



## The Great Grid Upgrade

Eastern Green Link 3 (EGL 3) and  
Eastern Green Link 4 (EGL 4)

# English Onshore Scheme Construction and Design Drawings – Converter Stations and Substation

May 2025

To assist with understanding these drawings please see the **Guide to Consultation Documents and Drawings**.

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## The Great Grid Upgrade

Eastern Green Link 3 (EGL 3) and  
Eastern Green Link 4 (EGL 4)

# 01. Converter Stations Plans

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# 01. Converter Stations Plans

Drawing Category	Plan Title	Drawing Reference
English Onshore Scheme Construction and Design Drawings – Converter Stations and Substation		
Converter Stations Plans	Typical Converter Station 3D Isometric View	S42/TDD/SS/0019 Rev 01
	Typical Converter Station Outline Layout	S42/TDD/SS/0018 Rev 01
	Typical Converter Station Construction Compound	S42/TDD/SS/0015 Rev 01

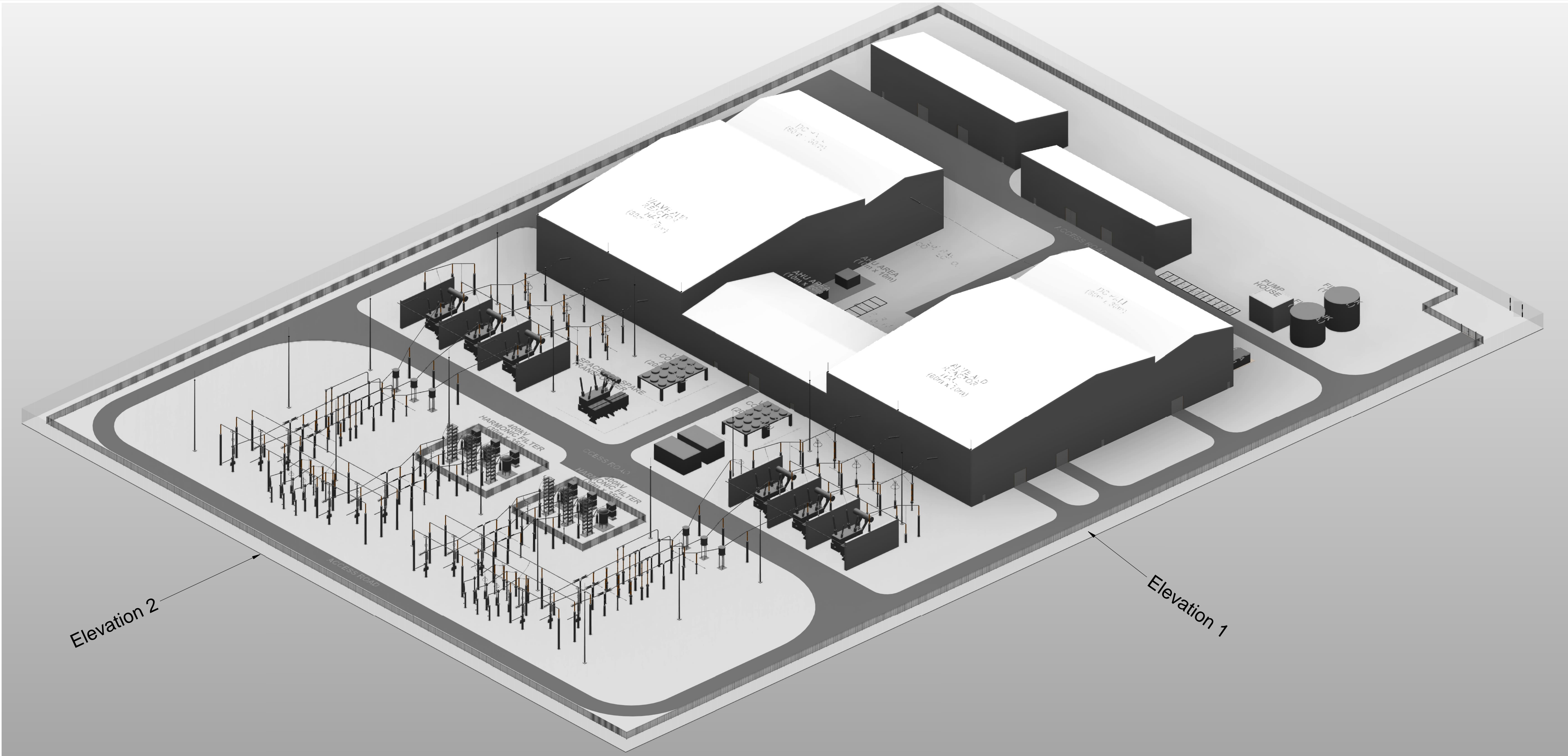
To assist with understanding these drawings please see the **Guide to Consultation Documents and Drawings**.



