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NR/L3/ELP/29987

Module X

Securing of points of disconnection for earthed isolations on new electrification infrastructure

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1 Purpose

This module defines the requirements for securing points of disconnection, creating points of isolation, when implementing an Earthed Isolation.

This module combines relevant local Supplementary Isolation Processes (SIP) that have been implemented into one process and provides a consistent securing process for all future applications.

The requirements include the specific rules and procedures to be followed so that a sufficient documented safe system of work is prepared and implemented that complies with the Electricity at Work Regulations 1989, specifically Regulation 12.

2 Scope

This module is applicable **only** to areas that are required to adopt a process for securing points of disconnection to form points of isolation (a SIP process) and all future sections of electrification of Network Rail infrastructure.

The requirements of this module are applicable to Network Rail personnel and to Network Rail's contractors.

This module does not include requirement for the following:

- Work on or about Network Rail controlled infrastructure equipped with the 1500V d.c. overhead line system (Sunderland Metro System Operating Area – Module Z).

3 Definitions

For the purpose of this module, the following definitions apply.

Earthed Isolation	The entire process of disconnection, separation, providing securely isolated equipment, earthing and the issue of relevant safety document. *The term 'Isolation' is used in Module 7 to refer to power being disconnected and earths applied prior to a Form C being issued. The main text in Module 7 does not state the requirement to secure the isolation in accordance with the requirements of this module.*
Fixed earthing device	An earthing device forming a permanent part of the fixed electrification infrastructure that can be used as a Circuit Main Earth or Additional Earth.
New electrification	Electrification schemes authorised under the Railway Interoperability Regulations 2011 and/or new sections of electrified route electrified post 2013.
Point of disconnection	The point at which the electrical equipment is disconnected from a source of electrical energy, i.e. OLE disconnector

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Point of isolation	A secure point of disconnection & separation that is secured by the Nominated Person or person(s) authorised to secure disconnectors as instructed by the Nominated Person. *NOTE: Disconnectors that are required to be uniquely secured are identified in the Isolation instructions in the "Point of Isolation" column.*
Securing	Application of unique safety lock to form point of isolation
Supplementary Isolation Process (SIP)	A process for securing of points of disconnection using a unique padlock (creating a point of isolation).
Unique safety lock	A unique lock exclusively under the control of a single Nominated Person for the sole purpose of securing points of disconnection and separation.

4 Application principles

Securing of points of isolation shall only be carried out where prescribed in the Isolation Instructions.

An example of an isolation instruction is contained in Appendix A.

Securing of points of isolation is a requirement for all newly electrified sections of Network Rail infrastructure, unless agreed by the Professional Head of Contact Systems (a.c./d.c.), and shall be implemented prior to entry into service.

The requirement to implement securing of the points of isolation may be relaxed for minor extensions to existing electrification systems. Relaxation of the requirement will only be granted if supported by an explicit risk assessment and time-bound plan for securing of the points of isolation throughout the route.

Normally open and alternate feed disconnectors shall be secured if forming a point of isolation.

Securing of normally open disconnectors not forming a point of isolation is not required.

When taking an Earthed Isolation across the boundary of a newly electrified section and existing electrification, securing shall only be applied to the 'points of isolation' within the newly electrified area.

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5 Interface with existing modules

The requirements of all modules remain unchanged with the exception of Module 7.

5.1 Module 7 – Isolation and Earthing of Overhead Line Equipment

Module X provides additional requirements and guidance for Module 7, clause 8 with respect to securing measures when implementing Earthed Isolation for New Electrification areas.

The Form for Authority to Test (Form B) and the Form for Switching, Testing and Earthing Details (Form STED) have been modified to allow additional securing to be implemented and are now referred to as Form GBSIP B and Form GBSIP STED – see model forms in Appendix C and Appendix D respectively. Adopting the requirements of clauses 6 and 7 of this module enables compliance with the relevant requirements of Module 7 for New Electrification areas.

NOTE: Clause 6.3 provides additional requirements for the legacy area of Western Route.

6 Implementation of an Earthed Isolation

6.1 General

Earthed isolation shall be implemented in accordance with the isolation diagrams and isolation instructions.

The sequential steps that shall be followed for implementing an Earthed Isolation are detailed in Appendix B – Process Flow Chart.

The Nominated Person shall prepare the Form(s) GBSIP STED (Appendix C) and the Form GBSIP B (Appendix D) in preparation of the works being implemented and agree the details with the Authorised Person(s) and ECO respectively. Both Forms shall identify the securing requirements for an Earthed Isolation.

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6.2 Disconnection and Separation

The ECO shall arrange for the necessary electrical sections to be electrically disconnected and separated from sources of electrical supply using remotely operated devices in preparation of an Earthed Isolation.

Additional local switching to achieve electrical separation shall be completed by Authorised Person(s) in accordance with the requirements identified on the Form(s) GBSIP STED upon instruction from the ECO.

