

## 1. SCOPE

This document details the **Approved** procedure to be adopted for work and testing on the 33 kV and 11 kV circuits including the 33 / 11 kV transformers between Braehead Park 132 kV substation and Renfrew Ferry No 1, Tee Renfrew Ferry 2/3 primary switchboards, as there are no **Primary Earths** (fixed or portable) available for the 2000 amp Ferguson Palin VSBP7 circuit breakers on the Renfrew Ferry No 1 11 kV switchboard.

This procedure confirms in writing the **Approved** manner to complete work or testing on the 33 kV and 11 kV circuits including the 33 /11 kV transformers without a **Primary Earth** applied at Renfrew Ferry No 1, 11 kV primary switchboard.

## 2. ISSUE RECORD

This is a [Reference](#) document. The current version is held on the EN Document Library.

**It is your responsibility to ensure you work to the current version.**

Issue Date	Issue No.	Author	Amendment Details
March 2005	1	R Nelson	Initial Issue
06/08/2020	2	John Canning	Layout updated with minor editorial changes. Minor changes to text, addition of most recent network diagram and network status.

## 3. ISSUE AUTHORITY

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## 4. REVIEW

This is a [Reference](#) document which has a 5 year retention period after which a reminder will be issued to review and extend retention or archive.

## 5. DISTRIBUTION

This document is part of the Management Safety Procedures Manual but does not have a maintained distribution list.



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## 6. DEFINITIONS

Terms printed in bold are as specified in the ScottishPower Safety Rules (Electrical and Mechanical) 4th Edition, or as specific definitions detailed within the text of this document.

## 7. REFERENCE AND RELATED DOCUMENTS

ScottishPower Safety Rules Handbook:

GP3:	Special instructions
CSI 1:	Earthing of <b>HV Apparatus</b>
CSI 1.1.1:	<b>Primary Earths</b>
OPSAF-10-002 (PSSI 2):	Earthing <b>High Voltage Apparatus</b> For Work or Testing
OPSAF-11-015 (MSP 2.4):	Procedure for Work or Testing of <b>Plant</b> and <b>Apparatus</b> where the Safety Rules Cannot or Should Not Be Applied.

## 8. SAFETY RULES REQUIREMENTS

The Company Safety Rules Handbook requires:

Basic Safety Rule A3.2 (iii) - For work on **HV Apparatus**, **Primary Earths** shall be applied within the **Isolated** zone and, where reasonably practicable, immobilised and **Locked**.

CSI 1.1.1 (ii) – **Primary Earths** – Where reasonably practicable, **Primary Earths** shall be applied between the point of work and the **Point(s) of Isolation**. Where this is not reasonably practicable, an **Approved** procedure shall be implemented.

GP3 – Special Instructions – Work on or testing of **Plant** or **Apparatus** to which these Rules cannot be applied, or for special reasons should not be applied, should be carried out in an **Approved** manner which shall be confirmed in writing.

As it not reasonably practicable to apply **Primary Earths** between the point of work or testing and the **Point of Isolation** at Renfrew Ferry No 1 11 kV primary switchboard for the stated 33 / 11 kV circuit, the undernoted **Approved** procedure shall be adopted.

## 9. APPROVED PROCEDURE

This **Approved** procedure shall be used for work or testing on the 33 kV No 1 and No 2 circuits and 33 / 11 kV transformers between:

Braehead Park 132 kV substation, to Renfrew Ferry No 1 primary switchboard, Tee Renfrew Ferry 2/3 primary switchboard.

- The circuit shall be **Isolated**, 33 kV busbar disconnecter opened and 11 kV busbar shutters closed safety **Locked** and **Caution Notices** posted, at:
  - Braehead Park 132 kV substation
  - Renfrew Ferry 2/3 primary switchboard
  - Renfrew Ferry No 1 primary switchboard
- At Renfrew Ferry No 1 primary switchboard, the transformer 11 kV feeder shutters shall be safety **Locked** closed and **Caution Notice** posted.
- At Renfrew Ferry No1 primary switchboard and Renfrew Ferry 2/3 primary switchboard, the transformer 11kV VTs shall be **Isolated**, VT shutters closed and **Safety Locked** or VT **LV** secondary fuses removed and retained and **Caution Notices** posted.
- **Primary Earths** shall be applied at Braehead Park 132 kV Substation and Renfrew Ferry 2/3 primary switchboard
- At Renfrew Ferry No1 primary switchboard, following isolation of the busbar shutters, feeder shutters and VT, the 2000 amp circuit breaker will be quarantined by the **Senior Authorised Person** in the following manner:
  - The circuit breaker withdrawn from service and racked up on the floor to allow the interlock bolt to engage
  - The circuit breaker closed
  - The trip bar **Locked** with a **Safety Lock**
  - The **Safety Lock** key placed into the **Key Safe**
  - **Caution Notice** applied to the moving portion of the circuit breaker

These actions render the moving portion of the circuit breaker inoperable and effectively quarantined.