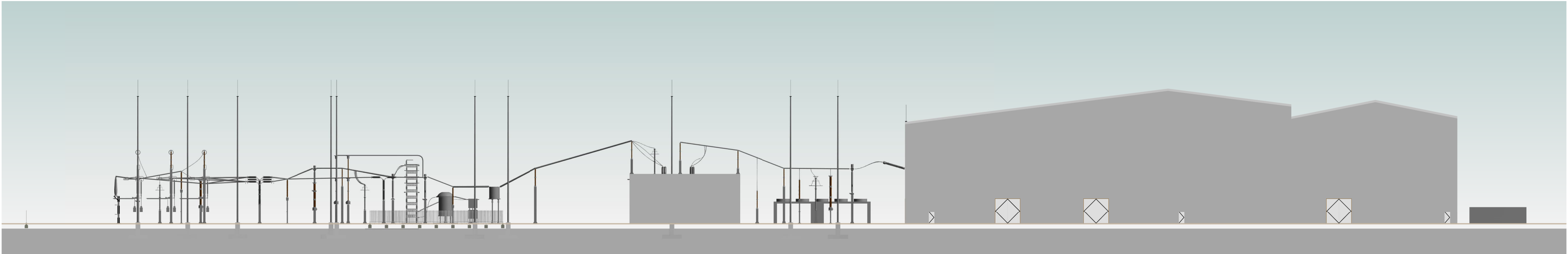
EASTERN GREEN LINK (EGL) 3 & EGL 4  
TYPICAL CONVERTER STATION 3D ISOMETRIC VIEW  
SHEET 1 OF 1

Notes

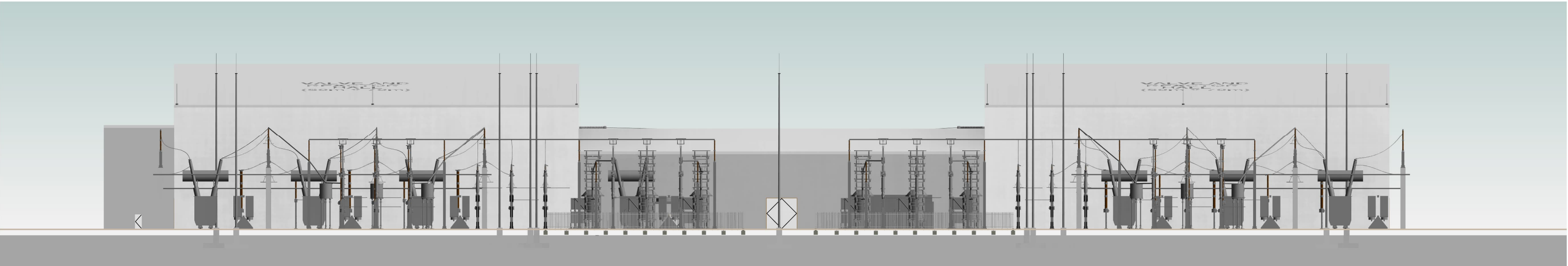
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CONVERTER STATION - 3D ISOMETRIC VIEW  
1 : 750