The ECO shall issue the Nominated Person with Form GBSIP B part 1 in the form of a unique numbered message.

Where a Fixed Earthing Device is operated it shall be recorded as both a switching and earthing location on the STED.

NOTE 1: Fixed Earthing Devices can be operated (either locally or remotely) as outlined in clause 6.3, prior to the issue of the Form GBSIP B part 1, providing that it has been pre-agreed with the Nominated Person.

NOTE 2: The 'test before earth' principle does not apply to remotely controlled, or manually operated fixed earthing devices when operated under the direction of the ECO.

NOTE 3: The Authorised Person can provide the securing outlined in clause 6.3 prior to the issue of the Form GBSIP B part 1, providing that it has been pre-agreed with the Nominated Person and securing is recorded on the Form GBSIP STED.

6.3 Securing

The Nominated Person(s), or Authorised Person(s) acting on behalf of the Nominated Person(s), shall confirm that the disconnectors are secured by visually checking that they are in the 'OPEN' or 'ALT' position as planned.

Once the position of the disconnector is confirmed then the Nominated Person(s), or Authorised Person(s) acting on behalf of the Nominated Person(s) shall either:

a) Attach a unique safety padlock (red pad lock in Figure 1) to the OLE disconnector handle via the multi-hasp; or
b) locking the OLE disconnector handle with its designated lock then securing the designated padlock key in a lock-off box before applying a unique safety padlock to the box via the multi-hasp. The lock-off box cannot be used for the purpose of securing, if it contains another designated padlock key that is not being secured as part of the Earthed Isolation.

Following the application of security, caution notices shall be applied to the OLE disconnector handle.

Where appropriate, the Authorised Person may secure the OLE disconnectors on instruction from the Nominated Person by following the details provided on the Form GBIP STED.

Figure 1 shows typical arrangements for manually securing a manual disconnector.

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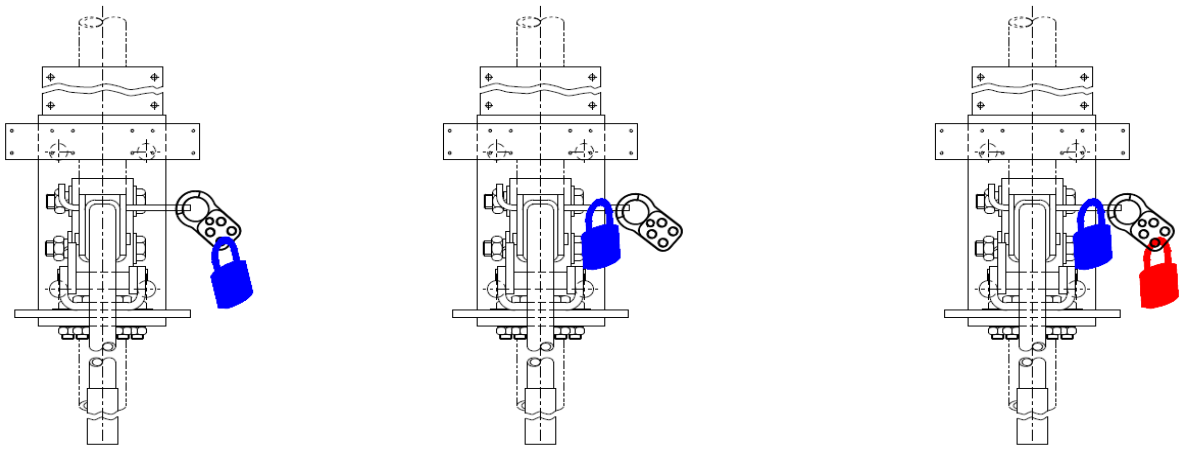

Stage 1 – Before Operation
Disconnector secured by a designated padlock connected to the multi-hasp arrangement.

Stage 2 – Post Operation
Disconnector secured by a designated padlock, multi-hasp arrangement is attached ready to add a unique safety padlock.

Stage 3 – Secured
Disconnector secured by a designated padlock and unique safety padlock connected to the multi-hasp arrangement.

Figure 1 – Stages of manual securing a manual OLE disconnector with a unique safety padlock (example of Option a)

Where motorised OLE disconnectors are installed they may be operated remotely or locally before a manual securing method is applied.

The method for securing motorised OLE disconnectors may vary between areas. Details will be provided in the local process briefing.

Where more than one Nominated Person is issued with a Form GBSIP B for the same electrical section(s), each Form GBSIP B holder shall be responsible for applying their own securing and caution notices at the disconnector.

NOTE 1: with prior agreement a single Authorised Person may act on behalf of multiple Nominated Persons.

The Nominated Person shall inform the ECO that the OLE disconnectors have been secured and the unique key or code is under their control. Both parties shall record the details in part 2 of their copy of the Form GBSIP B.

