



Safety Rules and Procedures for

# High Voltage Electrical Systems

Revision 3.0

October 2025



## Version Control

| Version Number | Implementation Date | Review Date | Amendments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------|---------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.0            | September 2005      |             | Original Safety Rules and Procedures Documents.<br>Versions for Individual Sectors.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 1.1            | October 2009        |             | Minor Grammatical Changes.<br>Addition of Model Key Register.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 1.2            | April 2012          |             | Removal of “where practicable” from the use of safety locks paragraph.<br>Addition of “Working Lock” definition.<br>Revision of “Safety Lock” definition.<br>Revision of AP suspension criteria, and Qualifications for AE.<br>Removal of age restriction from qualifications for AP.<br>Revision of Qualifications for AP.<br>Removal of age restriction from qualifications for SAP.<br>Revision of Qualifications for SAP.<br>Removal of need for Caution Signs at points of Earthing<br>Change of “Padlocks” to “Working Locks” in Removable Earths paragraph.<br>Revision of warning tape colours to White and Red.<br>Revision of Tables HV1 and HV2 to include Reviewing the Task Risk Assessment and Method Statement, and inclusion of the term “Confirm Dead”.<br>Positive Identification of the Point(s) of Work or Test.<br>Inclusion of Display Single Line Diagrams in Sub Stations as Mandatory. |
| 1.3            | November 2013       |             | Minor Grammatical Changes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 1.4            | October 2016        |             | General Formatting Changes.<br>Revised Model Forms.<br>Introduction of the Point of Work Sign.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 2.0            | May 2017            |             | Trading name changed to Compass Group.<br>Font Changed from Times Roman to Calibri.<br>Addition of Sub-Section Numbering<br>Addition of Co-Ordinating Authorising Engineer.<br>Revision of Authorising Engineer Role.<br>Revision of Authorised Person Role.<br>Revision of Senior Authorised Person Role.<br>Inclusion of Point of Work Sign.<br>Revision of Danger Sign Usage Criteria.<br>Revision of Sub-Station Access Criteria.<br>Reformat of tables HV1 and HV2.<br>Revision of Danger Sign Usage Criteria.<br>Revision of Sub-Station Access Criteria.                                                                                                                                                                                                                                                                                                                                                 |

(Cont)

|               |              |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------|--------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.0<br>(Cont) | May 2017     |              | Reformat of tables HV1 and HV2.<br>Revision of Switching Schedule Description.<br>Revision of Standing Instruction Description.<br>Revision of Warning Signs.<br>Change of Audit requirement to Authorised Person.<br>Revision of Model Appointment Letters and Certificates.<br>Revision of Model Safety Documents.<br>Revision of Model Signs.<br>Update of Associated Legislation and Guidance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 3.0           | October 2025 | October 2028 | Minor Grammatical Changes.<br>Font Changed from Calibri to Arial.<br>Inclusion of Technical Authority Designation.<br>Removal of Senior Authorised Person Designation.<br>Inclusion of Co-Ordinating Authorised Person Designation.<br>Inclusion of Skilled Person Designation.<br>Relocation of General Definitions to Appendix 4.<br>Inclusion of Procedures for Hazardous Working and Testing in Hazardous Areas.<br>Addition of Procedure Table for Works in Hazardous Areas (HV3)<br>Revision of Permit to Work, Sanction for Test and Limitation of Access to include Validation Times.<br>Inclusion of Model Operation File Contents Pages in Appendix A1.4<br>Inclusion of Model Switchgear and Transformer Schedules in Appendix A1.5<br>Inclusion of Model Symbols in Appendix A5<br>Amendments moved to Version Control.<br>Addition of Air3 reporting to Dangerous Occurrences and AE Auditing Requirements. |

Duty Holder                      Mark Armstrong (Compass Group)                      mark.armstrong@compass-group.co.uk

Technical Authority   Peter Priday (Compass Group)                      peter.priday@compass-group.co.uk

Working Group                      Mark Joyce (PPP-IML)  
Daniel Mitchell (14Forty)  
John Wigglesworth (14Forty)  
Jamie Keillor (ESS Energy)

**Please address any questions or concerns with regards this document to the Technical Authority or Duty Holder.**

# Contents

|          |                                                                            |           |
|----------|----------------------------------------------------------------------------|-----------|
| <b>1</b> | <b>Introduction</b>                                                        | <b>7</b>  |
| 1.1      | General                                                                    | 8         |
| 1.2      | Application of these Rules                                                 | 8         |
| 1.3      | Definition of Personnel                                                    | 9         |
| 1.4      | Demarcation of Responsibilities between Compass Group and others.          | 10        |
| <b>2</b> | <b>Roles and Duties of Personnel</b>                                       | <b>14</b> |
| 2.1      | Technical Authority                                                        | 15        |
| 2.2      | Co-Ordinating Authorising Engineer                                         | 15        |
| 2.3      | Authorising Engineer                                                       | 16        |
| 2.4      | Authorised Persons                                                         | 18        |
| 2.5      | Appointment and Reappointment of Authorised Persons.                       | 20        |
| 2.6      | Competent Persons                                                          | 21        |
| 2.7      | Accompanying Safety Persons                                                | 22        |
| <b>3</b> | <b>General Precautions</b>                                                 | <b>23</b> |
| 3.1      | General                                                                    | 24        |
| 3.2      | Underground Cables                                                         | 24        |
| 3.3      | Display of Temporary Signs                                                 | 25        |
| 3.4      | Withdrawable Equipment                                                     | 26        |
| 3.5      | Admittance to Sub-Stations                                                 | 26        |
| <b>4</b> | <b>Working on and Testing High Voltage Equipment</b>                       | <b>27</b> |
| 4.1      | General                                                                    | 28        |
| 4.2      | Operation of High Voltage Switchgear                                       | 29        |
| 4.3      | Testing at High Voltage                                                    | 30        |
| 4.4      | Work or Test on High Voltage Installations or Equipment in Hazardous Areas | 30        |
| 4.5      | High Voltage Enclosures                                                    | 34        |
| 4.6      | Procedures                                                                 | 36        |
| <b>5</b> | <b>Documentation</b>                                                       | <b>39</b> |
| 5.1      | Switching Schedules                                                        | 40        |
| 5.2      | Permit to Work                                                             | 41        |
| 5.3      | Sanction for Test                                                          | 43        |
| 5.4      | Limitation of Access                                                       | 46        |
| 5.5      | Standing Instruction                                                       | 48        |
| 5.6      | Specific Written Instruction                                               | 49        |
| 5.7      | High Voltage Logbook                                                       | 50        |
| 5.8      | High Voltage Operational File                                              | 51        |
| <b>6</b> | <b>Operating Procedures</b>                                                | <b>53</b> |
| 6.1      | Operational Restrictions                                                   | 54        |
| 6.2      | Keys, Key cabinets and Mimic Diagrams                                      | 55        |
| 6.3      | The Use of Protective, Test and Earthing Equipment                         | 57        |
| <b>7</b> | <b>Health and Safety</b>                                                   | <b>59</b> |
| 7.1      | Dangerous Occurrences                                                      | 60        |
| 7.2      | Display of Permanent Safety Signs Posters and Diagrams                     | 60        |
| 7.3      | Emergency First Aid Training                                               | 61        |
| 7.4      | Audit of Safe Systems of work and Safety Procedures                        | 62        |

|                    |                                                        |           |
|--------------------|--------------------------------------------------------|-----------|
| <b>8</b>           | <b>Appendices</b>                                      | <b>64</b> |
| <b>Appendix A1</b> |                                                        |           |
| A1.1               | Model Letters of Appointment for Authorising Engineers | 65        |
| A1.2               | Model Authorised Person Certificate of Appointment     | 66        |
| A1.3               | Model Competent Person Certificate of Appointment      | 67        |
| A1.4a              | Model Operational File Contents Page (Vol 1)           | 68        |
| A1.4b              | Model Operational File Contents Page (Vol 2)           | 69        |
| A1.5               | Model Switchgear and Transformer Schedule              | 70        |
| <b>Appendix A2</b> |                                                        |           |
| A2.1               | Model Switching Schedule                               | 71        |
| A2.2               | Model Permit to Work                                   | 72        |
| A2.3               | Model Sanction for Test                                | 74        |
| A2.4               | Model Limitation of Access                             | 76        |
| A2.5               | Model Standing Instruction                             | 77        |
| A2.6               | Model Specific Written Instruction                     | 78        |
| A2.7               | Model High Voltage Logbook                             | 79        |
| A2.8               | Model Key Register                                     | 80        |
| <b>Appendix A3</b> |                                                        |           |
| A3.1a              | Model Sub-Station Sign P1.1                            | 81        |
| A3.1b              | Model High Voltage Warning Sign P1.2                   | 81        |
| A3.2               | Model Main Intake Switch Sign P2                       | 82        |
| A3.3               | Model Standby House Sign P3                            | 82        |
| A3.4               | Model Danger Sign P4                                   | 83        |
| A3.5               | Model Caution Sign P5                                  | 83        |
| A3.6               | Model Point of Work Sign P6                            | 84        |
| <b>Appendix A4</b> |                                                        |           |
|                    | General Definitions                                    | 85        |
| <b>Appendix A5</b> |                                                        |           |
|                    | Standard Symbols for Isolation and Earthing Diagrams   | 90        |
| <b>Appendix A6</b> |                                                        |           |
|                    | Associated Regulations and Documents                   | 91        |

# 1 Introduction

|            |                                                                                                                                                |           |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>1.1</b> | <b>General</b>                                                                                                                                 | <b>8</b>  |
| 1.1.1      | Policy on Electrical Safety                                                                                                                    | 8         |
| <b>1.2</b> | <b>Application of these Rules</b>                                                                                                              | <b>8</b>  |
| 1.2.1      | General                                                                                                                                        | 8         |
| <b>1.3</b> | <b>Definitions of Personnel</b>                                                                                                                | <b>9</b>  |
| 1.3.1      | Duty Holder (DH).                                                                                                                              | 9         |
| 1.3.2      | Technical Authority (TA)                                                                                                                       | 9         |
| 1.3.3      | Operations Manager (OM)                                                                                                                        | 9         |
| 1.3.4      | Co-Ordinating Authorising Engineer (CAE)                                                                                                       | 9         |
| 1.3.5      | Authorising Engineer (AE)                                                                                                                      | 9         |
| 1.3.6      | Authorised Person (AP)                                                                                                                         | 9         |
| 1.3.7      | Duty Authorised Person.                                                                                                                        | 9         |
| 1.3.8      | Co-Ordinating Authorised Person (CAP)                                                                                                          | 9         |
| 1.3.9      | Authorised Signatory (AS)                                                                                                                      | 10        |
| 1.3.10     | Competent Persons (CP)                                                                                                                         | 10        |
| 1.3.11     | Skilled Persons (SP)                                                                                                                           | 10        |
| 1.3.12     | Accompanying Safety Person (ASP)                                                                                                               | 10        |
| <b>1.4</b> | <b>Demarcation of Responsibilities between Compass Group and Others</b>                                                                        | <b>10</b> |
| 1.4.1      | General                                                                                                                                        | 10        |
| 1.4.2      | Where Compass Group has control of the danger for part of another organisation's system or installation                                        | 11        |
| 1.4.3      | Where Compass Group has control of the danger for both High Voltage and Low Voltage Systems.                                                   | 11        |
| 1.4.4      | Where Compass Group does not have control of the danger for a system or installation                                                           | 11        |
| 1.4.5      | Where contractors are to undertake installation work on an existing system or installation for which Compass Group have control of the danger. |           |
| 1.4.6      | For New Work before the system or installation is accepted from the Contractor                                                                 | 11        |
| 1.4.7      | Energisation of New Works.                                                                                                                     | 12        |
| 1.4.8      | Where a Distribution Network Operator appoints a Compass Group Authorised Person to operate their equipment.                                   | 12        |
| 1.4.9      | Where Compass Group temporarily transfers control of part of a system to a Third Party.                                                        | 13        |

## 1.1 General

### 1.1.1 General

This document sets out the Compass Group High Voltage Safety Rules and Procedures (herein after abbreviated to “these Rules”) relating to:

- A. The responsibilities for the control of the electrical danger.
- B. Working on or near, and the operation of High Voltage electrical equipment, systems and installations.
- C. The appointment of Authorising Engineers, Authorised Persons, Competent Persons and Safety Persons.
- D. The qualifications and training necessary for the appointment of Authorising Engineers, Authorised Persons and Competent Persons.
- E. The documentation for the application of these Rules.

These Rules have been drafted to ensure compliance with UK statutory requirements and to prevent, so far as reasonably practicable, danger arising from working on, working near, testing or operating High Voltage electrical equipment and systems.

### 1.1.2 Policy on Electrical Safety

Our aims are to install, maintain and operate High Voltage electrical systems to the highest safety standards.

The consequence of undertaking electrical maintenance and/or switching operations can adversely affect the client, therefore, appropriate consultation must take place well in advance of any electrical work.

There is a legal obligation on all persons involved with the operation of, and work on electrical systems and equipment to carry out work in such a way as to prevent danger and injury to themselves and/or others.

These Rules have been put in place to assist in carrying out these obligations.

## 1.2 Application of these Rules

### 1.2.1 General

These Rules are mandatory for all persons (whether or not directly employed by Compass Group) working on, working near, testing or operating High Voltage electrical equipment and systems for which Compass Group has control of the electrical danger.

These Rules are designed to provide a safe framework within which work or testing can be carried out with safety on permanently connected High Voltage equipment.

Equipment which has been isolated via a switch or disconnector is considered to be permanently connected. These Rules do not apply to equipment that has been disconnected and discharged of any electrical potential and removed from an installation.



In case of apparent conflict between these Rules and a statutory requirement, the latter is to be followed, and the Authorised Person is to notify the Authorising Engineer.

If it is necessary to depart from any requirement of these Rules, Authorised Person is to agree such departure in writing with the Authorising Engineer.

Where the control of the electrical danger is divided between Compass Group and others, Section 1.4 of these Rules is to be applied.

Further advice on the application of the Rules can be obtained from the Authorising Engineer.

## **1.3 Definitions of Personnel**

### **1.3.1 Duty Holder (DH)**

A person on whom the Health and Safety Legislation, including The Electricity at Work Regulations 1989 imposes a duty in connection with Safety.

### **1.3.2 Technical Authority (TA)**

A person appointed, in writing by the Duty Holder to take responsibility for the creation and update of the Compass Operational Policy for Electrical Systems and these Rules.

### **1.3.3 Operations Manager (OM)**

The Operations Manager is defined as the person in the organisation, who is accountable for the maintenance of the premises.

### **1.3.4 Co-Ordinating Authorising Engineer (CAE)**

A person appointed, in writing, by the Duty Holder to take responsibility for the overall management of these Rules.

### **1.3.5 Authorising Engineer (AE)**

A person appointed, in writing, by the Duty Holder on the recommendation of the Co-Ordinating Authorising Engineer to take responsibility for the effective management of these Rules.

### **1.3.6 Authorised Persons (AP)**

A person appointed, in writing, by the Operations Manager on the recommendation of the Authorising Engineer to be responsible for the practical implementation of these Rules, in respect of the control and operation of defined High Voltage electrical systems including the issue of all Safety Documents.

### **1.3.7 Duty Authorised Person**

An Authorised person who has signed the High Voltage Systems Logbook to accept responsibility for the High Voltage Systems or Installations, their name must be displayed in the High Voltage Systems Control Centre.

### **1.3.8 Co-Ordinating Authorised Person (CAP)**

Where Authorised Persons of various disciplines are required to complete a task, one will be allocated the role of Co-Ordinating Authorised Person. The role of the Co-Ordinating Authorised Person is to ensure that all required Isolations, Verifications and Safety Documentation are completed and to give final authorisation for the task

to proceed. They shall retain control of all Safety Lock Keys for the duration of the task and co-ordinate the reinstatement of services upon completion of the works.

### **1.3.9 Authorised Signatory (AS)**

A person appointed in writing by the Duty Holder to take responsibility for the approval or issue of an Authority to Work for low and medium risk work activities. Roles and Responsibilities of the Authorised Signatory can be found in the Compass HSE Authority to Work Process HS1.19.

### **1.3.10 Competent Persons (CP)**

A person appointed, in writing, by the Operations Manager on the recommendation of the Authorised Person, or by receipt of a Safety Document, who has sufficient technical knowledge and experience to avoid any danger that electricity may create, has sufficient knowledge of these Rules and is suitable to carry out specific work activities on the types of installations, and in the locations indicated on their Safety Document or Certificate of Appointment.

### **1.3.11 Skilled Persons (SP)**

A suitably trained person who has sufficient technical knowledge and experience to avoid any danger that electricity may create, but has not been appointed, in writing, by the Operations Manager or by receipt of a Safety Document.

### **1.3.12 Accompanying Safety Persons (ASP)**

A person not involved in the work or test, who has received Emergency First Aid training and who has adequate knowledge, experience and ability to avoid danger, keep watch, prevent interruption, apply First Aid and summon help. The person is to be familiar with the system or installation being worked on or tested and is to have been instructed on the action to be taken to disconnect the equipment in the event of an accident.

## **1.4 Demarcation of Responsibilities between Compass Group and Others**

### **1.4.1 General**

Where there is a Demarcation of Responsibilities between Compass Group and others, the Duty Authorised Person is, on all matters relevant to his duties, to liaise with the other party (or parties) as necessary to avoid danger.

Each Demarcation of Responsibilities is to be recorded in writing and precisely described on a diagram. The point of demarcation must be at a cable termination and is to be at the outgoing terminals of a switch or circuit breaker.

Each proposed Demarcation of Responsibility is to be approved by the Authorising Engineer before it is finally agreed with the other party (or parties) involved.

A copy of the diagram is to be prominently displayed at each Sub-Station under joint control.

One copy of the agreement, including the diagram is to be held by the Authorising Engineer and another is to be placed in the Operational File.

Where another organisation transfers control of electrical danger to Compass Group for the duration of a contract, the Authorising Engineer is to request from the other

organisation, details in writing of any known hazards (including potentially explosive atmospheres, polychlorobiphenyls (PCBs), operational restrictions etc.) that are or may be present. A copy of this information is to be placed in the Operational File.

*Note: The other organisation has a duty to provide such details under Section 4 of the Health and Safety at Work Act 1974.*

#### **1.4.2 Where Compass Group has control of the danger for part of another organisation's system or installation**

The Authorising Engineer is to liaise with the other organisation's Authorising Engineer or Duty Holder to agree the point(s) of demarcation and the contact details for both parties. Once approved a formal agreement is to be produced in writing and signed by both parties.

#### **1.4.3 Where Compass Group has control of the danger for both High Voltage and Low Voltage Systems.**

Separate appointments of Authorised Persons are to be made by the Operations Manager on the recommendation of the Authorising Engineers for both the High Voltage and Low Voltage Systems. The Authorised Persons appointments for High and Low Voltage Systems may be held by the same person, but they will be designated Authorised Person (HV) and Authorised Person (LV) respectively.

#### **1.4.4 Where Compass Group does not have control of the danger for a system or installation**

Compass Group staff or Compass Group contractors' staff who are to undertake work or tests on parts of systems or installations for which Compass Group does not have control of the electrical danger are not required to comply with these Rules but are to comply with the Statutory Regulations and/or any Safety Rules and Procedures issued by the organisation having control of the danger.

If no such Safety Rules and Procedures exist, the matter is to be passed to the Authorising Engineer for adjudication.

#### **1.4.5 Where contractors are to undertake installation work on an existing system or installation for which Compass Group have control of the danger.**

Before any installation work is undertaken by contractors on an existing system or installation for which Compass Group has control of the danger, The Authorised Person is to liaise with the person in the company responsible for that installation work to ensure that the work is undertaken in accordance with these Rules.

#### **1.4.6 For New Work before the system or installation is accepted from the Contractor**

During the construction period of the contract, the contractor(s) will have control of the electrical danger and is to comply with all Statutory Regulations. The contractor(s) is not required to comply with these Rules unless they are imposed as part of the contract.

Where it is known that Compass Group will eventually accept control of the danger the Authorising Engineer, in conjunction with the Duty Holder for the site involved shall appoint an Authorised Person(s) to take responsibility for the new systems or installations when they are officially handed to Compass Group for day-to-day operation and maintenance.

Where possible The Authorised Person shall liaise with the contractor, to become familiar with the systems or installations for which they will eventually take control of the electrical danger.

Upon acceptance of control of the system from the site or contractor, the system will be operated under these Rules.

#### **1.4.7 Energisation of New Works**

Avoid energising distribution services until the distribution switchgear and all connected circuits and equipment to be energised are complete and have been inspected and “dead” tested. Copies of the inspection and testing certification should be retained in the document cabinet and a receipt recorded in the High Voltage Systems Logbook.

If live services are required by others for testing and commissioning, distribution boards and circuits should only be energised following a Risk Assessment.

When live electrical services are provided prior to final commissioning, Danger Signs will be displayed on each item of live switchgear, equipment, plant and exposed cable routes.

#### **1.4.8 Where a Distribution Network Operator appoints a Compass Group Authorised Person to operate their equipment.**

A Distribution Network Operator may appoint nominated Authorised Persons to operate their equipment under defined conditions and in accordance with defined procedures. In such cases, the Authorised Persons are to be nominated by the Authorising Engineer for the Distribution Network Operator. Each nominated Authorised Person is to obtain from the Distribution Network Operators Authorising Engineer a written agreement defining the responsibilities to be accepted and the regulations and procedures to be followed.

Each nominated Authorised Person is to acknowledge, in writing, receipt of the agreement from the Distribution Network Operator, and acceptance of the responsibilities after consultation with the Authorising Engineer. Copies of the agreement and acknowledgement are to be held by the Authorising Engineer and placed in the Operational File.

A copy of any relevant regulations of the Distribution Network Operator is to be available to each nominated Authorised Person.

Any action taken by a nominated Authorised Person on behalf of the Distribution Network Operator is to comply with the instructions of the Distribution Network Operator and is to be recorded in the Logbook and on any documentation required by the Distribution Network Operator.

Authorised Persons appointed by the Distribution Network Operator are, where practicable, to provide advanced warning to the Authorising Engineer and the Distribution Network Operator before relinquishing such an appointment.