Elevation 1  
1 : 500



Elevation 2  
1 : 500

Legend

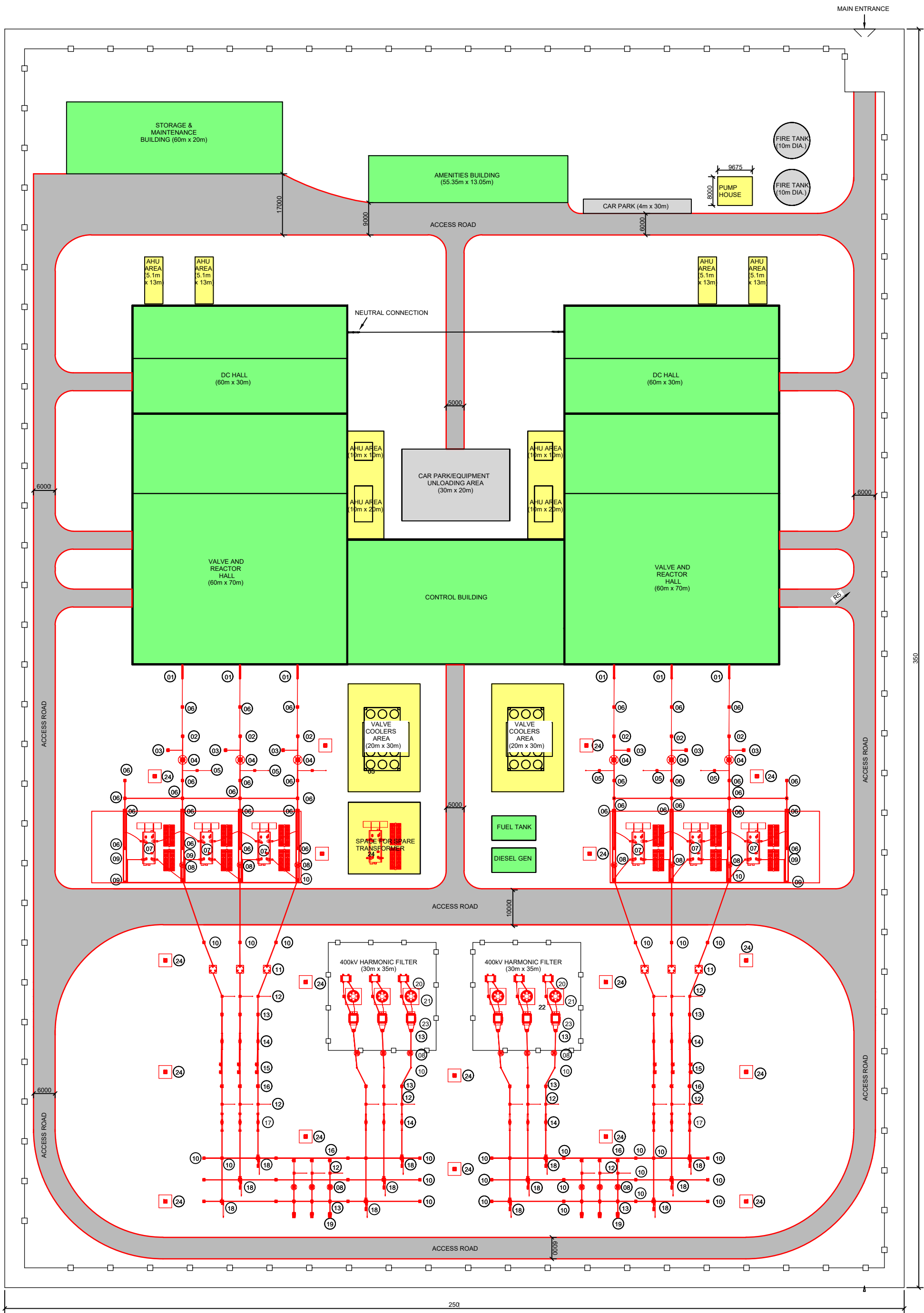
1ST	MAY 25	1ST ISSUE	VP	RM	LP
Issue	Date	Remarks	Drawn	Checked	Approved