Within the legacy area of the Western Route as defined in Appendix E, a point of disconnection within the electrical distribution equipment may be used as a Point of Isolation without further securing measures provided that the ECO has applied a SCADA inhibit against inadvertent operation.

6.4 Testing and Earthing

6.4.1 Earthed Isolation

The Nominated Person shall liaise with the ECO to complete part 2 of their copy of the Form GBSIP B to complete testing and earthing, including instructing Authorised Persons to test and earth following the directions provided on the Form GBSIP

STED. These actions shall be carried out in accordance with Module 7, clause 10 and clause 11.

Upon completion of part 2 of the Form GBSIP B, the Nominated Person should proceed to issue an Overhead Line Permit.

6.5 Altering the Extent of an Earthed Isolation

Where there is a requirement to alter the extent of an existing Earthed Isolation the requirements identified in Module 7 shall be adopted together with the measures identified in Appendix B of this Module.

7 Restoration Following an Overhead Line Permit

The sequential steps that shall be followed for the restoration of infrastructure following an Overhead Line Permit are shown in Appendix B – Process Flow Chart.

When all works are completed, the COSS (OLP) shall clear the work site of all persons, plant and materials. Overhead Line Permits shall be cancelled in accordance with the requirements of Module 7, clause 22.

The Nominated Person shall instruct the Authorised Person(s) to remove any Circuit Main Earths (CMEs) at all relevant locations.

Removal of earthing associated with an Overhead Line Permit shall be completed in accordance with Module 7, clause 23.

The Nominated Person shall instruct the Authorised Person(s) to remove caution notices and release the GBSIP safety locks from the disconnectors before requesting the ECO to remove all remotely applied earthing devices.

Once all Overhead Line Permits associated with a Form GBSIP B have been cancelled, earthing removed and securing arrangements released, the Nominated Person may declare the Overhead Line Equipment fit for the passage of electric traction.

Both the Nominated Person and ECO shall sign part 3 of their respective copies of the Form GBSIP B to confirm cancellation.

The ECO shall instruct the Nominated Person to arrange for switching to be completed to restore the infrastructure to its original configuration if required. If required the Authorised Person shall complete switching on behalf of the Nominated Person in accordance with the requirements identified on the Form(s) GBSIP STED.

If necessary, the ECO shall then close, or arrange to close, the appropriate circuit breaker(s) to permit electric train operation and cancel the Block to Electric Trains in accordance with Module 7, clause 25.

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8 Management of staff training and competence

All Nominated Person/Authorised Person(s) shall be formally trained and assessed on the local securing arrangements, including the processes around specific disconnector types.

The Electrical Control Operators shall receive a general awareness briefing of the local securing process.

Staff who have not been trained/briefed on the process shall not undertake the duties of Nominated Person, Authorised Person or Electrical Control Operator within an area applying securing of points of isolation.

A register of Nominated Persons and Authorised Person who have been trained shall be controlled by the local Route Asset Manager [E&P] and a controlled copy held by the relevant Electrical Control Room.

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Appendix A – Example Isolation Instruction

A.C. Electrified Lines
Overhead Line Equipment
Electrical Isolation Instructions

CONTROLLED DOCUMENTATION
(Uncontrolled when printed or saved locally)

Sheet: XXX SHT20 Issue: 099
Date: 15/04/2090
Checked: Checker (DPE) or RAM delegated authority
Checked: Checker (Route)
Approved: Approver (RAM)

Isolation Diagram Set name:
Form AE with: -

NR/L3/ELP/29987 MODULE X SHALL BE IMPLEMENTED FOR ALL POINTS OF ISOLATION. SEE LOCAL INSTRUCTIONS.

Electrical Section or	Lines Isolated	Limits of Isolation		Circuit Breaker / Disconnector (Switch)			Remarks
Sub-section		From	To	Open Remotely	Open Manually	Point of Isolation	
CX-7 Complete	**Up Fylde**	PB09/20	PB01/28	PN/CX-7	CX-7 2F	CX-7 2F CX-7B CX-5A	For this isolation, switch No. CX -7B CX-5A MUST be secured in the normally open position.
CX-7B	**Up Fylde**	PB09/04	PB01/28	PN/CX-7	CX-7 2F	CX-7 2F CX-7B CX-5A	For this isolation, switch No. CX -7B CX-5A MUST be secured in the normally open position.
CX-7XX (Permanently Earthed)	**Up Fylde**	PB09/20 (Permanent Earth)	PB09/08 (Permanent Earths)				No Form AE Required.

