Task Risk Control Sheet

Work associated with the Sunderland Direct Metro System when there are impedance and/or continuity Bonds damaged, missing or disconnected

No: NR/L3/MTC/RCS0216/OLE17
Issue: 1

Key Risks !

- **Struck by Train**
- **Electrocution**
- **Slips, trips and falls**

Personnel Involved		
	E&P	√
	S&T	
	Track	
	Off Track	
	Property	

Tools / Equipment	Spanners/Rachets

Task Risks	Controls	Implemented By
Electrocution (All Staff)	Where the following bonds are damaged, missing or disconnected there is a risk of electrocution to staff carrying out their normal duties on or near the line • One or more impedance bond side leads • Duplicate traction return continuity bonds when both bonds are disconnected or missing • Continuity bonds on IBJs not associated with the impedance bonding • Two or more rail joint bonds on individual rails within the track circuit If any of the above bonds are damaged, missing or disconnected the ECO must be informed of the risk to staff and all maintenance activities which necessitate going on the line or working on parts of the infrastructure electrically connected to the line must be suspended until either the traction bonding is reinstated or an absolute electric traction isolation of the area is imposed on all associated lines. If all four negative return cables from the traction return circuit to a traction substation are disconnected, severed, or otherwise seriously damaged, then the broken or damaged bonds may be at a dangerous voltage. The ECO shall arrange for the isolation of the substation and the OLE in accordance with Electrical Control Room Instructions.	Level A - Nominated Person (OHL)

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Task Risks	Controls	Implemented By
Electrocution (E & P)	Assessment of electrical risk from traction return current before disconnection/reconnection of impedance or continuity bonds Where the traction return bonding is damaged, missing or disconnected the following must be checked and implemented prior to reconnection • Where one or more impedance bond side leads or centre tap connections are damaged, missing or disconnected an absolute electric traction isolation of all associated lines is required before reconnection of any bond. • Where duplicate traction return bonds have been installed for continuity purposes and both bonds are damaged, missing or disconnected an absolute electric traction isolation of all associated lines is required before reconnection of bonds. • Where traction return bonds have been installed for continuity purposes around IBJs and the bond is damaged, missing or disconnected an absolute electric traction isolation of all associated lines is required before reconnection of bond. • Where duplicate traction return bonds have been installed for continuity purposes and one bond is intact the disconnected or missing bond can be reinstated without the need for an absolute electric traction isolation. Care must be taken not to disturb the existing bond when reconnecting. • Where there are rail joint bonds damaged, missing or disconnected and there is evidence of arcing/burning across the joint the bond shall not be replaced without an absolute electric traction isolation of the line concerned • Where bonding appears to be intact and there is evidence of arcing/burning an absolute electric traction isolation of all associated lines is required before repairing the bonds • If all four negative return cables from the traction return circuit to a traction substation are damaged, missing or disconnected then work on the traction return circuit shall **only** be carried out under an Overhead Line Permit and Permit-to-Work on High Voltage Electrical Equipment in accordance with Part D section 12 of Railtrack LNE Zone Document LNE/RT2000.	Level A - Nominated Person (OHL)
	A temporary bonding plan is required for the disconnection of any bonds on the Sunderland Direct Metro System. The bonding plan must be jointly approved by the DU E&P Maintenance Engineer and the DU S&T Maintenance Engineer.	E & P Technical Staff

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