Title:  
EASTERN GREEN LINK (EGL) 3 & EGL 4  
TYPICAL CONVERTER STATION 3D ISOMETRIC  
VIEW SHEET 1 OF 1

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PINS Application Number EN0210003					
National Grid Drawing Reference S42/TDD/SS/0019					
Scale As indicated	Sheet Size A1	Sheet SHEET 1 OF 1	Issue 1ST		



EASTERN GREEN LINK (EGL) 3 & EGL 4  
TYPICAL CONVERTER STATION OUTLINE LAYOUT  
SHEET 1 OF 1



NOMINAL SYSTEM VOLTAGE	PHASE TO EARTH	PHASE TO PHASE	SAFETY DISTANCE (FROM NATIONAL GRID SAFETY RULES)	DESIGN CLEARANCE FOR SAFETY (VERTICAL) Ds	DESIGN CLEARANCE FOR SAFETY (HORIZONTAL) Dsh	INSULATION HEIGHT Ih
kV	M	M	M	M	M (SEE POINT ii FROM NOTE 10)	M
400	2.8	3.6	3.1	5.5	4.6	2.4

NOMINAL SYSTEM VOLTAGE	PHASE TO EARTH	PHASE/POLE TO PHASE/POLE
kV	M	M
525 +/-	4	6

Legend

- PROPOSED EQUIPMENT
- INDICATIVE PERIMETER FENCE
- INDICATIVE INTERNAL FENCE

- BUILDINGS
- EXTERNAL EQUIPMENT AREAS
- CAR PARK
- ACCESS ROAD

Equipment Schedule

Item	Description
01	AIR BUSHING WALL PENETRATION
02	550kV CURRENT TRANSFORMER
03	550kV AIS CAPACITY VOLTAGE TRANSFORMER
04	550kV AIS SURGE ARRESTOR
05	550kV AIS EARTH SWITCH
06	550kV POST INSULATOR
07	400kV 1PH TRANSFORMER (355MVA)
08	400kV AIS SURGE ARRESTOR
09	11kV POST INSULATOR
10	400kV AIS POST INSULATOR
11	400kV PLC FILTER - REACTOR
12	400kV AIS EARTH SWITCH
13	400kV CURRENT TRANSFORMER
14	400 kV CIRCUIT BREAKER
15	400kV PRE-INSERTION RESISTOR
16	400kV CAPACITY VOLTAGE TRANSFORMER
17	400kV CIRCUIT BREAKER
18	400kV PANTOGRAPH DISCONNECTOR
19	400kV CABLE SEALING END
20	400kV HARMONIC FILTER - RESISTOR
21	400kV HARMONIC FILTER - REACTOR
22	400kV HARMONIC FILTER - SURGEARRESTOR
23	400kV HARMONIC FILTER - CAPACITOR
24	LIGHTNING MAST

Notes

- FOR STATUTORY CONSULTATION PURPOSES ONLY.

