

Company Directive

STANDARD TECHNIQUE: OC1L/2

Relating to the Operational Procedure for Independent Connection Providers carrying out HV Connection Works under Option 4 of the ICP Self-Connect Process

Policy Summary

This document details the Company Procedure for the Operation and Control of planned work by an Independent Connection Provider (ICP) on the Western Power Distribution's HV Network under Option 4 of the ICP Self-Connect Process.

Author: Gwyn Jones

Implementation Date: March 2019

Approved by



Sean Sullivan
Network Services Manager (South Wales)

Date:

15/3/19

All references to Western Power Distribution or WPD must be read as National Grid Electricity Distribution or NGED

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IMPLEMENTATION PLAN

Introduction

This updated document details the Company Procedure for the Operation and Control of planned work by an Independent Connection Provider (ICP) on Western Power Distribution's HV Network under Option 4 of the ICP Self Connect Process Control. Option 4 requires that 'Switching' is carried out under WPD Safety Rules by an ICP SAP (or an ICP trainee SAP under the Personal Supervision of an ICP SAP), but the issuing of Safety Documents or Work and Testing, are carried out by the ICP SAP (or trainee ICP SAP) under the ICPs Distribution Safety Rules, Policies and Procedures.

Main Changes

Amendment made to allow WPD Control Engineer to issue switching instructions to an ICP member of staff who is training to become a SAP. The trainee ICP SAP will be under the Personal Supervision of the ICP's own fully authorised SAP at all times. Section 5.7 refers.

Impact of Changes

Network Services and Control to be cognisant of the change in readiness to apply when required.

Implementation Actions

All Network Services and Control Staff to be briefed.

Implementation Timetable

18th March 2019.

REVISION HISTORY

Document Revision & Review Table		
Date	Comments	Author
March 2019	<ul style="list-style-type: none"> Amendment made to allow WPD Control Engineer to issue switching instructions to an ICP member of staff who is training to become a SAP. The trainee ICP SAP will be under the Personal Supervision of the ICP's own fully authorised SAP at all times. Section 5.7 refers. 	Gwyn Jones
February 2018	<ul style="list-style-type: none"> 3.2.5 Removal of Restriction for Overhead Line Switching and Work. Minor amendments to text in 3.2.3 and 3.2.4, process diagrams in 3.1 and Appendix A to clarify responsibility for establishing first and then remaining points of isolation. Amendment to the Release Document, Section 2, second paragraph to allow for removal of CME's for testing under a Sanction for Test. Typo in 5.5. 5.6 and 6.8 Requirement for Control Engineer to record dates & times for ICP Safety Documents. 7.17 amended for clarity. 	Sarah Hadfield
August 2017	<ul style="list-style-type: none"> New document 	Sarah Hadfield

1.0 DEFINITIONS

- 1.1 Self Connect - Where an ICP may choose to carry out the final connections and commissioning of new HV Apparatus to the WPD network.
- 1.2 Planning and Facilitation Document - the document relevant to Option 4 completed by the WPD and ICP SAP at the planning meeting prior to the submission of the schedule.
- 1.3 Agreed Works - the extent of the Works to be carried out as agreed between the ICP and Network Services and recorded in the Planning and Facilitation Document as per the requirements of ST: NC2L and ST: OS7H.
- 1.4 HV Network - for the purposes of this procedure means greater than 1000V but less than 22kV.
- 1.5 DSR's - Distribution Safety Rules.
- 1.6 Release Document - The Release Document (For Identification, Work and Testing). Copy is shown in Appendix B.
- 1.7 Control Engineer - A WPD Distribution Control Engineer.
- 1.8 ICP SAP (UPS) – A member of ICP staff that is under the Personal Supervision of an ICP SAP for the purposed of training and development and is able to switch on the WPD network within the confines of their Authorisation.

2.0 INTRODUCTION

The ICP Self Connect process is outlined in ST:NC2L where there are 3 Methods for an ICP to operate under when completing Connection works on the WPD HV Network:

- 2.1 Option 1 (& 3): The ICP works to ICP DSR's with ICP Authorised staff.

Option 1 is facilitated using Option 3 which transfers the Control of a defined section of network to the ICPs Control Room.

The Operational and Control Procedure to be followed when an ICP is working under this Option can be found in **ST: OC1K**.

- 2.2 Option 2: The ICP works to WPD DSR's with WPD Authorised ICP staff.

