

National Grid Company plc

Grid Code Review Panel Paper

The NGC Training Process for OC8 Changes on Proximity Working

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Prepared by Richard Scarth Network Operations Centre National Grid Company

Introduction

During consultation (Consultation Paper E/02) with Users on the proposed changes to OC8 for Proximity Working a User suggested that as NGC will define the new issues to its staff, it would be helpful for other Users to see how NGC intends to train its staff when considering their own training. This Paper, and the presentation which this accompanies, seeks to do that. Users have a responsibility to train their staff on OC8 and must themselves decide how this is best done. Whilst it is thought helpful to let Users see what NGC is utilising, the material in this Paper is not designed to be used by Users.

Training Plans

The attached material includes 2 “lesson plans” that will be further developed by NGC to train SAPs and Safety Co-ordinators in the new OC8 Proximity Working Provisions, and a “Case Study”.

OC8 Bulletin/ SAPs Guidance (attachment 5)

The OC8 Bulletin will be circulated to all NGC SAPs & Safety Co-ordinators at least 4 weeks before the OFGEM specified issue date of the new OC8 containing the proximity working arrangements. This will give time for these new safety arrangements to be disseminated to all relevant persons before the implementation date of the revised OC8.

ESI Training Process

Grid Code Panel members may want to consider circulating this paper within their “representation” organisations to enable due consideration to be given to the dissemination of NGC’s intended method of training.

Attachments

1. OC 8 Proximity Work Lesson Plan (SAP).
2. OC 8 Proximity Work Lesson Plan (Safety Co-ordinators).
3. Flow chart from OC8.
4. Case Study Third Party Proximity Working.
5. NGC SAPs Guidance: For Third Party Working In Proximity To NGC HV Equipment Within A Sub Station

Attachment 1

OC 8 Proximity Work Lesson Plan (SAP)

Objectives:-

- To explain the changes to Grid Code Operating Code 8 (OC8) which will now define the duties of third parties when working in proximity to NGC HV equipment.
- To explain the role of the NGC SAP when issuing a safety document to a third party for working near but not on NGC HV equipment.

Handouts:-

NGC SAPs Guidance

Proximity Working Case Study
Flow Chart from OC8.

Training Style:-

Case study followed by discussion, based on a DNO structure in proximity to a NGC SGT circuit.

Trainer Notes:-

Notes associated with the NGC SAPs Guidance

Attachment 2

OC 8 Proximity Work Lesson Plan (Safety Co-ordinator)

Objectives:-

- To explain the changes to Grid Code Operating Code 8 (OC8) which will now define the duties of third parties when working in proximity to NGC HV equipment.
- To explain the role of NGC Safety Co-ordinators when consenting to a NGC Permit For Work, which will be issued by an NGC SAP to a third party, for working near but not on NGC HV equipment.

Handouts:-

NGC SAPs Guidance
Proximity Working Case Study
Flow Chart from OC8.