1ST	MAY 25	1ST ISSUE	VP	RM	LP
Issue	Date	Remarks	Drawn	Checked	Approved

Title

EASTERN GREEN LINK (EGL) 3 & EGL 4  
TYPICAL CONVERTER STATION OUTLINE LAYOUT  
SHEET 1 OF 1

**nationalgrid**

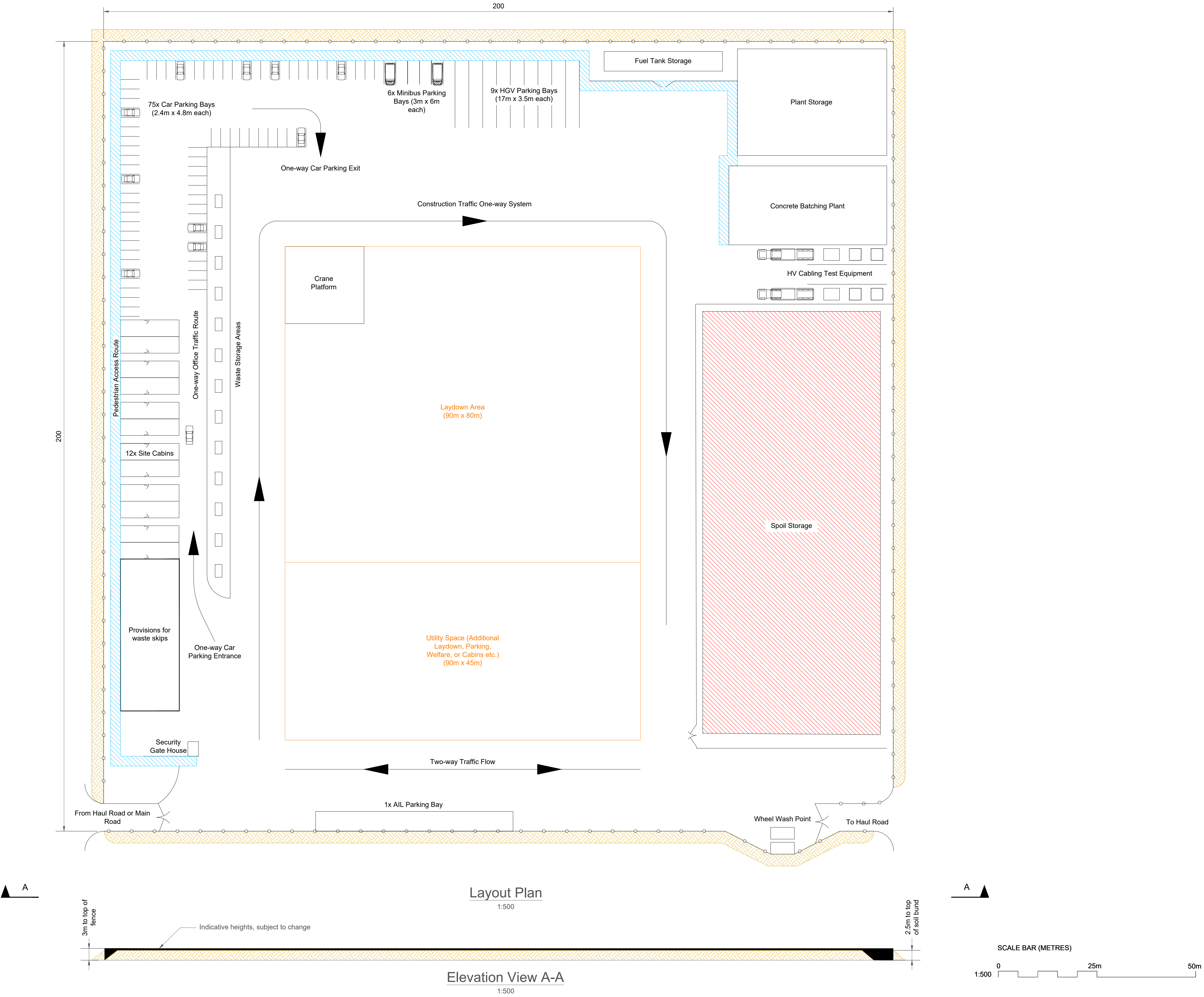
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<u>National Grid Drawing Reference</u>			
S42/TDD/SS/0018			
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1:500 0 25m 50m



EASTERN GREEN LINK (EGL) 3 & EGL 4  
TYPICAL CONVERTER STATION CONSTRUCTION COMPOUND  
SHEET 1 OF 1

Notes  
For statutory consultation purposes only.