#### **1.4.9 Where Compass Group temporarily transfers control of part of a system to a Third Party.**

Before control of any part of a system can be transferred from the control of Compass Group. Agreement must be obtained from the Client, Operational Manager and Authorising Engineer.

This agreement shall outline the duration and scope of the transfer and should stipulate the Safe Systems of Work under which the transferred system will be operated, the points of demarcation and access arrangements for Compass Group Staff.

The Authorising Engineer must be satisfied the proposed Safe System of Work is acceptable.

The transfer is to be formalised by an exchange of letters or by the signing of a Transfer of Demise Agreement by all parties.

The return of the system to Compass Group control shall be formalised by an exchange of letters or by the cancelling the Transfer of Demise Agreement by all parties.

The return shall be executed as per section 1.4.6 or 1.4.7 of these Rules as appropriate.

## 2 Roles and Duties of Personnel

|            |                                                                   |           |
|------------|-------------------------------------------------------------------|-----------|
| <b>2.1</b> | <b>Technical Authority</b>                                        | <b>15</b> |
| 2.1.1      | Roles and Duties of the Technical Authority                       | 15        |
| <b>2.2</b> | <b>Co-ordinating Authorising Engineer</b>                         | <b>15</b> |
| 2.2.1      | Roles and Duties of the Authorising Engineer                      | 15        |
| 2.2.2      | Qualifications and Appointment of the Authorising Engineer        | 16        |
| <b>2.3</b> | <b>Authorising Engineer</b>                                       | <b>16</b> |
| 2.3.1      | Roles and Duties of the Authorising Engineer                      | 16        |
| 2.3.2      | Qualifications and Appointment of the Authorising Engineer        | 17        |
| <b>2.4</b> | <b>Authorised Persons</b>                                         | <b>18</b> |
| 2.4.1      | Roles and Duties of Authorised Persons                            | 18        |
| 2.4.2      | Qualifications of Authorised Persons                              | 19        |
| <b>2.5</b> | <b>Appointment and Re-appointment of Authorised Persons</b>       | <b>20</b> |
| 2.5.1      | General                                                           | 20        |
| 2.5.2      | Review of Authorised Persons Appointments                         | 20        |
| 2.5.3      | Refresher Training for Authorised Persons                         | 20        |
| 2.5.4      | Suspension and Cancellation of Appointment of Authorised Persons  | 20        |
| <b>2.6</b> | <b>Competent Persons</b>                                          | <b>21</b> |
| 2.6.1      | Certificated Competent Persons                                    | 21        |
| 2.6.2      | Appointment and Re-appointment of Certificated Competent Persons  | 21        |
| 2.6.3      | Qualifications of Certificated Competent Persons                  | 21        |
| 2.6.4      | Appointment of Competent Persons by Issue of Safety Documentation | 21        |
| 2.6.5      | Contractors Skilled and Competent Persons                         | 22        |
| <b>2.7</b> | <b>Accompanying Safety Persons</b>                                | <b>22</b> |
| 2.7.1      | Role of Accompanying Safety Persons                               | 22        |
| 2.7.2      | Requirement for an Accompanying Safety Person                     | 22        |

## 2.1 Technical Authority

### 2.1.1 Roles and Duties of the Technical Authority

The Technical Authority is responsible for the production of the Compass Electrical Systems Operational Policy and these Rules.

The Technical Authority is to ensure that the Compass Electrical Systems Operational Policy and these Rules are maintained and updated to ensure compliance with current legislation and where appropriate industry best practice.

The Technical Authority is to liaise with the Co-Ordinating Authorising Engineer to ensure that Compass Electrical Systems Operational Policy and these Rules are suitable and sufficient for all systems and equipment for which Compass Group has responsibility.

## 2.2 Co-Ordinating Authorising Engineer

### 2.2.1 Roles and Duties of the Co-Ordinating Authorising Engineer

The Co-Ordinating Authorising Engineer is responsible for the provision and overall management of these Rules and is to monitor and audit the application of these Rules.

The Co-Ordinating Authorising Engineer is to appoint (or re-appoint) sufficient Authorising Engineers to provide the necessary cover for all systems and installations for which Compass Group has responsibility.

The Co-Ordinating Authorising Engineer should be satisfied that each prospective Authorising Engineer meets the qualifications and requirements of these Rules and issue a Letter of Appointment valid for a period not exceeding five years.

The Co-Ordinating Authorising Engineer is to define in writing the geographical area, for which each Authorising Engineer is to be responsible and maintain a register of all Authorising Engineers.

If necessary, the Co-Ordinating Authorising Engineer may suspend, at any time, the appointment of an Authorising Engineer by withdrawing their Letter of Appointment.

The Co-Ordinating Authorising Engineer is to report, to the Duty Holder, any deficiency in the number of suitably trained and experienced Authorising Engineers that significantly impairs Compass Group ability to provide a safe and effective service.

The Co-Ordinating Authorising Engineer shall audit the performance and record the operational experience of each Authorising Engineer at twelve monthly intervals.

The Co-Ordinating Authorising Engineer is responsible for notifying the Duty Holder and the Authorising Engineers of any known defect reports or Operational Restrictions issued by a Distribution Network Operator, Manufacturer or Supplier of electrical equipment.

The Co-Ordinating Authorising Engineer shall assign an Authorising Engineer to investigate all Dangerous Occurrences involving electrical equipment, systems and installations for which Compass Group is responsible.

The Co-Ordinating Authorising Engineer shall ensure that any amendments to these Rules are brought to the attention of, and understood by, all Authorising Engineers.

### **2.2.2 Qualifications and Appointment of the Co-Ordinating Authorising Engineer**

To be eligible for appointment the Co-Ordinating Authorising Engineer shall:

- A. Be an Engineer with a minimum of five years relevant experience and a sound technical engineering background, be educated to HNC level and have a minimum of eight years relevant experience as a practising Authorising Engineer.
- B. Have satisfactorily completed both the MS1 or MS4 Authorising Engineer and AP15, or equivalent, High Voltage Authorised Persons training courses within the last three years.
- C. Be able to demonstrate their suitability for the role by demonstrating a good understanding of HSE Legislation, Industry Best Practice and these Safety Rules, prior to the appointment through a formal interview.

The Co-Ordinating Authorising Engineer is to be appointed in writing, by the Duty Holder.

The Co-Ordinating Authorising Engineer is to be appointed or re-appointed for a period not exceeding five years.

## **2.3 Authorising Engineer**

### **2.3.1 Roles and Duties of the Authorising Engineer**

Within the geographical area for which an Authorising Engineer has been appointed, the Authorising Engineer is responsible for advising on the implementation and administration of these Rules and is to monitor and audit the application of these Rules.

The Authorising Engineer is to endorse the appointment (or re-appointment) of sufficient Authorised Persons to provide the necessary cover for all systems and installations for which Compass Group has responsibility.

The Authorising Engineer should be satisfied that each prospective Authorised Person meets the qualifications and requirements of these Rules and is to endorse each Authorised Persons' Certificate of Appointment for a period not exceeding three years.

The Authorising Engineer is to maintain a register of all Authorised Persons.

The Authorising Engineer is to produce a Demarcation Agreement which will define in writing, using drawings and diagrams if considered appropriate, the exact extent of the systems and installations for which each Authorised Persons is to be responsible and areas of the installation that can be operated by Level 2 and 3 Competent Persons.

If necessary, the Authorising Engineer may suspend, at any time, the appointment of an Authorised Person by withdrawing their Certificate of Appointment.



The Authorising Engineer is to report, to the Co-Ordinating Authorising Engineer and Operational Management, any deficiency in the number of suitably trained and experienced Authorised Persons that significantly impairs Compass Group ability to provide a safe and effective service.

The Authorising Engineer shall audit in accordance with Section 7.4.2 of these Rules, the performance of the operational experience of each Authorised Person at twelve monthly intervals.

At intervals not exceeding yearly, the Authorising Engineer shall undertake comprehensive audits, in accordance with Section 7.4.2 of these Rules of all systems and installations for each site for which the Authorising Engineer has appointed Authorised Persons. The audit is to include the implementation of safety procedures required by these Rules.

Where applicable to equipment within the areas for which the Authorising Engineer is responsible, they shall notify Compass Group of any known defect reports or Operational Restrictions issued by a Distribution Network Operator, Manufacturer or Supplier of electrical equipment.

The Authorising Engineer will ensure that a system is in place to circulate relevant information on Operating Restrictions and Dangerous Occurrences to all Authorised Persons.

The Authorising Engineer shall Investigate all Dangerous Occurrences involving electrical equipment, systems and installations for which the Authorising Engineer is responsible.

The Authorising Engineer shall agree in writing any local deviations from these Rules that may be necessary for their application to a particular item of equipment or location.

The Authorising Engineer shall ensure that any amendments to these Rules are brought to the attention of, and understood by, all Authorised Persons.

### **2.3.2 Qualifications and Appointment of the Authorising Engineer**

To be eligible for appointment, a prospective Authorising Engineer shall:

- A. Be an Engineer with a minimum of five years relevant experience and a sound technical engineering background who is qualified to HNC level and have a minimum of eight years relevant experience as a practising Authorised Person (HV).
- B. Have satisfactorily completed both the MS1 or MS4 Authorising Engineer and AP15, or equivalent, High Voltage Authorised Persons training courses within the last three years.
- C. Be familiar with the different types of equipment, installations and systems in use within the area for which the appointment is sought.
- D. Be able to demonstrate their competency and suitability for the role by demonstrating a good understanding of the tasks involved and knowledge of these Rules, prior to the appointment through a formal assessment.

- E. Have adequate knowledge of and, within the last three years, have successfully completed an emergency first aid training course which includes CPR.

An Authorising Engineer is to be appointed in writing, by the Co-Ordinating Authorising Engineer. A model letter of appointment is shown in Appendix A1.1

An Authorising Engineer is to be appointed or re-appointed for defined systems and installations for a period not exceeding five years.

## 2.4 Authorised Persons

### 2.4.1 Roles and Duties of Authorised Persons

The Authorised Person is responsible for the practical implementation and operation of these Rules for the systems and installations for which Compass Group has control of the danger and for which the Authorised Person has been appointed.

The Authorised Person's instructions and decisions on electrical matters are final and are to be complied with. In the case of a dispute, the Authorised Person is to stop the work or test and refer the matter to the Authorising Engineer for adjudication.

More than one Authorised person can be appointed for a system or installation but, only one is to be on duty at any one time. Each transfer of responsibility between Authorised Persons is to be recorded in the Logbook. The name of the Duty Authorised Person is to be displayed in the High Voltage System Control Centre.

The duties of the Authorised Person should be by agreement with the Authorising Engineer. These duties should include the following:

- A. Ensure, so far as reasonably practicable, that all personnel within their area of appointment observe and comply with the requirement of these Rules.
- B. The control of electrical distribution systems including the operation of High Voltage switchgear.
- C. The control of works on the systems for which they have been appointed.
- D. Produce or check and Countersign Safety Switching schedules for planned works.
- E. Issue, cancel and withdraw as appropriate all safety documents for the systems, installations and equipment for which the Authorised Person has been appointed.
- F. Ensure that all Safety Equipment, Test Equipment and Portable Earthing Equipment is periodically inspected, calibrated and maintained in accordance with the manufacturer's recommendations and is to be inspected to ensure it is in a satisfactory condition before use.
- G. Inform the Authorising Engineer:
  - i. Any defects found in electrical equipment.

- ii. Any dangerous occurrence.
- iii. Any dangerous practices observed in the course of his duties.
- H. Arrange for, supervise or undertake cable detection or location work within the geographical area of the Authorised Person's appointment.
- I. Appoint Competent Persons for defined work and maintain a register of Competent Persons appointments including dates of appointment, restrictions, details of training and training dates and the date the appointment is due to expire. This register should be kept in the Operational File with copies of all current Competent Persons certificates.
- J. Ensure that all records for the system for which the Authorised Person is appointed are completed and kept up to date.

#### **2.4.2 Qualifications of Authorised Persons**

Perspective Authorised Persons shall be assessed and endorsed by the Authorising Engineer. The appointment is to be for defined systems and installations and will be registered on a Certificate of Appointment signed by the Operations Manager, Authorising Engineer and the Authorised Person.

To be eligible for appointment as a Senior Authorised Person the perspective Authorised Person shall:

- A. Have an adequate knowledge of these Rules, and those Regulations and Documents listed in Appendix A6 that are applicable to the systems and installations for which the appointment is sort.
- B. Be technically competent and qualified to safely operate, and make safe to work on or test, the equipment, systems or installations for which the appointment is sought.
- C. Be familiar with the equipment, systems or installations for which the appointment is sort.
- D. Have successfully passed the AP15, or equivalent, High Voltage Authorised Persons training course within the last three years.
- E. Have adequate knowledge of and, within the last three years, have successfully completed an emergency first aid training course which includes CPR.
- F. Be able to demonstrate competency and suitability for the role, prior to their appointment, through a formal interview carried out by the Authorising Engineer.

## **2.5 Appointment and Re-Appointment of Authorised Persons**

### **2.5.1 General**

Authorised Persons are to be appointed (or re-appointed) by the Operations Manager and endorsed (or re-endorsed) by the Authorising Engineer for defined systems and installations, for periods not exceeding three years. Appointment and re-appointment are to be by the issue, and acceptance, of a Certificate of Appointment signed personally by the Operations Manager, Authorising Engineer and the Authorised Person. Certificates of Appointment or re-appointment and acceptance of appointment should be in the form illustrated in Appendix A1.2.

### **2.5.2 Review of Authorised Persons' Appointments**

Each Authorised Persons' appointment is to be reviewed by the Authorising Engineer at intervals not exceeding three years and prior to re-appointment.

### **2.5.3 Refresher Training for Authorised Persons**

Authorised Persons are to attend an AP15 or equivalent High Voltage Authorised Persons training course at intervals not exceeding three years.

Refresher training courses may be acceptable if the Authorised Person has been adequately engaged during the tenure of their appointment. The Authorising Engineers decision as to whether refresher training is acceptable is final.

All Authorised Persons are to attend an emergency first aid training course in accordance with Section 7.3 of these Rules at intervals not exceeding three years.

### **2.5.4 Suspension and Cancellation of appointment of Authorised Persons**

The appointment of any Authorised Person may be suspended or cancelled by the Authorising Engineer, who should take the following actions:

- A. Arrange a meeting with the Authorised Person to discuss the suspension or cancellation and any actions necessary.
- B. Retrieve the original Certificate of Appointment.
- C. Inform the Operations Manager and Authorised Person of the suspension or cancellation in writing. Giving the reasons for the suspension or cancellation and detailing any further training or experience considered necessary before re-appointment and the expected duration of the suspension or cancellation.
- D. In the case of cancellation, the Authorising Engineer is to destroy the original Certificate of Appointment and overwrite all other copies with the word 'Cancelled' followed by the date and his signature.
- E. On suspension or cancellation of an appointment the combination, or lock to the Key Control Box is to be changed.
- F. The Authorising Engineer should liaise with the Operations Manager to take the actions necessary to ensure alternative cover is provided.

## 2.6 Competent Persons

### 2.6.1 Certificated Competent Persons

The duties of a Competent Person authorised by the issue of a Certificate of Appointment will be limited to those duties specified on the certificate.

These certificated duties must not preclude the necessity for a Permit to Work or Sanction for Test where the works require an isolation(s).

### 2.6.2 Appointment and Re-Appointment of Certificated Competent Persons

Certificated Competent Persons are to be appointed (or re-appointed) by the Operations Manager and endorsed (or re-endorsed) by the Authorised Person.

When appointed by Certificate they are deemed competent to carry out the specified duties, as specified on the Certificate without the issue of additional Safety Documentation.

When appointed by the issue of a Safety Document, they are deemed competent to carry out only the task specified on the Safety Document.

Prior to the issue of a Certificate of Appointment the prospective Competent Person is to attend a formal interview with the Authorised Person appointed for the system or installation for which the appointment is sought.

A copy of the certificate is to be placed in the Operational File.

### 2.6.3 Qualifications for Certificated Competent Persons

To be eligible for appointment, prospective Competent Persons shall:

- A. Be familiar with the types of installation and equipment in the locations specified on their Certificate.
- B. Possess the necessary Safety Skills, Knowledge, Training and Experience relevant to the nature of their duties to be undertaken to prevent danger or injury.
- C. Have adequate knowledge of the relevant parts of these Rules, any agreed local variations, and those Regulations listed in Appendix A6 which are applicable to the installations and equipment in the locations specified on their Certificate.

### 2.6.4 Appointment of Competent Persons by Issue of Safety Documentation

A Competent Person authorised by the issue of a Safety Document may only undertake or supervise the work or test specified until the task is complete and the Competent Person has signed the clearance of the Safety Document. The Safety Document is then cancelled by the Duty Authorised Person.

The Duty Authorised Person is to ensure the perspective Competent Person has the necessary Technical and Safety Skills, Knowledge, Training and Experience to undertake or supervise the task before issuing the Safety Document.

Unless it is unavoidable the Competent Person is not to leave the location of the work or test until the task is completed. If the Competent Person must temporarily leave the location of work or test, the task is to be suspended, and adequate safety

precautions taken to prevent danger. The work or test is not to be resumed until the Competent Person has returned to the location of work or test.

### **2.6.5 Contractors Skilled and Competent Persons**

The contractor is responsible for ensuring that their employees assigned to work on systems or installations for which Compass Group have control of the danger have the necessary Technical and Safety Skills, Knowledge, Training and Experience to undertake or supervise the task. Written evidence of their competency is to be provided to the Duty Authorised Person prior to attendance.

Contractors Competent or Skilled Persons working or testing on systems or installations for which Compass Group have control of the danger are required to work in accordance with these Rules.

If the Duty Authorised Person is of the opinion that a Competent or Skilled Person is not carrying out work in accordance with these Rules, or is working in an unsafe manner, the Duty Authorised Person is to stop the work, have the equipment or installation made safe and the Competent Person removed from the work area.

## **2.7 Accompanying Safety Persons**

### **2.7.1 Role of Accompanying Safety Persons**

The Safety Person is a person, not directly involved in the work or test being performed, who has adequate knowledge, experience and ability to avoid danger, keep watch, prevent unauthorised interruption of the work or test and be able to apply first aid and summon help.

Accompanying Safety Persons shall have adequate knowledge of and, within the last three years, have successfully completed an emergency first aid training course that includes CPR.

The Duty Authorised Person is to ensure that the Accompanying Safety Person understands their role and fully understands how to disconnect the equipment being worked on or tested from all sources of supply and how to switch off or disconnect from its source of supply any test equipment.

### **2.7.2 Requirement for an Accompanying Safety Person**

An Accompanying Safety Person is to be in attendance when the Duty Authorised Person considers it necessary and in the following circumstances:

- A. Whilst equipment is being proved or confirmed dead.
- B. Whilst equipment is being earthed, other than by a switch.
- C. Whilst a cable is being spiked.
- D. When Live Testing or Fault Finding are being undertaken.
- E. Whilst a High Voltage enclosure is in place.

## 3 General Precautions

|            |                                          |           |
|------------|------------------------------------------|-----------|
| <b>3.1</b> | <b>General</b>                           | <b>24</b> |
| 3.1.1      | General                                  | 24        |
| <b>3.2</b> | <b>Underground Cables</b>                | <b>24</b> |
| 3.2.1      | Location of Underground Cables           | 24        |
| 3.2.2      | Identification and Spiking of Cables     | 24        |
| <b>3.3</b> | <b>Display of Temporary Safety Signs</b> | <b>25</b> |
| 3.3.1      | Caution Signs                            | 25        |
| 3.3.2      | Danger Signs                             | 25        |
| 3.3.3      | Point of Work Signs                      | 25        |
| <b>3.4</b> | <b>Withdrawable Equipment</b>            | <b>26</b> |
| 3.4.1      | General                                  | 26        |
| <b>3.5</b> | <b>Admittance to Sub-Stations</b>        | <b>26</b> |
| 3.5.1      | General                                  | 26        |
| 3.5.2      | Personal Protective Equipment            | 26        |

## 3.1 General

### 3.1.1 General

These Rules do not apply where equipment has been Isolated, Discharged, Disconnected and Removed from the system or installation.

Equipment that is considered by any Authorised Persons, to be in a Dangerous Condition is to be disconnected elsewhere and action taken to prevent it from being re-connected to the supply of electricity. A report of the incident and the action taken are to be reported as soon as is reasonably practicable to the Authorising Engineer.

Where an Authorised Person is undertaking a task requiring a Safety Document, this is to be issued by the Duty Authorised Person and receipted by the Authorised Person carrying out the task. In this case the Authorised Person becomes the Competent Person for the duration of the task.

The Duty Authorised Person shall not issue a Safety Document to themselves.

When a Permit to Work or Sanction for Test is to be issued, the Duty Authorised Person is required to have made safe the equipment upon which the work or test is to be undertaken.

The Duty Authorised Person is to identify the Point of Work and all Points of Isolation and Earthing to the perspective Competent Person.

If the work involves, or may involve, obtaining access to items of equipment over which confusion could occur the Duty Authorised Person is to positively identify such items to the Competent Person and apply Point of Work Signs to the equipment. In the case of a Sanction for Test being issued the Duty Authorised Person will identify any points of earthing that may be removed for the duration of the test.

## 3.2 Underground Cables

### 3.2.1 Location of Underground Cables

Where it is proposed to carry out excavation work on sites for which Compass Group have control of the danger, it is the responsibility of the Duty Authorised Person to ensure that all underground power cables within the proposed areas of excavation are located, and their positions marked prior to the ground being disturbed.

No persons should use cable location and tracing devices unless they are competent to do so and have been specifically trained in its use. A certificate should be issued by the instructor on successful completion of the training. A copy of this should be placed in the Operational File.

Training in the use of cable location and tracing devices should normally be given by the manufacturers of the equipment, but alternatively it may be given by a Person who has been trained and certified by the manufacturers or an approved training provider.

### 3.2.2 Identification and Spiking of Cables

Before the conductors of a cable are cut or exposed, the point(s) of isolation and earthing of the cable and the point of work on the cable are to be identified with certainty.