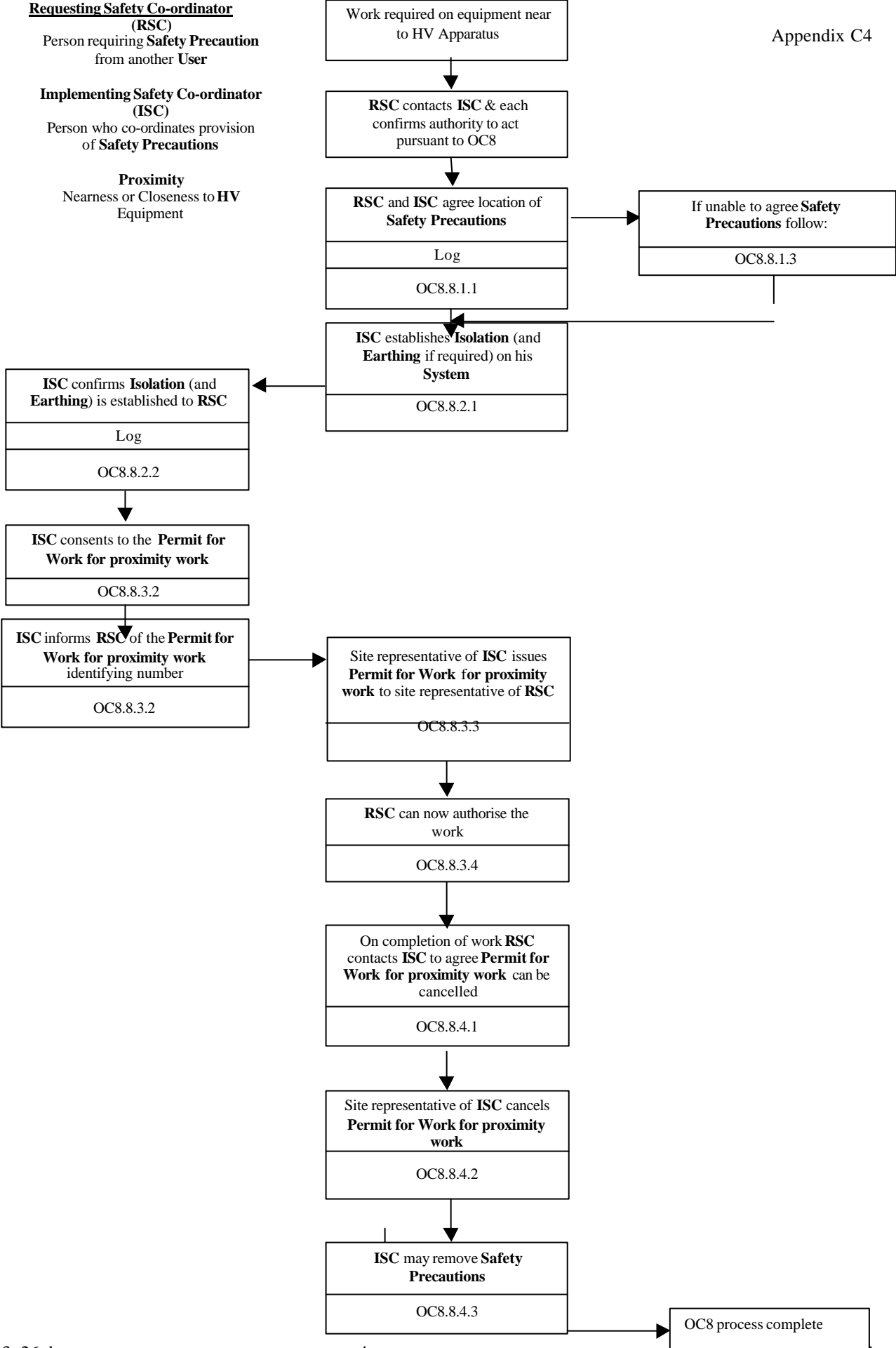
Training Style:-

Case study followed by discussion, based on a DNO structure in proximity to a NGC SGT circuit.

Trainer Notes:-

Notes associated with the NGC SAPs Guidance.