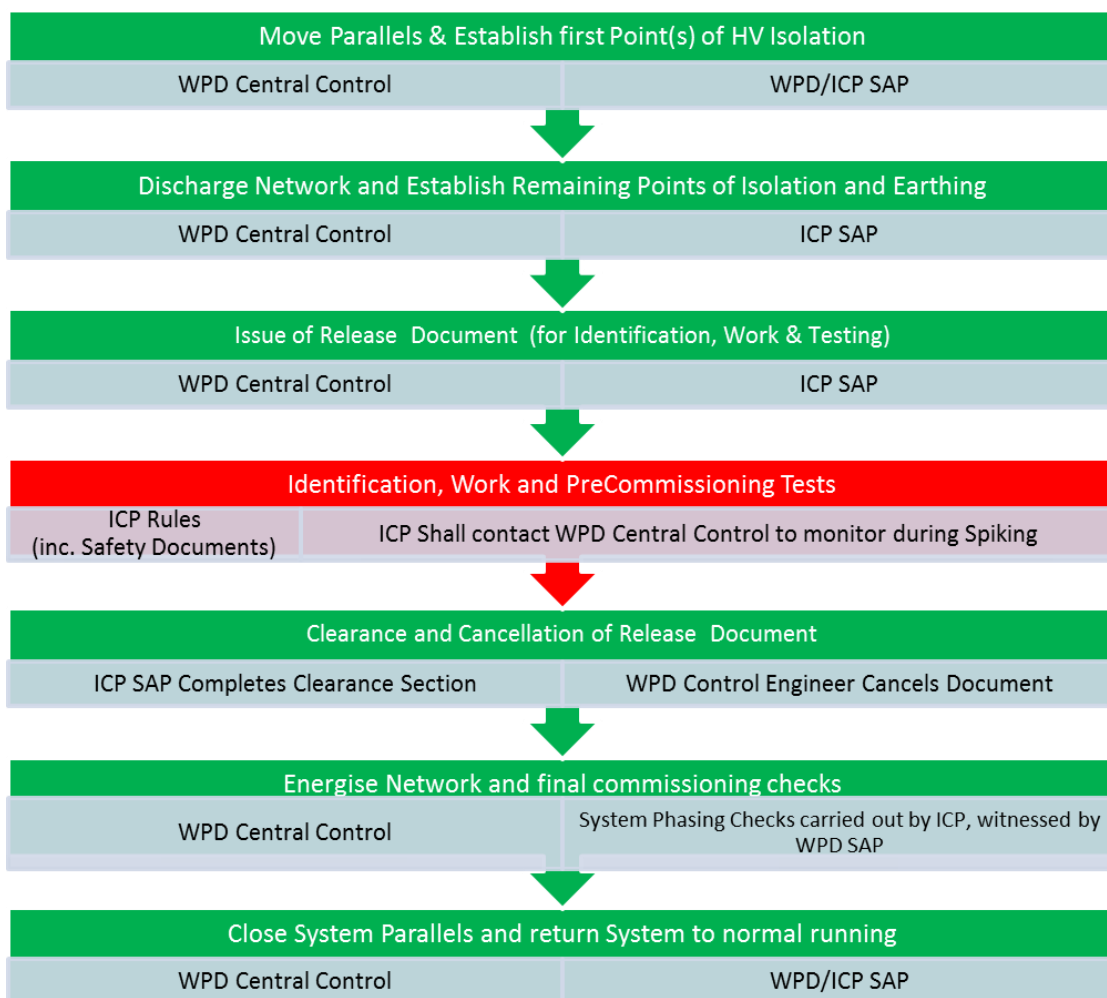
Under this Option, WPD's DSR's, policies and procedures are followed in full.

- 2.3 Option 4: ICP Authorised staff carry out Switching Operations on the WPD network under WPD DSRs, but carry out Testing and Work under their own ICP DSRs, rules and procedures.

The Operational and Control procedures to be followed when working when an ICP is working under this Option are detailed in this document.

