



ASSOCIATED DRAWINGS:
22119-BHK-NEAR-SUB-D-E-000101 - 275kV ELECTRICAL SUBSTATION LAYOUT
BT1733-2-8700-DK-SP-TEE-7001 - PROPOSED SWITCHGEAR NUMBERING FOR NEWARTHILL 275kV SUBSTATION

- NOTES:
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
 - ALL EQUIPMENT UPGRADE WORKS SHALL BE AS PER ASENG-11-B64.
 - ALL NEW MAIN PLANT PROPOSED IS SHOWN INDICATIVE TO BE UPDATED UPON RECEIPT OF CONTRACT GA'S IN AUTOCAD FORMAT.
 - DESIGN OF ALL NEW PRIMARY PLANT EQUIPMENT AND SYSTEMS SHALL BE AS PER EPS-03-033 & ASSET-02-005.
 - ELECTRO-MECHANICAL LOADING TO BE VERIFIED UPON RECEIPT OF CONTRACT GA'S.
 - TO BE UPDATED ONCE OHL DESIGN HAS BEEN SUITABLY PROGRESSED IN LINE WITH GANTRY.
 - EQUIPMENT CONTROL BOX LOCATIONS (TBC) ON RECEIPT OF MANUFACTURE DRAWINGS.
 - EXISTING PLANT TO BE REMOVED/REPLACED ARE NOT SHOWN FOR CLARITY.

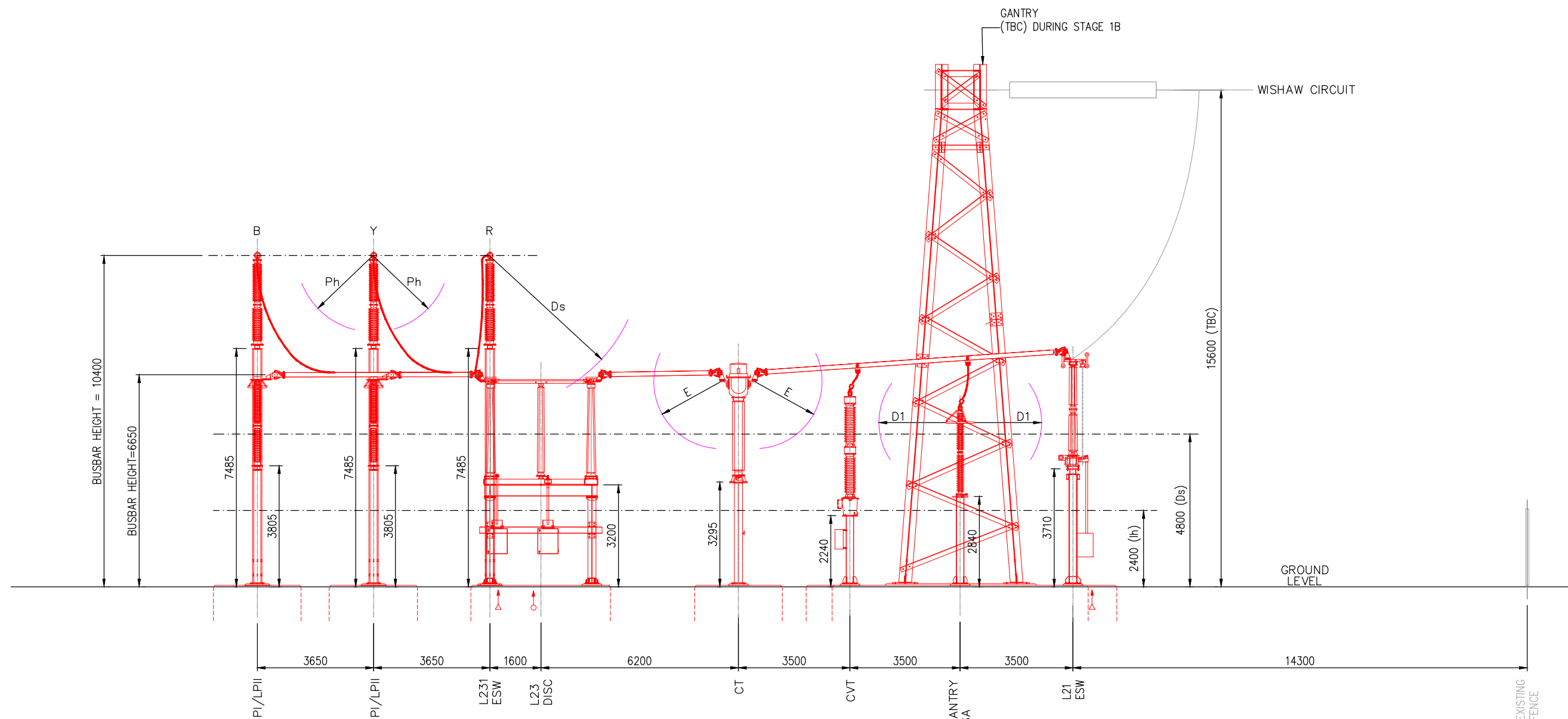
LEGENDS & ABBREVIATION:

Ex	EXISTING
CB	CIRCUIT BREAKER
DISC	DISCONNECTOR
ESW	EARTH SWITCH
CT	CURRENT TRANSFORMER
CVT	CAPACITIVE VOLTAGE TRANSFORMER
SA	SURGE ARRESTER
HPI	HIGH POST INSULATOR
LPI	LOW POST INSULATOR
AB	ANCHOR BLOCK
PROPOSED PLANT	PROPOSED PLANT
EXISTING PLANT	EXISTING PLANT
---	CLEARANCES & SAFETY DISTANCES
---	DISCONNECTOR MECH. BOX
---	EARTH SWITCH MOTOR/MANUAL MECH. BOX
---	CIRCUIT BREAKER MECH. BOX

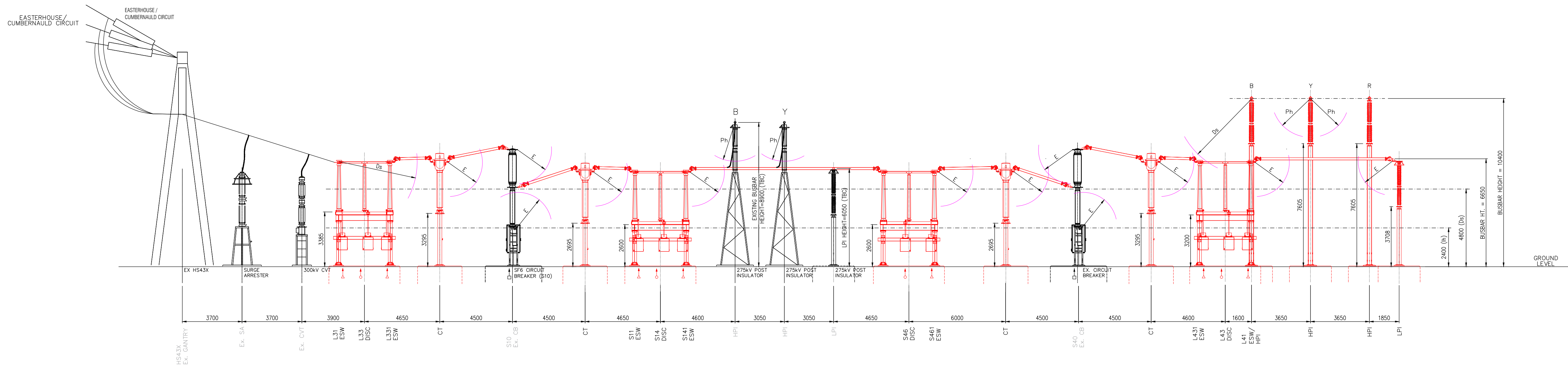
275kV MAIN PLANT EQUIPMENT SCHEDULE				
EQUIPMENT REF.	DESCRIPTION	QUANTITY	MANUFACTURER	TYPE
Ex. CB	EXISTING CIRCUIT BREAKER	6	TBC	TBC
DISC/ESW	DISCONNECTOR WITH 1 EARTH SWITCH	3	TBC	TBC
DISC/2ESW	DISCONNECTOR WITH 2 EARTH SWITCH	3	TBC	TBC
ESW	3 PHASE EARTH SWITCH	1	TBC	TBC
CT	CURRENT TRANSFORMER	18	TBC	TBC
CVT	CAPACITIVE VOLTAGE TRANSFORMER	3	TBC	TBC
SA	SURGE ARRESTER	6	TBC	TBC
HPI	HIGH POST INSULATOR	18	TBC	TBC
LPI	LOW POST INSULATOR	7	TBC	TBC

