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NATIONAL SAFETY INSTRUCTION

UK BP/SE/NSI 33 THE ADDITION/REMOVAL OF EQUIPMENT TO/FROM THE SYSTEM

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THE ADDITION/REMOVAL OF EQUIPMENT TO/FROM THE SYSTEM

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THE ADDITION/REMOVAL OF EQUIPMENT TO/FROM THE SYSTEM

1 SCOPE

NGC Safety Rule R.1. 2, requires that **Equipment** shall only be added to or removed from the **System** in accordance with an **Approved** procedure. This procedure will determine when NGC Safety Rules apply or cease to apply. Where **Equipment** is to be added to or removed from a **System** subject to the application of NGC Safety Rules, this procedure must be followed.

When **Equipment** is to be added to or removed from a **System** subject to a third party's Safety Rules & where NGC undertakes the role of **Control Person (Safety)**, the principles of this procedure must be followed in conjunction with the third party's safety management system.

This procedure defines a safe system of working when adding *Plant* or removing **Equipment** to/from the **System**, and when changes in Name or Nomenclature for existing circuits or **Equipment** are required. This procedure provides a method of formally identifying the existence of **HV Equipment** to the *Off Site Control Person*.

Construction sites, (non-operational sites), are covered by this procedure where there is to be connection of Earthing, **LV**, or Mechanical services which require the interface to be managed.

OVERVIEW

When *Plant* is brought onto a NGC operational site it is immediately subject to the requirements of NGC Safety Rules. Before *Plant* can be connected or is readily connectable to the **HV System** it must be formally identified as **HV Equipment**.

The *On Site Control Person* in conjunction with the **Senior Authorised Person(s)** are responsible for the safety aspects of new *Plant* entering site until it is declared as part of the NGC **HV System** and defined as **Equipment**.

The *Off Site Control Person* has no responsibilities for the *Plant* until after it has been declared as **HV Equipment**. This two-stage process described recognises both **Control Person's** responsibilities.

The Site Responsibility Schedule will be amended to identify each **Control Person's** responsibility following the addition/removal of **Equipment** to/from the **System**.

The process of declaring an item of *Plant* as **HV Equipment** has also to be co-ordinated with the requirements of the *Operation Diagram*, Site Responsibility Schedule and the Management Systems of the **Control Person** taking responsibility for the **HV Equipment**.

Where the defined terms **Senior Authorised Person** and **Control Person** are used in this procedure, there will be no requirement for staff to be appointed to this procedure.

2 DEFINITIONS

Terms printed in bold type are as defined in the NGC Safety Rules.

Terms printed in Italics are defined as follows:

<i>Commissioning</i>	The preparation for and energising of Equipment for the first time. This is a two-stage process consisting of Stage 1 Commissioning & Stage 2 Commissioning. Further information is available in TP106 "Equipment Commissioning and Decommissioning".
<i>Commissioning Eng.</i>	Responsible for defining the arrangements for achieving safety from the System , to manage the implementation of UK BP/SE 304 requirements