The identification may be regarded as clear and certain if the cable can be seen throughout its length, or if it can be clearly seen between a point of isolation and the point of work.

In the absence of clear and certain identification of a cable, it is to be spiked at the point of work.

Prior to spiking a cable, actions must be taken as far as reasonably practicable to ensure the cable is not energised, this may include some or all the following:

- A. Interrogation of cable route plans.
- B. Checking size and type of cable against drawings.
- C. Use of a current sensing device.
- D. Cable core signal injection.

Before spiking it may be necessary to carry out dead phasing tests to the cable that can be repeated after the works and the results compared.

The spiking of cables may only be carried out by the Duty Authorised Person or a Competent Person who has been specifically trained in the operation of the equipment to be used.

## **3.3 Display of Temporary Safety Signs**

### **3.3.1 Caution Signs**

Caution Signs in accordance with Appendix A3.5 Model Sign P5 are to be prominently displayed and securely fixed at all points of isolation before the start of and for the duration of any work or testing, and before the issue of any Permit to Work or Sanction for Test.

### **3.3.2 Danger Signs**

Danger Signs in accordance with Appendix A3.5 Model Sign LP5 are to be prominently displayed on any equipment which remains live and is adjacent to equipment to be worked on or tested before the start of and for the duration of any work or testing, and before the issue of any Permit to Work or Sanction for Test.

Where work or testing is to be undertaken on any part of a multi-cubicle switchboard, Danger Signs shall be prominently displayed on the cubicles or compartments adjacent to the part being worked on or tested. If the board has rear access Danger Signs shall similarly be displayed at both the front and rear of the board. Reliance is not to be placed upon the switchboard labelling when identifying parts at the rear of the board. Any discrepancies are to be reported to the Authorising Engineer.

Danger Signs are to be prominently displayed so that they are visible at all angles of approach to a High Voltage Enclosure.

### **3.3.3 Point of Work Signs**

Point of Work Signs in accordance with Appendix A3.6 Model Sign P6 are to be prominently displayed at the Point(s) of Work before the issue of any Permit to Work.

## **3.4 Withdrawable Equipment**

### **3.4.1 General**

When withdrawable electrical equipment has been disconnected from all sources of supply and withdrawn from its normal live position, its conductors shall be discharged to earth but need not remain connected to earth. All shutter mechanisms within the enclosure shall be locked shut with Working Locks or Safety Locks when unattended; the keys controlling such locks shall at all-time be under the control of the Duty Authorised Person.

## **3.5 Admittance to Sub-Stations**

### **3.5.1 General**

Any entrance to a room or enclosure that contains High Voltage Equipment is to be kept closed and securely locked when the equipment is unattended.

Where it is necessary to prevent danger or, where appropriate, injury, or prevent unauthorised operation, Equipment cubicles and operating mechanisms are to be locked when the Equipment is unattended.

No person other than the Duty Authorised Person shall enter a room containing High Voltage Equipment unless they are accompanied by the Duty Authorised Person or have receipt of a valid Safety Document or Certificate of Appointment authorising entry into the Sub-Station.

### **3.5.2 Personal Protective Equipment (PPE)**

Each Sub-Station is to be Risk Assessed and the PPE requirements for Sub-Station Entry are to be stipulated. When determining the PPE Requirements, the Risk Assessment is to consider the following:

- A. The Location and layout of the Sub-Station.
- B. The Type and Condition of the HV Switchgear (Including its susceptibility to Arc Flash / Blast).
- C. The Arc Flash Potential Rating of the equipment within the Sub-Station.
- D. Presence of other equipment, such as Generator Sets and Fire Suppression.

## 4 Working on and Testing High Voltage Equipment

|            |                                                                                                            |           |
|------------|------------------------------------------------------------------------------------------------------------|-----------|
| <b>4.1</b> | <b>General</b>                                                                                             | <b>28</b> |
| 4.1.1      | General                                                                                                    | 28        |
| <b>4.2</b> | <b>Operation of High Voltage Switchgear</b>                                                                | <b>29</b> |
| 4.2.1      | General                                                                                                    | 29        |
| 4.2.2      | Standing and Specific Written Instructions                                                                 | 29        |
| <b>4.3</b> | <b>Testing at High Voltage</b>                                                                             | <b>30</b> |
| 4.3.1      | General                                                                                                    | 30        |
| 4.3.2      | Live Voltage and Phasing Tests                                                                             | 30        |
| <b>4.4</b> | <b>Work or Test on High Voltage Installations or Equipment in Hazardous Areas</b>                          | <b>30</b> |
| 4.4.1      | General                                                                                                    | 30        |
| 4.4.2      | DSEAR Operational Authorities                                                                              | 31        |
| 4.4.3      | DSEAR Authorising Authorities                                                                              | 31        |
| 4.4.4      | DSEAR Zones                                                                                                | 31        |
| 4.4.5      | ATEX Equipment Categories and Concepts                                                                     | 32        |
| 4.4.6      | Maintaining ATEX Protection During Maintenance and Repair                                                  | 32        |
| 4.4.7      | Identifying and Reporting Unsafe or Non-Compliant Equipment                                                | 33        |
| 4.4.8      | Working or Testing on Electrical Systems or Equipment in Hazardous Areas                                   | 33        |
| <b>4.5</b> | <b>High Voltage Enclosures</b>                                                                             | <b>34</b> |
| 4.5.1      | General                                                                                                    | 34        |
| 4.5.2      | Entry into a High Voltage Enclosure                                                                        | 35        |
| <b>4.6</b> | <b>Procedures</b>                                                                                          | <b>36</b> |
| Table HV1. | Procedures to be carried out by the Duty Authorised Person to enable work on High Voltage Equipment.       | 36        |
| Table HV2. | Procedures to be carried out by the Duty Authorised Person to enable testing of High Voltage Equipment.    | 37        |
| Table LV4  | Procedure to be carried out by the Duty Authorised Person to enable Working or Testing in Hazardous Areas. | 38        |

## 4.1 General

### 4.1.1 General

These Rules do not apply where equipment has been Isolated, Discharged, Disconnected and Removed from the system of installation.

High Voltage Equipment which is considered by an Authorised Person to be in a Dangerous Condition or is subject to a Health and Safety Warning Notice that requires it to be immediately switched off should be isolated elsewhere and action taken by the Authorised Person to prevent it being re-connected to the supply of electricity. The Authorised Person is to report the matter as soon as is reasonably practicable to the Authorising Engineer.

All working on or testing of High Voltage Equipment connected to a system is to follow the procedures set out in Tables HV1, HV2 or HV3 of these Rules and Procedures as appropriate.

Safety Locks are to be applied at points of isolation to prevent unauthorised operation or re-connection. A Caution Sign shall accompany Safety Locks used for isolation.

Safety Locks are to be applied at points of earthing to prevent unauthorised removal.

Temporary Safety Signs shall be fixed and displayed in accordance with section 3.3 of these Rules.

Where required by section 2.7 of these Rules, an Accompanying Safety Person is to be appointed before work or tests are commenced.

A High Voltage Potential Indicator is to be tested immediately before and after use against a High Voltage Test Supply. Only the Duty Authorised Person, A Competent Person or a Skilled Person acting on the instructions of and personally supervised by the Duty Authorised Person are to use a High Voltage Potential Indicator to prove dead in accordance with these Rules and Procedures.

Where practicable, High Voltage Cables and Equipment are to be proved dead prior to earthing. Where it is not practicable to prove dead any earth connection shall be made by means of a switch or circuit breaker. Other forms of earth connection shall not be used until the Equipment, and its conductors have been proved dead.

In cases when working or testing is to be undertaken on High Voltage Equipment where it is not practicable to prove the Equipment dead prior to issuing a Permit to Work or Sanction to Test, the Duty Authorised Person having issued the Permit or Sanction is to remain with and supervise the Competent Person until conductors have been made accessible to a High Voltage Potential Indicator (or Low Voltage Potential Indicator for proving dead at the Low Voltage conductors of a High Voltage transformer). The Duty Authorised Person is then to confirm the Equipment dead before allowing the Competent Person to assume control of the work or tests.

Where the procedures involve the application of Additional Earths the unauthorised removal of such earth connections is to be prevented by the application of Safety Locks. The keys controlling such locks shall at all times be under the control of the Duty Authorised Person.

Where the procedures involve the application of Removable Additional Earths the unauthorised removal of such earth connections is to be prevented wherever practicable by the application of Working Locks. The keys controlling such locks shall at all times be under the control of the Duty Authorised Person.

Prior to the issue of a Permit to Work or Sanction to Test, the Duty Authorised Person is to show the prospective Competent Person the electrical diagram on the Safety Document, the safety arrangements at the Points of Isolation, Points of Earthing and at the Points of Work or Test and is to ensure that the person understands all the relevant safety procedures and precautions. If the prospective Competent Person thereafter accepts the Permit or Sanction, they are responsible for the defined Work or Test until the Permit or Sanction is cancelled.

Where an Authorised Person is undertaking a task requiring a Permit to Work or Sanction for Test, these are to be issued by the Duty Authorised Person and receipted by the Authorised Person carrying out the task. In this case the Authorised Person becomes the Competent Person.

## **4.2 Operation of High Voltage Switchgear**

### **4.2.1 General**

In an emergency, High Voltage switchgear in service may be switched off or tripped off by any Authorised Person, Competent or Skilled Person. The person is then without delay and with some urgency, to advise the Duty Authorised Person of the action(s) taken.

In normal circumstances High Voltage switchgear is to be operated only by:

- A. The Duty Authorised Person.
- B. A Competent Person who has been issued with a Standing Instruction giving authority for the operation.
- C. A Competent Person who has been issued with a Specific Written Instruction giving authority for the operation.
- D. A Competent Skilled Person acting on the instructions and personally supervised by the Duty Authorised Person.
- E. The Competent Person in receipt of a Sanction for Test, when the operation is part of the test procedure.
- F. A Skilled Person acting on the instructions of and personally supervised by the Competent Person in receipt of a Sanction for Test, when the operation is part of the test procedure.

### **4.2.2 Standing and Specific Written Instructions**

An Authorised Person may issue a Standing Instruction to a named Competent Person for a defined switching operation or sequence of operations in respect of specific items of High Voltage Equipment. If the Competent Person thereafter accepts the Standing Instruction that person becomes responsible for carrying out the defined tasks as required until the Standing Instruction is cancelled.

The Duty Authorised Person may give a Specific Written Instruction to a named Competent Person or to an Authorised Person for defined switching operations in respect of specific items of High Voltage switchgear. If the Competent Person or an Authorised Person thereafter accepts the Specific Written Instruction that person becomes responsible for the defined switching operations.

## **4.3 Testing at High Voltage**

### **4.3.1 General**

Where High Voltage tests are to be undertaken on High Voltage Equipment a Sanction for Test is to be issued to the prospective Competent Person who, on acceptance, becomes the Competent Person and is to be present throughout the duration of the tests.

The areas containing exposed live High Voltage conductors, Test Equipment and any High Voltage connection are to be regarded as High Voltage Enclosures.

Unauthorised access to such areas is to be prevented by, as a minimum, White and Red striped tape, not less than 25mm wide, suspended on posts, and by the display of Danger Signs in accordance with section 4.5 of these Rules. And the attendance of a Safety Person(s) in accordance with sections 2.7 and 4.5 of these Rules.

### **4.3.2 Live Voltage and Phasing Tests**

Live voltage and phasing tests on High Voltage Equipment may be undertaken provided adequate precautions are taken to prevent accidental contact with, and prevent injury from, live High Voltage conductors. Test Equipment for live voltage and phasing tests is to be tested immediately before and after use against a Test Supply. Live voltage and phasing tests on High Voltage Equipment are to be undertaken only by the Duty Authorised Person, with assistance, if necessary, from Skilled Person acting on verbal instructions from the Duty Authorised Person, with a Safety Person in attendance. Neither a Permit to Work nor a Sanction for Test is appropriate to this activity.

## **4.4 Work or Test on High Voltage Installations or Equipment in Hazardous Areas**

### **4.4.1 General**

Work or testing is classified as occurring in a “Hazardous Area” if:

- A. The location has been designated as such under the Dangerous Substance, Explosive Atmosphere Regulations (DSEAR).
- B. The area is controlled by an “Explosives Safety Representative” under the Explosives Regulations.

### **4.4.2 DSEAR Operational Authorities**

Operations within DSEAR Designated Areas are controlled by either:

- A. Operating Authority (Petroleum Installations).
- B. Network Controller (Natural or LPG Gas Installations).

C. Responsible Person (COSHH Storage Areas).

Each role ensures compliance with designated hazardous area safety requirements.

Further details on Operational Authority and their operational controls can be found in the Compass Operational Policies for Fuel Systems and Hazardous Substances.

#### 4.4.3 DSEAR Authorising Authorities

Works within DSEAR Designated Areas are controlled by either:

- A. Authorised Person (Pet) (Petroleum Installations).
- B. Responsible Person (Gas) (Natural or LPG Gas Installations).
- C. Responsible Person (COSHH Storage Areas).

The process to transfer control of DSEAR Designated Areas between the Operational and Authorising Authorities is outlined in the Installation Process Safety Management System.

The Authorising Authority for works in Explosive Storage Areas shall be the Explosives Safety Representative.

To ensure operational integrity the Authorising Authority will require the following before authorising any works or issuing any Safety Documentation:

- A. Specific Scope of Work and Task Methodology.
- B. Specific Task Risk Assessment.
- C. Verification of the Work Teams Competency.

The Authorising Authority will specify the DSEAR Zone within which the works will be undertaken and the permissible concentrations of both the product vapours and oxygen. They will also specify the ATEX Category of Equipment and ATEX Concept to be used.

Further details on Authorising Authority Appointments and their safety procedures can be found in the Compass Operational Policies for Fuel Systems and Hazardous Substances.

#### 4.4.4 DSEAR Zones

DSEAR Designated Areas are divided into zones which indicate the occurrence frequency of a potentially explosive atmosphere.

The Table below outlines the Zone Categorisations for Explosive Atmospheres for Vapours / Fumes / Mists and Dusts.

| Occurrence Frequency | Zone Categorisations    |           |
|----------------------|-------------------------|-----------|
|                      | Vapours / Fumes / Mists | Dusts     |
| Constant Presence    | Zone "0"                | Zone "20" |
| Likely Presence      | Zone "1"                | Zone "21" |
| Unlikely Presence    | Zone "2"                | Zone "22" |

#### 4.4.5 ATEX Equipment Categories and Concepts

All Electrical Systems and Equipment installed in Hazardous Areas must be designed manufactured and installed to meet the requirements of ATEX 95 (Equipment Directive) and ATEX 137 or 1999/92/EC (Workplace Directive).

The Table below outlines the ATEX Equipment Categories for equipment to be installed or used in the relevant DSEAR Zones.

| Zone Categorisations    |           | ATEX Equipment Categories    |
|-------------------------|-----------|------------------------------|
| Vapours / Fumes / Mists | Dusts     |                              |
| Zone "0"                | Zone "20" | Category 1 Equipment         |
| Zone "1"                | Zone "21" | Category 1 or 2 Equipment    |
| Zone "2"                | Zone "22" | Category 1, 2 or 3 Equipment |

To identify the level of protection offered by Electrical Equipment ATEX have the following protection concepts and coding:

- EX e – Increased Safety (prevents sparks and excessive heat)
- EX i – Intrinsic safety (Limits electrical energy to prevent ignition)
- EX m – Encapsulated equipment (Seals components to prevent ignition)
- EX d – Flameproof (contains explosions within an enclosure)
- EX n – Non-sparking (designed to avoid sparks in normal operation)
- EX p – Pressurisation (Uses clean air or inert gas to prevent explosive atmospheres from entering)

Only electrical systems or equipment that meet or exceed ATEX Directives (ATEX 95 – Equipment Directive and ATEX 137 – Workplace Directive) are permitted for installation and operation in hazardous areas.

Non-compliant equipment must not be installed or used under any circumstances.

#### 4.4.6 Maintaining ATEX Protection During Maintenance and Repair

The integrity of ATEX protection concepts must be preserved throughout maintenance or repair activities.

Following any maintenance, modification, or repair, the equipment must be verified to ensure it maintains its required protection category before returning to service.

Verification methods may include:

- ATEX certification checks.
- Insulation and functional tests.
- Explosion-proof enclosure integrity confirmation.
- Post-maintenance compliance inspections.



#### **4.4.7 Identifying and Reporting Unsafe or Non-Compliant Equipment**

Electrical Systems or Equipment which, in the opinion of the Authorised or Competent Person, are Unsafe for Operation or Non-Compliant with the ATEX Directives are not to be operated and are to be reported to the Operating and/or Authorising Authority without undue delay.

Following the reporting of Unsafe or Non-Compliant equipment actions should be agreed and implemented to prevent operation, remediate the issue and restore the system to compliance to ATEX Directives.

#### **4.4.8 Working or Testing on Electrical Systems or Equipment in Hazardous Areas**

The Duty Authorised Person is to liaise with the Authorising Authority to arrange access to the area and release of the equipment required through the Operating Authority.

The Duty Authorised Person is responsible for providing the required Task Method Statements and Risk Assessments to the Authorising Authority. Where required they should also produce for review a Switching Schedule. The Switching Schedule shall be countersigned by the Authorising Authority.

The Authorising Authority shall complete the required Operations and Procedures to make the Point(s) of Work and Point(s) of Isolation safe to operate in. This shall include ensuring the surrounding atmosphere is confirmed to be below 1% of the LEL or lower for Vapours / Fumes / Mists or is free from concentrations of Dust which could give rise to an explosion.

Safety Locks and Caution Signs are to be fitted at all Points of Isolation provided by the Duty Authorised Person.

Where required by Paragraph 2.7.2 an accompanying Safety Person is to be appointed before work or tests are commenced.

The Authorising Authority shall check all Tools, Equipment and Materials to ensure they comply with the required ATEX Directives.

The Authorising Authority shall confirm that the Prospective Competent Person understands the relevant safety arrangements, monitoring requirements and the contents of the Task Risk Assessment and Method Statement and Issue the required Safety Documentation to the Competent Person.

Only Potential Indicators approved for use in Hazardous Areas are to be used to Prove Dead. The Authorised Person is to agree with the Authorising Authority where, and under what conditions proving units may be used.

Electrical Conductors within Hazardous Area are only to be Proved Dead once the area has an atmosphere of 1% of the LEL or lower for Vapours / Fumes / Mists or is free from concentrations of Dust which could give rise to an explosion. At which point, the Equipment can be opened to expose conductors to Prove or Confirm Dead.

Electrical Equipment within Hazardous Areas must not be opened, or the protection concept disturbed, until it is electrically isolated and, when the surrounding atmosphere is confirmed to be below 1% of the LEL or lower for Vapours / Fumes / Mists or is free from concentrations of Dust which could give rise to an explosion.

No Earth Connection shall be applied to a conductor, until the conductor has been Proved or Confirmed Dead and Discharged.

The Working Area should remain below 1% of the LEL or lower for Vapours / Fumes / Mists or is free from concentrations of Dust which could give rise to an explosion for the duration of the Works. This is to be confirmed by regular monitoring of the Atmospheric Conditions at the Point of Work. Where this is not possible the Authorising Authority shall give guidance on the precautions and procedures to be followed.

Testing of Electrical Circuits can induce Currents and Voltages throughout the installation. To reduce the risk of explosion from arcs or where it is identified as a risk control measure on the Task Risk Assessment, testing is to be carried out when the surrounding atmosphere is confirmed to be below 1% of the LEL or lower for Vapours / Fumes / Mists or is free from concentrations of Dust which could give rise to an explosion.

Only Persons in receipt of valid Safety Documentation, issued by the Duty Authorised Person and/or Authorising Authority are to Work or Test Electrical Equipment located within Hazardous Areas. They are to be familiar with Equipment and the ATEX Protection Concepts utilised.

The Work or Test is to be completed in a manner that complies with these Safety Rules and any instructions issued by the Equipment Manufacturer or Authorising Authority.

All Tools, Equipment and Materials taken into a Hazardous Area are to be in good condition. They should be Maintained, Tested and Calibrated to ensure they comply with the requirements of the appropriate ATEX Equipment Category.

Upon completion of the Work or Test, the Competent Person is to return the original of the Safety Document to the Authorising Authority for Clearance and Cancellation.

The Authorising Authority shall return control of the Area or Equipment to the control of the Operating Authority.

## **4.5 High Voltage Enclosures**

### **4.5.1 General**

No person other than the Duty Authorised Person using a High Voltage Potential Indicator designed for the purpose shall be engaged in any work or activity on or near any live conductor (other than one covered with insulating material so as to prevent danger) where danger may arise.

The areas containing exposed live High Voltage conductors, Test Equipment and any High Voltage connection are to be regarded as High Voltage Enclosures.

Except in a High Voltage Enclosure, access to live High Voltage conductors is to be possible only by the use of a tool or key.

A High Voltage Enclosure is to be opened only by the Duty Authorised Person or Skilled Person acting on the instructions of and personally supervised by the Duty Authorised Person.

Unauthorised access to such areas is to be prevented by, as a minimum, White and Red striped tape, not less than 25mm wide, suspended on posts, and by the display of Danger Signs so that they are visible at all angles of approach to a High Voltage Enclosure.

An Accompanying Safety Person or Persons in accordance with Section 2.7 of these rules shall be in attendance whenever the High Voltage Enclosure is accessible or occupied.

#### **4.5.2 Entry into a High Voltage Enclosure**

A High Voltage Enclosure is to be entered only by:

- A. The Duty Authorised Person.
- B. A Skilled Person acting on the instructions of and personally supervised by the Duty Authorised Person.
- C. The Competent Person in receipt of a Sanction to Test, when the High Voltage Enclosure is created as part of the test procedure.
- D. A Skilled Person acting on the instructions of and personally supervised by the Competent Person in receipt of a Sanction to Test, when the High Voltage Enclosure is created as part of the test procedure.
- E. A Safety Person in connection with his or her safety role.