Legend					
	Pedestrian Access				
	Spoil				
	Security Fenceline				
	Lay-down / Storage Area				
	Soil Bund				

1ST	MAY 25	1ST ISSUE	OM	RM	LP
Issue	Date	Remarks	Drawn	Checked	Approved

Title					
EASTERN GREEN LINK (EGL) 3 & EGL 4 TYPICAL CONVERTER STATION CONSTRUCTION COMPOUND SHEET 1 OF 1					

<b>nationalgrid</b>			
<u>Application Number</u>		EN0210003	
<u>National Grid Drawing Reference</u>			
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## The Great Grid Upgrade

Eastern Green Link 3 (EGL 3) and  
Eastern Green Link 4 (EGL 4)

# 02. Substation Plans

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# 02. Substation Plans

Drawing Category	Plan Title	Drawing Reference
English Onshore Scheme Construction and Design Drawings – Converter Stations and Substation		
Substation Plans	Walpole B Substation Layout Plan	PDD-100944_LAY_309 Rev A
	Walpole B Substation Layout Plan (Schematic)	PDD-100944_LAY_310 Rev A

To assist with understanding these drawings please see the **Guide to Consultation Documents and Drawings**.



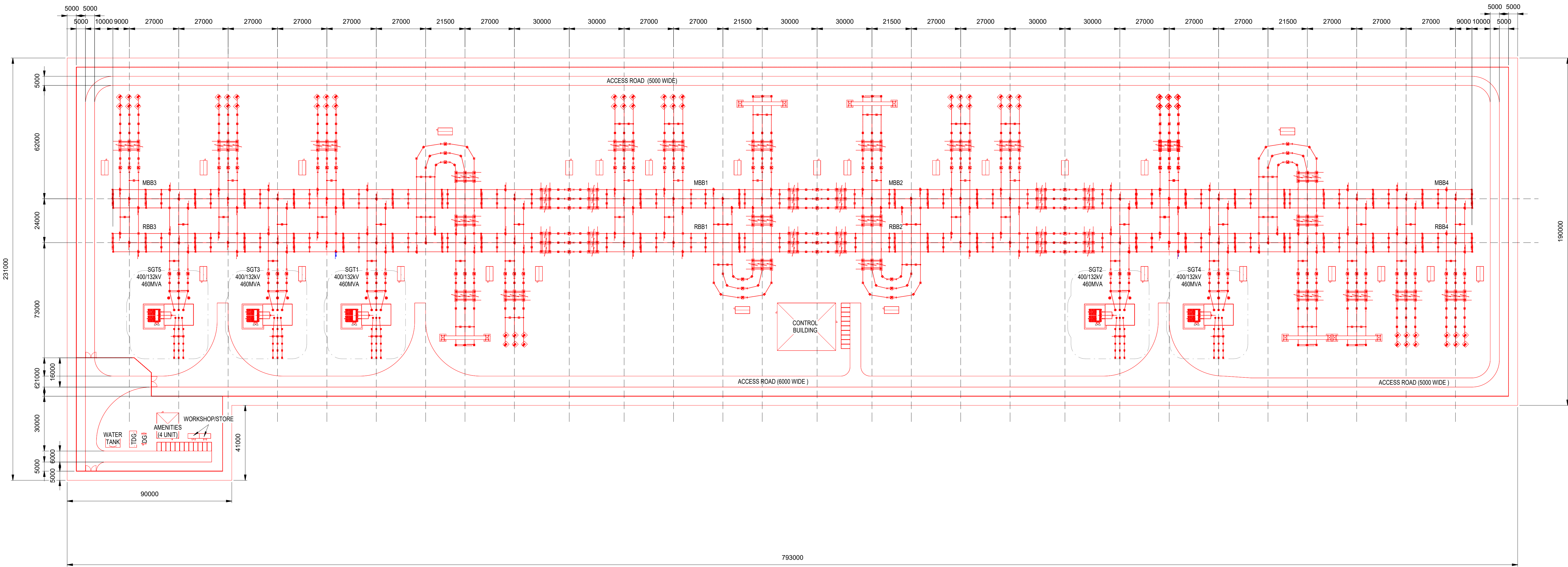
The site plan illustrates the layout of the Walpole B 400kV Substation Construction Compound, which covers an area of 4.2 hectares. The compound is depicted as a large blue-shaded rectangular area with internal structural details. A dashed black line indicates the 'INDICATIVE CABLE SWATHE' along the eastern boundary. A smaller, purple-shaded rectangular area at the top center represents the 'CABLE SEALING END COMPOUND', with dimensions of 6000 and 23100. The main compound has dimensions of 231000 and 41000. A label 'WALPOLE B 400kV SUBSTATION CONSTRUCTION COMPOUND (AREA = 4.2 ha)' is located within the compound. The plan also shows surrounding green areas, roads, and other infrastructure elements.

