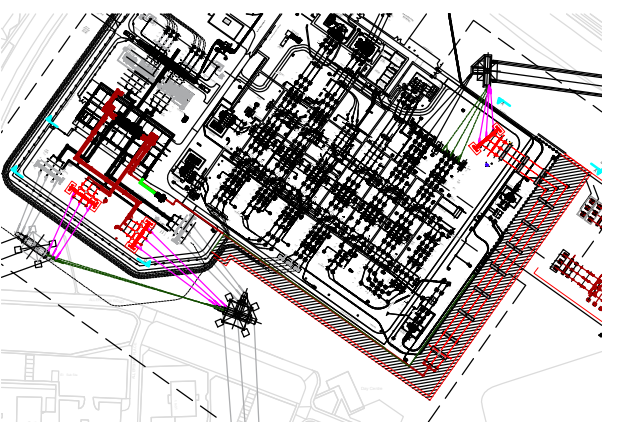




KEY PLAN
SCALE 1:3500

ASSOCIATED DRAWINGS:

22119-BHK-WSH-SUB-D-E-000101	-	400kV ELECTRICAL SUBSTATION LAYOUT
BT1733-2-0000-DK-SPTES-4118	-	PROPOSED SWITCHGEAR NUMBERING FOR WSHAW 400kV SUBSTATION
1HC5114794	-	GIS LAYOUT & REQUIREMENTS (HITACHI)

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
2. ALL EQUIPMENT UPGRADE WORKS SHALL BE AS PER ASSENG-11-855.
3. DESIGN OF ALL NEW PRIMARY PLANT EQUIPMENT AND SYSTEMS SHALL BE AS PER EPS-03-003 & ASSET-02-005.
4. ALL NEW MAIN PLANT PROPOSED IS SHOWN INDICATED AND TO BE UPDATED UPON RECEIPT OF CONTRACT GA'S IN AUTOGAD 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 INLINE WITH GANTTRY.
7. THE PROPOSED DESIGN FOR GAS EXTENSION, GID WORKS UP TO GAS TO AIR BUSHING SHOWN IN MAGENTA ARE BY OTHERS.
8. LV/ CONTROL CABLE CONDUIT AND MANHOLE TO BE CONFIRMED IN STAGE 1B.

LEGENDS & ABBREVIATION:

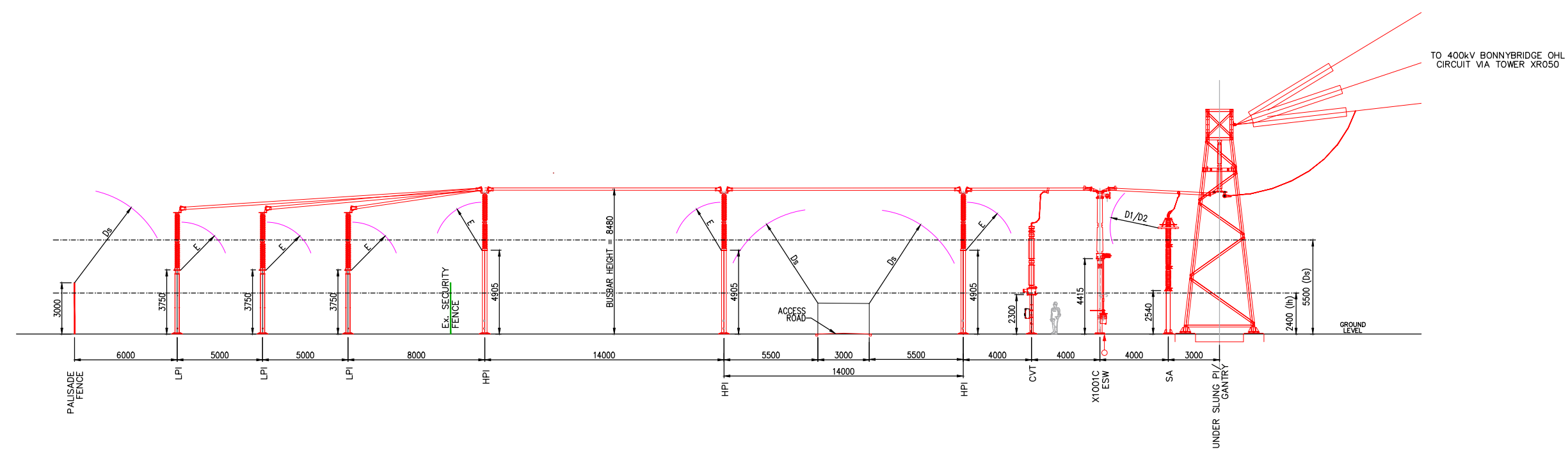
ESW	EARTH SWITCH
CVT	CAPACITIVE VOLTAGE TRANSFORMER
SA	SURGE ARRESTER
US PI	UNDERSLUNG POST INSULATOR
HPI	HIGH POST INSULATOR
LPI	LOW POST INSULATOR
	PROPOSED MAIN PLANT
	EXISTING MAIN PLANT
	TO BE REMOVED
	PROPOSED GIS (BY HITACHI)
	CLEARANCES AND SAFETY DISTANCES
	EARTH SWITCH MOTOR/MANUAL MECH. BOX

