

PR-NET-OSM-030

IDENTIFICATION OF APPARATUS

OPERATIONAL SAFETY MANUAL - SECTION 4.6



PR-NET-OSM-030	Identification of Apparatus - Operational Safety Manual - Section 4.6		Applies to	
			Distribution ✓	Transmission
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1 Introduction

- 1.1 Statutory regulations specify that ground mounted substations, and **Street Furniture** that are controlled by **SSEN-D** **Shall** have signs erected including **Property Notices** (bearing location or identification details) and **Safety Signs**. In addition, requirements exist for the labelling of **Plant** and associated equipment for operational purposes. To fulfil these requirements this document defines the procedure for the identification of **Apparatus** on the **System**.
- 1.2 Compliance with the following procedures **Shall** enable staff to work safely and reduce the risk of injury to themselves and their colleagues.

2 Scope

- 2.1 The scope of this document is to ensure that statutory provisions are met in relation to the identification and labelling of **System Apparatus**.
- 2.2 The procedures included herein have been developed to minimise incidents associated with human error by ensuring that:
- A consistent approach is maintained for the identification of **Apparatus**
 - At all times consideration is given to the operating characteristics of ancillary equipment and the **Dangers** imposed
- 2.3 This document **Shall** be read in conjunction with WI-NET-OPS-034 which determines the numbering and nomenclature of all new equipment installed on and connected to the **System**.
- 2.4 This document is not intended to be retrospective but, where work is being carried out on the **System** or part thereof, the opportunity **Shall** be taken to make modifications that will apply the procedures contained herein for existing substations, **Plant** and **Apparatus**.
- 2.5 This document excludes the use of temporary signage and labels.

3 References

The documents detailed in Table 3.1 - Scottish and Southern Electricity Networks Documents, and Table 3.2 - External Documents, should be used in conjunction with this document.

Table 3.1 - Scottish and Southern Electricity Networks Documents

Reference	Title
PR-NET-OSM-006	SSEN Distribution Operational Safety Rules – Operational Safety Manual – Section 1.1
PR-NET-OSM-028	Switching Terminology and Approved Abbreviations - Operational Safety Manual - Section 4.4
WI-NET-OPS-034	Nomenclature and Labelling of Networks Electrical Equipment
SP-NET-OHL-516	Safety Signs, Information Plates and Anti-climbing Devices for Steel Lattice Towers
N/A	SSEN SHE Handbook (Held in Safety, Health and Wellbeing SharePoint Site)

Table 3.2 - External Documents

Reference	Title
Statutory Instrument 2002 No. 2665	Electricity Safety, Quality and Continuity Regulations 2002 (ESQCR) (as amended)

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4 Definitions

4.1 The words printed in bold text within this document are either headings or definitions. Definitions used within this **Approved** Procedure are defined within the list presented immediately below, or within Section 2 of the **OSR**.

4.2 Nameplate

An **Approved** sign giving details of the asset name and any identification number.

4.3 Operational Safety Rules (OSR)

the **SSEN-D** Distribution set of rules, as read with related documents and procedures, that provide generic safe systems of work on the **System** therefore ensuring the health and safety of all who are liable to be affected by any **Danger** that might arise from the **System**.

4.4 Property Notice

A statutory sign of an **Approved** design providing information of the property owner including contact details.

4.5 Safety Sign

A statutory sign of an **Approved** design giving warning of 'Danger of Death' in accordance with the Electricity Safety, Quality and Continuity Regulations 2002 (as amended) (ESQCR).

4.6 Street Furniture

Apparatus, typically **Low Voltage** but may include EHV cable oil tank installations, generally located in or adjacent to public footpaths and accessible to members of the public.

5 General Responsibilities

5.1 Persons who are required to operate and undertake work on the **System** or part thereof, **Shall** have a thorough understanding of the work and ensure on site risks are suitably assessed and appropriate control measures put in place before, during and after all activities.

5.2 Persons must ensure that at all times during the work (or associated testing) **General Safety** arrangements are maintained and that other work areas are not adversely affected by the activities for which they are responsible.

6 General Requirements

6.1 All signs and notices **Shall** be permanently fitted such that they cannot provide any assistance to climbing.

6.2 All signs and notices **Shall** be fitted at pre-determined heights in accordance with **SSEN-D** policy.

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7 Application of Signs and Notices

7.1 Substation Statutory Signage

7.1.1 The following **Shall** be prominently displayed on, or adjacent to, all gates or doors giving access to substations. Signs and notices **Shall** be permanently fixed to the substation structure at pre-determined height in accordance with **SSEN-D** policy.

- Statutory **Safety Sign(s)**
- **Property Notice** giving details of ownership and emergency contact telephone number
- **Nameplate** with substation name and asset identification number

7.1.2 Where there is a site boundary, e.g. a wall or fence, the following **Shall** be prominently displayed on all doors and gates forming part of the boundary:

- **Property Notice** giving details of ownership and emergency contact telephone number, displayed at access points forming part of the boundary
- **Danger Notices** displayed within substation boundaries such that they are visible from all reasonable angles of approach

7.2 Substation Additional Signage

7.2.1 In addition to statutory signs and notices and to comply with ESQCR requirements, the following may be fitted to substations. This list is non-exhaustive, other signage may be fitted following a risk assessment of the environment concerned and the hazards identified:

- Fire Escape notices
- First Aid notices
- No Smoking notices
- Confined space notices
- Fire appliance notices
- Carbon dioxide (CO₂) gas warning notices
- Asbestos warning notices
- Polychlorinated biphenyl (PCB) warning notices
- Sulphur Hexafluoride (SF₆) warning notices
- Personal Protective Equipment (PPE) mandatory requirement notices

7.2.2 Where applicable general signs and notices **Shall** meet the requirements of governing National Legislation, British Standards and **SSEN-D** specifications and drawings.