## 4.6 Procedures

| <b>Table HV1</b><br><b>Procedures to be carried out by the Duty Authorised Person to enable Work on High Voltage Equipment requiring a Permit to Work.</b><br><b>Steps in Column 1 are to be undertaken in Numerical Order</b><br><b>(The Duty Authorised Person is responsible for all tasks, unless specified)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Column 1</b>                                                                                                                                                                                                                                                                                                      | <b>Column 2</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>1. Prepare a Switching Schedule</b>                                                                                                                                                                                                                                                                               | <ul style="list-style-type: none"> <li>Review the Task Risk Assessment and Method Statement.</li> <li>Ensure that no other Safety Documents are open for the equipment involved.</li> <li>Prepare a switching schedule in duplicate and obtain a countersignature from another Authorised Person appointed for the system or Authorising Engineer.</li> <li>Sign on as Duty Authorised Person in the Logbook before proceeding to Step 2.</li> </ul>                                                                                                                                                                                                                                              |
| <b>2. Isolate and Fix Signs</b>                                                                                                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>Isolate from all sources of supply applying Safety Locks and Caution Signs at all Points of Isolation.</li> <li>Fit Danger Signs to Live Equipment adjacent to the Point of Work.</li> <li>Fit a Point of Work Sign at the Point(s) of Work.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>3. Prove Dead</b>                                                                                                                                                                                                                                                                                                 | <ul style="list-style-type: none"> <li>Where practicable, Prove Dead with a High Voltage Potential Indicator at all accessible Points of Isolation or Point(s) of Work.</li> </ul> <p><i>Where it is not practicable to prove the Equipment dead prior to issuing a Permit to Work, the Authorised Person having issued the Permit is to remain with and supervise the Competent Person until the conductors have been made accessible to a High Voltage Potential Indicator and Confirmed Dead.</i></p>                                                                                                                                                                                          |
| <b>4. Earth</b>                                                                                                                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>Earth High Voltage Conductors at all points of isolation and or Point(s) of Work and prevent unauthorised disconnection by applying Safety Locks.</li> <li>Identify with certainty or spike cables at the Point(s) of Work if the conductors are to be exposed.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>5. Secure Safety Lock Keys</b>                                                                                                                                                                                                                                                                                    | <ul style="list-style-type: none"> <li>Secure the Keys for the Safety Locks in the Safety Key Box.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>6. Issue The Permit to Work</b>                                                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>Show the Prospective Competent Person the electrical diagram on the Permit to Work and explain the safety arrangements at the Points of Isolation and at the Point(s) of Work.</li> <li>Ensure that the Prospective Competent Person understands the relevant safety arrangements and the contents of the Task Risk Assessment and Method Statement.</li> <li>Issue The Permit to Work and The Competent Persons Key for the Safety Key Box to the Competent Person.</li> </ul>                                                                                                                                                                            |
| <b>7. Undertake the Work</b>                                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>The Competent Person is to undertake or Directly Supervise the works.</li> <li>Duty Authorised Person to provide Personal Supervision as they deem necessary.</li> <li>Upon completion The Competent Person is to return the original of the Permit to Work and Key for the Safety Key Box to the Duty Authorised Person to complete the Clearance and Cancellation of the Permit to Work.</li> <li>If the works are suspended, the Competent Person is to return the original of the Permit to Work and The Competent Persons Key for the Safety Key Box to the Duty Authorised Person who will retain them until recommencement of the works.</li> </ul> |

| <b>Table HV2</b><br><b>Procedures to be carried out by the Duty Authorised Person to enable Dead Testing of High Voltage Equipment under a Sanction for Test.</b><br><b>Steps in Column 1 are to be undertaken in Numerical Order</b><br><b>(The Duty Authorised Person is responsible for all tasks, unless specified)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Column 1</b>                                                                                                                                                                                                                                                                                                             | <b>Column 2</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>1. Prepare a Switching Schedule</b>                                                                                                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>Review the Task Risk Assessment and Method Statement.</li> <li>Ensure that no other Safety Documents are open for the equipment involved.</li> <li>Prepare a switching schedule in duplicate and obtain a countersignature from another Authorised Person appointed for the system or Authorising Engineer.</li> <li>Sign on as Duty Authorised Person in the Logbook before proceeding to Step 2.</li> </ul>                                                                                                                                                                                                                                                       |
| <b>2. Isolate and Fix Signs</b>                                                                                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>Isolate from all sources of supply applying Safety Locks and Caution Signs at all Points of Isolation.</li> <li>Fit Danger Signs to Live Equipment adjacent to the Point of Test.</li> <li>Fit a Point of Work Sign at the Point(s) of Test.</li> <li>If a High Voltage Enclosure is required set up Barriers and fix Danger Signs.</li> </ul>                                                                                                                                                                                                                                                                                                                      |
| <b>3. Prove Dead</b>                                                                                                                                                                                                                                                                                                        | <ul style="list-style-type: none"> <li>Where practicable, Prove Dead with a High Voltage Potential Indicator at all accessible Points of Isolation or Point(s) of Test.</li> </ul> <p><i>Where it is not practicable to prove the Equipment dead prior to issuing a Sanction for Test, the Authorised Person having issued the Sanction is to remain with and supervise the Competent Person until the conductors have been made accessible to a High Voltage Potential Indicator and Confirmed Dead.</i></p>                                                                                                                                                                                              |
| <b>4. Earth</b>                                                                                                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>Earth High Voltage Conductors at all points of isolation and or Point(s) of Test.</li> <li>Apply Working Locks to Earths if their removal is required during the test. If the Earth is not to be removed prevent unauthorised disconnection by applying Safety Locks.</li> <li>Identify cables with certainty between the Point(s) of Isolation and Point(s) of Test.</li> </ul>                                                                                                                                                                                                                                                                                    |
| <b>5. Secure Safety Lock Keys</b>                                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>Secure the Keys for the Safety Locks in the Safety Key Box.</li> <li>Working Locks to be retained by the Duty Authorised Person.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>6. Issue The Sanction for Test</b>                                                                                                                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>Show the Prospective Competent Person the electrical diagram on the Sanction for Test and explain the safety arrangements at the Points of Isolation and at the Point(s) of Test.</li> <li>Ensure that the Prospective Competent Person understands the relevant safety arrangements and the contents of the Task Risk Assessment and Method Statement.</li> <li>Issue The Sanction for Test and The Competent Persons Key for the Safety Key Box to the Competent Person.</li> </ul>                                                                                                                                                                               |
| <b>7. Undertake the Test</b>                                                                                                                                                                                                                                                                                                | <ul style="list-style-type: none"> <li>The Competent Person is to undertake or Directly Supervise the tests.</li> <li>Duty Authorised Person to provide Personal Supervision as they deem necessary.</li> <li>Upon completion The Competent Person is to return the original of the Sanction for Test and Key for the Safety Key Box to the Duty Authorised Person to complete the Clearance and Cancellation of the Sanction for Test.</li> <li>If the tests are suspended, the Competent Person is to return the original of the Sanction for Test and The Competent Persons Key for the Safety Key Box to the Duty Authorised Person who will retain them until recommencement of the tests.</li> </ul> |

**Table HV3**  
**Procedure to be carried out by the Duty Authorised Person to enable Working or Testing in Hazardous Areas**

**Steps in Column 1 are to be undertaken in Numerical Order**

| <b>Column 1</b>                                                                                                  | <b>Column 2</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Duty Authorised Person to Liaise with Authorising Authority</b>                                            | <ul style="list-style-type: none"> <li>Duty Authorised Person to Arrange access to Hazardous Area and release of Equipment with Authorising Authority.</li> <li>Duty Authorised Person to Submit Task Method Statements and Risk Assessments to Authorising Authority for approval.</li> <li>Where required Duty Authorised Person to submit a Switching Schedule to the Authorising Authority for approval and Counter Signature.</li> </ul>                                                           |
| <b>2. Authorising Authority to complete Safety Precautions required at Point of Work and Points of Isolation</b> | <ul style="list-style-type: none"> <li>Authorising Authority to accept control of Work Area and Equipment from the Operating Authority.</li> <li>Authorising Authority to complete the required Operations and Procedures to make the Point(s) of Work and Point(s) of Isolation safe to operate in.</li> </ul> <p><i>Point(s) of Work must be at 1% of LEL or lower for Vapours / Fumes / Mists or to be free from Dust Concentrations which could give rise to an explosion.</i></p>                  |
| <b>3. Isolate and Fix Signs</b>                                                                                  | <ul style="list-style-type: none"> <li>Isolate from all sources of supply applying Safety Locks and Caution Signs at all Points of Isolation.</li> <li>Fit Danger Signs to Live Equipment adjacent to the Point of Work.</li> <li>Fit a Point of Work Sign at the Point(s) of Work.</li> </ul>                                                                                                                                                                                                          |
| <b>4. Authorising Authority to Issue required Safety Documentation</b>                                           | <ul style="list-style-type: none"> <li>Authorising Authority to check all Tools, Equipment and Materials to ensure they comply with the required ATEX Directives.</li> <li>Authorising Authority to ensure that the Prospective Competent Person understands the relevant safety arrangements, monitoring requirements and the contents of the Task Risk Assessment and Method Statement.</li> <li>Authorising Authority to Issue the required Safety Documentation to the Competent Person.</li> </ul> |
| <b>5. Confirm Dead</b>                                                                                           | <ul style="list-style-type: none"> <li>Upon exposure of the conductors, Competent Person to Confirm Dead with a High Voltage Potential Indicator approved for use in Hazardous Areas.</li> </ul>                                                                                                                                                                                                                                                                                                        |
| <b>6. Undertake the Work or Test</b>                                                                             | <ul style="list-style-type: none"> <li>The Competent Person is to undertake or directly supervise the Work or Test which must be conducted in line with the relevant ATEX Directives.</li> <li>The Authorising Authority and / or Competent Person to monitor the %LEL at The Point of Work and Downwind Boundary.</li> <li>On completion, or when the Work or Test is stopped the Point(s) of Work are to be returned to the required ATEX Directive.</li> </ul>                                       |
| <b>7. Return Area or Equipment to Operational Control</b>                                                        | <ul style="list-style-type: none"> <li>The Competent Person returns the original of the Safety Documentation to the Authorising Authority to complete the Clearance and Cancellation.</li> <li>The Authorising Authority to return control of the Area or Equipment to the control of the Operating Authority.</li> </ul>                                                                                                                                                                               |

## 5 Documentation

|            |                                                                     |           |
|------------|---------------------------------------------------------------------|-----------|
| <b>5.1</b> | <b>Switching Schedules</b>                                          | <b>40</b> |
| 5.1.1      | General                                                             | 40        |
| 5.1.2      | Contents of Switching Schedules                                     | 40        |
| 5.1.3      | Implementing Switching Schedules                                    | 41        |
| 5.1.4      | Completion of Switching Schedules                                   | 41        |
| <b>5.2</b> | <b>Permit to Work</b>                                               | <b>41</b> |
| 5.2.1      | General                                                             | 41        |
| 5.2.2      | Issue and Acceptance of a Permit to Work                            | 42        |
| 5.2.3      | Suspension of the Permit to Work                                    | 43        |
| 5.2.4      | Completion of the work and a Cancellation of the Permit to Work     | 43        |
| <b>5.3</b> | <b>Sanction for Test</b>                                            | <b>43</b> |
| 5.3.1      | General                                                             | 43        |
| 5.3.2      | Issue and Acceptance of a Sanction for Test                         | 44        |
| 5.3.3      | Suspension of the Sanction for Test                                 | 45        |
| 5.3.4      | Completion of the test and Cancellation of the Sanction or Test     | 45        |
| <b>5.4</b> | <b>Limitation of Access</b>                                         | <b>46</b> |
| 5.4.1      | General                                                             | 46        |
| 5.4.2      | Issue and Acceptance of a Limitation of Access                      | 46        |
| 5.4.3      | Completion of the work and Cancellation of the Limitation of Access | 47        |
| <b>5.5</b> | <b>Standing Instruction</b>                                         | <b>48</b> |
| 5.5.1      | General                                                             | 48        |
| <b>5.6</b> | <b>Specific Written Instruction</b>                                 | <b>49</b> |
| 5.6.1      | General                                                             | 49        |
| <b>5.7</b> | <b>High Voltage Log</b>                                             | <b>50</b> |
| 5.7.1      | General                                                             | 50        |
| 5.7.2      | Logbook Entries                                                     | 50        |
| <b>5.8</b> | <b>High Voltage Operational File</b>                                | <b>51</b> |
| 5.8.1      | General                                                             | 51        |
| 5.8.2      | File Contents                                                       | 51        |

## 5.1 Switching Schedules

### 5.1.1 General

Prior to the issue of a Permit to Work or Sanction for Test, a Switching Schedule, detailing the intended sequence of safety operations to be performed to make the equipment safe for the execution of the Work or Test, is to be prepared. When the Switching Schedule has been completed it should be countersigned by another Authorised Person who has been appointed for the system involved.

Where the Work or Test is to be completed within a Hazardous Area the Switching Schedule is to be countersigned by the relevant Authorising Authority.

A Switching Schedule form shall have a format in accordance with Appendix A2.1. It shall have an original and a duplicate of each page, and each sheet of a Switching Schedule shall bear the same unique and non-repeatable serial number.

### 5.1.2 Contents of Switching Schedules

The Switching Schedule is to be completed in duplicate by the Authorised Person who is to be responsible for issuing the Permit to Work or Sanction to Test, and is to indicate:

- A. The name of the originating Authorised Person.
- B. The name and signature of the countersigning Authorised Person or Authorising Authority.
- C. Date of the countersignature.
- D. Site Name.
- E. The Equipment for which the proposed sequence of operations is intended to make safe to Work on or Test.
- F. The purpose of the proposed Work or Test.
- G. The sequence of operations to be undertaken up to the issue of The Permit to Work or Sanction for Test, including:
  - i. The location at which each operation is to be performed.
  - ii. The type of switchgear to be operated.
  - iii. The identity of each item of switchgear to be operated (this should be what is stated on the local label on the equipment or alternatively the generic type, manufactures name and type reference).
  - iii. The operation to be performed.
  - iv. The reason for the operation.

### 5.1.3 Implementing Switching Schedules

Before commencing the sequence of operations detailed on the countersigned Switching Schedule, the Duty Authorised Person is to confirm that persons affected have been informed and that permission from the client has been obtained.



Before commencing the sequence of operations detailed on the countersigned Switching Schedule, the original copy is to be detached from the duplicate. The original is to be taken by the Authorised Person carrying out the operations and the duplicate is retained in the Switching Schedule Pad and located in the Document Cabinet.

The Duty Authorised Person is to refer to the original while carrying out the sequence of operations detailed on the Switching Schedule and is to note on it the date and time of each operation.

The serial number of the Permit to Work or Sanction for Test should be entered on the Switching Schedule as a cross reference.

#### **5.1.4 Completion of Switching Schedules**

On completion the original of the Switching Schedule should be placed in the Operational File with the associated Safety Document and Supporting Documentation.

The original Switching Schedules are to be retained, in the Operational File, for three years after the dates on which they were implemented.

## **5.2 Permit to Work**

### **5.2.1 General**

A Permit to Work shall be issued by The Duty Authorised Person to a Skilled Person before any work on defined items of equipment is started. Items of equipment or tasks that will require the issue of a Permit to Work include:

- A. Work on transformers having one or more High Voltage Windings.
- B. Work on High Voltage cables including cable end boxes.
- C. Work on High Voltage Switchgear (except for withdrawable equipment which has been Isolated, Discharged, Disconnected and Removed from the system or installation).
- D. Work on High Voltage Overhead Lines.
- E. Any other work which the Duty Authorised Person deems a Permit to work necessary.

A Permit to Work shall have the format of that shown in Appendix A2.2. It shall have an original and a duplicate page. Each page of the permit shall bear the same serial number. Pads of numbered forms shall be used in sequence.

Prior to issue, the Isolation and Earthing Diagram shall be completed on the Permit to Work and explained to the Skilled Person.

Only one Permit to Work pad shall be in use at any one time for each system. When not in use the Permit to Work pads shall be stored in the lockable Document Cabinet.

A Permit to Work is not to be issued for an item of equipment for which an existing Permit to Work or Sanction for Test, remains valid, nor for any equipment which is within an area for which a Limitation of Access exists unless a Risk Assessment indicated that it is safe to do so.

Where an Authorised Person is to undertake the work, they will become the Competent Person upon Receipt of the Permit to Work from the Duty Authorised Person.

### **5.2.2 Issue and Acceptance of a Permit to Work**

A Permit to Work is to be issued at the Point of Work, and the Points of Isolation and Earthing shown to the Skilled Person. The issue and cancellation of every Permit is to be recorded in the High Voltage Logbook.

Before issuing a Permit to Work, the Duty Authorised Person is to:

- A. Positively identify to the Skilled Person the Equipment upon which the work is to be undertaken, indicating the precise Point(s) of Work.
- B. Explain in detail to the Skilled Person the exact extent of the work to be undertaken.
- C. Draw the attention of the Skilled Person to any special instructions and safety measures noted on the Permit.
- D. Show the Skilled Person the Isolation and Earthing Diagram on the Permit to Work, and the safety arrangements at the points of Isolation, Earthing and the Point(s) of Work.
- E. Demonstrate to the satisfaction of the Skilled Person that the Equipment is dead, earthed and safe to work on.
- F. Where it is not practicable to prove the Equipment dead prior to issuing a Permit to Work, the Duty Authorised Person having issued the Permit is to remain with and Personally Supervise the Competent Person until conductors have been made accessible to a High Voltage Potential Indicator and Confirmed Dead.

The Duty Authorised Person shall sign and print their name, along with the date and time, in the Issue Section of the Permit to Work.

Prior to acceptance of the Permit to Work, the Skilled Person, having understood the work to be undertaken and being prepared to carry it out, considering any special instructions, shall sign and print their name, along with the date and time, in the Receipt Section of the Permit to Work.

The original copy of the Permit is issued to the Skilled Person along with the Competent Person's Key to the Safety Key Box. The Permit and copies of the associated Method Statements and Risk Assessments are to be displayed at the Point of Work.

After accepting the Permit to Work the Skilled Person becomes the Competent Person and is responsible for personally supervising or undertaking the defined work. The Competent Person is not to leave the place where the work is being carried out, or to undertake any other work or tests while the defined work is in progress.

During any temporary absence of the Competent Person from the place where the work is being carried out, the work is to be suspended, and adequate safety precautions taken until work is resumed upon the return of the Competent Person.

### **5.2.3 Suspension of the Permit to Work**

Where there is a temporary suspension of the works, the area is to be made safe to the satisfaction of the Duty Authorised Person and all persons associated with the work informed that it is no longer safe to work on the Equipment. The Competent Person is to return the original of the Permit to Work to the Duty Authorised Person who will retain the Permit until the works are resumed.

### **5.2.4 Completion of the work and Cancellation of the Permit to Work**

Having completed the work, withdrawn all persons, instruments and tools from the location of work and having advised all persons associated with the work that it is no longer safe to work on the Equipment, the Competent Person is to return the original of the Permit to Work to the Duty Authorised Person and complete and sign The Clearance Section of the Permit to Work.

Where work is stopped the aforementioned procedures apply and in addition the Competent Person confirms that the Equipment has been made safe pending the issue of another Permit or a Sanction.

The Duty Authorised Person completes and signs the Cancellation Section of the Permit to Work and places the original in the Operational File with the relevant Switching Schedule and any other associated paperwork.

If the Competent Person has lost the original of the Permit to Work, the loss is to be recorded by the Duty Authorised Person on the duplicate copy, and in the High Voltage Logbook. The Competent Person is to countersign the loss of the original Permit, and a note to that effect placed in the Operational File in place of the original. The loss is to be reported to the Authorising Engineer.

Completed Permit to Work pads are to be retained in the lockable Document Cabinet for a minimum of three years after the date of cancellation of the last Permit issued from the pad.

## **5.3 Sanction for Test**

### **5.3.1 General**

A Sanction for Test is to be issued by the Duty Authorised Person to a Skilled Person before the commencement of any Test of High Voltage Equipment involving the application of a Test Voltage to an otherwise isolated, earthed and proven dead circuit.

A Sanction to Test form shall have a format in accordance with Appendix A2.3. It shall have an original page and a duplicate page. Each page of a Sanction shall bear the same pre-printed serial number and sets of numbered forms shall be used in sequence.

Prior to issue, the Isolation and Earthing Diagram shall be completed on the Sanction for Test and explained to the Skilled Person.

Only one Sanction for Test pad shall be in use at any one time for each system. When not in use the Sanction for Test pads shall be stored in the lockable Document Cabinet.

A Sanction for Test is not to be issued for an item of equipment for which an existing Permit to Work or Sanction for Test, remains valid, nor for any equipment which is within an area for which a Limitation of Access exists.

### **5.3.2 Issue and Acceptance of a Sanction for Test**

A Sanction for Test is to be issued at the point of test, and the points of isolation and earthing shown to the Skilled Person. The issue and cancellation of every Sanction is to be recorded in the High Voltage Logbook.

Where an Authorised Person is to undertake the test, they will become the Competent Person upon Receipt of the Sanction for Test from the Duty Authorised Person.

Before issuing a Sanction for Test, the Duty Authorised Person is to:

- A. Positively identify to the Skilled Person the Equipment upon which the test is to be undertaken, indicating the precise Point(s) of Test.
- B. Explain in detail to the Skilled Person the exact extent of the tests to be undertaken, including the test voltages.
- C. Draw the attention of the Skilled Person to any special instructions and safety measures noted on the Sanction.
- D. Show the Skilled Person the electrical diagram and the safety arrangements at the points of isolation, earthing and the places of test.
- E. Demonstrate to the satisfaction of the Skilled Person that the Equipment is dead and safe to test.
- F. Where it is not practicable to prove the Equipment dead prior to issuing a Sanction for Test, the Authorised Person having issued the Sanction is to remain with and supervise the Competent Person until conductors have been made accessible to a High Voltage Potential Indicator and Confirmed Dead
- G. If Circuit Main Earths are to be removed and replaced this will be carried out by the Duty Authorised Person at the request of the Competent Person.

The Duty Authorised Person shall sign and print their name, along with the date and time, in the Issue section of the Sanction for Test.