P0	18/03/25	DRAFT - FOR COMMENT	JR	MG	CN	
Issue	Date	Remarks	Drawn	Checked	Approved	
Title						

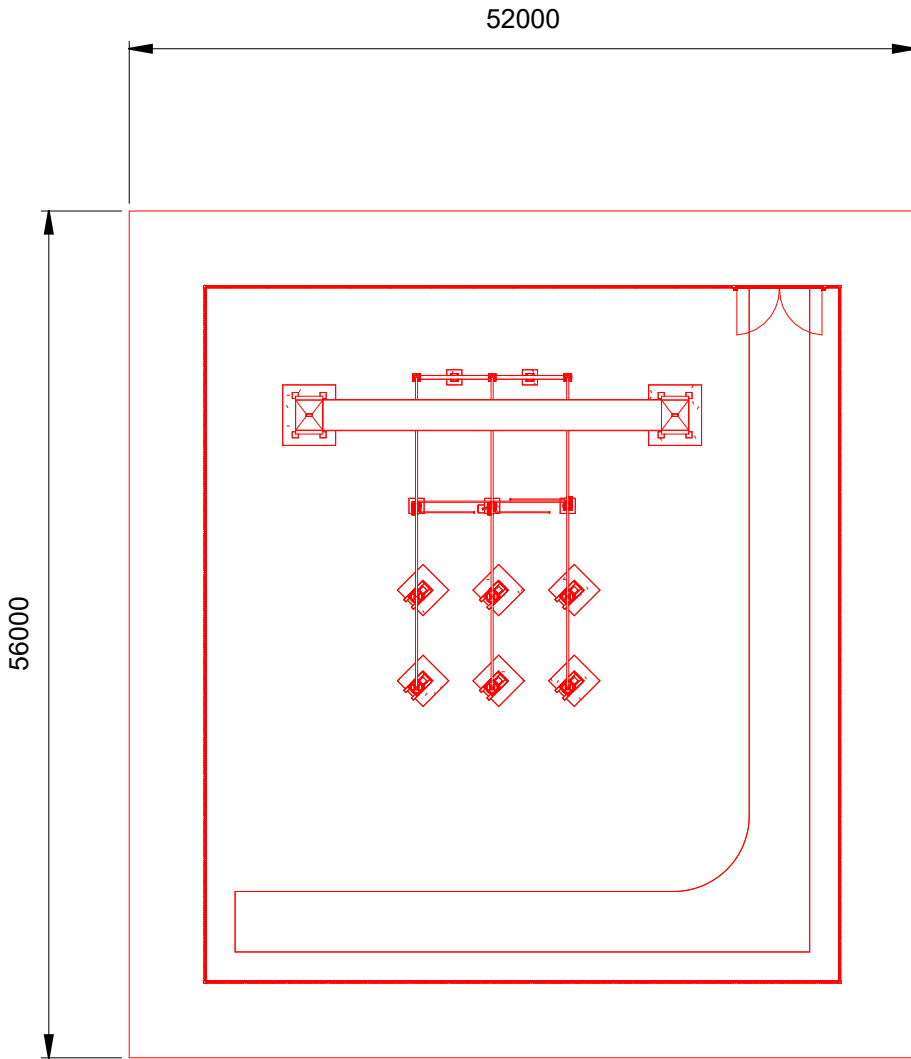
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XXX			
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PDD-100944_LAY_309			
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1:1500	A0	SHEET 1 OF 1	A