	(including Operations Diagrams) and to confirm the adequacy of the health and safety file on completion.																
<i>HV System Change Certificate. (HVSCC)</i>	A certificate used to notify contractors and NG Operating Units when adding <i>Plant</i> or removing Equipment to/from the System , and changes in name or Nomenclature for existing circuits or Equipment. On the completion of Part 6 the changes defined in Part 3 become effective.																
<i>Notification of Change Certificate (NCC)</i>	A certificate used to notify Contractors and NGC Operating Units, of a change to the date on an existing <i>HVSCC</i> .																
<i>Occupier</i>	The person having control over the premises and who regulates and controls the work that is done there.																
<i>Occupiers Representative</i>	The person identified by the <i>Occupier</i> who will discharge the duties and responsibilities of the <i>Occupier</i> on the premises. On NGC Operational sites this will normally be the Delivery Manager. On NGC non-operational sites it will be a representative of the party who regulates and controls the work that is done there.																
<i>Off Site Control Person</i>	The Control Person (Operations) and Control Person (Safety) for the HV System as defined in the Site Responsibility Schedule. Where authorisations allow, this may be done by the <i>On Site Control Person</i> .																
<i>On Site Control Person</i>	A Senior Authorised Person (SAP 1 and/or 2 and 3) acting as the Control Person (Operation) and Control Person (Safety) for LV and mechanical Equipment . Where Equipment is to be transferred to a CPS1 a SAP1 is required.																
<i>Operations Diagram</i>	The series of NGC issued diagrams which define the following information: (Ref. TP 119 Operation Diagrams) <table border="0"> <tr> <td>Sheet 1</td> <td>S/S single line diagram</td> </tr> <tr> <td>Sheet 2</td> <td>S/S Technical Data Sheet</td> </tr> <tr> <td>Sheet 3</td> <td>S/S Gas Zones</td> </tr> <tr> <td>Sheet 4</td> <td>S/S Gas Zone Alarm Schedule</td> </tr> <tr> <td>Sheet 5</td> <td>S/S Oversailing Hazard Schedule</td> </tr> <tr> <td>Routes</td> <td>National Routes</td> </tr> <tr> <td>OHL</td> <td>OHL Technical Database</td> </tr> <tr> <td>Routes</td> <td>Oversailing Conductors Schedule</td> </tr> </table>	Sheet 1	S/S single line diagram	Sheet 2	S/S Technical Data Sheet	Sheet 3	S/S Gas Zones	Sheet 4	S/S Gas Zone Alarm Schedule	Sheet 5	S/S Oversailing Hazard Schedule	Routes	National Routes	OHL	OHL Technical Database	Routes	Oversailing Conductors Schedule
Sheet 1	S/S single line diagram																
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Sheet 3	S/S Gas Zones																
Sheet 4	S/S Gas Zone Alarm Schedule																
Sheet 5	S/S Oversailing Hazard Schedule																
Routes	National Routes																
OHL	OHL Technical Database																
Routes	Oversailing Conductors Schedule																
<i>Plant</i>	Electrical and/or Mechanical items, which are not part of the System and Disconnected from the System .																
<i>System Connection Form</i>	A document used to formally authorise connection of <i>Plant</i> subject to the control of another party's Safety Management System to the System . See appendix 2.																

<p><i>Third Party Isolation Request</i></p>	<p>This document is used to define, secure and maintain safety precautions across the interface of two Safety Management Systems. See appendix 4.</p>
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3 DOCUMENTATION

[HV System Change Certificate](#) (click for link)

[Notification of Change Certificate](#) (click for link)

[System Connection Form](#)

[Third Party Isolation Request](#)

4 PROCEDURE

4.1 REMOVAL OF HV EQUIPMENT

A permanent physical disconnection (greater than the **Safety Distance**) between the **Equipment** and the **HV System** will be established while the **Equipment** is part of the **HV System**, the **Equipment** will then be declared as being removed from the **HV System**. The former **HV Equipment** will then become *Plant*. Part A of an HVSCC will be completed & issued for this purpose.

4.2 CHANGE OF CIRCUIT NAME OR NOMENCLATURE

When **HV** circuit names or **Equipment** nomenclature change, the appropriate *Operation Diagrams* shall be updated. Part B of an HVSCC will be completed & issued for this purpose.

4.3 ADDITION OF PLANT

Prior to any physical connection being made between the **HV System** and *Plant*, the *Plant* shall be declared as part of the **HV System** and defined as **HV Equipment**. Part C of an HVSCC will be completed & issued for this purpose.

Note: completion of matrix in Part 3 N/A required for sections not used.

4.4 O.H.L. TOWERS & CONDUCTORS

The same principles as 1.1.1 , 2 ,3 shall apply to O.H.L. conductors. When **Equipment** (i.e. new conductors) are applied to a tower, the tower shall be made subject to **HV** safety rules. Subsequent addition of conductors to the other side of the tower will require those conductors to be declared as **Equipment** via the issue of a *HVSCC*.

