



EQUIPMENT SCHEDULE				
ID	DESCRIPTION	MANUFACTURER	DRAWING No.	QTY
01	33/11kV 20/40MVA TRANSFORMER	WINDER POWER & DISTRIBUTION	TX/A1/4309135 REV. D	2
02	NER	CRESSALL	112501 REV.B	2
04	33kV ISOLATOR w/ EARTH SWITCH - 3 PHASE	MORRIS LINE ISOLATOR	MP/00/2475 REV.0	2
05	33kV SURGE ARRESTER	TYCO ELECTRONICS	SSEN STOCK CODE 217473	6
06	33kV OUTDOOR TYPE CABLE TERMINATION	TYCO ELECTRONICS	SSEN STOCK CODE 990182	6
07	HV EARTHING LINK BOX	TE CONNECTIVITY	SSEN STOCK CODE 990189	2

NOTES:

- ALL DIMENSIONS IN mm UNLESS OTHERWISE CONFIRMED.
- SUBSTATION MINIMUM ELECTRICAL CLEARANCES TO BE IN ACCORDANCE WITH SSEN PRIMARY DISTRIBUTION SUBSTATION COMMON CLAUSES - DESIGN AND INSTALLATION STANDARD DOC No. PR-NET-SST-005.

SUBSTATION MINIMUM ELECTRICAL CLEARANCES

REQUIREMENTS TO BE IN ACCORDANCE WITH SSEN PRIMARY DISTRIBUTION SUBSTATION COMMON CLAUSES - DESIGN AND INSTALLATION STANDARD DOC No. PR-NET-SST-005

REF	CLEARANCE (mm)	VOLTAGE	
		33kV	11kV
E	PHASE TO EARTH	500	500
Ph	PHASE TO PHASE	430	250
S	DESIGN CLEARANCE FOR SAFETY	2900	2900
SD	SAFETY DISTANCE	800	800
Ds	WORKING & ACCESS CLEARANCE (VERTICAL)	2900	2900
Dsh	WORKING & ACCESS CLEARANCE (HORIZONTAL)	2300	-
IH	INSULATION HEIGHT (PEDESTRIAN ACCESS)	2400	2400

3) FOR TOPOGRAPHICAL SURVEY AND PAS 128:2022 UTILITY SURVEY REFER TO FREEDOM DRAWING ROWNCAB-FREPP-SS-XX-SU-G-0001 REV. 01 DATED 05-01-23.

- LEGEND:**
- NEW EQUIPMENT
 - CABLE CONTAINMENT
 - 2.4m PALISADE FENCE
 - 2.4m PALISADE FENCE - REMOVABLE
 - 33kV CABLE
 - 11kV CABLE
 - LINKBOX BONDING LEAD
 - EXISTING/SURVEY DATA

- ABBREVIATION:**
- CSE CABLE SEALING END
 - DISC DISCONNECTOR / ISOLATOR
 - NER NEUTRAL EARTH RESISTOR
 - PI POST INSULATOR
 - TX TRANSFORMER
 - LX PROPOSED LIGHTING POSITION
 - SA SURGE ARRESTER

- ASSOCIATED DRAWING:**
- SUBSTATION ELEVATIONS NRWNPRI-FREPP-SL-XX-DR-E-0002
 - SUBSTATION CABLE LAYOUT NRWNPRI-FREPP-EC-XX-DR-E-0001
 - BUILDING LAYOUT NRWNPRI-FREPP-BL-XX-DR-E-0001
 - SUBSTATION CDM LAYOUT NRWNPRI-FREPP-SL-XX-DR-E-0006

REV	DATE	DESCRIPTION	DRN	CHK	APP
05	18/03/24	AMENDED AS PER COMMENTS	H.M.	V.J.	V.S.
04	22/01/24	AMENDED AS PER COMMENTS	D.W.M	J.V	S.V
03	01/12/23	AMENDED AS PER COMMENTS	D.W.M	J.V	S.V
02	01/12/23	AMENDED AS PER COMMENTS	D.W.M	J.V	S.V
01	01/12/23	FIRST ISSUE	D.W.M	J.V	S.V

SHE BOX
CONTAINING SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARDS AND RISKS NORMALLY ASSOCIATED WITH CONSTRUCTING, MAINTAINING AND DEMOLISHING THE STRUCTURES ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RISK INFORMATION SHOULD BE TAKEN INTO ACCOUNT WHEN PLANNING AND CARRYING OUT CONSTRUCTION, MAINTENANCE AND DEMOLITION WORK.

- CONSTRUCTION, OPERATION, MAINTENANCE & DEMOLITION**
- VEHICLE MOVEMENT: LIMIT THE MOVEMENT OF PLANT CLOSE TO EXCAVATION. ALL MOVEMENTS TO BE CONTROLLED BY BANKSMAN.
 - WORKING AT HEIGHT: BARRIER INSTALLED AROUND EXCAVATION. PROPER ACCESS TO BE USED e.g. LADDER etc.
 - WORKING IN EXCAVATION: TEMPORARY WORKS DESIGN REQUIRED & TO BE APPROVED PRIOR TO ANY ON SITE WORKS TAKING PLACE. ALL STAFF TO BE ADEQUATELY TRAINED. NO LONE WORKING IN EXCAVATION. FULL PPE TO BE WORN.
 - MANUAL HANDLING: ALL STAFF TO BE ADEQUATELY TRAINED. CORRECT MANUAL HANDLING TECHNIQUES TO BE USED.
 - BURIED SERVICES: SERVICES INFORMATION TO BE OBTAINED AND REVIEWED. EXISTING SERVICES TO BE LOCATED BY CAT SCANNING AND TRIAL HOLES, IF REQUIRED, PRIOR TO EXCAVATION WORKS BEGINNING.
 - GROUNDWATER: WATER TO BE PUMPED FROM EXCAVATION TO PREVENT FLOODING.
 - PROXIMITY TO POTENTIALLY LIVE EQUIPMENT: ALL STAFF TO BE ADEQUATELY TRAINED. STRUCTURE SHOULD BE EARTHED.
 - SHARP OBJECT: ALL STAFF TO BE ADEQUATELY TRAINED.

STATUS: FOR GATE 3 APPROVAL

SCALE: 1:100

SIZE: A1

CONTRACTOR: **Freedom** (an NG Bailey Group company)

CLIENT: **Scottish & Southern Electricity Networks**

SHEPD - SCOTTISH HYDRO ELECTRIC POWER DISTRIBUTION

DRAWING TITLE: **ALTERNATIVE SUBSTATION ELECTRICAL LAYOUT**

PROJECT NAME: **GREEN RECOVERY - LOT 1 - SEPD ROWNHAMS NEW MSA TRANSFORMER & BOARD ARRANGEMENT**

SITE NAME: **NEW ROWNHAMS 33/11kV SUBSTATION**

SSEN DRAWING NUMBER: **NRWNPRI-FREPP-SL-XX-DR-E-0011**

FREEDOM DRAWING NUMBER: **N/A**

SHEET: **01 OF 01**

REVISION: **05**