3.0 OPERATIONAL PROCEDURE

- 3.1 The process diagram below illustrates the procedure to be followed for Option 4:



- 3.2 The Main Operational features of Option 4 are:
- 3.2.1 Control of the Network is retained by WPD's Distribution Control Engineer throughout the duration of the Agreed Works.
 - 3.2.2 The ICP SAP will have been authorised by the ICP under their DSRs and authorisation procedures but this authorisation will be recognised by WPD to allow the ICP SAP to switch on the WPD Network under WPD Rules. This is subject to the requirements of ST: OS7H.
 - 3.2.3 The WPD SAP or ICP SAP may carry out switching to set the network up and/or to return the network to normal running but this shall be agreed and recorded in the Planning and Facilitation Document and reflected in the Approved Switching schedule. This includes establishing the first point of isolation.
 - 3.2.4 Only the ICP SAP may establish the remaining Points of Isolation and Earthing.
 - 3.2.5 The ICP SAP will not carry out switching under Field Control.
 - 3.2.6 Once the Points of Isolation and Earthing are established and any necessary screening carried out, the Control Engineer shall issue a Release Document (for Identification, Work and Test) to the ICP SAP. This document is only cancelled on completion of precommissioning and cancellation of the ICPs Sanction for Test.
 - 3.2.7 The ICP SAP identifies the circuit/equipment to be worked on, sets ICP authorised staff to work and carries out testing under ICP Safety Documents and ICP DSR's, policies and procedures.
 - 3.2.8 Final Commissioning Tests are completed by the ICP SAP, witnessed by the WPD SAP.
- 3.3 A detailed diagram showing the step by step process can be found in Appendix A.

4.0 NETWORK SERVICES RESPONSIBILITIES

- 4.1 WPD Network Services shall check the status of the ICP Organisation and the ICP SAP as per the requirements of ST: NC2L and ST: OS7H.

- 4.2 WPD Network Services shall ensure that the Planning and Facilitation meeting is held suitably in advance of the job to agree and record project details, roles and responsibilities. The Switching Schedule and patch for submission should also be agreed and finalised at or before this meeting.
- 4.3 WPD Network Services shall submit a switching schedule (and patch where required) to WPD Control in line with the required timescales.
- 4.3.1 Option 4 is only appropriate for work which is continuous. For works that continue overnight or greater than 24 hours, ICP Contact details shall be available to Control in case of emergency
- 4.3.2 ‘ICP Self Connect – Option 4’ should be included in the schedule header. A description and date of the Agreed Works and the ICP SAP’s contact details and escalation contact number should also be included.
- 4.3.3 Items are required for the issue and cancellation of the Release Document in the appropriate stage of the job. Text entry item shall be made to indicate where ICP Sanction for Test/Permit for Work is issued and ‘ICP Safety Document’ inserted in the comments field of such items.
- 4.3.4 Network Services shall ensure that they have agreed with the ICP the status of the network on its return and therefore should complete the switching schedule to return the network to normal on that basis.
- 4.3.5 Option 4 will not be available where any of the boundaries of the Isolated and Earthed section are under the control of another body, e.g. Field Control, another Distribution Network Operator, National Grid, other third parties or across Control Centre boundaries.
- 4.4 WPD Network Services shall check if the ICP SAP requires an ICP Operational Site Check and where necessary arrange for the check to be carried out and recorded in line with ST: OS7H.
- 4.5 WPD Network Services shall witness label checks and final commissioning checks.

5.0 CONTROL RESPONSIBILITIES

- 5.1 The Control Engineer shall Approve the Schedule in line with WPD Policy.
- 5.2 The Control Engineer shall contact the ICP SAP in the event of any issue on the network which may impact the ICP during the course of the Agreed Works.

- 5.3 The Control Engineer may require the HV Network to be restored under emergency conditions. The ICP SAP will work with the Control Engineer to restore the network as soon as possible.
- 5.4 The Control Engineer will issue and cancel the Release Document in line with this procedure and will ensure that the document is applied to and removed from the network diagram appropriately.
- 5.5 The Control Engineer will issue the ICP Safety Document items as a batch of items at the same time the Release Document is issued.
- 5.6 The Control Engineer will record the issue and cancellation dates and times of ICP Safety Documents when the Release for Work document is cancelled.
- 5.7 As with WPD personnel, an ICP will need to train their staff to operate on the HV network. Accordingly, it is permissible for a WPD Control Engineer to issue switching instructions to a suitably Authorised ICP staff member who is Under the Personal Supervision of an ICP SAP. This mirrors WPD protocol.