The circuit breaker quarantine will be confirmed in writing in the appropriate **Safety Documents**:

- Section 2 (i) of a **Permit for Work** – Precautions taken to achieve **Safety from the System**: or
- Section 2(i) of a **Sanction for Test** – Precautions taken to achieve **Safety from the System** which shall not be altered:

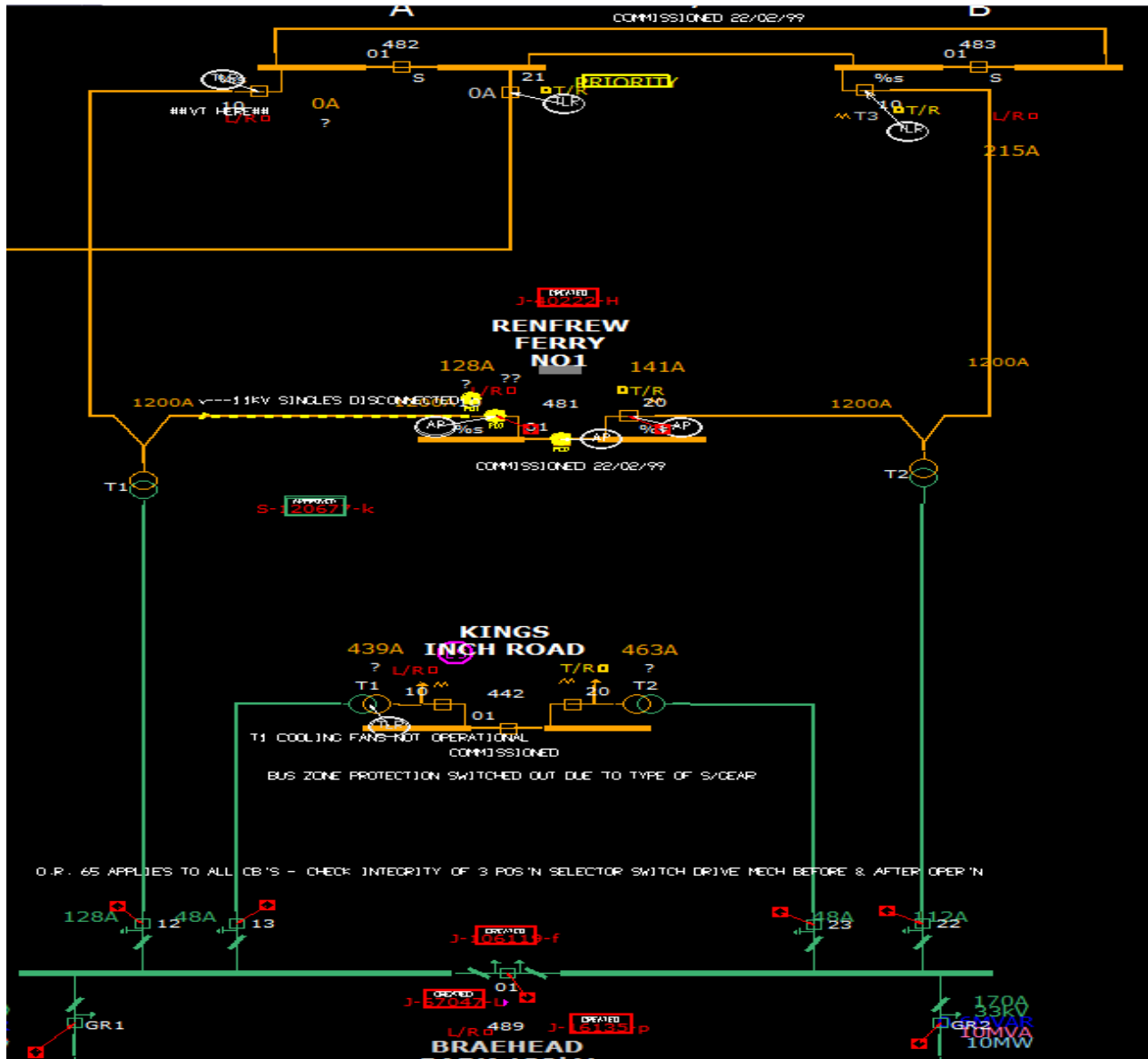
stating:

In Renfrew Ferry No 1 substation, the T1 (or T2) CB has been quarantined in accordance with OPSAF-11-047 (MSP 2.4.3).

On completion of this **Approved** procedure, **Safety Documents** can be issued for work or testing on the 33 kV and 11kV circuits or 33 /11 kV transformers.

## 10. NETWORK DIAGRAM

Braehead Park 132 kV substation, to Renfrew Ferry No 1 primary switchboard, Tee Renfrew Ferry 2/3, primary switchboard.



At the time of document review (May 2020) the No 1 side busbar at Renfrew Ferry No 1 substation has been permanently disconnected with all 11 kV cables disconnected and bus section section band joint cut and sealed. Both the No 1 and bus section 11kV circuit breakers are quarantined as per procedure in section 9. Reference shall be made to the current **System** diagram prior to any work being carried out.