Prior to acceptance of the Sanction for Test, the Skilled Person, having understood the test to be undertaken and being prepared to carry it out, considering any special instructions, shall sign and print their name, along with the date and time, in the Receipt section of the Sanction for Test.

The original copy of the Sanction for Test is issued to the Skilled Person along with the Competent Person's Key to the Safety Key Box. The Sanction for Test and

copies of the associated Method Statements and Risk Assessments are to be displayed at the Point of Test.

After accepting the Sanction for Test the Skilled Person becomes the Competent Person and is responsible for personally supervising or undertaking the defined test. The Competent Person is not to leave the place where the test is being carried out, or to undertake any other work or tests while the defined test is in progress. During any temporary absence of the Competent Person from the place where the test is being carried out, the test is to be suspended, and adequate safety precautions taken until the test is resumed upon the return of the Competent Person.

### **5.3.3 Suspension of the Sanction for Test**

Where there is a temporary suspension of the tests, the area is to be made safe to the satisfaction of the Duty Authorised Person and all persons associated with the test informed that it is no longer safe to work on the Equipment. The Competent Person is to return the original of the Sanction for Test to the Duty Authorised Person who will retain the Sanction for Test until the tests are resumed.

### **5.3.4 Completion of the test and Cancellation of the Sanction for Test**

Having completed the test, withdrawn all persons, instruments and tools from the location of the test and having advised all persons associated with the test that it is no longer safe to work on or test the Equipment, the Competent Person is to return the original of the Sanction for Test to the Duty Authorised Person and complete and sign The Clearance section of the Sanction for Test.

Where the test is stopped the aforementioned procedures apply and in addition the Competent Person confirms that the Equipment has been made safe pending the issue of another Sanction or a Permit.

The Duty Authorised Person completes and signs the Cancellation section of the Sanction for Test and places the original in the Operational File with the relevant Switching Schedule and any other associated paperwork.

If the Competent Person has lost the original of the Sanction for Test, the loss is to be recorded by the Authorised Person on the duplicate copy, and in the High Voltage Logbook. The Competent Person is to countersign the loss of the original Sanction for Test and a note to that effect placed in the Operational File in place of the original. The loss is to be reported to the Authorising Engineer.

Completed Sanction for Test pads are to be retained in the lockable Document Cabinet for a minimum of three years after the date of cancellation of the last Sanction issued from the pad.

## **5.4 Limitation of Access**

### **5.4.1 General**

The Duty Authorised Person may issue a Limitation of Access for any specified task, other than one that requires a Permit or Sanction, within an area or location that is normally under the control of the Authorised Person.

A Limitation of Access should be issued for single tasks. Where the task is repetitive a Standing Instruction could be issued.

A Limitation of Access shall have the format shown in Appendix A2.4. It shall have an original and a duplicate. Each page of a Limitation of Access shall bear the same serial number. Pads of numbered forms shall be used in sequence.

Only one Limitation of Access pad shall be in use at any one time for each geographical area for which the Authorised Person has responsibility. When not in use the Limitation of Access pads shall be stored in the lockable Document Cabinet.

Provided that a Risk Assessment indicates that it is safe, a Limitation of Access may be issued for work to be undertaken in an area or location containing an item of equipment where a Permit to Work is valid.

A Limitation of Access is not to be issued for any area for which a Sanction for Test is valid, or where a High Voltage Enclosure has been set up.

Whilst the Limitation of Access is in force, the Duty Authorised Person is to inspect the area at the end of each working period or day to ensure that the area remains in a safe and tidy condition.

#### **5.4.2 Issue and Acceptance of a Limitation of Access**

A Limitation of Access may be offered to a Skilled Person of any discipline who is competent to personally execute the work activities or to supervise the execution of the work activities by others. On accepting the Limitation of Access, the person becomes the Competent Person and is personally responsible for undertaking or supervising the work activities, for which the access is required.

Limitations of Access are to be issued at the location where the work activities are to be undertaken. The issue and cancellation of every Limitation of Access is to be recorded in the High Voltage Logbook.

Before issuing a Limitation of Access, the Duty Authorised Person shall positively identify the scope and limits of the work activities which are to be carried out, and the physical extent of the work activities at the location.

Prior to offering a Limitation of Access to the Skilled Person, the Duty Authorised Person is to:

- A. Accompany the Skilled Person to the location where the work is to be undertaken.
- B. Confirm with the Skilled Person in detail the exact extent of the work activities to be undertaken, including its scope and limits.
- C. Show the Skilled Person the area in which the work activities are to be undertaken.
- D. Draw the attention of the Skilled Person to any special instructions and safety measures.
- E. Indicate to the Skilled Person all items of live Electrical Equipment in or adjacent to the work activities area, which are to be identified by Danger Signs.

The Duty Authorised Person shall sign and print their name, along with the date and time, in the Issue section of the Limitation of Access.

Prior to acceptance of the Limitation of Access, the Skilled Person, having understood the work to be undertaken and being prepared to carry it out, taking into account any special instructions, shall sign and print their name, along with the date and time, in the Receipt section of the Limitation of Access.

The original copy of the Limitation of Access is issued to the Skilled Person.

After accepting the Limitation of Access, the Skilled Person becomes the Competent Person and is responsible for personally supervising or undertaking the defined work. The Competent Person is not to leave the place where the work is being carried out, or to undertake any other work while the defined work is in progress. During any temporary absence of the Competent Person from the place where the work is being carried out, the work is to be suspended, and adequate safety precautions taken until work is resumed upon the return of the Competent Person.

#### **5.4.3 Completion of the work and Cancellation of the Limitation of Access**

Having completed the work, withdrawn all persons, instruments and tools from the working place the Competent Person is to return the original of the Limitation of Access to the Duty Authorised Person and complete and sign the Clearance section of the Limitation of Access.

When the work is completed, The Duty Authorised Person is to check that the location has been left in a clean and tidy condition and is secured against unauthorised access.

The Duty Authorised Person completes and signs the Cancellation section of the Limitation of Access and places the original in the Operational File with any other associated paperwork.

If the Duty Authorised Person decides to stop the work, the Limitation of Access is to be withdrawn and cancelled. The withdrawal is to be noted on the Limitation of Access and the reasons for the withdrawal recorded in the High Voltage Logbook.

If the Competent Person has lost the original of the Limitation of Access, the loss is to be recorded by the Authorised Person on the duplicate copy, and in the High Voltage Logbook. The Competent Person is to countersign the loss of the original Limitation of Access and a note to that effect placed in the Operational File in place of the original. The loss is to be reported to the Authorising Engineer.

Completed pads are to be retained in the lockable Document Cabinet for a minimum of three years after the date of cancellation of the last Limitation of Access issued from the pad.

## **5.5 Standing Instruction**

### **5.5.1 General**

An Authorised Person may originate a Standing Instruction for:

- A. Defined tasks on a High Voltage system or installation in non-hazardous areas.
- B. Low Risk, Repetitive tasks carried out by Skilled or Competent Persons in areas under the control of the Authorised Person.



A Standing Instruction shall have the format shown in Appendix A2.5. It shall have an original and a duplicate. Each page of a Standing Instruction shall bear the same serial number. Pads of numbered forms shall be used in sequence.

The original and the duplicate of the Standing Instruction are to be signed by all the Authorised Persons appointed for the system or installation to which the Instruction applies.

A Standing Instruction is not to be transferred from one Competent Person to another.

The Competent Person is to acknowledge receipt by completing and signing the original and the duplicate pages of the Standing Instruction; the signature renders the Instruction valid for the defined work or tests. The original of the Instruction is to be issued to the Competent Person.

The issue of a Standing Instruction is to be recorded in the High Voltage Logbook.

The duplicate of the signed Standing Instruction is to be retained in the pad which is to be kept in the locked Document Cabinet.

The Competent Person is to present the original to the Duty Authorised Person to obtain the keys to access the required areas.

An Authorised Person may, at any time, cancel a Standing Instruction. The cancellation is to be notified to all other Authorised Persons appointed for the system or installation.

On termination, the original of the Standing Instruction is to be retrieved from the Competent Person by an Authorised Person, the original and duplicate of the Standing Instruction held in the pad are to be overwritten with the word, "CANCELLED" or "EXPIRED", as appropriate, followed by the date of termination.

The original is to be placed in the Operational File.

The duplicate is to be countersigned by each of the Authorised Persons and retained in the pad.

The cancellation or expiry of a Standing Instruction is to be noted in the High Voltage Logbook.

A Standing Instruction is to be renewed at intervals of no longer than one year or whenever the originating Authorised Persons appointment has been suspended or cancelled.

Completed pads are to be retained in the lockable Document Cabinet for three years after the date of cancellation of the last Standing Instruction issued from the pad.



## 5.6 Specific Written Instruction

### 5.6.1 General

The Duty Authorised Person may issue a Specific Written Instruction for a defined switching operation or a sequence of operations in respect of specific items of High Voltage Equipment.

A Specific Written Instruction form shall have a format shown in Appendix A2.6. It shall have an original and a duplicate. Each page of a Specific Written Instruction shall bear the same serial number. Pads of numbered forms shall be used in sequence.

A Specific Written Instruction is to be offered only to another Authorised Person appointed for the system.

A Specific Written Instruction is not to be transferred from one Authorised Person to another.

The Authorised Person is to acknowledge receipt of the Specific Written Instruction by signing the original and duplicate; the signature renders the Instruction valid for the defined operations. The original of the Instruction is issued to the Authorised Person who thereafter becomes the Competent Person responsible for completing the defined switching operations.

Unless planned to a specified time or communication, the switching operations are to be undertaken immediately without any intentional delay following the issue of the Instruction.

The duplicate of the signed Specific Written Instruction is to be retained in the pad which is to be kept in the locked Document Cabinet.

The issue of a Specific Written Instruction is to be recorded in the High Voltage Logbook.

On completion of the switching operations the Competent Person is to return the original Instruction to the Duty Authorised Person immediately without any intentional delay.

Both copies are to be overwritten as “COMPLETE” or “WITHDRAWN” as applicable. The original is to be placed in the Operational File, and the duplicate is to be retained in the pad.

Details of the switching operations carried out are to be entered in the High Voltage Logbook.

Completed pads are to be retained in the lockable Document Cabinet for a minimum of three years after the date of cancellation of the last Specific Written Instruction issued from the pad.

## 5.7 High Voltage Systems Logbook

### 5.7.1 General

A High Voltage Logbook is required for each geographical area for which Authorised Persons have been appointed. The book is to be indelibly marked with the name of the Site for which it refers and is to be kept in the locked Document Cabinet when not in use.

Where remote sites are covered by a Regional Authorised Person the Logbook shall be indelibly marked with the name of the Authorised Person.

The Logbook shall have the format shown in Appendix A2.7.

### 5.7.2 Logbook Entries

Entries are to be made by the Duty Authorised Person in chronological order. Each entry is to be ruled off with a horizontal line across the page.

Entries required to be recorded in the Logbook should be by agreement with the Authorising Engineer but as a minimum shall include the following:

- A. The acceptance and relinquishing of responsibility between Duty Authorised Persons.
- B. The removal, return and transfer of the Authorised Persons Key from the Key Control Box.
- C. Each individual operation of High Voltage Switchgear.
- D. Adjustment of the Mimic Diagram to indicate the present state of the system or installation.
- E. The issue and return of any key for areas under the control of the Duty Authorised Person or High Voltage Equipment.
- F. The issue, cancellation, loss or suspension of a Permit to Work, Sanction for Test, Limitation of Access or Standing or Specific Written Instruction.
- G. The appointment of Competent Persons for systems of equipment under the control of the Authorised Person.
- H. The cancellation of Competent Persons appointments.
- I. The receipt, termination and remedial action associated with an Operational Restriction.
- J. The Spiking of a cable.
- K. The inspection of Sub-Stations and other areas under the control of the Authorised Person.
- L. The inspection of Safety Equipment, Test Equipment and Portable Earthing Equipment.

Completed Logbooks are to be retained in the lockable Document Cabinet for a minimum of three years after the date of the last entry.

## 5.8 High Voltage Systems Operational File

### 5.8.1 General

An Operational File is required for each geographical area for which Authorised Persons have been appointed. A ring binder file(s) is to be entitled “High Voltage Systems Operational File” and clearly and indelibly marked with the name of the Site for which it refers and is to be kept in the locked Document Cabinet when not in use.

Where remote sites are covered by a Regional Authorised Person the Operational File shall be indelibly marked with the name of the Authorised Person.

Where more than one ring binder is required to accommodate the required information, they should be identified as “Master File” Vol 1.0, 1.1 etc and “Completed Safety Documentation” Vol 1.0, 2.1 etc.

### 5.8.2 File Contents

The File is to contain in separate sections a copy of each of the following:

- A. Letter of Appointment for the Authorising Engineer, with copies of their latest Training and First Aid Certificates.
- B. Certificates of Appointment for the Authorised Persons, with copies of their latest Training and First Aid Certificates.
- C. A register of Competent Persons including details and dates of training, restrictions and the issue and review dates of Certificates of Appointment.
- D. Certificates of Appointment for all Competent Persons including any appointed Contractors Competent Persons.
- E. Information and Schematics relevant to the site systems including Demarcation Agreements and Switchgear & Transformer Schedules.
- F. Details of any agreements with the Distribution Network Operator.
- G. Details of safety, work, test and portable earthing equipment under the control of the Authorised Persons. Including instructions and where appropriate calibration records.
- H. Copies of Authorised Persons Inspections and current Authorising Engineers Audit Report.
- I. Copies of Operational Restrictions received and signed by all Authorised Persons appointed for the system or installation.
- J. Copies of cancelled Operational Restrictions.
- K. A copy of these Rules.
- L. A copy of the Memorandum of Guidance for the Electricity at Work Regulations.

- M. The originals of every approved Switching Schedule, Safety Document, Method Statement and Risk Assessment for each task undertaken, filed together as job files.

Operational File Contents Page Templates can be found in Appendix A1.4.

Documents in the file are to be retained for a period of not less than three years after their dates of cancellation or expiry.

## 6 Operating Procedures

|            |                                                                     |           |
|------------|---------------------------------------------------------------------|-----------|
| <b>6.1</b> | <b>Operational restrictions</b>                                     | <b>54</b> |
| 6.1.1      | General                                                             | 54        |
| 6.1.2      | On termination of an Operational Restriction                        | 54        |
| <b>6.2</b> | <b>Keys, Key Cabinets and Mimic Diagrams</b>                        | <b>55</b> |
| 6.2.1      | Safety Locks                                                        | 55        |
| 6.2.2      | Safety Key Boxes                                                    | 55        |
| 6.2.3      | Key Control Box                                                     | 55        |
| 6.2.4      | Key Cabinets                                                        | 56        |
| 6.2.5      | High Voltage Sub-Station Keys                                       | 56        |
| 6.2.6      | Lockable Document Cabinet                                           | 57        |
| 6.2.7      | Mimic Diagram                                                       | 57        |
| <b>6.3</b> | <b>The Use and Provision of Safety, Test and Earthing Equipment</b> | <b>57</b> |
| 6.3.1      | General                                                             | 57        |
| 6.3.2      | Safety Equipment                                                    | 58        |
| 6.3.3      | Test Equipment                                                      | 58        |
| 6.3.4      | Earth Equipment                                                     | 58        |

## 6.1 Operational Restrictions

### 6.1.1 General

An Operational Restriction is specific information modifying the normal operating procedures associated with a particular type of equipment.

The Authorising Engineer shall ensure that each Operational Restriction that is received is passed as soon as reasonably practicable to each Authorised Person for action.

Any Authorised Person receiving or discovering an Operational Restriction imposed by a Distribution Network Operator or equipment manufacturer shall inform the Authorising Engineer without delay.

On receipt of an Operational Restriction, the Authorised Person is to:

- A. Notify the Authorising Engineer that the restriction has been received and advise whether the subject equipment forms part of the systems or installations for which the Authorised Person is responsible.
- B. Record the receipt in the High Voltage Systems Logbook.
- C. Ensure that a copy of the restriction, signed by all Authorised Persons for the system or installation, is placed in the Operational File.
- D. Where the equipment to which the Operational Restriction refers, forms part of the system or installation for which they are responsible, the Authorised Person is to place a copy of the restriction in the relevant Site Operating and Maintenance Manual.
- E. Arrange any inspection and remedial work required.
- F. Where it considered necessary fix warning signs on each item of equipment involved.
- G. Report the satisfactory completion of any remedial works to the Authorising Engineer and ensure that details of any remedial works undertaken are placed in the relevant Site Operation and Maintenance Manual.

### 6.1.2 On termination of an Operational Restriction

- A. The copy of the Operational Restriction held in the Operational File is to be overwritten with the word "CANCELLED" followed by the cancellation date and again countersigned by each Authorised Persons for the system or installation.
- B. The Copy of the Operational Restriction held in the Operation and Maintenance Manual is to be overwritten with the word "CANCELLED" followed by the date of the cancellation.
- C. The termination of the Operational Restriction is to be recorded in the High Voltage Systems Logbook.

## 6.2 Keys, Key Cabinets and Mimic Diagrams

### 6.2.1 Safety Locks

Before a Permit to Work is issued, and before a Competent Person commences work or testing, Safety Locks are to be applied at all Points of Isolation and at all points where Circuit Main Earths or Temporary Earths are applied.

Before a Sanction for Test is issued Safety Locks are to be applied at all Points of Isolation and at all points where Non-Removable Circuit Main Earths or Temporary Earths are applied. Working Locks are to be applied at all points where Removable Circuit Main Earths or Temporary Earths are applied.

The keys for Safety Locks currently in use by Authorised Persons in conjunction with Permits to Work or Sanctions to Test are to be secured in one or more Safety Key Boxes. When in use each Safety Key Box is to contain the keys associated with only one Permit to Work or one Sanction for Test.

When not in use, Safety Locks and their Keys are to be kept in the Key Cabinet.

### 6.2.2 Safety Key Boxes

A Safety Key Box is to have two locks, each of which is to have only one key, one being labelled "Safety Key Box – No\*\*. Authorised Persons Key" and the other labelled "Safety Key Box – No\*\*. Competent Persons Key"

*\*\* Denotes the Safety key Box Designation*

After the Safety Locks have been applied, and before the Permit to Work or Sanction for Test is issued, the keys to all the Safety Locks are to be placed in a Safety Key Box and both locks of the Box are to be secured. When the Permit or Sanction is issued the Authorised Person is to issue the Competent Person's Key of the Safety Key Box to the Competent Person and is to retain the Authorised Person's key.

When in use each Safety Key Box is to contain the keys associated with only one Permit to Work or one Sanction for Test.

More than one Safety Key Box may be provided on any site. In such cases, each Competent Person's Key is to release only one Safety Key Box lock on that site, and each box is to bear a serial number ensuring positive identification within the site.

The Competent Person is to retain the Competent Persons Key until the Permit to Work or Sanction for Test has been cancelled.

When not in use, The Keys to the Safety Key Boxes are to be kept in the Key Cabinet.

### 6.2.3 Key Control Box

A Key Box with a Combination Lock is to be installed adjacent to the Key cabinet. The Duty Authorised Persons Keys are to be kept locked in this box when not in use.

No other keys are to be kept in the Key Control Box.

Only Authorised Persons appointed for the system or installation are to know the combination of the lock. The combination settings are to be changed whenever an Authorised Persons appointment has been suspended or cancelled.

#### **6.2.4 Key Cabinets**

Except for any key in use the key plates holding the working keys are to be kept in a closed and securely locked Working Key Cabinet labelled "High Voltage System – Working Keys", installed, with the Document Cabinet, in a room to which Authorised Persons are to have access at all times.

Where deemed necessary by the Authorising Engineer a Duplicate Key Cabinet shall be installed in a location to which Authorised Persons are to have access at all times but separate from the location of the Working Key Cabinet.

The Duplicate Cabinet shall be labelled "High Voltage System – Duplicate Keys" and hold the key plates holding the duplicate keys (except for those in use) and adequate Safety Locks should the Working Cabinet become unavailable.

The Working Key Cabinet and the Duplicate Key Cabinet are to be fitted with identical locks for which there are only two keys. The keys are to be labelled and held as follows one key, labelled "Authorised Person", is to be held by the Duty Authorised Person or locked in the Key Control Box; The other key, labelled "Authorised Person - Duplicate", is to be kept in a glass-fronted box in the same room as the Duplicate Key Cabinet. This box is to be made so that the glass front has to be broken before access to the key is gained.

A notice is to be affixed near to the glass-fronted box containing the Authorised Person's duplicate key stating, "Only the persons listed have authority to break the glass and withdraw the key". This is to be followed by a current list of Authorised Persons appointed for the systems and installations to which the key relates.

#### **6.2.5 High Voltage Sub-Station Keys**

There are to be two keys for each lock provided for:

- A. High Voltage Distribution Switchgear and Equipment.
- B. High Voltage Distribution Switchgear including Feeder Pillars, and Main Intake Switches located within Sub-Stations.
- C. Sub-Stations, Standby Set Houses and any building, part of a building or compound containing High Voltage Equipment.

Within the geographical area for which an Authorised Person is appointed, the keys for each Sub-Station, Building or item of Equipment are to be attached to two appropriately sized key plates, one key plate being clearly labelled "Working Keys" and the other "Duplicate Keys".

Key plates are to bear the identification of the Sub-Station, Building or item of Equipment to which the keys belong, or the purpose for which each key is intended.

In connection with these Rules and Procedures where keys are issued for regular or repeated use, to persons other than the Authorised Person, the specific use and purpose intended for the keys is to be detailed on a Standing Instruction issued to that person.

#### **6.2.6 Lockable Document Cabinet**

When the documents specified in these Rules are not in use they are to be kept in a lockable Document Cabinet installed, with the Working Key Cabinet, in a room to which Authorised Persons have access at all times.



When any Document Cabinet associated with these Rules is not in use it is to be closed and securely locked and the key retained in the Working Key Cabinet or under the control of the Duty Authorised Person.

Where the volume of documents is small and there is adequate space, it is permissible to keep them in the Working Key Cabinet.

#### **6.2.7 Mimic Diagram**

A Mimic Diagram is to be provided for any High Voltage System.

The Mimic Diagram is to show as a minimum the Distribution System and Equipment that is under the control of the Authorised Person, from all sources of supply up to and including Low Voltage Main Intake Switchgear or Feeder Pillar.