6.0 INDEPENDENT CONNECTION PROVIDER RESPONSIBILITIES

- 6.1 The ICP shall have successfully completed the due diligence checks detailed in ST: OS7H associated with Option 4 for connection work on the WPD HV Network.
- 6.2 The ICP SAP is authorised under the ICPs DSRs, Rules and Procedures. This authorisation shall only be recognised by WPD upon completion of the agreed process as defined in ST: OS7H.
- 6.3 The ICP SAP will provide their contact number that must be in use and answered for the duration of the Agreed Works. This will be used for all communication between the ICP SAP and WPD Central Control.
- 6.4 An alternative ICP site contact number and Escalation contact number shall be recorded in the Schedule for the Control Engineer to use in the event of an emergency.
- 6.5 The ICP SAP shall attend the Planning and Facilitation meeting in advance of the Works and ensure that all information required to complete the document and submit the schedule is made available prior to or at the Planning and Facilitation meeting.
- 6.6 The ICP SAP shall ensure that there is no deviation from the Agreed Works.

- 6.7 The ICP shall maintain a record of all Operations carried out as part of the Agreed Works and a copy of all Safety Documents issued.
- 6.8 The ICP will be required to give the Control Engineer the issue and cancellation times of ICP Safety Documents upon cancellation of the Release Document.
- 6.9 The ICP SAP shall contact the WPD SAP in good time to enable witnessing of label checks & final commissioning tests.
- 6.10 The Control Engineer may require the HV Network to be restored under emergency conditions. The ICP SAP will work with the Control Engineer to restore the network as soon as possible.
- 6.11 The ICP SAP Shall contact the Control Engineer:
 - 6.11.1 Immediately in the event that anything abnormal occurs or is found during the course of the works i.e. operational incidents, damage to/unexpected operation of WPD equipment.
 - 6.11.2 If the outage is likely to extend for any reason.
 - 6.11.3 If they identify a requirement to deviate from the Agreed Works.
- 6.12 The ICP shall have a Procedure in place in the event that cancellation of Safety Documents is required when the holder, issuer or safety keys are not available.

7.0 PROCEDURE DURING THE WORKS

- 7.1 The WPD/ICP SAP will carry out switching instructions to the Approved Schedule to set the network up.
- 7.2 The ICP SAP will carry out switching instructions to the Approved Schedule to establish Points of Isolation and Earthing.
- 7.3 The ICP SAP will carry out screening and apply Danger Notices where necessary, in line with WPD DSRs 4.1.1. (d)
- 7.4 The ICP SAP will contact the Control Engineer to request issue of the Release Document.
- 7.5 The Control Engineer shall then formally issue the document by completing, and communicating the details in Part 1:

