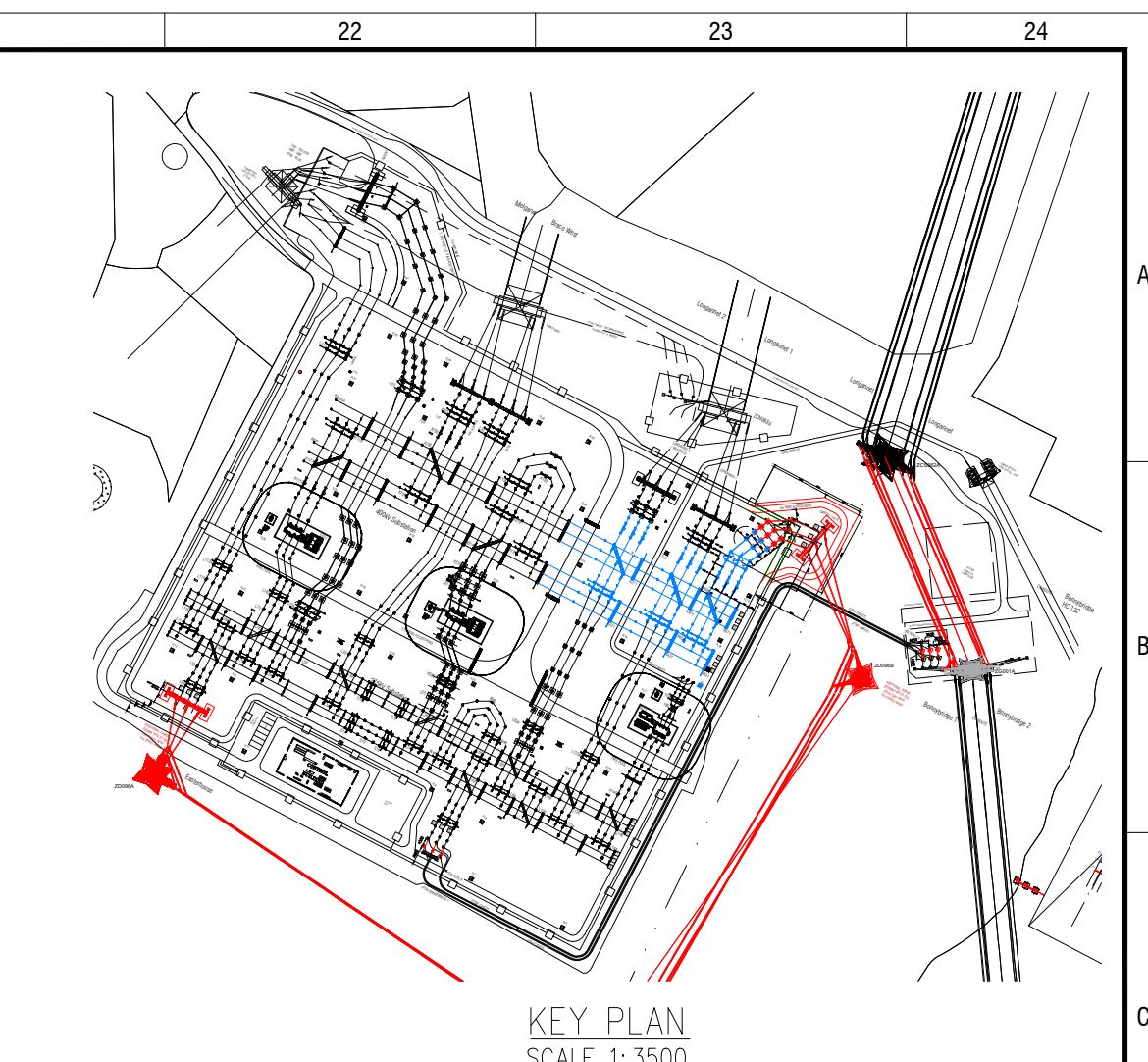
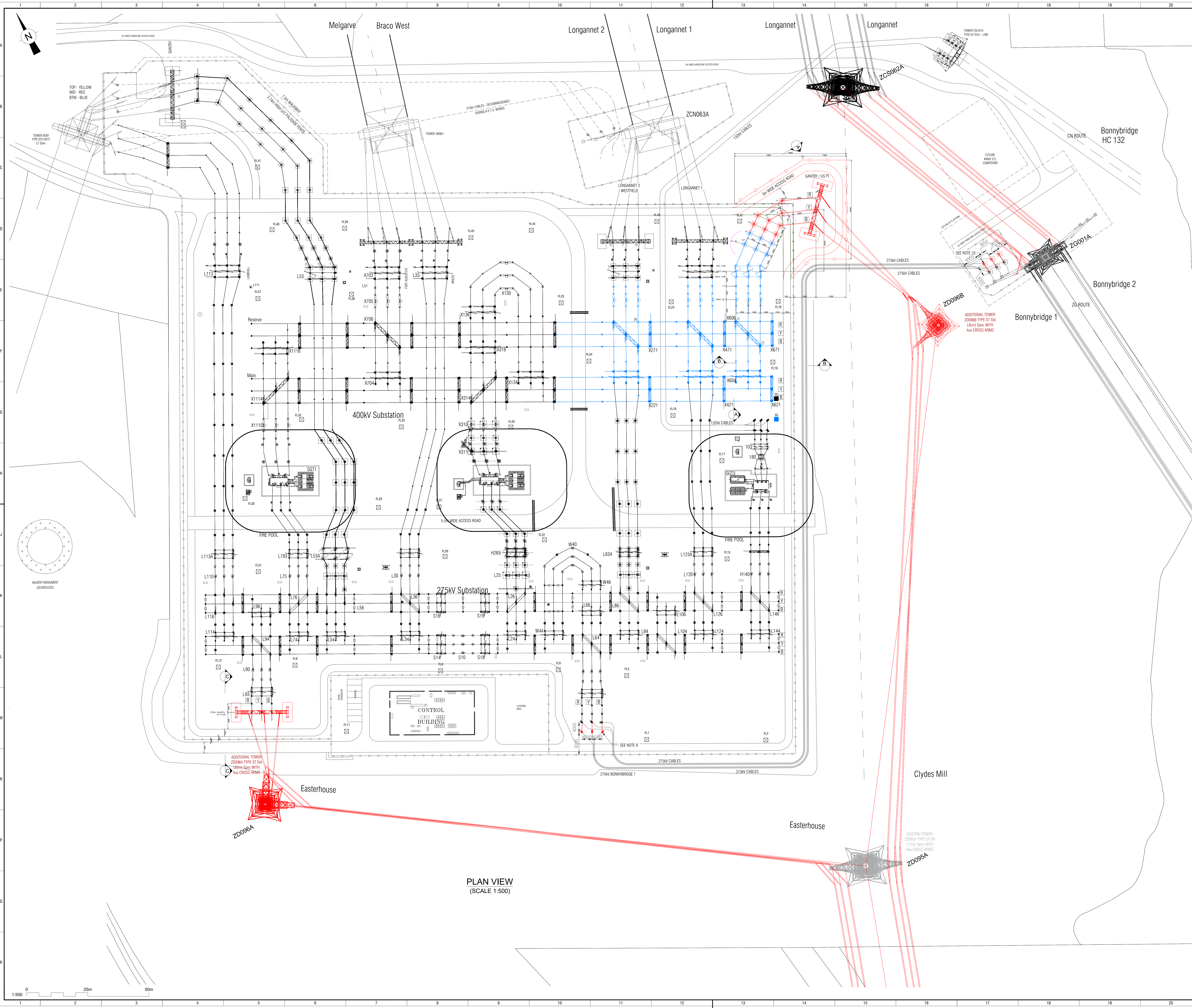




