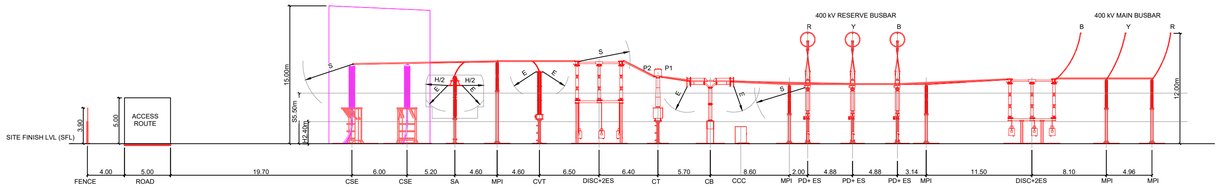
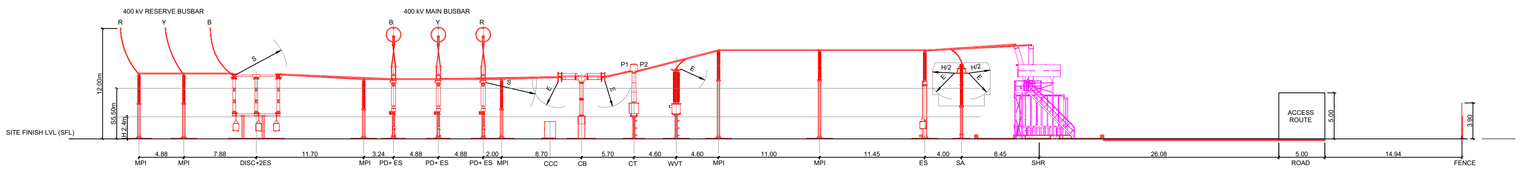
SUBSTATION MINIMUM ELECTRICAL CLEARANCES

REQUIREMENTS TO BE IN ACCORDANCE WITH SSE SUBSTATION DESIGN SPECIFICATIONS DOC NO. SP-NET-SST-501

REF	CLEARANCE (mm)	NOMINAL SYSTEM VOLTAGE			
		400kV	275kV	132kV	33kV
E	PHASE TO EARTH	2800	2100	1100	500
Ph	PHASE TO PHASE	3600	2400	1400	430
S	DESIGN CLEARANCE FOR SAFETY	5500	4800	3500	2900
SD	SAFETY DISTANCE	3100	2400	1400	800
Ds	WORKING & ACCESS CLEARANCE (VERTICAL)	5200	4500	3500	2900
Dsh	WORKING & ACCESS CLEARANCE (HORIZONTAL)	4600	3900	2900	2300
IH	INSULATION HEIGHT (PEDESTRIAN ACCESS)	2400	2400	2400	2400
S+2	MEWP DESIGN CLEARANCE FOR SAFETY	7500	6800	5500	4900
-	MEWP ACCESS CORRIDOR TO DEAD CIRCUIT	3000	3000	3000	3000



SECTION A
1:200
TP-0001



SECTION B
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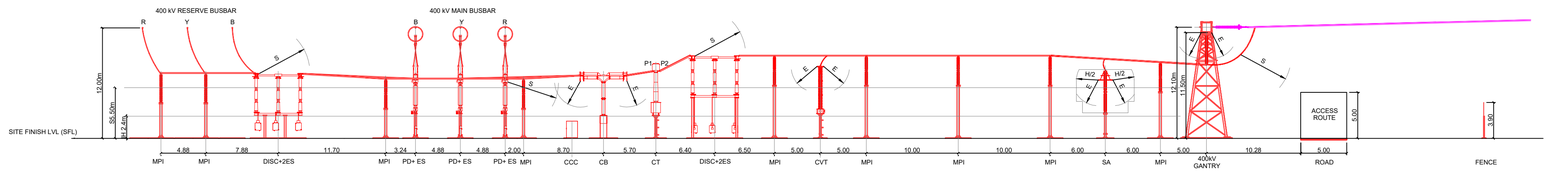
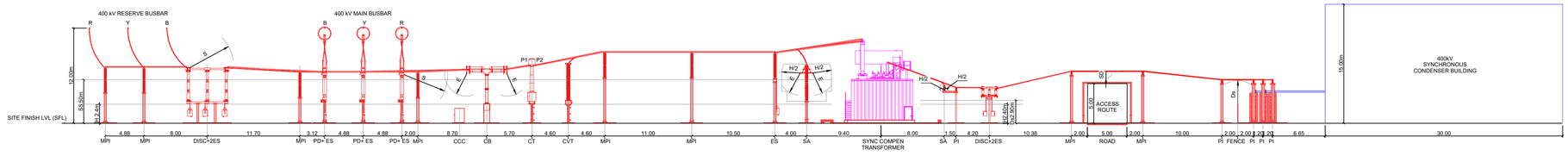
TP-0001



SECTION C
1:200
TP-0001



SECTION D
1:200
TP-0001

NOTES:

1. THIS DRAWING IS FOR PLANNING PURPOSES ONLY SUBJECT TO DETAILED DESIGN.
2. DIMENSION IS IN METRES UNLESS STATED OTHERWISE.
3. THE FOLLOWING FENCING REQUIREMENTS HAVE BEEN ASSUMED:
   INTERNAL FENCE: 2.4m HIGH NON-ELECTRIC FENCE
   EXTERNAL FENCE: 2.4m HIGH PHYSICAL MESH / PALISADE BARRIER WITH ELECTRIC PULSE FENCE.
4. REQUIREMENT FOR NOISE ENCLOSURE ON STGS AND SHUNT REACTORS SHALL BE CONFIRMED.
5. OHL ARRANGEMENT TO BE CONFIRMED BY OHL CONTRACTOR. MAINTENANCE CLEARANCE CONSIDERED AS 25m RADIUS CIRCLE FROM TOWER CENTRE. CONSTRUCTION CLEARANCE CONSIDERED AS SQUARE WITH 70m SIDES CENTRED ON THE TERMINAL TOWER. REQUIREMENT TO BE CONFIRMED BY OHL CONTRACTOR.
6. THE 400kV CABLE ROUTE TO BE CONFIRMED BY CABLE CONTRACTOR.
7. SPACE REQUIREMENT FOR SYNCHRONOUS CONDENSER TAKEN FROM DRAWING LT486-XXXX-0802-003. NO REQUIREMENTS ARE AVAILABLE. FOOTPRINT TO BE REVIEWED ONCE INFORMATION IS MADE AVAILABLE.
8. FOR OIL COOLED EQUIPMENT RADIATOR POSITIONS SHOWN ARE INDICATIVE, IN THE FINAL DESIGN THEY BE LOCATED AWAY FROM THE SKID-WAY DEPENDING ON THE SELECTED TRANSFORMER.
9. GIS/AIR INTERFACE CONNECTION TO SYNCHRONOUS CONDENSER TO BE CONFIRMED BY THE SUPPLIER.
10. DENOTES PLANT EQUIPMENT TO BE FREE ISSUED AND INSTALLED BY SSEN.

KEY:

CSE - CABLE SEALING END
SA - SURGE ARRESTER
ES - EARTH SWITCH
PI - POST INSULATOR
MPI - MEDIUM LEVEL POST INSULATOR
HPI - HIGH LEVEL POST INSULATOR
CT - CURRENT TRANSFORMER
CVT - CAPACITIVE VOLTAGE TRANSFORMER
WVT - WOUND VOLTAGE TRANSFORMER
CB - CIRCUIT BREAKER
DISC.+2ES - DISCONNECTOR WITH TWO EARTH SWITCH
PD+ES - PANTOGRAPH WITH EARTH SWITCH
SHR - SHUNT REACTOR
PRR - PORTABLE RELAY ROOM
SGT - SUPERGRID TRANSFORMER
NER - NEUTRAL EARTHING RESISTOR
ET - EARTHING TRANSFORMER
AVR - AUTOMATIC VOLTAGE REGUALTOR
MK - MARSHALLING KIOSK
CCC - CENTRAL CONTROL CUBICLE

LEGEND:

EXISTING EQUIPMENT
PROPOSED EQUIPMENT
PROPOSED EQUIPMENT - SCOPE TBD
PROPOSED EQUIPMENT (BY OTHERS)

REFERENCE DRAWINGS:

SINGLE LINE DIAGRAM - 116367-MMD-00-XX-DR-EE-0013
ELECTRICAL SITE LAYOUT (PRIMARY) - 162507-BMD-PL-HR-DEL-TP-0001

SCALE AT 1:200
0m 5 10 15 20m

Issue / Revision:	01	Drawn By:	RB
Investment No.:	N/A	Checked By:	JF
Date:	27/SEP/24	Approved By:	RC

Description / Remarks: ISSUED FOR PLANNING

Issue / Revision:	02	Drawn By:	RB
Investment No.:	N/A	Checked By:	JM
Date:	05/DEC/24	Approved By:	RC

Description / Remarks: ISSUED FOR PLANNING
SCALING UPDATED

Drawing Status: ISSUED FOR PLANNING

Software:	Status Code:	Scale:	Paper Size:
AUTOCAD	Not Used	1:200	A1
Drawn By:	**Checked By:**	**Approved By:**	**Date:**
RB	JF	RC	27/SEP/24

Contractor: BURNS McDONNELL
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Email: bmcd.uk@burns.mcd.com | Website: www.burnsmcd.com

Client: Scottish & Southern Electricity Networks

Supplier / Subcontractor:

Drawing Title: ELECTRICAL ELEVATIONS

Project Name: HURLIE 400kV SUBSTATION

Site Name: HURLIE 400kV SUBSTATION

Contractor Drawing No.: 162507-BMD-PL-HR-DEL-TP-0001

Client Drawing No.: 162507-BMD-PL-HR-DEL-TP-0001

Sheet: 1 OF 2
Next: 2

Supplier / Subcontractor Drawing No.: XXX

Issue / Revision: 02