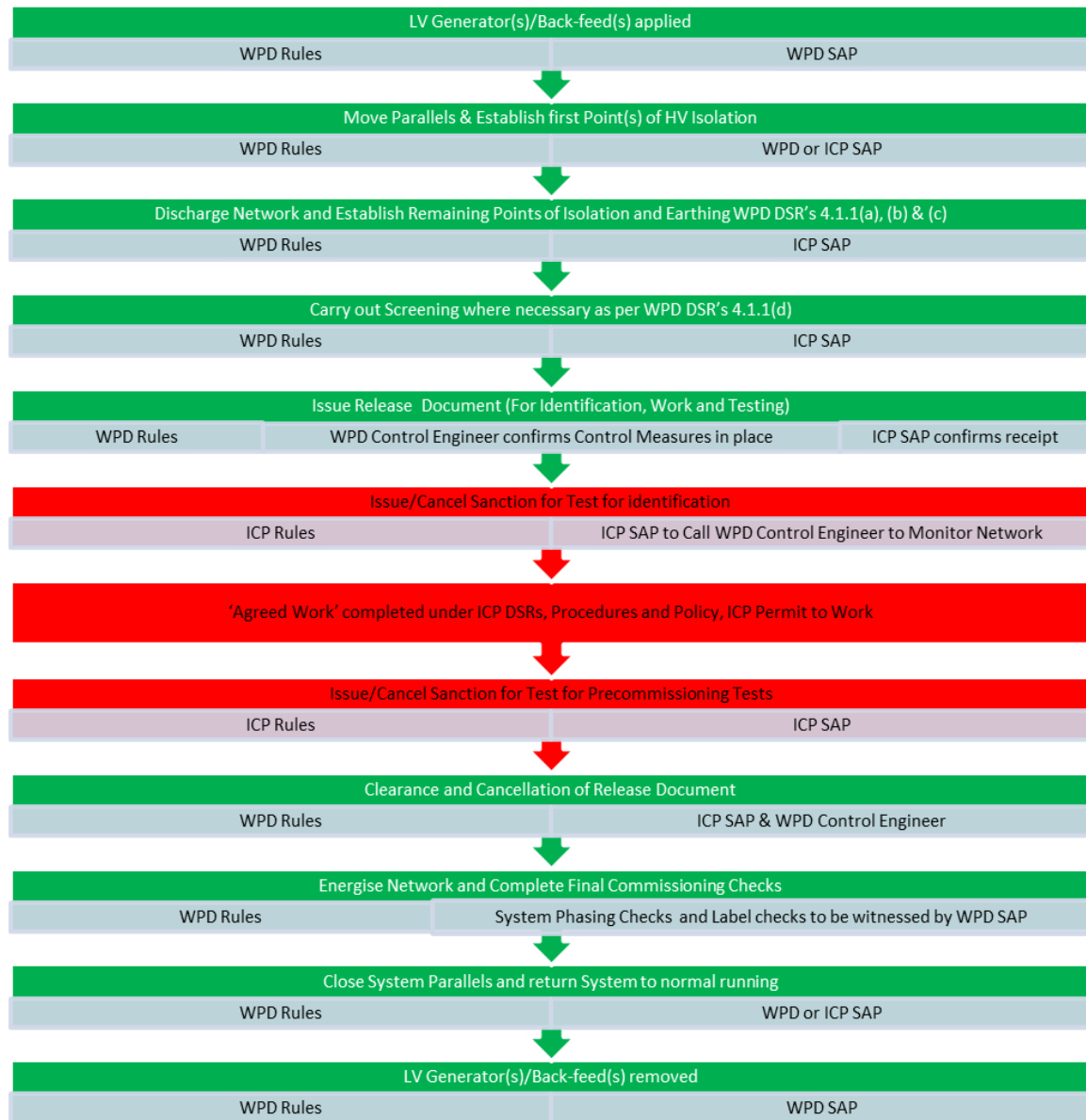
- 7.5.1 Use the Release Document (for Identification, Work and Test) on the POF System to identify and record on the diagram that a document is in force and to hold the Points of Isolation and Earthing. The document should also record the ICP SAP's name, organisation, contact details and an escalation contact telephone number.
- 7.5.2 Confirm to the ICP SAP the HV Apparatus and/or Conductors to be worked on and Points of Isolation and Earthing applied. Communicate any other information that the Control Engineer deems relevant.
- 7.5.3 Confirm the document number, issue date & time and Control Engineer's name.
- 7.6 The ICP SAP will:
 - 7.6.1 Confirm their contact details when requested by the Control Engineer.
 - 7.6.2 Record the details given by the Control Engineer in Part 1 of the site copy of the Release Document (for Identification, Work and Test). A copy is shown in Appendix B.
 - 7.6.3 Repeat back the details in Part 1 to the Control Engineer for formal confirmation.
- 7.7 The ICP SAP will formally confirm receipt of the document and complete the declaration by reading the statement in Part 2 of the Release Document. The ICP SAP shall then sign and date Part 2.
- 7.8 The ICP SAP shall then proceed under the ICPs DSR's, policies and procedures to issue a Sanction for Test to allow minor works and testing to identify the circuit to be worked on.
 - 7.8.1 The ICP will contact the Control Engineer before and after cable spiking (but before the spiking gun is removed) so that the WPD Network can be monitored.
- 7.9 The ICP SAP will then proceed to set his/her team to work under the ICPs Rules, Policies and Procedures - including the issue of an ICP Permit to Work to allow all Agreed Works to be completed. ICP staff will be working to and authorised under the ICPs Distribution Safety Rules.
- 7.10 Upon completion of the Works the ICP Permit to Work shall then be cancelled and labels applied.
- 7.11 The ICP SAP will contact Control to introduce the patch onto the network diagram.

- 7.12 The ICP SAP will then issue an ICP Sanction for Test to allow Precommissioning tests to be completed.
- 7.13 Upon completion of precommissioning the ICP Sanction for Test will be cancelled. The ICP SAP will then complete the clearance section in Part 3 of the Release Document, recording any exceptions.
- 7.14 The ICP SAP will contact the Control Engineer to request cancellation of the Release Document, stating any exceptions.
- 7.15 The Control Engineer will record any exceptions and cancel the Release Document on the Control System.
- 7.16 The ICP will then record the Control Engineer name with date and time of cancellation in Part 4 of the Release Document.
- 7.17 Energisation and Final commissioning checks will be undertaken by the ICP SAP. Final commissioning checks shall be witnessed by the WPD SAP.
- 7.18 Upon successful completion, the Network can be returned to normal running by the ICP/WPD SAP.