ASSOCIATED DRAWINGS:

22119-BHK-DENN-SUB-D-E-000201 - 400kV ELECTRICAL SUBSTATION ELEVATIONS
BT1733-2-0000-DK-SPTES-518 - PROPOSED SWITCHGEAR NUMBERING FOR DENNY NORTH 400/275/132kV SUBSTATION

- NOTES:**
1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.
 2. ALL EQUIPMENT UPGRADE WORKS SHALL BE AS PER ASENO-11-865.
 3. DESIGN OF ALL NEW PRIMARY PLANT EQUIPMENT AND SYSTEMS SHALL BE AS PER EPS-03-033 & ASSET-02-005.
 4. ALL NEW MAIN PLANT PROPOSED IS SHOWN INDICATIVE TO BE UPDATED UPON RECEIPT OF CONTRACT GA'S IN AUTOCAD FORMAT.
 5. ELECTRO-MECHANICAL LOADING TO BE VERIFIED UPON RECEIPT OF CONTRACT GA'S.
 6. TO BE UPDATED ONCE OHL DESIGN HAS BEEN SUITABLY PROGRESSSED IN LINE WITH GANTRY/TOWER.
 7. LWUP INTERM STAGE AS SHOWN IN THIS DRAWING IS INDICATIVE ONLY. FOR DETAILS REFER TO LWUP LAYOUT & ELEVATION DRAWINGS.
 8. ARRANGEMENT OF DWNO WORKS IS BASED ON THE CONSIDERATION THAT DWNO WORKS WILL COMMENCE AFTER THE LWUP INTERM STAGE & BEFORE THE LWUP FINAL STAGE.
 9. THIS IS A TEMPORARY 3-ENDED CIRCUIT PROPOSED BETWEEN LONGANNET-DENNY - BONNYBRIDGE DURING DWNO WORKS. THIS IS TO BE REMOVED AT A LATER STAGE. THE POSSIBILITY TO RE-USE THE EXISTING CSE'S FROM BAY 9 TO BE INVESTIGATED AT A DETAIL DESIGN STAGE.
 10. THE POSSIBILITY TO RE-USE THE EXISTING CSE'S FROM BONNYBRIDGE 2 AT BONNYBRIDGE 1 CIRCUIT TO BE INVESTIGATED AT DETAIL DESIGN STAGE. THE EXISTING CABLES FROM 275kV BAY 9 AND EX-BONNYBRIDGE 2 CIRCUITS TO BE RE-USED.