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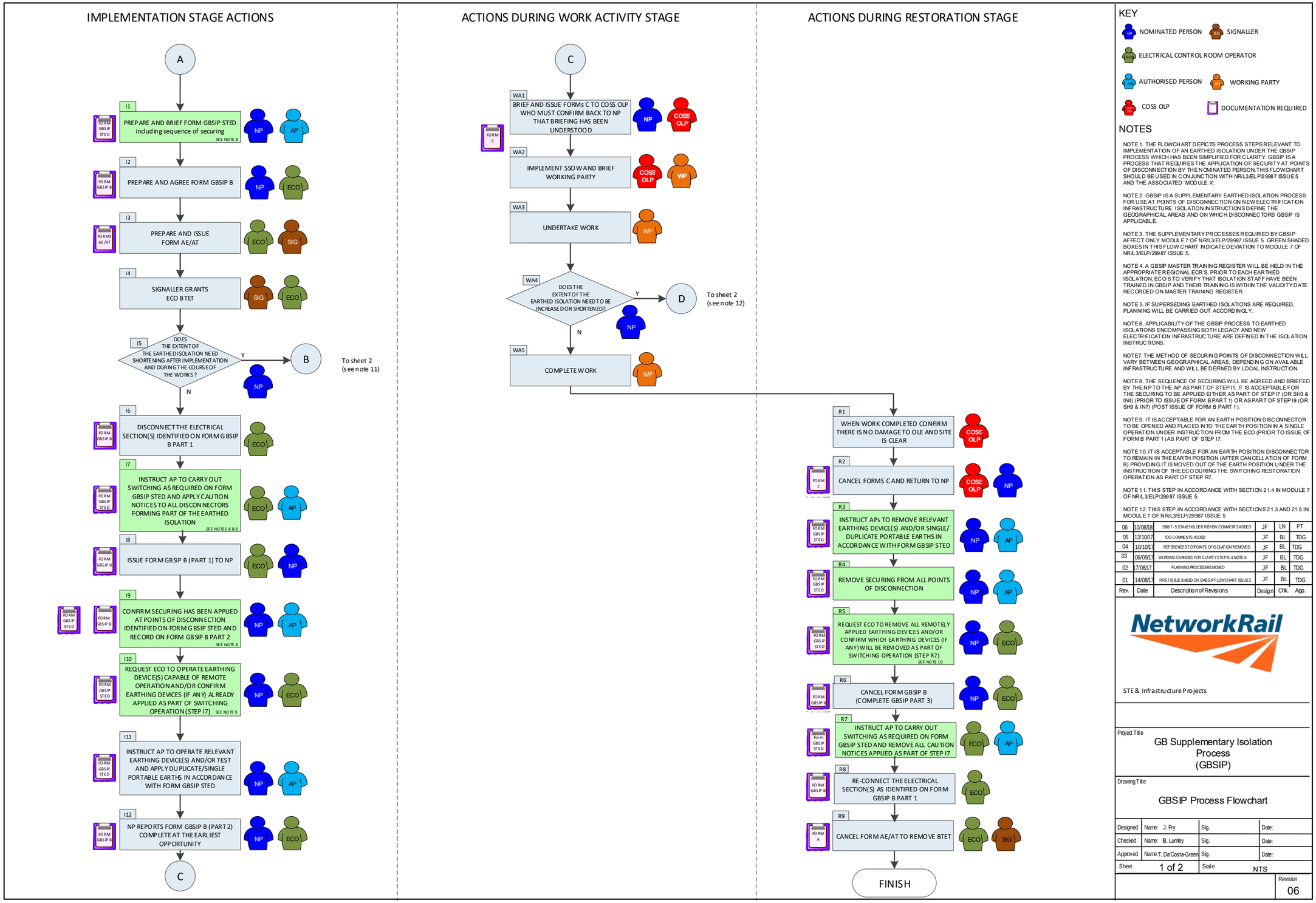
Appendix B – Process Flowchart



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IMPLEMENTATION STAGE ACTIONS

From sheet 1

B

SHORTENING THE EXTENT OF AN EARTHED ISOLATION

SH1 — DISCONNECT THE ELECTRICAL SECTION(S) TO BE COVERED BY THE SUPERSEDING (SHORTENED) EARTHED ISOLATION IDENTIFIED ON THE FORM GBSIP B PART 1 — ECO

SH2 — INSTRUCT AP TO CARRY OUT SWITCHING AS REQUIRED ON FORM GBSIP STED FOR THE SUPERSEDING (SHORTENED) EARTHED ISOLATION AND APPLY CAUTION NOTICES TO ALL DISCONNECTORS FORMING PART OF THE EARTHED ISOLATION — SEE NOTE 9 — FORM GBSIP STED — ECO, AP

SH3 — ARRANGE FOR TESTING OF EACH SEPARATELY ISOLATED SECTION OR SUBSECTIONS TO CONFIRM THAT THEY HAVE BEEN DE-ENERGISED — ECO, NP, AP

SH4 — CONFIRM SECURING HAS BEEN APPLIED AT POINTS OF DISCONNECTION IDENTIFIED ON FORM GBSIP STED AND RECORD ON FORM GBSIP B PART2 — SEE NOTE 8 — FORM GBSIP STED, FORM GBSIP B — AP, NP