PROCESS FOR WORKING NEAR TO SYSTEM EQUIPMENT

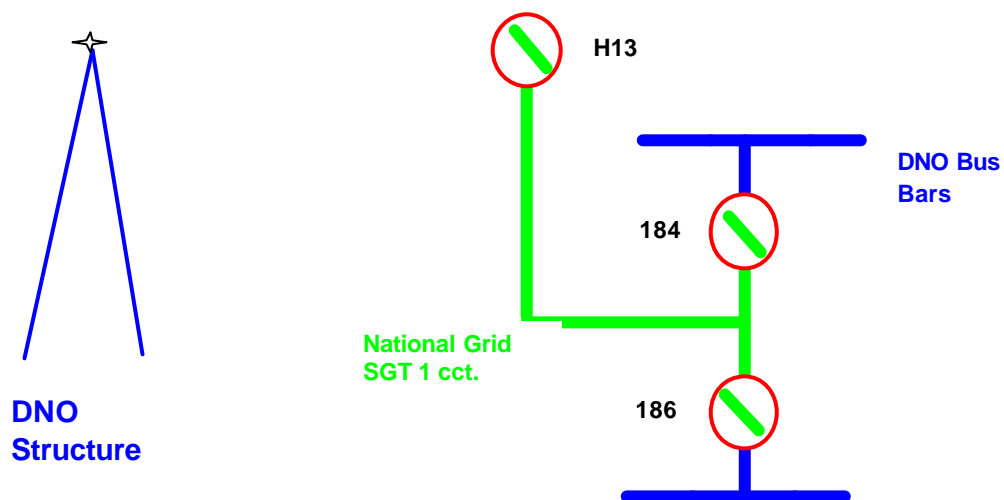


Attachment 4

Case Study: Third Parties Working In Proximity to NGC HV Equipment

National Grid and Users, through the Safety Co-ordinators, manage safety across HV control boundaries when working on electrical equipment.

- OC8 has been changed to give guidance on how work near to other's equipment within a Connection Site shall be managed.
- Previously no guidance was given on how Users or National Grid at a Connection Site requested and managed Safety Precautions when those Safety Precautions are required for work close to but not on the other's equipment.
- Where work is to be undertaken near to overhead/underground conductors of a System **within** a Connection Site, the Grid Code now defines the duties of Users/NGC Safety Co-ordinators/SAPs, to enable the work to be completed safely.

An example to illustrate the issues within a Connection Site

An example of a situation which, on occasion, arises in practice is shown in the diagram above:

- The example illustrates work taking place by Distribution Network Operator (DNO) staff or one of its contractors at one of its substations to erect (or dismantle) a structure where the structure (or a crane) could come into contact with the National Grid circuit during the lifting operation.
- In this example, no circuit or busbar owned by the DNO is close enough such that the structure (or a crane) could come into contact with their system.
- Clearly, the parties could be reversed, with National Grid staff working at one of its substations with a risk of contact with DNO owned Equipment, and the example could just as readily be at a Power Station Site.

Work Near Person's Own Equipment

There is also the possibility that the work will be taking place near to the DNO's own circuit, necessitating the Isolation and Earthing of that circuit and of the other's circuit connected to it. This is similar to OC8 as previously written, except that OC8 previously only applied where work was being carried out **on** a circuit.

Working Outside Connection Sites

The Health & Safety Executive Guidance Note, GS6 Avoidance of Danger From Over Head Electric Lines gives guidance on how working near to equipment must be managed covering how such hazards should be managed **outside** Connection Sites. It would not be appropriate, or indeed possible, to deal with this within the Grid Code, due to the likelihood that the relevant person would not be a party to the Grid Code.

Third Party Working

There may be situations where third parties other than Users or National Grid require this 'proximity' working within substations. This is a matter between the third party and the operator of the equipment that the third party will be working close to, and cannot be covered by the Grid Code as the third party will not be a party to the Grid Code.

Compatibility with HSE Regulations

Regulation 4(3) and 14 of the Electricity at Work Regulations reflect that the concept of "work" on electrical conductors includes "work on or near" to those electrical conductors. In National Grid and many other Users' Safety Rules this concept of "work on or near" is defined and reflects the requirement of those Regulations.