8.0 RECORDS

- 8.1 A copy of the site Release Document will be provided by the ICP SAP to the WPD SAP for submission to Control for audit in line with POL: OS5.
- 8.2 The ICP shall maintain a record of all Operations carried out as part of the Agreed Works and a copy of all Safety Documents issued. These documents shall be retained by the ICP and made available when requested for audit purposes.

OPERATION AND CONTROL PROCEDURE UNDER OPTION 4



RELEASE DOCUMENT (FOR IDENTIFICATION, WORK AND TEST)

RELEASE DOCUMENT



FOR IDENTIFICATION, WORK & TESTING

1. ISSUE TO: ICP Senior Authorised Person Doc. No.

Operating under: (ICP) Distribution Safety Rules

Following an assessment of the Electrical Risks, and the application of appropriate Control Measures, the following High Voltage Apparatus and/or Conductors has been made **Dead, Isolated** and **Earthed** in accordance with the WPD Distribution Safety Rules:-

.....

For the following **Agreed Work** and **Testing** only to be carried out:-

1. Identification of the HV Apparatus and/or Conductors to be worked on at the Point of Work
2. Installation of:
3. Testing and Precommissioning associated with Agreed Works

TREAT ALL OTHER APPARATUS AS LIVE

The following Control Measures have been applied:

POINTS OF ISOLATION are at:-

CIRCUIT MAIN EARTHS are applied at:-

Other Relevant Information:-

ISSUED BY (WPD Control Engineer):

Name: Date: Time:

FOR IDENTIFICATION, WORK & TESTING

2. RECEIPT & DECLARATION

I accept that the HV Apparatus detailed above has been Isolated and Earthed in accordance with WPD Distribution Safety Rules.

I understand that all applied Control Measures will remain in place for the duration of the Agreed Work and that all Switching activities will remain under WPD Distribution Safety Rules. CME's may be removed under a Sanction for Test for the purposes of precommissioning only.

I understand that the Identification, Agreed Works and Precommissioning only may now be carried out in accordance with the ICP's Distribution Safety Rules.

I confirm that the Control Measures taken above will be formally communicated to the ICP Working Party using an ICP approved procedure which involves the issue of appropriate ICP safety documentation which shall not be issued unless the issuer and the recipient are fully conversant with the precise parts of the Systems, Apparatus and Conductors to be worked upon, the nature and also the extent of the work to be done and the safety precautions taken.

I shall ensure that labels are applied after the ICP Permit for Work is cancelled but before the issue of the ICP Sanction for Test.

Signature ICP SAP: Date: Time:

3. **CLEARANCE:** I confirm that all persons under my charge have been withdrawn and warned that it is no longer safe to work on the Apparatus detailed on this Release Document for Identification, Work & Testing. All ICP Safety Documents have been cancelled, gear/tools/test equipment has been removed and ADDITIONAL EARTHS have been removed/ accounted for*. * delete where applicable

The operational state of the Apparatus is the same as at the time of issue of this Release Document apart from the exceptions noted below:-

Exceptions (if none , state 'none')

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

Signature ICP SAP Date: Time:

4. CANCELLATION: This Release Document: For Identification, Work & Testing is cancelled

CANCELLED BY (WPD Control Engineer):

Name: Date: Time:

Please retain this document

APPENDIX C

SUPERSEDED DOCUMENTATION

This document supersedes ST: OC1L/1 dated February 2018 which has now been withdrawn.

APPENDIX D

ASSOCIATED DOCUMENTATION

POL: NC2 New Connections

ST: NC2L Relating to Independent Connection Provider (ICP) High and Low Voltage Connections under ICP DSRs

ST: OS7H Relating to due diligence checks on ICP safety management systems and operational site performance

ST: OC1K Relating to Transfer of Control of WPD Network between WPD Central Control and ICP Control

APPENDIX E

KEY WORDS

Control Engineer, Network Services, Independent Connection Provider, Release Document (for Identification, Work and Test).