7.3 Towers and Poles Statutory Signage

7.3.1 Statutory **Safety Signs Shall** be fitted to all supports carrying overhead lines regardless of voltage or **Conductor** type. In addition, statutory requirements exist to make the public aware of the **Dangers** associated with activities in the vicinity of overhead lines.

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7.3.2 For tower sites and overhead arrangements with other types of supports (e.g. cable sealing end arrangements), extra **Safety Signs** may be required. In such cases, **Safety Signs Shall** be fitted so that the signs make a continuous ring around the support. On 'H' poles, **Safety Signs Shall** be fitted to each pole of the structure.

7.3.3 Overhead Lines at 132kV:

The following **Shall** be prominently displayed on the pole or tower structure at a point that is not obscured and is above the anti-climbing device.

- Statutory **Safety Sign**
- **Property Notice** giving details of ownership and emergency contact telephone number
- Voltage plate
- Asset identification plate
- Circuit identification
- Phase colour plates

NOTE: The asset identification plate **Shall** be fitted below the Statutory **Safety Sign** clearly visible at the climbing leg of the respective circuit.

7.3.4 Overhead Lines below 132kV.

The following **Shall** be prominently displayed on the pole or tower structure at a point that is not obscured and is above the anti-climbing device when fitted.

- Statutory **Safety Sign**
- Asset identification plate
- Circuit identification (excluding **Low Voltage** and 11kV poles)

NOTE: 33kV constructed circuits reconfigured to run at 11kV may have a single colour, red circuit identification plate.

7.4 Towers and Poles Additional Signage

In addition to statutory signs and notices, the following may be fitted to towers and poles. This list is non-exhaustive, other signage may be fitted following a risk assessment of the environment concerned and the hazards posed:

- Inadvertent contact signs
- Prohibition notices

7.5 Street Furniture Statutory Signage

The following **Shall** be prominently displayed on the front access doors of all **Street Furniture**:

- Statutory **Safety Sign**
- **Property Notice** giving details of ownership and emergency contact telephone number

NOTE: Considering the nature of application, there **Shall** be no requirement for the covers of **Low Voltage** link box pits to have labels or signs fitted.

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8 Nomenclature and Labelling of Substations and Circuits

8.1 General

- 8.1.1 Clear and unambiguous labelling of switchgear and other equipment is essential for the safe operation of the **System**. The ability for site staff to cross check both the location and the equipment for each operation is a major factor in reducing the possibility of human error faults.
- 8.1.2 In the interests of safety and efficiency, it is essential that any labelling of electrical equipment is carried out carefully and that this takes place at the same time as any change to the **System** or part thereof.

8.2 Ground Mounted Switchgear

- 8.2.1 Included in the classification of ground mounted switchgear are any associated relay panels and local control units.
- 8.2.2 Circuit labels **Shall** be durable non-fading and where practicable securely fixed to the equipment in the position provided or in an alternative position as specified by **SSEN-D**. Inscriptions **Shall** be in the form of black letters on a white background and permanently etched. Inscriptions **Shall** use capital letters only that are in a font size proportional to the size of the circuit label.
- 8.2.3 Circuit labels, **Shall** be secured to the front and rear of each switchgear fixed portion, preferably using screws. These labels **Shall** be fitted to a non-removable component. The front circuit label **Shall** be positioned adjacent to the controls and be clearly legible from the operating position.
- 8.2.4 Where the **Switching** device is removable, an additional label **Shall** be secured to the removable device.
- 8.2.5 Circuit labels **Shall** be repeated at the point of cable test / cable termination if the above labels are not clearly visible and unambiguously associated with the switchgear unit.
- 8.2.6 Circuit labels **Shall** be detachable without the necessity to move any cover giving access to a compartment containing **Live**, or potentially **Live** parts of the main circuit.
- 8.2.7 Circuit label nomenclature **Shall** be in accordance with WI-NET-OPS-034.
- 8.2.8 Temporary labels **Shall** be used if no labels exist, but **Shall** be replaced with permanent label as soon as practicable

8.3 Pole Mounted Switchgear

- 8.3.1 Poles and associated switchgear circuit labels **Shall** be durable non-fading and where practicable securely fixed to the equipment in the position specified by **SSEN-D**.
- 8.3.2 Circuit label nomenclature **Shall** be in accordance with WI-NET-OPS-034.
- 8.3.3 Air break isolating switches **Shall** have a label indicating the 'making' and 'breaking' rating of each switch. This label **Shall** be positioned in accordance with **SSEN-D** policy, providing the operator with an indication that the normal System fault level is within the breaking capacity of the switch to be operated.
- 8.3.4 The requirements of section 8.3.3 **Shall** apply to Category 1 and 2 switches only. In the absence of a label, until confirmation of category, the switch **Shall** be assumed to be Category 3.

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9 Revision History

No	Overview of Amendments	Previous Document	Revision	Authorisation
01	New document created	TBC	1.00	Richard Gough
02				