SH5 — DOES THE EARTHED ISOLATION REQUIRE MORE THAN A SINGLE STAGE OF SHORTENING? — NP

Y → SHORTENING THE EXTENT OF AN EARTHED ISOLATION

N

SH6 — DISCONNECT THE ADDITIONAL ELECTRICAL SECTIONS TO BE COVERED BY THE INITIAL WIDER REQUIREMENTS OF THE FORM GBSIP B PART 1 — FORM GBSIP B — ECO

SH7 — INSTRUCT AP TO CARRY OUT SWITCHING AS REQUIRED ON FORM GBSIP STED AND APPLY CAUTION NOTICES TO ALL DISCONNECTORS FORMING PART OF THE EARTHED ISOLATON — SEE NOTE 9 — FORM GBSIP STED — ECO, AP

SH8 — ISSUE INITIAL WIDER FORM GBSIP B (PART1) TO NP — FORM GBSIP B — ECO, NP

SH9 — CONFIRM SECURING HAS BEEN APPLIED AT POINTS OF DISCONNECTION IDENTIFIED ON FORM GBSIP STED AND RECORD ON FORM GBSIP B PART 2 — SEE NOTE 8 — FORM GBSIP STED, FORM GBSIP B — NP, AP

SH10 — REQUEST ECO TO OPERATE EARTHING DEVICE(S) CAPABLE OF REMOTE OPERATION. ECO TO CONFIRM EARTHING DEVICES (IF ANY) ALREADY APPLIED AS PART OF SWITCHING OPERATION (STEP SH7) — SEE NOTE 9 — FORM GBSIP STED — NP, ECO

SH11 — THE DISCONNECTORS EFFECTING THE SHORTENED ISOLATION THAT WERE OPENED IN STEP SH1 SHALL BE TREATED AS DISCONTINUITIES — FORM GBSIP STED — ECO, AP

SH12 — INSTRUCT AP TO OPERATE RELEVANT EARTHING DEVICES AND/OR TEST AND APPLY DUPLICATE/SINGLE PORTABLE EARTHS IN ACCORDANCE WITH FORM GBSIP STED. THIS TO INCLUDE EARTHS APPLIED EITHER SIDE OF DISCONTINUITIES CREATED AS PART OF STEP SH11 — FORM GBSIP STED — NP, AP

SH13 — NP REPORTS INITIAL WIDER FORM GBSIP B (PART 2) COMPLETE AT THE EARLIEST OPPORTUNITY — FORM GBSIP B — NP, ECO

C

To sheet 1

ACTIONS DURING WORK ACTIVITY STAGE

From sheet 1

D

WAS — DOES THE EXTENT OF THE EARTHED ISOLATION NEED TO BE INCREASED OR SHORTENED? — NP

INCREASING THE EXTENT OF AN EARTHED ISOLATION

Increased

IN1 — ARRANGE FOR A INCREASED BTET TO BE IMPLEMENTED — FORM A — ECO, SIG

IN2 — CANCEL SUPERSEDED FORM AE/AT — FORM A — ECO, SIG

IN3 — DISCONNECT THE ELECTRICAL SECTION(S) TO BE COVERED BY THE INCREASED EARTHED ISOLATION IDENTIFIED ON THE FORM GBSIP B PART 1 — FORM GBSIP B — ECO

IN4 — INSTRUCT AP TO CARRY OUT SWITCHING AS REQUIRED ON FORM GBSIP STED FOR THE INCREASED EARTHED ISOLATION AND APPLY CAUTION NOTICES — SEE NOTES 8 &9 — FORM GBSIP STED — ECO, AP

IN5 — DISCONNECTORS IN THE OPEN POSITION FROM THE INITIAL FORM GBSIP B SHALL NOT BE OPERATED BUT REMAIN OPEN — ECO, NP, AP

IN6 — ISSUE INCREASED FORM GBSIP B (PART 1) TO NP — FORM GBSIP B — ECO, NP

IN7 — CONFIRM SECURING HAS BEEN APPLIED AT POINTS OF DISCONNECTION IDENTIFIED ON FORM GBSIP STED AND RECORD ON FORM GBSIP B PART 2 — SEE NOTE 8 — FORM GBSIP STED, FORM GBSIP B — NP, AP

IN8 — REQUEST ECO TO OPERATE EARTHING DEVICE(S) CAPABLE OF REMOTE OPERATION AND/OR CONFIRM EARTHING DEVICES (IF ANY) ALREADY APPLIED AS PART OF SWITCHING OPERATION (STEP IN4) — SEE NOTE 9 — FORM GBSIP STED — NP, ECO

IN9 — INSTRUCT AP TO OPERATE RELEVANT EARTHING DEVICE(S) AND/OR TEST AND APPLY DUPLICATE/SINGLE PORTABLE EARTHS IN ACCORDANCE WITH FORM GBSIP STED — FORM GBSIP STED — NP, AP