Where a risk assessment defines that cross jumpering of Over Head Line double circuits is required, the action to add cross jumpers (inter circuit conductors) and the removal of jumpers to form a disconnected circuit will be defined on the *HVSCC* on completion of the cross jumpering.

4.5 ADDITION OF EARTHING, LV AND MECHANICAL PLANT

Prior to any physical connection being made between Earthing, **LV** and Mechanical *Plant*, these items will be declared by the *On Site Control Person* as part of the **System** and defined as **Equipment** using one of the following options:

- The *Plant* will become part of the **System** immediately prior to first connection.

- The *Plant* will become part of the **System** immediately after cancellation of the **Safety Document**, that has been issued for the purpose of *Connection* of the new **Equipment**.
- The completion of the System Connection Form Part 4 Item 2 (Appendix 2) where the third party confirms that the *On Site Control Person* is now responsible for the *Plant* defined in Section 1 of this form. Note: When using this form *Plant* does not have to be declared as **Equipment** before the third party's *Plant* is connected to the **System**.

The Commissioning Method Statement, Commissioning Switching Programme and Site Specific Risk Assessment and Method Statements shall detail the methods of work. The *On Site Control Person* shall ensure that site drawings and records of the **System** are updated and relevant personnel made aware of the changes.

4.6 REMOVAL OF EARTHING, LV / MECHANICAL EQUIPMENT

Following the physical disconnection being made between Earthing, LV and Mechanical **Equipment**, and the rest of the **System** those items will be declared as not being part of the **System** and defined as *Plant*, using one of the following options:

- The **Equipment** will become *Plant* after the last disconnection from the **System**.
- The **Equipment** will become *Plant* immediately after cancellation of the **Safety Document** that has been issued for the purpose of disconnecting the **Equipment** from the **System**.

The Commissioning Method Statement, Commissioning Switching Programme and Site Specific Risk Assessment and Method Statements shall detail the methods of work. The *On Site Control Person* shall ensure that site drawings and records of the **System** are updated and relevant personal made aware of the changes.

4.7 TRANSFER OF CONTROL PERSON

When **Equipment** is transferred from the Safety Rules of NGC to or from the Safety Management System of another company the Site Responsibility Schedule (Ref TP136 "Responsibility Schedules") shall be updated and signed by all interested parties prior to the transfer. Part D of the HVSCC should be used to define the **Equipment** & control party at the start & finish of the process.

4.8 TEMPORARY REMOVAL OF EQUIPMENT FROM THE SYSTEM

Equipment temporarily removed from the **System**, e.g. for workshop repair, return to manufacturers etc, shall be considered to be not subject to the requirements of the Safety Rules from the time of removal from the normal position until the time of return or replacement. e.g. circuit breakers are not subject to HV Safety Rules when in the Refurb. Centre.

An HVSCC is not required. On site procedures shall define how residual dangers will be managed.

4.9 TIME SCALES

Where due to unforeseen circumstances the timescales for a HVSCC cannot be adhered to, all relevant parties must seek the agreement of the Network Operations Centre Manager before Part 2 of the certificate can be completed.

4.10 SYSTEM CONNECTION FORM (Appendix 2)

On Earthing, LV and Mechanical *Plant*, prior to a connection between the **System** and a third party's system, the third party's Safety Management System will be assessed and recorded to be adequate by the *Occupiers Representative*.

4.11 THIRD PARTY ISOLATION REQUEST (Appendix 4)

The third party shall have a Safety Management System formally agreed with the *Occupiers Representative*, to adequately manage the hazards presented.

The responsibilities for Safety Management on both sides of the connection shall be agreed and defined in writing using the form.

5 DOCUMENT COMPLETION

This procedure needs to be read in conjunction with the relevant parts of TP106.