ELECTRICAL SAFETY CLEARANCE REFERENCE TABLE		
REF	DESCRIPTION	275kV
E	PHASE TO EARTH CLEARANCE	2.1m
Ph	PHASE TO PHASE CLEARANCE	2.4m
SD	SAFETY DISTANCE*	2.4m
Ds	DESIGN CLEARANCE FOR SAFETY - VERTICAL	4.8m
Dsh	DESIGN CLEARANCE FOR SAFETY - HORIZONTAL	3.9m
D1	SURGE ARRESTER TO LIVE EQUIPMENT OF SAME PHASE	2.1m
D2	SURGE ARRESTER TO EARTH	2.1m
D3	SURGE ARRESTER TO SURGE ARRESTER, BETWEEN PHASES	2.4m
Ds (MEWP)	MEWP DESIGN FOR SAFETY - VERTICAL	6.8m
Dsh (MEWP)	MEWP DESIGN FOR SAFETY - HORIZONTAL	5.9m
ih	INSULATION HEIGHT - PEDESTRIAN ACCESS	2.4m
	STANDARDISED PHASE TO PHASE BUSBAR SPACING	3.65m
	MAXIMUM HEIGHT OF CONDUCTORS ABOVE ROADWAYS	7.2m

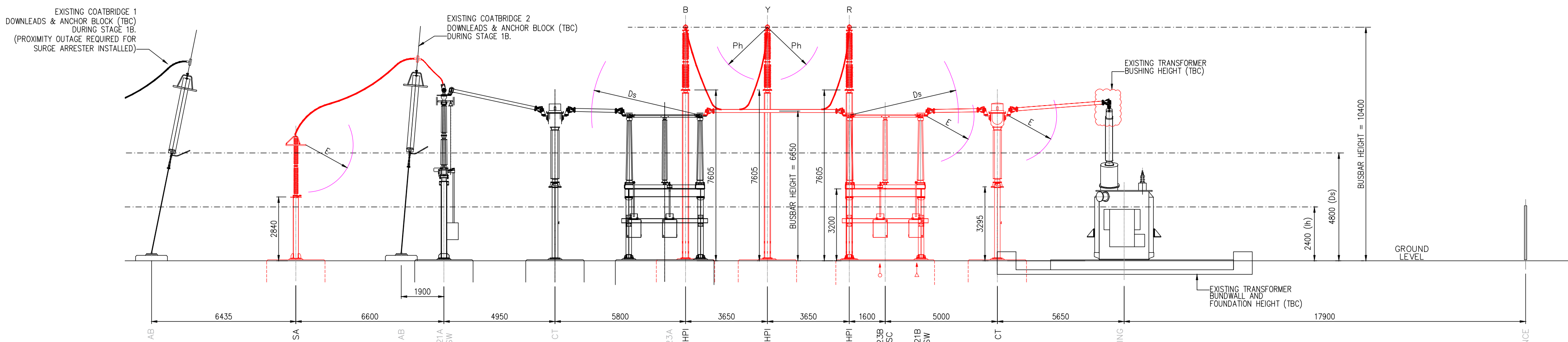
* A DISTANCE OF 300mm SHALL ALSO BE MAINTAINED FROM THAT PORTION OF THE INSULATORS SUPPORTING EXPOSED HV CONDUCTORS WHICH IS OUTSIDE THE APPROPRIATE SAFETY DISTANCE (SD) FROM THE CONDUCTORS - REFER TO SPEN SAFETY BASIC SAFETY RULE 42.6



SECTION A-A
(SCALE 1:100)



SECTION B-B
(SCALE 1:100)



SECTION C-C
(SCALE 1:100)

1:100 0 5m 10m

Rev	01/09/2025	POC	SJ	US	FIRST ISSUE
Date		Drawn	Reviewed	Approved	Reason / Description of changes
DWNO - DENNY TO WISHAW NETWORK OPTIMISATION					275kV ELECTRICAL SUBSTATION ELEVATIONS
NEWARTHILL					22119-BHK-NEAR-SUB-D-E-000201
DWNO - DENNY TO WISHAW NETWORK OPTIMISATION					P01
SPEN Ref No.					Rev: A0
AS SHOWN					Sheet: 01
Total a partial reproduction of this drawing without a revision of the appropriate is prohibited					Size: A0