IN10 — DISCONNECTORS IN THE OPEN POSITION EFFECTING THE INITIAL FORM GBSIP B TO BE TREATED AS DISCONTINUITIES — FORM GBSIP STED — ECO, AP

IN11 — INSTRUCT AP TO APPLY EARTHS EITHER SIDE OF DISCONTINUITIES CREATED AS PART OF STEP 1N10 — FORM GBSIP STED — NP, AP

IN12 — EXCHANGE DETAILS OF PART 2 OF THE INCREASED GBSIP FORM B — FORM GBSIP B — NP, ECO

IN13 — TRANSFER THE DETAILS OF THE FORMS C WHICH REMAIN IN FORM TO THE INCREASED GBSIP FORM B — FORM GBSIP B, FORM C — NP

IN14 — INFORM THE ECO WHEN ALL NEW EARTHING DEVICES AND PORTABLE EARTHS ARE IN PLACE, PROVIDE DETAILS OF ALL NEW AND TRANSFERRED FORMS Cs AND CONFIRM THAT THE EXISTING EARTH DETAILS HAVE BEEN TRANSFERRED TO THE NEW FORM GBSIP B — FORM GBSIP B — NP, ECO

IN15 — CANCEL IN ITIAL SHORTER FORM GBSIP B (COMPLETE WIDER FORM GBSIP B PART 3) — FORM GBSIP B — NP, ECO

C

To sheet 1

SHORTENING THE EXTENT OF AN EARTHED ISOLATION

Shortened

SH14 — CHECK AND CONFIRM TO ECO THAT ALL WORKSITES, FORMS C AND ASSOCIATED EARTHING DEVICES AND PORTABLE EARTHS ARE WITHIN THE LIMITS OF THE SHORTENED FORM GBSIP B — NP, ECO

SH15 — ARRANGE FOR A SHORTENED BTET TO BE IMPLEMENTED — FORM A — ECO, SIG

SH16 — ISSUE SHORTENED FORM GBSIP B (PART 1) TO NP — FORM GBSIP B — ECO, NP

SH17 — EXCHANGE DETAILS OF PART 2 OF THE SHORTENED GBSIP FORM B — FORM GBSIP B — NP, ECO

SH18 — CANCEL SUPERSEDED FORMS C — FORM C — NP

SH19 — TRANSFER THE DETAILS OF FORMS C WHICH REMAIN IN FORCE TO THE SHORTENED FORM GBSIP B — FORM C, FORM GBSIP B — NP

SH20 — INFORM THE ECO OF ALL TRANSFERRED FORMS C (S) CONFIRM THAT THE DETAILS OF ALL EXISTING EARTHING DEVICES AND PORTABLE EARTHS IN THE SHORTENED AREA HAVE BEEN TRANSFERRED TO THE NEW FORM GBSIP B — FORM GBSIP B — NP, ECO

SH21 — INSTRUCT APs TO REMOVE EARTHING DEVICE(S) OR DUPLICATE PORTABLE EARTH(S) AT RELEVANT LOCATION(S) AND ALL OTHER PORTABLE EARTHS IN THE AREA TO BE ENERGISED IN ACCORDANCE WITH FORM GBSIP STED — FORM GBSIP STED — NP, AP

SH22 — REMOVE SECURITY FROM RELEVANT POINTS OF DISCONNECTION ASSOCIATED WITH SHORTENED EARTHED ISOLATION AND AS IDENTIFIED ON FORM GBSIP STED — FORM GBSIP B, FORM GBSIP STED — NP, AP

SH23 — REQUEST ECO TO REMOVE ALL REMOTELY APPLIED EARTHING DEVICES AND/OR CONFIRM WHICH EARTHING DEVICES (IF ANY) WILL BE REMOVED AS PART OF SWITCHING OPERATION (STEP SH25) — SEE NOTE 10 — FORM GBSIP STED — NP, ECO

SH24 — RECORD THE REMOVAL OF EARTHING DEVICES ON THE INITIAL WIDER FORM GBSIP B & CANCEL (COMPLETE WIDER FORM GBSIP B PART 3) — FORM GBSIP B — NP, ECO

SH25 — CARRY OUT OR INSTRUCT AP TO CARRY OUT SWITCHING IN ORDER TO ENERGISE OLE IN THE AREA TO BE RELEASED — FORM GBSIP STED — ECO, AP

SH26 — CANCEL SUPERSEDED FORM AE/AT — FORM A — ECO, SIG

KEY

NP NOMINATED PERSON — SIG SIGNALLER

ECO ELECTRICAL CONTROL ROOM OPERATOR

AP AUTHORISED PERSON — WP WORKING PARTY

COSS OLP — DOCUMENTATION REQUIRED

NOTES

NOTE 1. THE FLOWCHART DEPICTS PROCESS STEPS RELEVANT TO IMPLEMENTATION OF AN EARTHED ISOLATION UNDER THE GBSIP PROCESS WHICH HAS BEEN SIMPLIFIED FOR CLARITY. GBSIP IS A PROCESS THAT REQUIRES THE APPLICATION OF SECURITY AT POINTS OF DISCONNECTION BY THE NOMINATED PERSON.THIS FLOWCHART SHOULD BE USED IN CONJUNCTION WITH NR/L3/ELP/29987 ISSUE 5 AND THE ASSOCIATED 'MODULE X'.