400KV MAIN PLANT EQUIPMENT SCHEDULE					
EQUIPMENT REF.	DESCRIPTION	QUANTITY	MANUFACTURER	TYPE	GA DRAWING NO.
ESW	3 PHASE EARTH SWITCH	4	TBC	TBC	TBC
CVT	CAPACITIVE VOLTAGE TRANSFORMER	9	TBC	TBC	TBC
SA	SURGE ARRESTER	9	TBC	TBC	TBC
HPI	HIGH POST INSULATOR	9	TBC	TBC	TBC
LPI	LOW POST INSULATOR	30	TBC	TBC	TBC
US PI	UNDERSLUNG POST INSULATOR	3	TBC	TBC	TBC

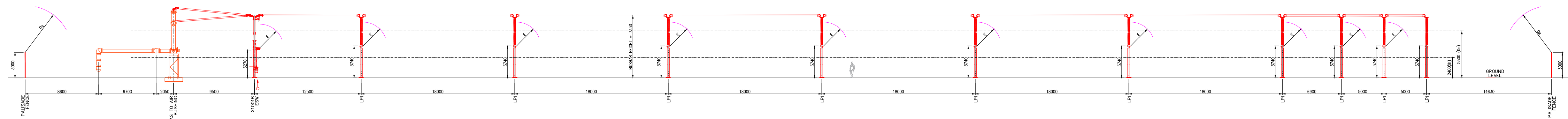
REF	DESCRIPTION	480V ¹
E	PHASE TO EARTH CLEARANCE	2.8m
Ph	PHASE TO PHASE CLEARANCE	3.6m
SD	SAFETY DISTANCE*	3.1m
Ds	DESIGN CLEARANCE FOR SAFETY – VERTICAL	5.5m
Dsh	DESIGN CLEARANCE FOR SAFETY – HORIZONTAL	4.6m
O1	SURGE ARRESTER TO LIVE EQUIPMENT OF SAME PHASE	2.8m
O2	SURGE ARRESTER TO EARTH	2.8m
O3	SURGE ARRESTER TO SURGE ARRESTER, BETWEEN PHASES	3.6m
Ds (MEWP)	MEWP DESIGN FOR SAFETY – VERTICAL	7.5m
Dsh (MEWP)	MEWP DESIGN FOR SAFETY – HORIZONTAL	6.6m
lh	INSULATION HEIGHT – PEDESTRIAN ACCESS	2.4m
	STANDARDISED SPACE TO PHASE BUSBAR SPACING	5.0m
	MAXIMUM CLEARANCE TO ROADWAYS	7.9m