Sub-Stations and High Voltage Main Intake switchgear are to be appropriately labelled on the Mimic Diagram with the location name and identification code.

The Mimic Diagram is to be permanently displayed in the room in which the Working Key Cabinet is located. The status of the Distribution System and Equipment is to be visible at all times, but the Mimic Diagram is to be lockable to prevent unauthorised adjustment.

## **6.3 The Use and Provision of Safety, Test and Earthing Equipment**

### **6.3.1 General**

Safety Equipment, Test Equipment and Earthing Equipment is to be maintained and stored in accordance with the manufacturers or supplier's instructions, and it is to be inspected by the user on each occasion before use and is to be properly used.

Where Safety Equipment, Test Equipment and Earthing Equipment is kept on site for use in connection with these Rules, details and copies of the equipment specification, operation, maintenance and, where appropriate, calibration, are to be kept in the Operational File.

Unless more frequent intervals are specified by the manufacturer or supplier an Authorised Person is to inspect each item of Safety Equipment, Test Equipment and Earthing Equipment, kept on the site, at least once a year and in accordance with the manufacturers or supplier's instructions, to ensure that it is suitable for the use for which it is provided and it is maintained in a condition suitable for that use.

Where Safety Equipment, Test Equipment and Earthing Equipment is found to be defective or faulty it is to be taken out of use and suitable precautions implemented to prevent further use. The inspecting Authorised Person is to instigate the appropriate remedial or replacement action where necessary. These inspections are to be recorded in the Operational File, as well as in any other maintenance and inspection record system.

The Authorised Person or Authorising Engineer is to examine the records every twelve months to determine that the maintenance and inspection is being carried out for Safety Equipment, Test Equipment and Earthing Equipment kept on the site.

### **6.3.2 Safety Equipment**

Appropriate Safety Equipment is to be provided and is to be readily available at all times to those who need it in connection with these Rules. Safety Equipment is to be used whenever necessary to prevent danger or, where appropriate, injury, and as required by these Rules.

Safety Equipment used by the Competent Person shall be inspected by the Duty Authorised Person and Competent Person for visible defects on each occasion prior to use to ensure that it is suitable for the use for which it is provided, and that it has been maintained in a condition suitable for that use, when properly used.

Any suspect item is to be withdrawn from use until remediated or replaced.

### **6.3.3 Test Equipment**

Test Equipment, in normal circumstances, is to be provided by the organisation responsible for the work activities. Test Equipment under the control of the Authorised Person may be used if the Duty Authorised Person and Competent Person agree, and such use is recorded in the High Voltage Logbook.

Test Equipment is to be, where appropriate, calibrated in accordance with the manufacturers or supplier's instructions.

Test Equipment is to be inspected by the user for visible defects on each occasion prior to use to ensure that it is suitable for the use for which it is provided, and that it has been maintained in a condition suitable for that use, when properly used. Any suspect item is to be reported to the Duty Authorised Person who is to consider its withdrawal and replacement.

### **6.3.4 Earth Equipment**

Before Conductors are Earthed a check is to be made by the Duty Authorised Person or Competent Person using the equipment to confirm that the Earthing Equipment to be used is of sufficient strength and current-carrying capability to discharge electrical energy to earth without danger or, where appropriate, risk of injury.

Only manufacturers or suppliers' proprietary Earthing Equipment is to be used.

Earthing Equipment is to be inspected before each use to confirm that it is suitable for the use for which it is provided, and that it has been maintained in a condition suitable for that use, when properly used.

Any suspect item is to be withdrawn from use until remediated or replaced.

## 7 Health and Safety

|            |                                                                 |           |
|------------|-----------------------------------------------------------------|-----------|
| <b>7.1</b> | <b>Dangerous Occurrences</b>                                    | <b>60</b> |
| 7.1.1      | General                                                         | 60        |
| <b>7.2</b> | <b>Display of Permanent Warning Signs, Posters and Diagrams</b> | <b>60</b> |
| 7.2.1      | Display of Permanent Warning Signs                              | 60        |
| 7.2.2      | Display of Posters and Diagrams                                 | 61        |
| <b>7.3</b> | <b>Emergency First Aid Training</b>                             | <b>61</b> |
| 7.3.1      | General                                                         | 61        |
| <b>7.4</b> | <b>Audit of Safe Systems of Work and Safety Procedures</b>      | <b>62</b> |
| 7.4.1      | Technical Authority                                             | 62        |
| 7.4.2      | Authorising Engineer                                            | 62        |
| 7.4.3      | Authorised Person                                               | 63        |

## **7.1 Dangerous Occurrences**

### **7.1.1 General**

Any Dangerous Occurrence is to be reported to the Duty Authorised Person by the Competent Persons without unnecessary delay.

The Duty Authorised Person is, without delay or as soon as practicable, to report the Dangerous Occurrence to the Authorising Engineer.

Any notifications or reports required to satisfy Statutory or other Company requirements are to be issued in addition to the requirements of these Rules.

The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR), will require certain dangerous occurrences and accidents to be reported to the Enforcing Authority (HSE), these include Electrical Fires.

The Authorising Engineer is to investigate each Dangerous Occurrence and issue a report to the Operations Manager. The Operations Manager is to log the Report on the Compass Air3 System.

The report is to be sufficiently detailed to enable the sequence of events leading to the occurrence to be determined. Where reasonably practicable the report is to include photographs taken before any items of equipment involved in the occurrence are disturbed.

## **7.2 Display of Permanent Safety Signs, Posters and Diagrams**

### **7.2.1 Display of Permanent Safety Signs**

Warning Signs, required by this section, are to be securely and permanently fixed.

A Warning Sign in accordance with Appendix A3.1a Model Sign P1.1 is to be displayed in a prominent position, on or adjacent to each entry to every Sub-Station. The notice identifying the installation is to include an address or telephone number where the Duty Authorised Person can be contacted

A Warning Sign in accordance with Appendix A3.1b Model Sign P1.2 is to be displayed on all Sub-Station Perimeter Fences and Poles which support High Voltage Conductors or Equipment.

A Warning Sign in accordance with Appendix A3.2 Model Sign P2 is to be displayed on all Low Voltage main intake switches.

A Warning Sign in accordance with Appendix A3.3 Model Sign P3 is to be displayed on or adjacent to all remotely or automatically controlled generating sets.

Where a 'Gas Flooding System' is installed in a Sub-Station, or other area where High Voltage Equipment is present, Warning Signs with appropriate text shall be displayed in a prominent position, on or adjacent to each entry point.

### **7.2.2 Display of Posters and Diagrams**

Where Compass Group has control of the danger, the Authorising Engineer shall carry out an assessment to determine the requirement and location for the display of information in connection with these Rules.

Information is to be displayed permanently in suitable and prominent positions. The areas to be considered for the display of information in connection with these Rules are to include every Sub-Station and Standby Set House and High Voltage System Control Centre.

The only posters that must be displayed at the above locations are the Emergency Procedures for an Electric Shock Casualty (First Aid) and extracts of The Electricity at Work Regulations 1989.

Single Line Diagram(s) of the system(s) shall be readily available although not necessarily permanently displayed.

Other information and posters that may be displayed include:

- A. Extracts from these Rules.
- B. Other relevant Health and Safety Information.

## **7.3 Emergency First Aid Training**

### **7.3.1 General**

All persons employed on the Supervision, Control or Operation of Electrical Equipment are to be given training in emergency First-Aid.

Training in emergency First-Aid is to be provided by organisations whose training and qualifications for First Aiders are approved by the Health and Safety Executive for the purposes of the Health and Safety (First-Aid) Regulations.

Training courses must include Resuscitation (as appropriate for the treatment of electric shock); and if deemed necessary any of the following items:

- A. Treatment of burns.
- B. Control of bleeding.
- C. Treatment of the unconscious casualty.
- D. The Use of Automated Emergency Defibrillators.
- E. Contents of First-Aid boxes and Kits.
- F. Communication.

## **7.4 Audit of Safe Systems of Work and Safety Procedures**

### **7.4.1 Technical Authority**

At intervals not exceeding three years the Technical Authority and Co-Ordinating Authorising Engineer are to undertake comprehensive review of the Compass Electrical Systems Operational Policy and Safety Rules. This review may be completed in conjunction with a Working Group of Authorising Engineers and Authorised Persons.

The review is to ensure that the Policy and Safety Rules comply with current legislation and industry best practice.

### **7.4.2 Authorising Engineer**

At intervals not exceeding yearly the Authorising Engineer is to undertake comprehensive audits of the Safe Systems of Work and Safety Procedures required by these Rules. Separate audits are to be carried out for each site for which the Authorising Engineer has appointed Authorised Persons. These Audits are to be completed on the Compass Air3 Reporting System.

At intervals not exceeding yearly the Authorising Engineer is to review the appointments of all Authorised Persons. These reviews should pay particular attention to the operating records, the issue and cancellation of Permits and Sanctions and should formally advise on any training or retraining considered necessary, including when it should be received.

These reviews should include a meeting with the Authorised Person, an inspection of the Systems or Installations to which their appointment refers and where deemed necessary a practical assessment.

As a minimum, the procedures listed below are to be checked as part of each yearly audit:

- A. As part of the desk audit ensure that:
  - i. Samples of the Safety Documentation issued have been correctly completed and used in accordance with these Rules.
  - ii. Each operation has been correctly recorded in the High Voltage Logbook.
  - iii. The Operational file contains all the information required by these Rules, and that it is being kept up to date.
  - iv. Copies of all current certificates of appointment are kept in the Operational File.
  - v. Training including Emergency First Aid training for all Authorised Persons is up to date.
  - vi. All Dangerous Occurrences have been reported.
  - vii. All Operating Restrictions have been correctly actioned.

B. Visit the site and check that:

- i. Safety Signs and Posters are displayed as required by these Rules.
- ii. Sufficient Safety Locks and Safety Boxes are held and are correctly used.
- iii. The keys held on each Working and Duplicate Key Plate are correct and only operate the locks at the Switchroom to which they refer, and that Key Plates are correctly held in the Key Cabinets.
- iv. The Duty Authorised Person Key is being held in the Key Control Box and that the combination is only known by the current Authorised Persons for the system or installation to which it applies.
- v. All documents are held in the Lockable Document Cabinet.
- vi. The Mimic Diagram correctly indicates the current configuration of the system.
- vii. Adequate Safety, Test and Earthing equipment is held, all items are fit for purpose and in good condition and that regular checks are being carried out and recorded.
- viii. Switchgear and Equipment in use is being maintained and is in good condition.

A written report of the audit is to be compiled, listing satisfactory items seen, any deficiencies found, and recommendations made. The report is to be issued to the Authorised Person and Operations Manager for action as necessary. A copy of the report with a summary of the findings is to be issued to the Co-Ordinating Authorising Engineer.

The Authorised Person is to acknowledge receipt of the audit report, make any comments considered necessary and compile an action plan in consultation with the Authorising Engineer. The Authorising Engineer should review progress on the action plan at the next audit.

#### **7.4.3 Authorised Person**

Authorised Persons are to monitor the performance of the Competent Persons in carrying out their duties under these Rules. Monitoring is to be carried out on a continuing basis and is to include:

- A. Visiting worksites and communicating safety issues.
- B. Inspection of Safety, Work, and Test Equipment used by the Competent Person.

Authorised Persons are to take action to rectify and report in writing to the Authorising Engineer on any deficiencies found. A copy of the report is to be placed in the Operational File.

Authorised Persons must inspect all Sub-Stations and Stand-by Houses at intervals not exceeding three months, the inspection should be recorded in the High Voltage Systems Logbook.



## 8 Appendices

### Appendix A1 Appointments

|       |                                                        |    |
|-------|--------------------------------------------------------|----|
| A1.1  | Model Letters of Appointment for Authorising Engineers | 66 |
| A1.2  | Model Authorised Person Certificate of Appointment     | 67 |
| A1.3  | Model Competent Person Certificate of Appointment      | 68 |
| A1.4a | Model Operational File Contents Page (Vol 1)           | 69 |
| A1.4b | Model Operational File Contents Page (Vol 2)           | 70 |
| A1.5  | Model Switchgear and Transformer Schedule              | 71 |

### Appendix A2 Safety Documents

|      |                                    |    |
|------|------------------------------------|----|
| A2.1 | Model Switching Schedule           | 73 |
| A2.2 | Model Permit to Work               | 74 |
| A2.3 | Model Sanction for Test            | 76 |
| A2.4 | Model Limitation of Access         | 78 |
| A2.5 | Model Standing Instruction         | 79 |
| A2.6 | Model Specific Written Instruction | 80 |
| A2.7 | Model High Voltage Log             | 81 |
| A2.8 | Model Key Register                 | 82 |

### Appendix A3 Safety Signs

|       |                                      |    |
|-------|--------------------------------------|----|
| A3.1a | Model Sub-Station Sign P1.1          | 83 |
| A3.1b | Model High Voltage Warning Sign P1.2 | 83 |
| A3.2  | Model Main Intake Switch Sign P2     | 84 |
| A3.3  | Model Standby House Warning Sign P3  | 84 |
| A3.4  | Model Danger Sign P4                 | 85 |
| A3.5  | Model Caution Sign P5                | 85 |
| A3.6  | Model Point of Work Sign P6          | 86 |

### Appendix A4

|                     |    |
|---------------------|----|
| General Definitions | 87 |
|---------------------|----|

### Appendix A5

|                                                      |    |
|------------------------------------------------------|----|
| Standard Symbols for Isolation and Earthing Diagrams | 92 |
|------------------------------------------------------|----|

### Appendix A6

|                                      |    |
|--------------------------------------|----|
| Associated Regulations and Documents | 93 |
|--------------------------------------|----|

## A1.1 Model Letters of Appointment for Authorising Engineers



### LETTER OF APPOINTMENT AS AUTHORISING ENGINEER HIGH VOLTAGE SYSTEMS (HV)

Dear **[Authorising Engineers Name]**

Being satisfied that you are suitably qualified and meet the requirements of section 2.3 of the Compass Group Safety Rules and Procedures for High Voltage Systems, I hereby offer you the appointment as Authorising Engineer for **[Scope of Appointment]** and to undertake the duties set out in section 2.3 of the Compass Group Safety Rules and Procedures for High Voltage Systems until further notice. However, this appointment will be reviewed and reconfirmed at Five yearly intervals.

Please confirm your acceptance of this appointment by signing and returning to me a copy of this letter with the acceptance completed and signed by yourself.

Yours Sincerely,

Name: \_\_\_\_\_ Signed: \_\_\_\_\_ Date: \_\_\_\_\_  
(Technical Duty Holder)

### ACCEPTANCE OF APPOINTMENT AS AUTHORISING ENGINEER

Dear **[Technical Duty Holders Name]**

I acknowledge receipt of your letter dated **[Letter Date]** offering me the appointment as an Authorising Engineer for **[Scope of Appointment]**.

I confirm that to the best of my knowledge, I satisfy the requirements for appointment as an Authorising Engineer indicated in section 2.3 of the Compass Group Safety Rules and Procedures for High Voltage Systems.

I accept the responsibilities of the Authorising Engineer and will, to the best of my ability, carry out the Authorising Engineer's duties as set out in the Compass Group Safety Rules and Procedures for High Voltage Systems.

I note that I am required to attend an Authorising Engineer training course and an Authorised Person (HV) training course at intervals not exceeding three years.

Yours Sincerely,

Name: \_\_\_\_\_ Signed: \_\_\_\_\_ Date: \_\_\_\_\_  
(Authorising Engineer)

Authorising Engineer (HV) Appointment Letter / P Friday /Sep25

## A1.2 Model Authorised Person Certificate of Appointment

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Certificate of Appointment for an Authorised Person HV</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>This is to certify that:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Name: ..... Employed By: .....<br>Employed As: .....<br>Having attended the requisite training courses and satisfied the Authorising Engineer as to their competence and knowledge of the system(s) is appointed as an <b>Authorised Person (HV)</b> for the purpose of carrying out switching, isolating, testing and earthing of High Voltage Systems as set out below for the period of validity of this certificate.<br>Issue Date: ..... Expiry Date: .....<br><div style="text-align: right;"><i>(Appointment period not to exceed 3 Years)</i></div>                                                                                                                                                                                               |
| <b>Duties of the Authorised Person (HV):</b> <ol style="list-style-type: none"> <li>1. Review and Approve Task Risk Assessments and Method Statements for High Voltage Works.</li> <li>2. Prepare and Approve High Voltage Switching Schedules.</li> <li>3. Carry Out Switching Operations on High Voltage Equipment.</li> <li>4. Isolate and Earth High Voltage Equipment.</li> <li>5. Issue Safety Documentation to allow Works on, and Access to, Systems and Areas under their control.</li> <li>6. Carry out or witness HV tests on new or modified circuits.</li> <li>7. Ensure all Works carried out on Systems or in Areas under their control comply with the Compass Group Rules and Procedures (SRP01) and all current Legislation.</li> </ol> |
| <b>Special Remarks or Restrictions:</b><br>This certificate applies only to HV systems within the boundary of: .....<br>.....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Appointed by: .....(Name) .....(Signed)<br><i>(Operations Manager)</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Endorsed by: .....(Name) .....(Signed)<br><i>(Authorising Engineer)</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| I hereby certify that I fully understand the limits of my authority as specified above. I undertake to carry out all procedures on electrical equipment in accordance with the current edition of Compass Safety Rules and Procedures for High Voltage Systems, the Electricity at Work Regulations 1989 and all-existing site standing instructions.<br>Accepted by: .....(Name) .....(Signed)<br><i>(Authorised Person)</i>                                                                                                                                                                                                                                                                                                                             |
| Authorised Person (HV) Certificate of Appointment / P Friday /Sep25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## A1.3 Model Competent Person Certificate of Appointment



### High Voltage Electrical Systems Competent Persons Certificate of Appointment

#### Declaration

I hereby declare that I have read the Compass Operational Policies and Safety Rules and Procedures for High Voltage Systems, they have been explained to me and that I understand and will follow them.

I agree to act as a Competent Person (HV) to the extent defined on the Authorisation Certificate issued to me.

Name: \_\_\_\_\_ \*

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

(Valid for 3 Years from Date of Issue)

#### Certificate of Authorisation

I hereby certify that \_\_\_\_\_ \* is appointed as a Competent Person (HV) as defined in the Compass Safety Rules and Procedures for High Voltage Systems, for the following High Voltage Systems on the \_\_\_\_\_ contract:

High Voltage Switchgear  
Protection Relays

High Voltage Cables

High Voltage Transformers

#### Authority

In accordance with Compass Safety Rules and Procedures for High Voltage Systems the Competent Person named above is Authorised to:

1. Enter Sub-Stations to carry out Meter Readings and Inspections
2. Enter Standby Houses to carry out Generator Checks

#### Appointed By:

Name: \_\_\_\_\_ \* Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
(Operations Manager)

#### Appointment Endorsed By:

Name: \_\_\_\_\_ \* Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
(Authorised Person)

\* Please Print

Competent Person (HV) Certificate of Appointment / P Priday / Sep 25

## A1.4a Model Operational File Contents Page (Vol 1)



[SITE]

### High Voltage Systems Operational File Master File (Vol 1.0)

|            |                                            |
|------------|--------------------------------------------|
| Section 1  | AE Appointment Information                 |
| Section 2  | AP Appointment Information                 |
| Section 3  | CP Appointment Information                 |
| Section 4  | Appointment Structures                     |
| Section 5  | Site Information / Demarcation             |
| Section 6  | System Schematics                          |
| Section 7  | Safety / Test Equipment Inspection Records |
| Section 8  | Sub-Station Inspection Records             |
| Section 9  | AE Audit Reports                           |
| Section 10 | Information and Guidance                   |
| Section 11 | Safety Alerts and Operational Restrictions |
| Section 12 | SRP1 and EAWR                              |

## A1.4b Model Operational File Contents Page (Vol 2)



[SITE]

High Voltage Systems Operational File  
Completed Safety Documentation (Vol 2.0)

|           |                                         |
|-----------|-----------------------------------------|
| Section 1 | Completed Permit to Work Packs          |
| Section 2 | Completed Sanction for Test Packs       |
| Section 3 | Completed Limitation of Access          |
| Section 4 | Completed Standing Instructions         |
| Section 5 | Completed Specific Written Instructions |
| Section 6 |                                         |

### A1.5 Model Switchgear and Transformer Schedules



[SITE] Switchgear Schedule

[illegible]

[SITE] Transformer Schedule

[illegible]

Page Left Blank



## A2.1 Model Switching Schedule

**High Voltage Switching Schedule**

No: ..... Site: ..... Locations(s): ..... Sheet No ..... of ....

Proposed Date: ..... Operational Requirement: .....

Written by: ..... Signature: ..... Approved By: ..... Signature: ..... Date: .....



| Operation No | Location and Equipment | Operation, Reason and Safety Precautions | Items Required | Date and Time | AP Initials |
|--------------|------------------------|------------------------------------------|----------------|---------------|-------------|
|              |                        |                                          |                |               |             |

High Voltage Switching Schedule / P Friday / Sep 25

## A2.2 Model Permit to Work

### Permit to Work on High Voltage Systems

Permit to Work No

**1. ISSUE:** Issued to: ..... Employed By: .....  
I hereby declare that it is safe to work on the following High Voltage equipment which is dead, isolated from all live conductors and is connected to earth

.....  
.....

**All other Equipment should be deemed Unsafe**

**Isolation.** The Equipment is isolated from all live conductors at the following points:

.....  
.....  
.....

**Earthing.** The Equipment is earthed at the following points:

.....  
.....  
.....

**Danger Signs** are posted at:

.....  
.....

**Other Precautions:**

.....  
.....

**Work to be carried out:**

.....  
.....

**Automatic Fire Protection has been rendered inoperative** \*Yes / No / N/A \*Delete as appropriate

Signed: ..... Name: ..... Date: ..... Time: .....  
(Duty Authorised Person) (Capitals)

**2. RECEIPT:** I hereby declare that I accept responsibility for carrying out work on the equipment as detailed on this Permit and that no attempt will be made by me, or any other person under my control, to carry out work on any other equipment.