NOTE 2. GBSIP IS A SUPPLEMENTARY EARTHED ISOLATION PROCESS FOR USE AT POINTS OF DISCONNECTION ON NEW ELECTRIFICATION INFRASTRUCTURE. ISOLATION INSTRUCTIONS DEFINE THE GEOGRAPHICAL AREAS AND ON WHICH DISCONNECTORS GBSIP IS APPLICABLE.

NOTE 3. THE SUPPLEMENTARY PROCESSES REQUIRED BY GBSIP AFFECT ONLY MODULE 7 OF NR/L3/ELP/29987 ISSUE 5. GREEN SHADED BOXES IN THIS FLOW CHART INDICATE DEVIATION TO MODULE 7 OF NR/L3/ELP/29987 ISSUE 5.

NOTE 4. A GBSIP MASTER TRAINING REGISTER WILL BE HELD IN THE APPROPRIATE REGIONAL ECR'S. PRIOR TO EACH EARTHED ISOLATION, ECO'S TO VERIFY THAT ISOLATION STAFF HAVE BEEN TRAINED IN GBSIP AND THEIR TRAINING IS WITHIN THE VALIDITY DATE RECORDED ON MASTER TRAINING REGISTER.

NOTE 5. IF SUPERSEDING EARTHED ISOLATIONS ARE REQUIRED, PLANNING WILL BE CARRIED OUT ACCORDINGLY.

NOTE 6. APPLICABILITY OF THE GBSIP PROCESS TO EARTHED ISOLATIONS ENCOMPASSING BOTH LEGACY AND NEW ELECTRIFICATION INFRASTRUCTURE ARE DEFINED IN THE ISOLATION INSTRUCTIONS.

NOTE7. THE METHOD OF SECURING POINTS OF DISCONNECTION WILL VARY BETWEEN GEOGRAPHICAL AREAS, DEPENDING ON AVAILABLE INFRASTRUCTURE AND WILL BE DEFINED BY LOCAL INSTRUCTION.

NOTE 8. THE SEQUENCE OF SECURING WILL BE AGREED AND BRIEFED BY THE NP TO THE AP AS PART OF STEP I 1. IT IS ACCEPTABLE FOR THE SECURING TO BE APPLIED EITHER AS PART OF STEP I7 (OR SH9 & IN4) (PRIOR TO ISSUE OF FORM B PART 1) OR AS PART OF STEP I9 (OR SH9 & IN7) (POST ISSUE OF FORM B PART 1).

NOTE 9. IT IS ACCEPTABLE FOR AN EARTH POSITION DISCONNECTOR TO BE OPENED AND PLACED INTO THE EARTH POSITION IN A SINGLE OPERATION UNDER INSTRUCTION FROM THE ECO (PRIOR TO ISSUE OF FORM B PART 1) AS PART OF STEP I7.

NOTE 10. IT IS ACCEPTABLE FOR AN EARTH POSITION DISCONNECTOR TO REMAIN IN THE EARTH POSITION (AFTER CANCELLATION OF FORM B) PROVIDING IT IS MOVED OUT OF THE EARTH POSITION UNDER THE INSTRUCTION OF THE ECO DURING THE SWITCHING RESTORATION OPERATION AS PART OF STEP R7.

NOTE 11. THIS STEP IN ACCORDANCE WITH SECTION 21.4 IN MODULE 7 OF NR/L3/ELP/29987 ISSUE 5.

NOTE 12. THIS STEP IN ACCORDANCE WITH SECTIONS 21.3 AND 21.5 IN MODULE 7 OF NR/L3/ELP/29987 ISSUE 5

Rev.	Date	Description of Revisions	Design	Chk.	App.
06	10/08/18	29987-5 STAKEHOLDER REVIEW COMMENTS ADDED	JF	LN	PT
05	13/10/17	TDG COMMENTS ADDED	JF	BL	TDG
04	10/10/17	REFERENCES TO POINTS OF ISOLATION REMOVED	JF	BL	TDG
03	06/09/17	WORDING CHANGES FOR CLARTY STEPS 6 &NOTE 8	JF	BL	TDG
02	17/08/17	PLANNING PROCESS REMOVED	JF	BL	TDG
01	14/08/17	FIRST ISSUE BASED ON GNE/SIP FLOWCHART ISSUE 3	JF	BL	TDG

NetworkRail

STE & Infrastructure Projects

Project Title: GB Supplementary Isolation Process (GBSIP)

Drawing Title: GBSIP Process Flowchart

Designed	Name: J. Fry	Sig.	Date:
Checked	Name: B. Lumley	Sig.	Date:
Approved	Name:T. Da'Costa-Green	Sig.	Date:
Sheet	2 of 2	Scale NTS	
			Revision 06

Size: A3

Appendix C – Form GBSIP STED

General

When it is necessary to revise a form, the form and this index will be updated in accordance with the appropriate change process described in NR/L2/CSG/STP001/02.