The *Commissioning Engineer* will be appointed by an appropriate manager. The *Occupiers Representative* has the responsibility to produce the relevant documents and certificates.

Where the **Control Person Safety (HV)** is not at the Network Operations Centre the certificates must be amended as appropriate.

The same HVSSC shall be used for all related changes on the **System** that take place at the same time & locations. Changes to a HVSCC shall be controlled by reissuing the *HVSCC* with a new revision number. The defined changes will not become effective until Part 6 of the *HVSCC* has been completed.

Sections of the certificates shall be completed in the defined order.

The certificates shall be numbered from a register accessed via the Intranet. [Click here for link in the SAP Briefcase](#)

The forms in appendix 2 & 4 shall be uniquely sequentially numbered from a register managed by the *Commissioning Engineer*.

Appendix 1 flow chart describes the process of completing a *HVSCC*.

Appendix 3 flow chart describes the process for completing *System Connection Form*.

6 REFERENCES

TP 106 Equipment Commissioning and Decommissioning
TP 119 Operations Diagrams
TP 136 Site Responsibility Schedules

7 APPENDICES

HV System Changes Certificate, flow chart

System Connection Form (SCF)

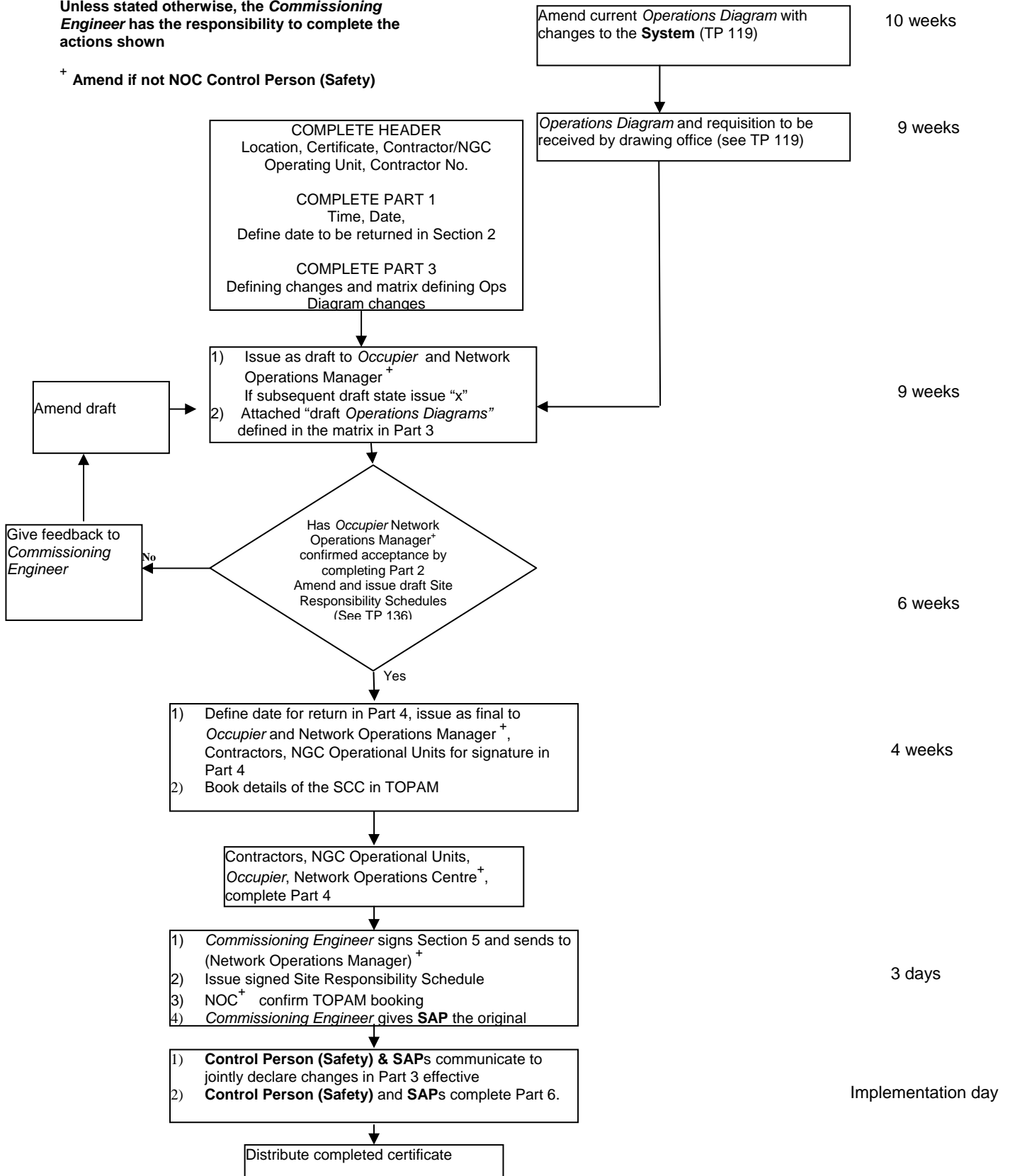
System Connection Form, flow chart

Third Party Isolation Request

H.V. SYSTEM CHANGE CERTIFICATE (HVSCC) Flow chart

Unless stated otherwise, the **Commissioning Engineer** has the responsibility to complete the actions shown

+ Amend if not NOC Control Person (Safety)



SYSTEM CONNECTION FORM (SCF) (EARTHING, LV AND MECHANICAL)

This document formally authorises connection of *Plant* under the control of another party's Safety Management System to the **System**

LOCATION.....

NUMBER.....

PART 1 – DESCRIPTION

Plant and where it is Connected to the **System**

PART 2 – SANCTION

I agree to the connection specified in Part 1 from Hrs on

Name..... Signature..... Time..... Date.....
NGC On Site Control Person

PART 3 – ISSUE

I agree to the connection onto the NGC **System** as specified in Part 1 and accept, on behalf of the Company named below, responsibility for the Management of Safety within our control. The point of connection will always be part of the NGC **System**.

Name..... Signature..... Time..... Date.....

Company.....

PART 4 – CANCELLATION

The connection specified in Part 1 shall be :-

- * 1. Disconnected as fromhrs. on
- * 2. *Plant added* to the **System** under the control of the **Senior Authorised Person** acting as the *On Site Control Person*