Signed: ..... Name: ..... Date: ..... Time: .....  
(Competent Person) (Capitals)

**Note:** Once issued and receipted, this document must remain under the control of the Competent Person until all work is suspended, completed or stopped when it must be cleared and returned to the Authorised Person.

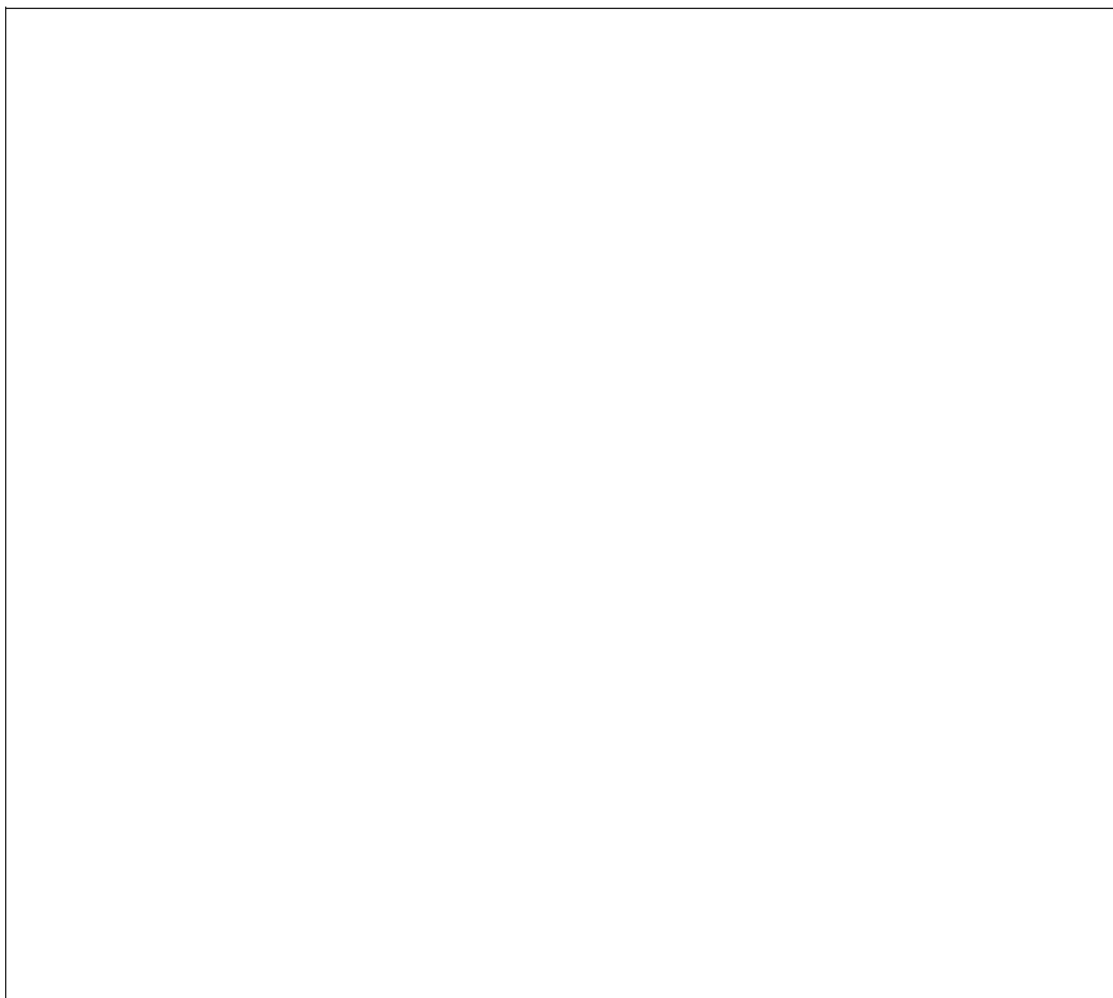
**3. CLEARANCE:** I declare that the work above has been \*completed / \*stopped and that all persons under my charge have been withdrawn and warned that it is no longer safe to work on the equipment specified on this Permit to Work and that all tools, equipment, materials and additional earthing connections are all cleared. \*Delete as appropriate

Signed: ..... Name: ..... Date: ..... Time: .....  
(Competent Person) (Capitals)

**4. CANCELLATION:** I declare that The Equipment is to be \* Returned to Service / Rejected for rework under a new Permit to Work. **This Permit to Work is hereby cancelled**  
\*Delete as appropriate

Signed: ..... Name: ..... Date: ..... Time: .....  
(Duty Authorised Person) (Capitals)

## Isolation and Earthing Diagram



Associated Switching Schedule Reference No: .....

Dated: .....

### Additional Information:

.....

.....

.....

.....

**Permit Valid From:** ..... **On** ..... **To:** ..... **On** .....

(Time) (Date) (Time) (Date)

**Point(s) of Work Positively Identified and Point of Work Sign(s) Posted \*Yes / No \*Delete as appropriate**

Signed: ..... Name: ..... Date: ..... Time: .....

(Duty Authorised Person) (Capitals)

Signed: ..... Name: ..... Date: ..... Time: .....

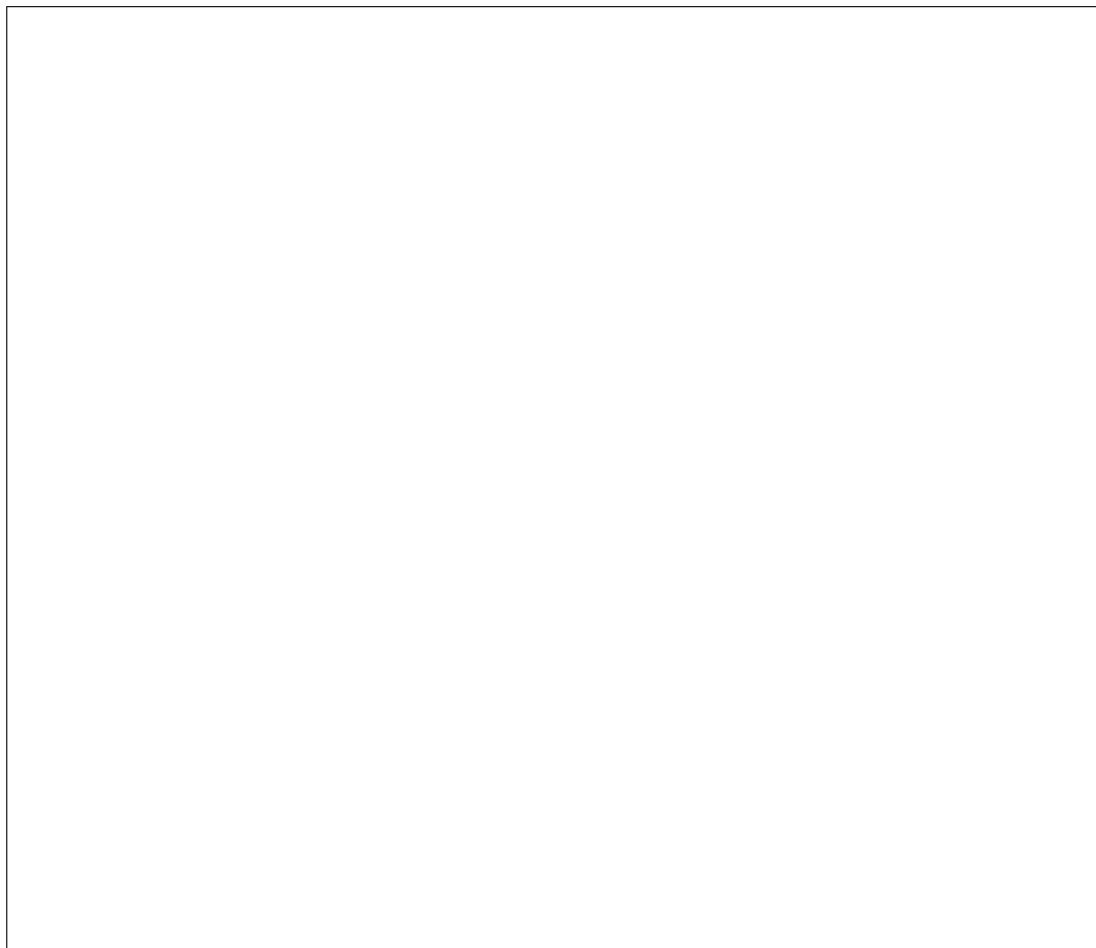
(Competent Person) (Capitals)

High Voltage Permit to Work / P Friday / Sep 25





## Isolation and Earthing Diagram



Associated Switching Schedule Reference No: .....

Dated: .....

### Additional Information:

.....

.....

.....

.....

**Sanction Valid From:** ..... **On** ..... **To:** ..... **On** .....

(Time) (Date) (Time) (Date)

Signed: ..... Name: ..... Date: ..... Time: .....

(Duty Authorised Person) (Capitals)

Signed: ..... Name: ..... Date: ..... Time: .....

(Competent Person) (Capitals)

High Voltage Sanction for Test / P Friday / Sep 25

## A2.4 Model Limitation of Access



Limitation of Access No:

### Limitation of Access

(High Voltage Electrical Distribution Equipment)

**This document must not be used for work on equipment for which a Permit to Work or Sanction for Test is required.**

**1. ISSUE:** To ..... (Name in Capitals)

Who is in the employee of ..... is hereby given permission to carry out the actions described below:

**Site:** .....

**Location(s):** .....

.....

**Authorised Action(s):** .....

.....

.....

.....

### NO OTHER ACTIONS SHALL BE CARRIED OUT

**Precautions:** .....

.....

.....

**Automatic Fire Protection has been rendered inoperative** \*Yes / No / N/A (\*delete as applicable)

Signed: ..... Name: ..... Date: ..... Time: .....  
(Duty Authorised Person) (Capitals)

**Access Valid From:** ..... **On** ..... **To:** ..... **On** .....

**2. RECEIPT:** I accept responsibility for carrying out the actions detailed on this Limitation of Access and no attempt will be made by me or by people under my charge to work on any other equipment or in any other area.

Signed: ..... Name: ..... Date: ..... Time: .....  
(Competent Person) (Capitals)

**3. COMPLETION:** I declare that all persons under my charge have been withdrawn and informed individually that access is closed to the location(s) specified on this Limitation of Access and that all equipment and materials have been removed.

Signed: ..... Name: ..... Date: ..... Time: .....  
(Competent Person) (Capitals)

**4. CANCELLATION:** I declare that this Limitation of Access is Cancelled

Signed: ..... Name: ..... Date: ..... Time: .....  
(Duty Authorised Person) (Capitals)

High Voltage Limitation of Access / P Friday / Sep 25

## A2.5 Model Standing Instruction

|                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                  |             |             |                  |             |             |                  |             |             |                  |             |             |
|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------|-------------|------------------|-------------|-------------|------------------|-------------|-------------|------------------|-------------|-------------|
| <div style="border: 1px solid black; padding: 5px; min-height: 20px;">Instruction No</div> | <div style="text-align: right; padding-bottom: 10px;">  </div> <h3 style="text-align: center; margin: 0;">High Voltage Systems Standing Instruction</h3> <p><b>(Complete precisely and legibly in BLOCK CAPITALS)</b></p> <p>Name of Competent Person: _____ Employed by: _____</p> <p>Issue date: _____ Expiry date: _____ (not more than 1 year from date of issue)</p> <p>Site: _____</p> <p>Location(s) _____</p> <p>_____ Operating at _____ kV ac rms* / dc nominal*</p> <p style="text-align: right;">*Delete as appropriate</p> <p>Tasks or switching operations to be undertaken on the equipment specified above (to be carried out in the order in which they are listed):</p> <ol style="list-style-type: none"> <li>1) _____</li> <li>2) _____</li> <li>3) _____</li> <li>4) _____</li> <li>5) _____</li> <li>6) _____</li> </ol> <p>Circumstances under which the above tasks or switching operations are to be undertaken, and special instructions and safety measures:</p> <p>_____</p> <p>_____</p> <p><b>To be completed by the Duty Authorised Person</b></p> <p>I hereby authorise the Competent Person named above to enter the stated location(s) under my control and carry out the specified Tasks or Switching Operations outlined.</p> <p>Signed _____ (Duty Authorised Person) Date _____</p> <p>Name _____ Contact Tel. No. _____</p> <p><b>Signature and name of all other Authorised Persons (HV) appointed for the system or installation of which the equipment forms part:</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">Signature: _____</td> <td style="width: 33%;">Name: _____</td> <td style="width: 33%;">Date: _____</td> </tr> <tr> <td>Signature: _____</td> <td>Name: _____</td> <td>Date: _____</td> </tr> <tr> <td>Signature: _____</td> <td>Name: _____</td> <td>Date: _____</td> </tr> <tr> <td>Signature: _____</td> <td>Name: _____</td> <td>Date: _____</td> </tr> </table> <p>Issue noted in High Voltage Log _____ (date) Termination noted in High Voltage Log _____ (date)</p> <p>I (the Competent Person named above) acknowledge receipt of this Standing Instruction, have been shown and have had explained to me the equipment to which the Instruction refers, and confirm that I fully understand the tasks or switching operations listed above and the circumstances under which they are to be undertaken.</p> <p>Signature: _____ Name: _____ Date: _____</p> <p><i>(Competent Person)</i></p> <p style="text-align: right; margin-top: 20px;">High Voltage Standing Instruction / P Friday / Sep 25</p> | Signature: _____ | Name: _____ | Date: _____ | Signature: _____ | Name: _____ | Date: _____ | Signature: _____ | Name: _____ | Date: _____ | Signature: _____ | Name: _____ | Date: _____ |
| Signature: _____                                                                           | Name: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Date: _____      |             |             |                  |             |             |                  |             |             |                  |             |             |
| Signature: _____                                                                           | Name: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Date: _____      |             |             |                  |             |             |                  |             |             |                  |             |             |
| Signature: _____                                                                           | Name: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Date: _____      |             |             |                  |             |             |                  |             |             |                  |             |             |
| Signature: _____                                                                           | Name: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Date: _____      |             |             |                  |             |             |                  |             |             |                  |             |             |

## A2.6 Model Specific Written Instruction

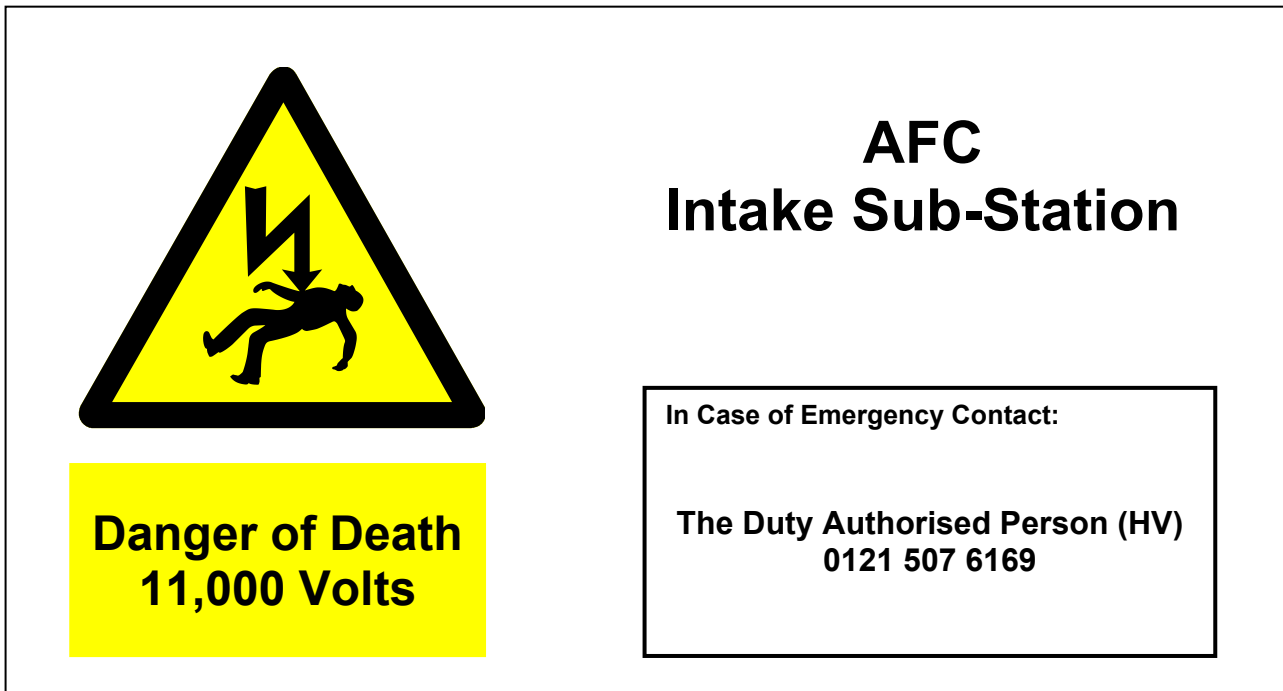
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <div style="border: 1px solid black; padding: 2px; display: inline-block;">Instruction No</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                              |   |
| <h3 style="margin: 0;">High Voltage Systems Specific Written Instruction</h3> <p style="margin: 0;">_____ for Particular Switching Operations in respect of _____<br/>Specific Items of High Voltage Equipment</p>                                                                                                                                                                                                                                                                                                                                           |                                                                                      |
| <b>Name of Competent Person:</b> _____ <b>Employed by:</b> _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                      |
| <b>Site:</b> _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                      |
| <b>Location and Identity of the equipment to which this Specific Written Instruction refers:</b><br>_____<br>_____                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                      |
| <b>Switching operations to be undertaken on the equipment specified above.<br/>(to be carried out in the order in which they are listed):</b>                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Time and Date for each operation<br/>(To be Recorded by the Competent Person)</b> |
| 1) _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Time/Date _____                                                                      |
| 2) _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Time/Date _____                                                                      |
| 3) _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Time/Date _____                                                                      |
| 4) _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Time/Date _____                                                                      |
| 5) _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Time/Date _____                                                                      |
| 6) _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Time/Date _____                                                                      |
| 7) _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Time/Date _____                                                                      |
| 8) _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Time/Date _____                                                                      |
| 9) _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Time/Date _____                                                                      |
| 10) _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Time/Date _____                                                                      |
| <b>Circumstances under which the above switching operations are to be undertaken, and special instructions and safety measures:</b><br>_____<br>_____<br>_____                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                      |
| <b>Signed</b> _____ <b>Name</b> _____<br><i>(The Duty Authorised Person)</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                      |
| <b>Time</b> _____ <b>Date</b> _____ <b>Contact Tel.No</b> _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                      |
| <p>I (the Competent Person named above) acknowledge receipt of this Specific Written Instruction and have had explained to me the switching operations required to which the Instruction refers and confirm that I fully understand the switching operations listed above and the circumstances under which they are to be undertaken. I will record the time and date for each operation on this form in the space provided. Upon completion of the switching operations, I will return the Specific Written Instruction to the Duty Authorised Person.</p> |                                                                                      |
| <b>Signed</b> _____ <b>Name</b> _____<br><i>(Competent Person)</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                      |
| <b>Time</b> _____ <b>Date</b> _____ <b>Contact Tel.No</b> _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                      |
| High Voltage Specific Written Instruction / P Friday / Sep 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                      |



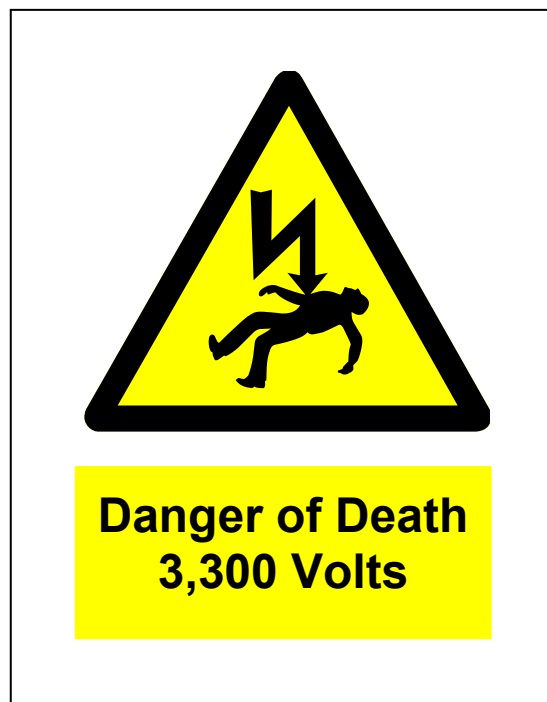
81

High Voltage Key Register / P Friday / Sep 25

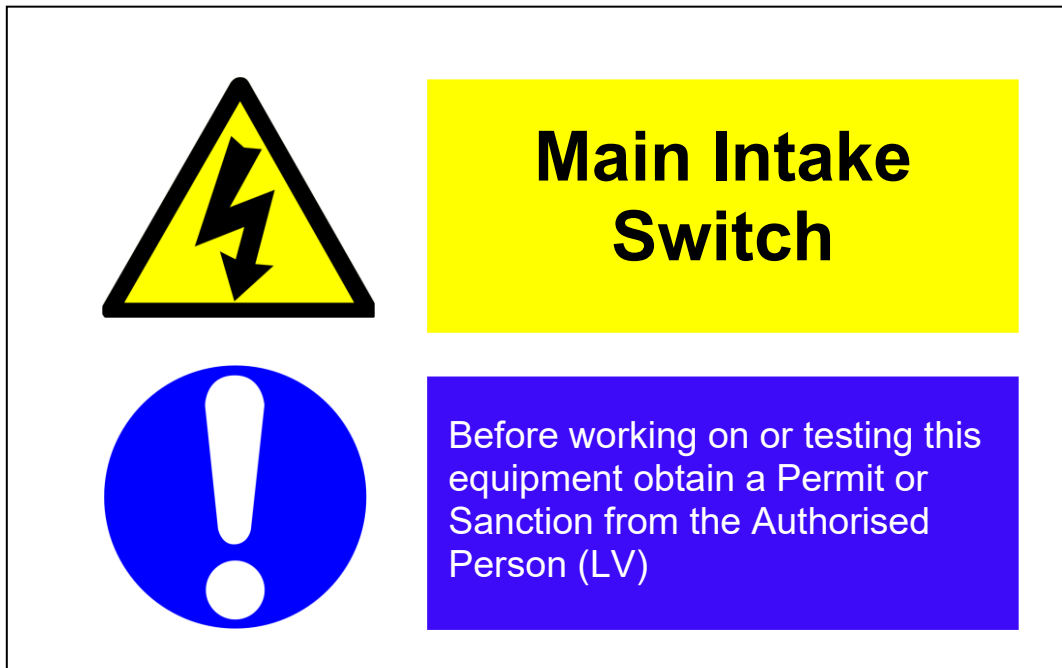
## Appendix 3.1a Model Sub-Station Sign P1.1