Case Study Exercise

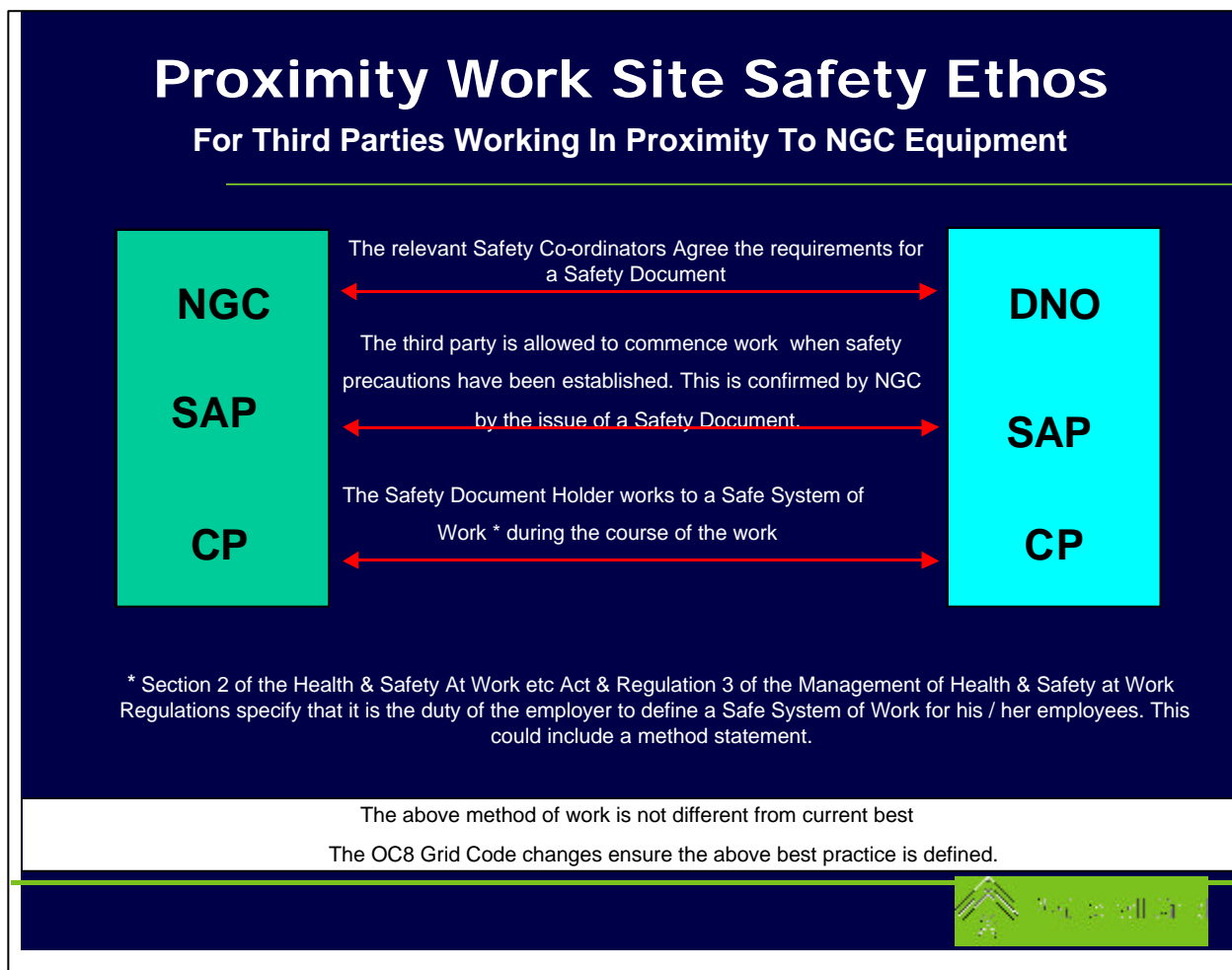
1. Complete a PFW to cover for the third party work that controls the hazard from the NGC circuit.
2. How does this PFW fit into the other work on the DNO structure?

NGC SAPs Guidance
For Third Party Working In Proximity To NGC HV Equipment Within A Sub Station

Forthcoming changes in the Grid Code Operating Code 8 (OC8) will give guidance on how third parties shall control work in proximity to NGC HV equipment.

The slide below is an extract from the Eaking lesson plans developed for new & refresher training of SAPs & Safety Controllers. NGC Health & Safety Professionals have kindly assisted in developing this policy.

For the full lesson plan please contact Richard Scarth on 433 2282.



- It is the employer's duty to develop a Safe System of Work.
- The Safe System of Work has to specify how work, which is in close proximity to the NGC HV equipment is controlled by the Safety Document that allows approach to NGC's equipment.
- The NGC Safety Document is that part of the Safe System of Work, which controls the risk from the NGC HV system.
- The above helps to clarify how NGC can assist the third party employer in developing those measures needed to carry out their duties.
- NGC's internal procedure WE 1030 define how third parties can be made competent to receive the NGC Safety Documents.

