the operation takes place in reasonable working conditions with the handler in a stable body position.

The guideline figures take into consideration the vertical and horizontal position of the hands as they move the load during the handling operation, as well as the height of reach of the individual handler. It will be apparent that the capability to lift or lower is reduced significantly if, for example, the load is held at arm's length of the hands pass above shoulder height.

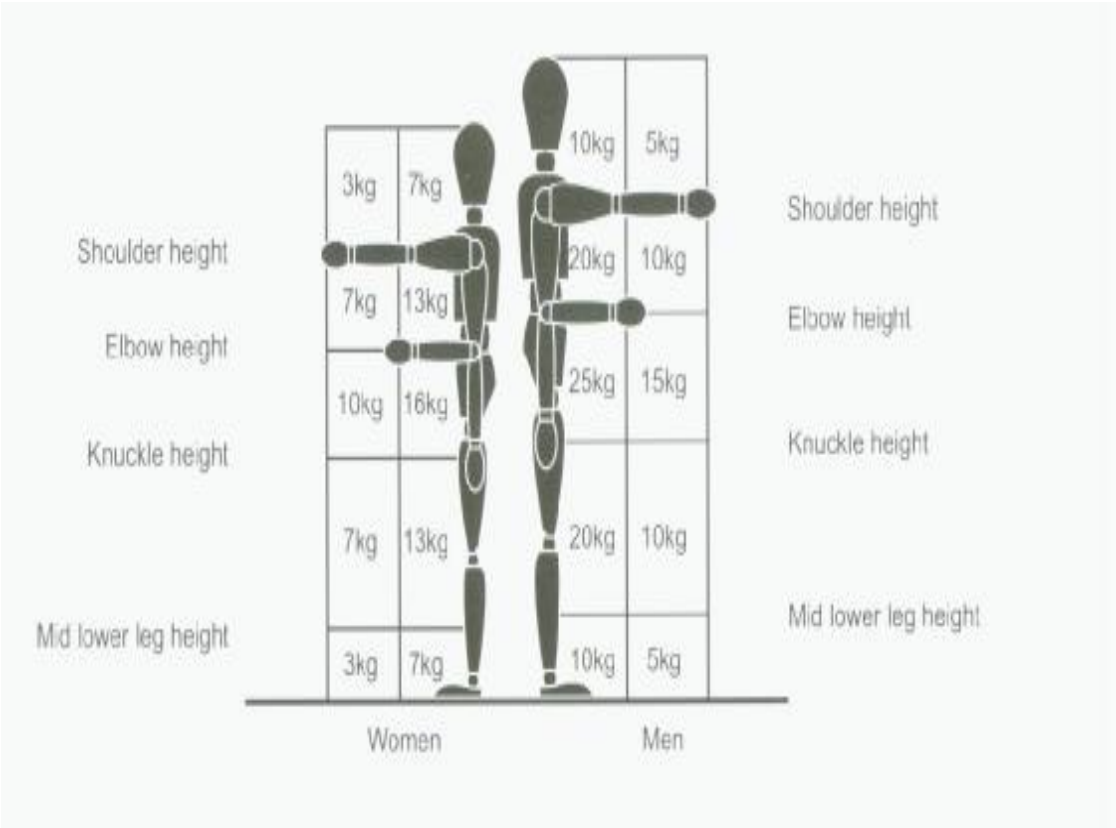
Twisting

The basic guideline figures for lifting and lowering should be reduced if the handler twists to the side during the operation. As a rough guide the figures should be reduced by about 10% where the handler twists through 45° and by about 20% where the handler twists through 90°.

Frequent Lifting and Lowering

The basic guideline figures for lifting and lowering are for relatively infrequent operations – up to approximately 30 operations per hour – where the pace of work is not forced, adequate pauses for rest or recovery are possible and the load is not supported for any length of time. They should be reduced if the operation is repeated more frequently. As a rough guide, the figures should be reduced by 30% where the operation is repeated once or twice per minute by 50% where the operation is repeated around five to eight times per minute; and by 80% where the operation is repeated more than 12 times per minute.

Lifting Guidelines



Guidelines for Carrying

Basic guideline figures for manual handling operations involving carrying are similar to those given for lifting and lowering, though carrying will not normally be carried out with the hands below knuckle height.