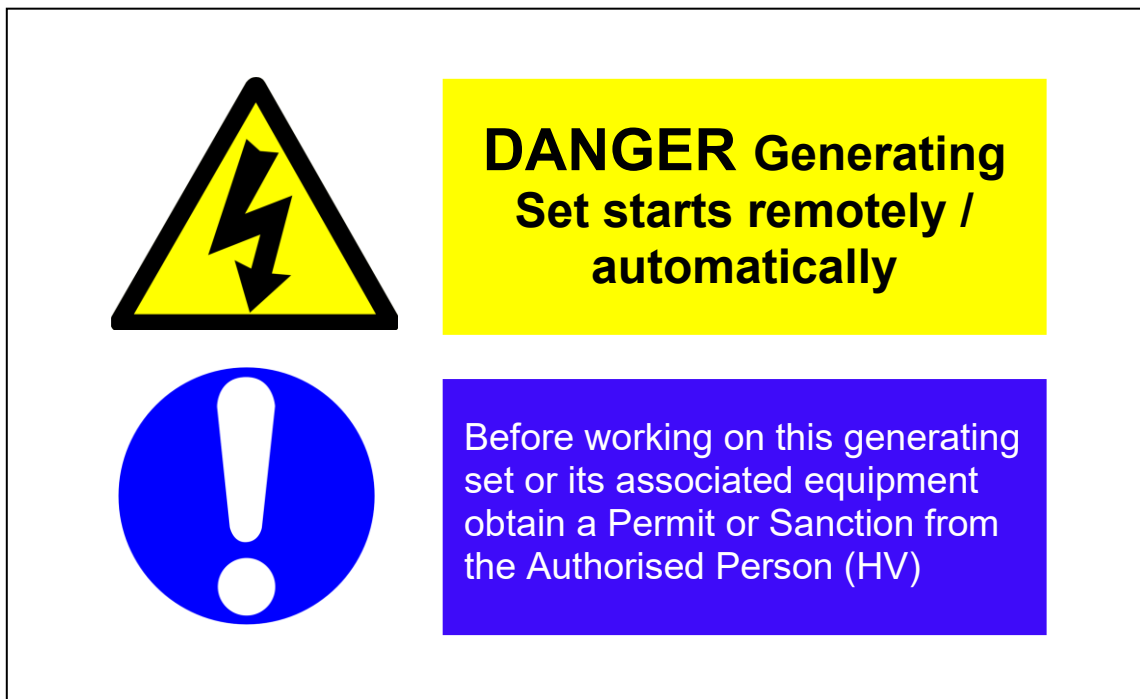
## Appendix 3.1b Model High Voltage Warning Sign P1.2



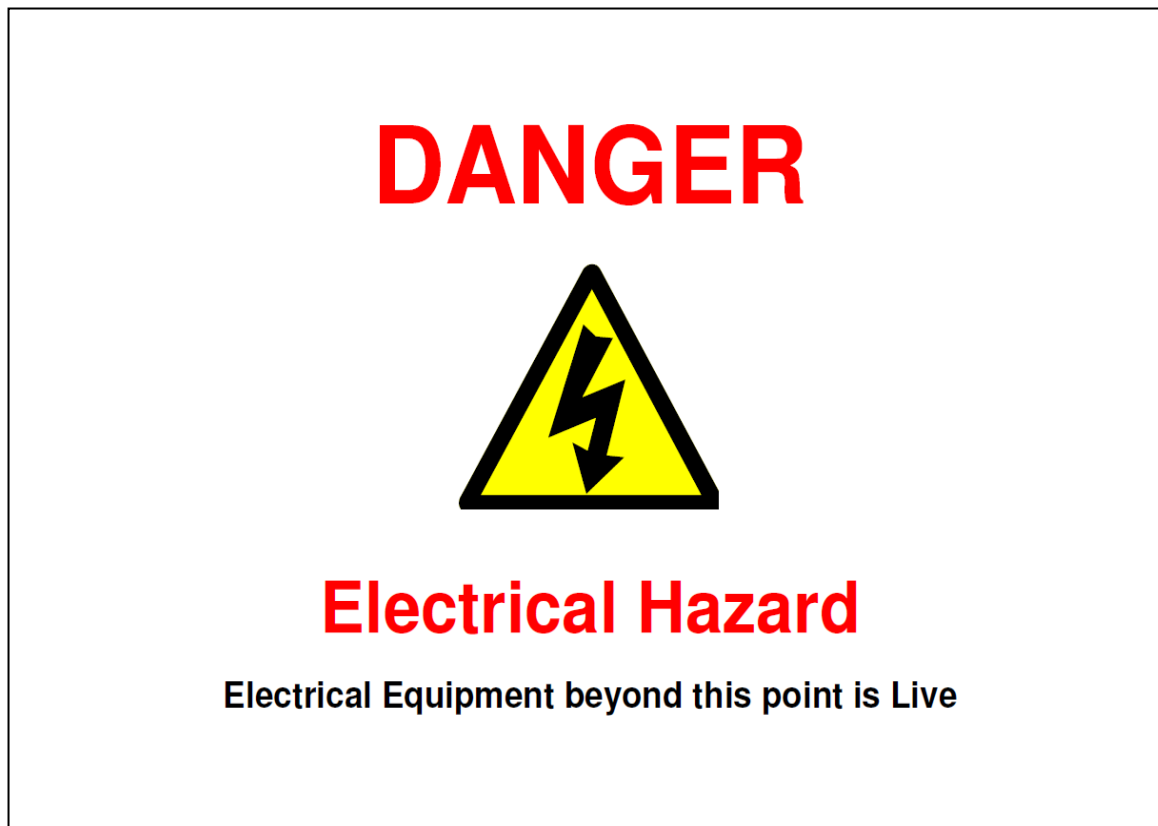
## Appendix 3.2 Model Main Intake Switch Sign P2



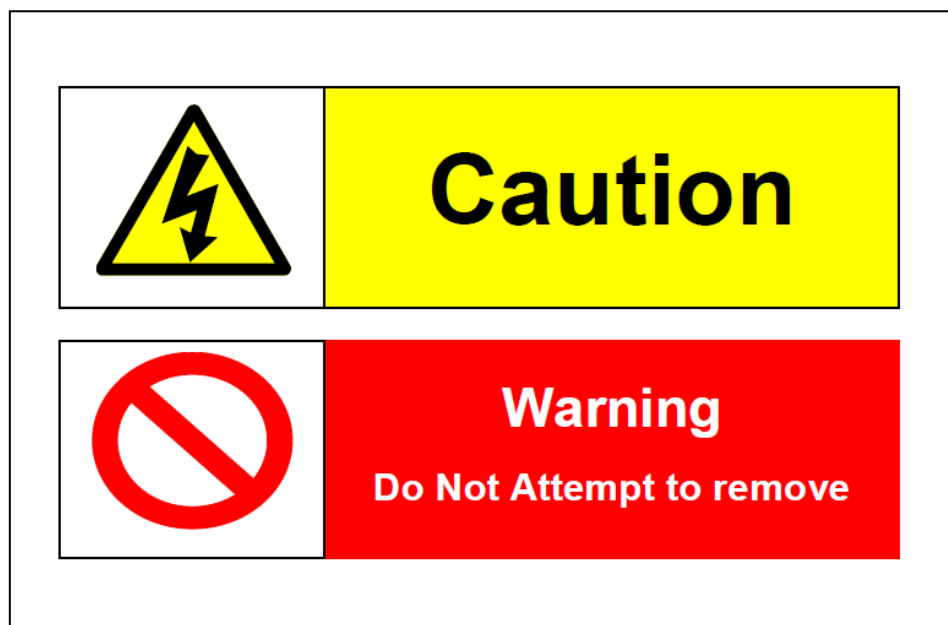
## Appendix 3.3 Model Stand-By Set Warning Sign P3



## Appendix 3.4 Model Danger Sign P4



## Appendix 3.5 Model Caution Sign P5



## Appendix 3.6 Model Point of Work Sign P6



## A4 General Definitions

### **Basic Protection**

Protection from direct physical contact with Conductors which are “Live” or have the potential to become so. This protection could be by Insulation, Barriers, and Guarding or by placing out of reach.

### **Confirm Dead**

Demonstrate with the use of approved test equipment, designed for the purpose that no electrical potential liable to cause danger is present, carried out by the Duty Authorised Person after issuing Safety Documentation.

### **Danger**

Risk of injury or death.

### **Dangerous Condition**

A condition that is likely to lead to a Dangerous Occurrence.

### **Dangerous Occurrence**

An incident, involving a source of electrical energy, which may be dangerous to any person, whether or not an accident has occurred.

### **Demarcation Agreement**

A document, produced by the Authorising Engineer, outlining the extent of the system under Compass Group control, the parts of the system under the control of the Authorised Persons (HV & LV Respectively) and the parts of the system where Certificated Competent Person may operate.

### **Demise**

The Area(s) or System(s) under control of the Authorised Person. The scope of the Demise will be outlined in the Demarcation Agreement.

### **Demise (Change of)**

The transfer of control, either temporarily or permanently, of an area, system or part thereof from the Authorised Person.

### **Earthed**

Connected to the general mass of earth in such a manner as will ensure at all times an immediate discharge of electrical energy without danger.

(i) **Circuit Main Earth:** A safety earthing connection of an approved type, secured where practicable by a Safety Lock, applied by an Authorised Person and its position recorded before the issue of a Safety Document.

(ii) **Additional Earth:** Earthing equipment of an approved type applied after the issue of a Safety Document (for example an earth applied at the point of work).

### **Electrical Equipment**

Anything used, intended to be used or installed for use, to generate, transmit, transform, rectify, convert, distribute, control, store, measure or use electrical energy.

### **High Voltage System Control Centre**

A room or area where the Document Cabinet, Key Control Box and Key Cabinet are located.

**High Voltage Enclosure**

A Location within which a live High Voltage conductor is, or can be, exposed without the use of a tool or key.

**Injury**

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

**Isolate**

Disconnect and separate electrical equipment from every source of electrical energy in such a way that this disconnection and separation is secure.

**Isolation and Earthing Diagram**

A diagram which forms part of the Permit to Work or Sanction for Test illustrating the safety measures taken.

**Key Cabinet**

A cabinet for the sole purpose of retaining all keys relative to the Site High Voltage System to which the Authorised Person(s) have control.

**Key Control Box**

A single locked box used for the control of the key to the Key Cabinet and Document Cabinet.

**Key Plate**

A key fob, or similar, with the ability to hold all the keys to a specific Sub-Station and its associated Switchgear.

**Live**

The presence of an electrical potential (electrically charged).

**Lockable Document Cabinet**

A lockable cabinet suitable for the storing of electrical safety documents, temporary safety signs, etc. used in the application of these Rules. This cabinet shall not be used to store anything not associated with these Rules. The key for this cabinet will be retained in the Key Control Box when not in use.

**Logbook (High Voltage Systems)**

A book in which all matters relating to the condition of the electrical system should be recorded. Including all switching operations, application of circuit main earths and issuing of any safety documentation.

**Mimic Diagram**

A single line diagram of an electrical distribution system so made that the symbol for each item of switch gear may be adjusted to indicate the On Off or Earthed positions.

**Operational File**

A file, which contains the information on the Site High Voltage Systems, Associated Appointments, and Safety Equipment. It also holds all completed Switching



Schedules, Permits to Work, Sanctions for Test, Method Statements and Risk Assessments.

**Operational Restriction**

A written safety instruction, issued by the Authorising Engineer, modifying or prohibiting the normal operating procedures associated with a particular make and type of equipment.

**Proprietary Earthing Equipment**

Earthing equipment of an approved type applied after Isolation, of a circuit or equipment, to allow an item of equipment or cable to be earthed.

**Proprietary Isolation Equipment**

Equipment fitted at a Point of Isolation to allow Safety Locks and Caution Signs to be affixed.

**Proved Dead**

Demonstrate with the use of approved test equipment, designed for the purpose, that no electrical potential liable to cause danger is present. Carried out before applying Earths or issuing Safety Documentation.

**Safety Documents****Permit to Work (High Voltage)**

A written authority, issued by the Duty Authorised Person for work to be undertaken on defined High Voltage Electrical Equipment.

**Sanction for Test (High Voltage)**

A written authority, issued by the Duty Authorised Person for testing to be undertaken on defined High Voltage Electrical Equipment.

**Limitation of Access**

A written authority, issued by the Duty Authorised Person allowing a named person to enter and carry out specified tasks (which do not require the issue of a Permit to Work or Sanction for Test) in any location which is under the control of the Duty Authorised Person.

**Safety Document Suspension**

The temporary withdrawal of a Safety Document due to an interruption in the work process, a health and safety concern, or the temporary absence of the Competent Person.

**Safety Equipment**

Equipment used to protect persons from danger in the working environment. Protective equipment includes such items as special tools, protective clothing, insulating screens, safety harnesses, temporary signs, etc.

**Safety Lock**

A padlock, predominately Red in colour, uniquely identified and having a single key that differs from other keys provided for the system or installation, used for securing the means of Isolation and to prevent the removal of Circuit Main Earths.

**Safety Key Box**

A box having two locks, each of which is to have only one key, one being labelled "Safety Key Box – Competent Person", and the other "Safety Key Box – Authorised Person". It is to be so arranged that both locks must be released before access can

be gained to the contents of the box. The box is to be used for the safe retention of the Keys to Safety Locks.

## **Safety Signs**

### **Caution Sign**

A temporary sign bearing the words “caution” and “do not attempt to remove” which also has the appropriate graphical symbol to be secured at a Point of Isolation by the Duty Authorised Person (Model Sign P5).

### **Danger Sign**

A temporary sign bearing the word “Danger”, “equipment beyond this point still live” which also has the appropriate graphical symbol to be used where there is live equipment adjacent to the Point of Work (Model Sign P4).

### **Point of Work Sign**

A temporary sign bearing the words “Point of Work” and a Green Cross to be used to positively identify the Point of Work (Model Sign P6).

### **Warning Signs**

These are permanent signs, (as per Appendix 3.1 – 3.3), indicating the presence of an electrical hazard within a Building, Room or Compound.

## **Single Line Drawing**

A schematic drawing or set of drawings of the whole site system showing all HV and major LV equipment in its normal state of operation.

## **Spiking Gun**

An item of safety equipment used to confirm that a cable is dead at the point of work.

## **Sub-Station**

Any premises or part thereof, which contain equipment for either transforming or converting electrical energy to or from High Voltage (other than transforming or converting solely for the operation of switching devices or instruments), or the switching, controlling or regulating energy at High Voltage.

## **Sub-Station Warning Sign**

A permanent sign bearing the words “Danger of Death”, or a combined Warning Sign and notice. The relevant voltage, if in excess of Low Voltage shall be declared below the words “Danger of Death”. Model Sign P1.1

## **Supervision**

### **Immediate Supervision**

Supervision given by a person, having adequate technical knowledge and experience, who is available and attends the work as necessary.

### **Personal Supervision**

Supervision given by a person who is present at all times.

## **Switching Schedule**

A written schedule, as shown in Appendix A2.1 compiled by an Authorised Person and countersigned by a second Authorised Person, an Authorising Engineer or Authorising Authority, setting out the sequence of operations to be followed before a Permit to Work or Sanction for Test is issued.

**Switchgear and Transformer Schedule**

A document, as shown in Appendix A1.6 listing details of the Switchgear and Transformers under the control of the Authorised Person.

**System**

An electrical system in which all the equipment is, or may be, connected to a common source of electrical energy, including the source and its associated equipment.

**Voltage Range****Extra Low Voltage (ELV)**

A potential not exceeding 50 volts ac or 120 volts ripple free dc, whether between Conductors or to Earth.

**Low Voltage (LV)**

A potential in excess of Extra Low Voltage but not exceeding 1000 volts ac or 1500 volts dc between Conductors or 600 volts ac or 900 volts dc between Conductors and Earth.

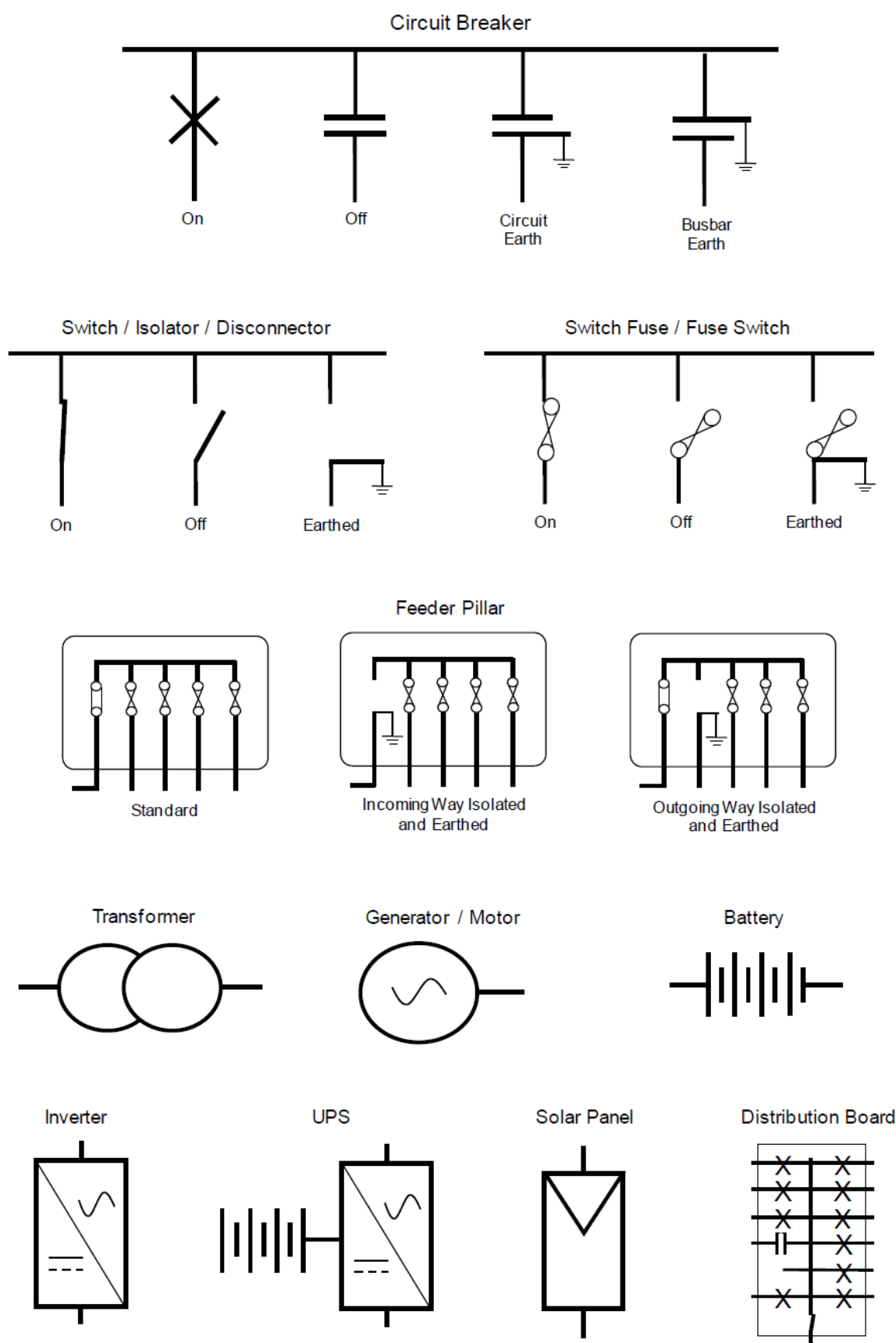
**High Voltage (HV)**

A potential normally exceeding Low Voltage.

**Working Lock**

A padlock, having a single key that differs from other keys provided for the system or installation.

# A5 Standard Symbols for Isolation and Earthing Diagrams



## A6 Associated Regulations and Documents

These Rules are based on and comply, where applicable, with the following Regulations and Documents:

- A. The Health and Safety at Work Act 1974.
- B. Management of Health and Safety at Work Regulations 1999.
- C. Approved Code of Practice for Management of Health and Safety at Work Regulations 1999.
- D. Electricity Safety, Quality and Continuity Regulations 2002.
- E. Electricity at Work Regulations 1989.
- F. The Personal Protective Equipment Regulations 1992. (EC Directive)
- G. Manual Handling Operations Regulations 1989.
- H. Provision and Use of Work Equipment Regulations 1998.
- I. Construction (Design and Management) Regulations 1996.
- J. Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013.
- K. Health and Safety (Safety Signs and Signals) Regulations 1996.
- L. Health and Safety (First Aid) Regulations 1981 Approved Code of Practice and Guidance.
- M. Workplace (Health, Safety and Welfare) Regulations 1992.
- N. Electrical Equipment for the use by electricians. Guidance Note GS38 (HSE).
- O. Electricity at Work: - Safe Working Practices. Health and Safety Booklet HS(G)85 (HSE).

## Notes

## Notes





## **RECEIPT**

### Compass Group: Safety Rules and Procedures for High Voltage Electrical Systems (V3.0).

Compass Group reserves the right to amend any part of these Rules and Procedures from time to time. It may add new material or alter or remove existing material. The Authorising Engineer or Senior Authorised Person will notify you of any changes.

Please acknowledge receipt of these Rules by signing below, detaching the page and returning it to The Authorising Engineer.

A copy of this receipt will be placed in the site Operational File.

We recommend that you keep a copy for your own records.

Name:

.....

Position:

.....

Site:

.....

Date:

.....

Signature:

.....