NATIONAL GRID  
EASTERN GREEN LINK (EGL) 3 & EGL 4 INDICATIVE WALPOLE B SUBSTATION  
SCHEMATIC PLAN



WALPOLE B 400kV SUBSTATION  
1 : 1000



WALPOLE (EXISTING) 2 CABLE SEALING END COMPOUND  
1 : 500


SUBSTATION MINIMUM ELECTRICAL CLEARANCES IN ACCORDANCE WITH TS 2.1 AND TONEI 196			
REF	NOMINAL SYSTEM VOLTAGE (mm)	400kV	132kV
1	PHASE TO EARTH CLEARANCE	2.8m	1.1m
2	PHASE TO PHASE CLEARANCE	3.6m	1.4m
3	SAFETY DISTANCE (FROM NSG SAFETY RULES)	3.1m	1.4m
4	DESIGN CLEARANCE FOR SAFETY (HORIZONTAL) DSHT	4.6m	2.9m
5	DESIGN CLEARANCE FOR SAFETY (VERTICAL) DS1	5.5m	3.6m
6	INSULATION HEIGHT (PEDESTRIAN ACCESS)	2.4m	2.4m
7	MEWP DESIGN CLEARANCE FOR SAFETY (HORIZONTAL) DSHT	6.6m	4.9m
8	MEWP ACCESS CORRIDOR TO DEAD CIRCUIT	3m	3m
9	CRANE ALLOWANCE	7.5m	7.5m

- NOTES:
- THIS IS A FEED 4.2 DRAWING.
  - FEEDER CIRCUIT TECHNOLOGY TO BE CONFIRMED (CABLE/OHL).
  - ISS AND ASSOCIATED ENHANCED SECURITY DESIGN ASPECTS (INCLUDING PERIMETER FENCING AND GATES) ASSUMED, TO BE CONFIRMED.
  - POWER QUALITY MONITORING REQUIREMENTS TO BE CONFIRMED.
  - METERING REQUIREMENTS TO BE CONFIRMED.
  - 5kA CONTINUOUS CURRENT, 63kA SHORT CIRCUIT CURRENT REQUIRED. THIS DESIGN IS BASED ON STANDARD 4kA SWITCHGEAR. ASSUMES 5kA RATED AIS SWITCHGEAR IS AVAILABLE, TYPE REGISTERED AND HAS NEGLIGIBLE DIMENSIONAL DIFFERENCES, TO BE CONFIRMED.
  - BAY NOMENCLATURE TO BE CONFIRMED.
  - LIVAC SUPPLY ARRANGEMENTS TO BE CONFIRMED.
  - NOISE ENCLOSURES FOR SGTs NOT SHOWN, BUT SUFFICIENT SPACE EXISTS FOR THEIR INCLUSION.
  - 400kV & 132kV CABLE DESIGN TO BE CONFIRMED.

A	29/04/2025	FIRST ISSUE	JR	MG	RM
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Title

NATIONAL GRID  
EASTERN GREEN LINK (EGL) 3 & EGL 4  
INDICATIVE WALPOLE B SUBSTATION  
SCHEMATIC PLAN

			
<u>Application Number</u>		XXX	
<u>National Grid Drawing Reference</u>			
PDD-100944-LAY-310			
Scale	Sheet Size	Sheet	Issue
1:1000	A0		A