LEGEND & ABBREVIATION:

CB	CIRCUIT BREAKER
DISC	DISCONNECTOR
ESW	EARTH SWITCH
CT	CURRENT TRANSFORMER
CVT	CAPACITIVE VOLTAGE TRANSFORMER
SA	SURGE ARRESTER
PI	POST INSULATOR
USPI	UNDERSLING POST INSULATOR
	PROPOSED MAIN PLANT
	EXISTING MAIN PLANT
	LWUP SCOPE EQUIPMENT
	CLEARANCES & SAFETY DISTANCES TO BE REMOVED

400kV MAIN PLANT EQUIPMENT SCHEDULE

EQUIPMENT REF.	DESCRIPTION	QUANTITY	MANUFACTURER	TYPE	GA DRAWING No.
SA	SURGE ARRESTER	3	TBC	TBC	TBC
PI	POST INSULATOR	5	TBC	TBC	TBC
US PI	UNDERSLING POST INSULATOR	3	TBC	TBC	TBC

275kV MAIN PLANT EQUIPMENT SCHEDULE

EQUIPMENT REF.	DESCRIPTION	QUANTITY	MANUFACTURER	TYPE	GA DRAWING No.
US PI	UNDERSLING POST INSULATOR	3	TBC	TBC	TBC

ELECTRICAL SAFETY CLEARANCE REFERENCE TABLE

REF	DESCRIPTION	400kV	275kV
E	PHASE TO EARTH CLEARANCE	2.6m	1.9m
Ph	PHASE TO PHASE CLEARANCE	3.6m	2.6m
SD	SAFETY DISTANCE*	3.1m	2.4m
Ds	DESIGN CLEARANCE FOR SAFETY - VERTICAL	5.5m	4.8m
Dsh	DESIGN CLEARANCE FOR SAFETY - HORIZONTAL	4.6m	3.9m
D1	SURGE ARRESTER TO LIVE EQUIPMENT OF SAME PHASE	2.8m	2.1m
D2	SURGE ARRESTER TO EARTH	2.8m	2.1m
D3	SURGE ARRESTER TO SURGE ARRESTER, BETWEEN PHASES	3.6m	2.4m
Ds (MEWP)	MEWP DESIGN FOR SAFETY - VERTICAL	7.5m	6.8m
Dsh (MEWP)	MEWP DESIGN FOR SAFETY - HORIZONTAL	6.6m	5.9m
lh	INSULATION HEIGHT - PEDESTRIAN ACCESS	2.55m	2.55m
	STANDARDISED PHASE TO PHASE BUSBAR SPACING	5.0m	3.65m
	MAXIMUM CLEARANCE TO ROADWAYS	7.3m	7.0m

* A DISTANCE OF 300mm SHALL ALSO BE MAINTAINED FROM THAT PORTION OF THE INSULATORS SUPPORTING EXPOSED HV CONDUCTORS WHICH IS OUTSIDE THE APPROPRIATE SAFETY DISTANCE (SD) FROM THE CONDUCTORS - REFER TO SPEN SAFETY BASIC SAFETY RULE A2.6

P01	04/09/2025	AAK	SJ	US	FIRST ISSUE
Rev.	Drawn		Reviewed	Approved	Reason / Description of changes
Drg File:					
			400754V ELECTRICAL SUBSTATION LAYOUT		
Location: DENNY NORTH					
Project: DWNO - DENNY TO WISHAW OPTIMISATION			Drg No: 22119-BHK-DENN-SUB-D-E-00001		Rev: P01
Status Code	Description	SPEN Ref: -		Scale: AS SHOWN	Sheet: 01
53	FOR REVIEW & COMMENT				Size: A0
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21		22		23	
				24	