It also assumes that the load is held against the body and is carried no further than about 10m without resting. If the load is carried over a longer distance without resting the guidance figures may need to be reduced. Where the load can be carried securely on the shoulder without first having to be lifted (as for example unloading sacks from a lorry) a more detailed assessment may also show that it is acceptable to exceed the guidance figures.

In – Service Inspection and Testing of Electrical Equipment (PAT)

All servicing is carried out within the IEE code of practice for In – service Inspection and Testing of Electrical Equipment

This comprises of the following regime

1. Inspection and Testing

	Site	***Office***
User Checks	Weekly	Weekly/before use
Formal Visual Inspections	Monthly	6 – 24 month
Combined Inspections and Tests	3 Monthly	12 – 48 monthly Class1 only

Ensure you carry out the following prior to use

2. Daily User Inspections

   Is the flex in good condition, e.g. cuts or damage? Suitability for location
   Check plug for overheating and cable is secure
   Equipment function correctly, e.g. free from cracks or corrosion
   Is the equipment suitable for its environment?
   Is the equipment suitable for the task?

   Faulty equipment must be switched off and reported to the responsible person

The following are the types of portable equipment within our general definition

3. Types of electrical equipment

   Portable: - less than 18 kg e.g. Vacuum
   Hand-Held: - Held in the hand during use
   Stationary equipment: - Exceeding 18 kg

   The person responsible for the adherence of the PAT testing regime is the PAT testing manager, but supervisors must ensure compliance of the daily user inspections and it is the responsibility of everyone to ensure the equipment they are using is safe and fit for purpose

COMPANY VEHICLE AND TRAVEL ARRANGEMENTS

It has been estimated that up to a third of all road traffic accidents involve somebody who is at work at the time. This may account for over 20 fatalities and 250 serious injuries every week

Health and safety law applies to on-the-road work activities as to all work activities, and the risks must be effectively managed within our health and safety management system, this means undertaking Risk Assessments not only for operatives travelling to and from site once a day, but also Engineers and Forman driving between sites on a daily basis

Risk assessments for any work-related driving activity should follow the same principles as risk assessments for any other work activity. You should bear in mind that failure to properly manage work-related road safety is more likely to endanger other people than a failure to properly manage risks in the workplace.

A risk assessment is nothing more than a careful examination of what at work activities can cause harm to people. It helps you to weigh up whether you have done enough to ensure safe working practices or should do more to prevent harm. One of the most important things is to ensure that drivers are not at risk of falling asleep at the wheel. Thousands of crashes are caused by tired drivers. These are most likely to happen: on long journeys on monotonous roads, such as motorways between 2am and 6am and between 2pm and 4pm (especially after eating or taking even one alcoholic drink) after having less sleep than normal, after drinking alcohol, or if taking medicines that may cause drowsiness.

Observe the following

- Alternatives to travel should be considered wherever possible.
- The use of public transport services such as rail and air transport shall always be considered for long journeys and should be used whenever this may be a feasible option.
- If working abroad, car driving should normally be avoided after a long air journey. Local advice shall be sought on the use of cars in parts of the world where travel conditions differ widely from those at home. As a rule if working abroad, avoid driving wherever possible.
- Any vehicle driven on company business shall be driven in a safe and lawful manner.
- Drivers have the personal responsibility to ensure that they are fit to drive and are not under the adverse influence of any medication, drugs or alcohol.
- It is expected that a risk assessment be carried our prior to undertaking a long journey
- With the exception of when a specific risk assessment is in place, the distance travelled before taking a break is left to the discretion and common sense of the driver. But account must be taken of the hazards associated with the journey so as not to plan or accept over-demanding schedules which could give rise to increased risks caused by fatigue, stress, adverse weather etc.
- Drivers must avoid any activity which may prove to be distracting whilst driving, such as reading maps, preparing food, making notes or using mobile phones.
- The use of mobile phones whilst in control of a motor vehicle can be a major distraction even when using hands free systems. Steps should be taken to avoid this distraction or safely stop the vehicle to make or receive calls.
- Unless a voice activated hands free system is installed, no calls should be made by the driver whilst the vehicle is being driven, and the company strongly recommends that mobile phones are not used by the driver whilst in control of his vehicle.
- All travel and vehicle accidents, including non-injury incidents, must be reported and shall be investigated in line with normal reporting requirements.

!!! REMEMBER !!! THINK SAFETY, WORK SAFELY