* 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

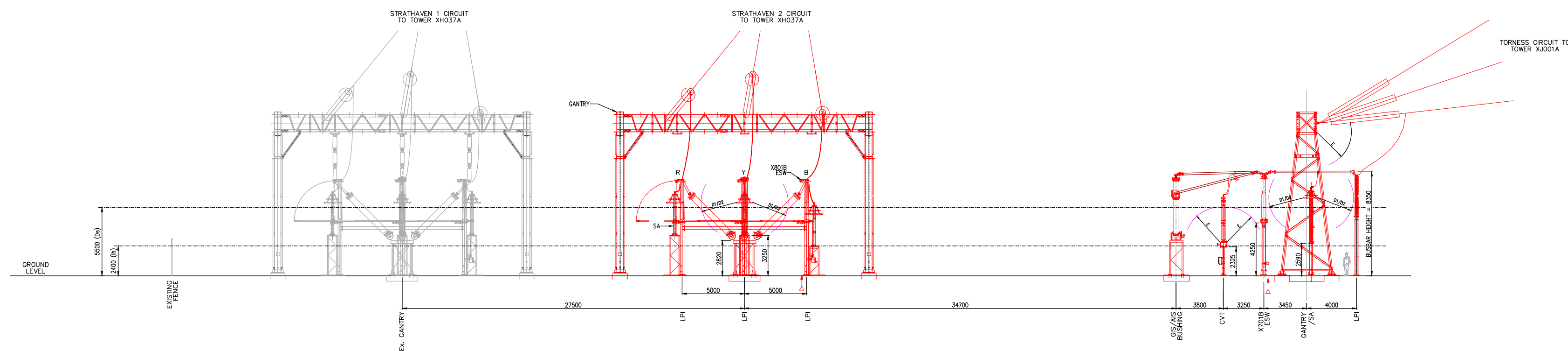
GIS DESIGN CLEARANCES (BY GIS SUPPLIER)		
REF	DESCRIPTION	400kV
TC	MINIMUM ELECTRICAL CLEARANCE FROM EXPOSED CONDUCTORS SUBJECT TO 400kV GIS TESTING.	3.4m
TP	MINIMUM ELECTRICAL CLEARANCE FROM EXPOSED CONDUCTORS SUBJECT TO 400kV GIS TESTING.	8.2m



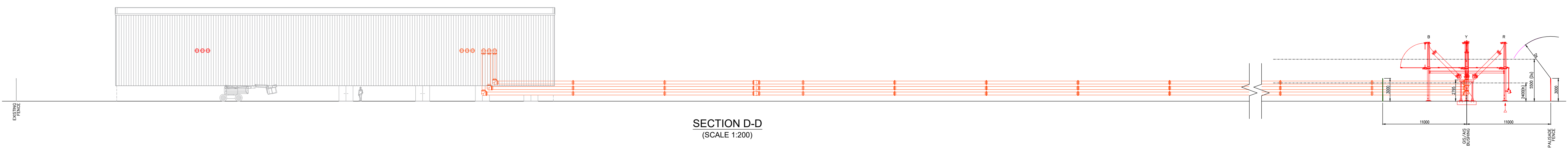
SECTION A-A
(SCALE 1:200)



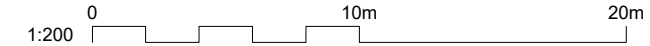
SECTION B-B
(SCALE 1:200)



SECTION C-C
GIB CONNECTIONS OMITTED FOR CLARITY
(SCALE 1:200)



SECTION D-D
(SCALE 1:200)



P01	01/09/2025	RCC	US	FIRST ISSUE	
Rev	Date	Drawn	Reviewed	Approved	Description of changes
				Dig. Title: 400V ELECTRICAL SUBSTATION ELEVATIONS	
Location: WISHAW				Dig. No.: 22119-BHK-WISH-SUB-D-E-000201	
Project: DWNO - DENNY TO WISHAW NETWORK OPTIMISATION				P01	
Status Codes: Description:				Scale: AS SHOWN Sheet: 01 Next: Suck: AD	
Will only represent 'Total or partial reproduction of this drawing without the permission of the appropriate authority'					