Declaration by the Company, associated with option 2

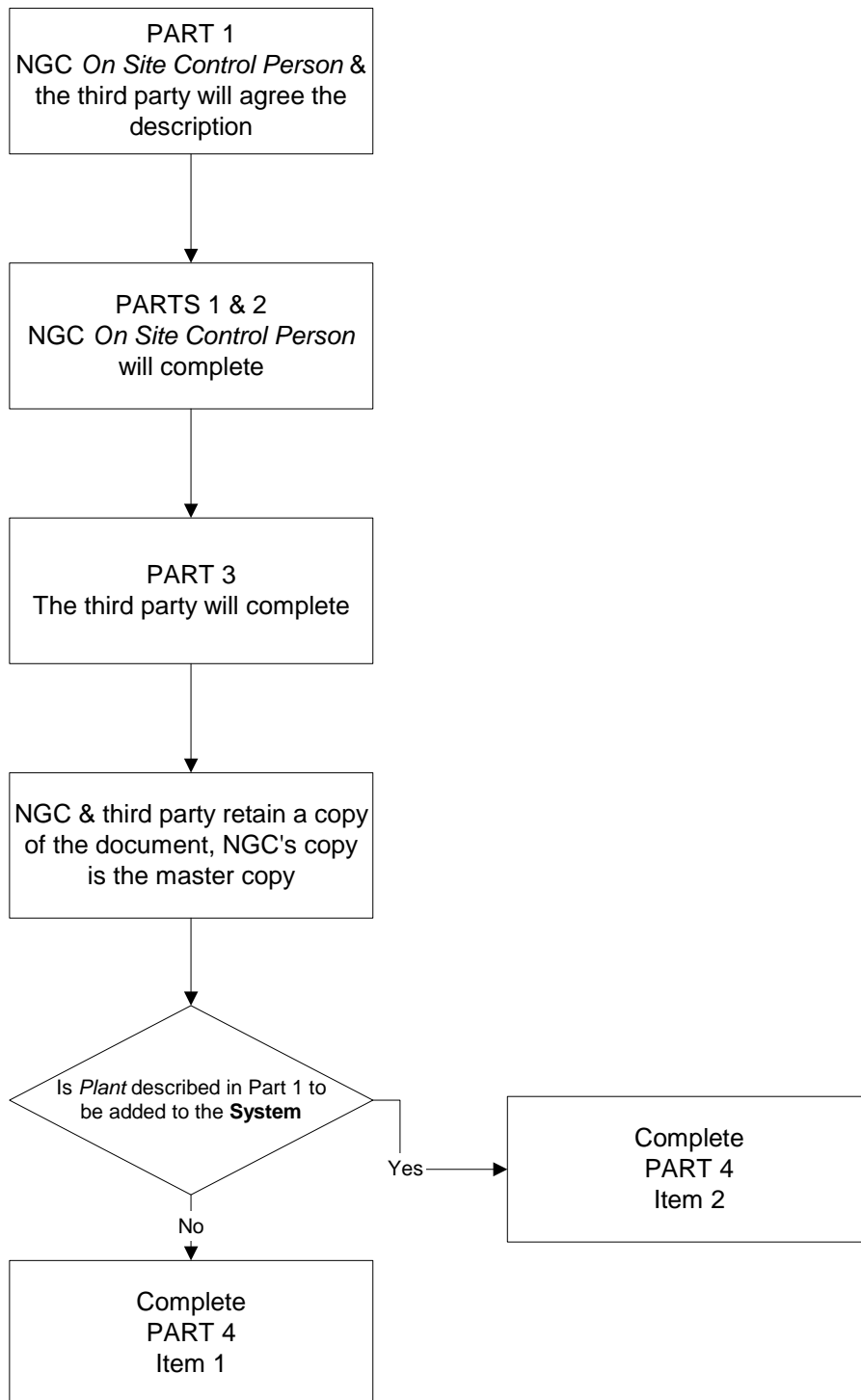
I confirm that all persons in my charge have been warned that the *Plant* specified in Part 1 will become part of the NGC **System** and that no further work shall be done on or near to the **Equipment** unless it is sanctioned by a **Senior Authorised Person** in accordance with the requirements of the NGC Safety Rules

Company
Name..... Signature..... Time..... Date.....

NGC
Name..... Signature..... Time..... Date.....
On Site Control Person

* Delete as appropriate

SYSTEM CONNECTION FORM



THIRD PARTY ISOLATION REQUEST (EARTHING, LV AND MECHANICAL EQUIPMENT)

This certificate is used to define and secure & maintain safety precautions across the interface of two Safety Management Systems.

LOCATION.....

NUMBER.....

Part 1	Plant (Third Party)			
Part 2	Work to be done (Third Party)			
Part 3	Precautions to achieve Safety from the System , cross boundary (Agreed between Third Party and NGC <i>On Site Control Person</i>)			
Part 4	Confirmation that the above Safety Precautions have been established and will not be removed until this document has been cancelled. (<i>On Site Control Person</i>)	Signature	Name	
		NGC	Time	Date
Part 5	Receipt (Third Party)	Signature	Name	
		Company Name	Time	Date

CLEARANCE				
Part 6	Confirmation that the above Safety Precautions are no longer required. (Third Party)	Signature	Name	
		Company Name	Time	Date

CANCELLATION				
Part 7	Acknowledgement (<i>On Site Control Person</i>)	Signature	Name	
		NGC	Time	Date