Any future re-issue of forms is controlled by the Electrical Power Standards and Controls Steering Group. Any proposed revisions to forms should be forwarded to the Steering Group, who will review the form and pass it to the Standards and Controls Management team for publication at the next available opportunity.

NOTE From time to time it may be necessary to publish a revised version of a form. As a result there may be instances when the version number on Connect is more recent than that identified in the index. The most recent version of the form should be the one used.

For organisations that are not eligible to free of charge standards, there are a number of ways for suppliers, principal contractors and subcontractors to access Network Rail standards and controls: -

- Online: IHS Network Rail Standards Online at: http://uk.ihs.com/products/rail/index.htm Call IHS Customer Services on 01344 328300 for login details.
- Online: SAI Global Network Rail Standards Online Standards Management – i2i | SAI Global Infostore or call SAI Global for more details on 0203 327 3140
- Hard copy: To buy individual standards and controls, call IHS Markit Customer Services on 01344 328300 or emeastore@ihs.com

C.1 Form GBSIP STED

Reference	Issue	Date	Title
NR/L3/ELP/29987/X/ GBSIP/STED	6	03/09/2022	Switching, Testing & Earthing Details

Appendix D – Form GBSIP B

General

When it is necessary to revise a form, the form and this index will be updated in accordance with the appropriate change process described in NR/L2/CSG/STP001/02.

Any future re-issue of forms is controlled by the Electrical Power Standards and Controls Steering Group. Any proposed revisions to forms should be forwarded to the Steering Group, who will review the form and pass it to the Standards and Controls Management team for publication at the next available opportunity.

NOTE From time to time it may be necessary to publish a revised version of a form. As a result there may be instances when the version number on Connect is more recent than that identified in the index. The most recent version of the form should be the one used.

Ref:	NR/L3/ELP/29987/X
Issue:	5
Date:	03 September 2022
Compliance date:	03 September 2022

For organisations that are not eligible to free of charge standards, there are a number of ways for suppliers, principal contractors and subcontractors to access Network Rail standards and controls: -

- Online: IHS Network Rail Standards Online at: http://uk.ihs.com/products/rail/index.htm Call IHS Customer Services on 01344 328300 for login details.
- Online: SAI Global Network Rail Standards Online Standards Management – i2i | SAI Global Infostore or call SAI Global for more details on 0203 327 3140
- Hard copy: To buy individual standards and controls, call IHS Markit Customer Services on 01344 328300 or emeastore@ihs.com

D.1 Form GBSIP B

Reference	Issue	Date	Title
NR/L3/ELP/29987/X/ GBSIP/B	6	03/09/2022	Authority to test and apply portable earths and reminder of live exposed equipment to overhead line equipment including return conductors and autotransformer feeders

Ref:	NR/L3/ELP/29987/X
Issue:	5
Date:	03 September 2022
Compliance date:	03 September 2022

Appendix E – Specification of legacy electrified area on Western Route

For the purposes of securing points of isolation in clause 6.3 of this module, the legacy electrified area comprises:

All Western Route electrified lines of ELR MLN1 and associated electrical distribution equipment to the London side of:

- OLE Disconnector at structure MLN/19/575 Down Main
- OLE Disconnector at structure MLN/19/575 Up Main
- OLE Disconnector at structure MLN/18/986 Down Relief
- OLE Disconnector at structure MLN/18/986 Up Relief
- OLE Disconnector at structure MLN/18/964 Reliefs ATF
- OLE Disconnector at structure J/18/07B Mains ATF

This legacy isolation area comprises all electrical sections of the form 48XX and 8XX, the subsections 4006A and 4005E and sections 8001 and 8002 ATFs, and extends between 0 miles and circa 12 miles of the Western Route.

For a point of disconnection, including a 'normally open' disconnector acting as a point of isolation, within the legacy electrified area, the requirements to carry out a visual check, to attach a unique safety lock and to apply a caution notice shall **only** apply if it is necessary for the Nominated Person or an Authorised Person acting on behalf of the Nominated Person to visit the point of disconnection in order to operate it.

NOTE: Within the legacy electrified area, a point of disconnection within the electrical distribution equipment may be used as a Point of Isolation without further securing measures provided that the ECO has applied a SCADA inhibit against inadvertent operation.