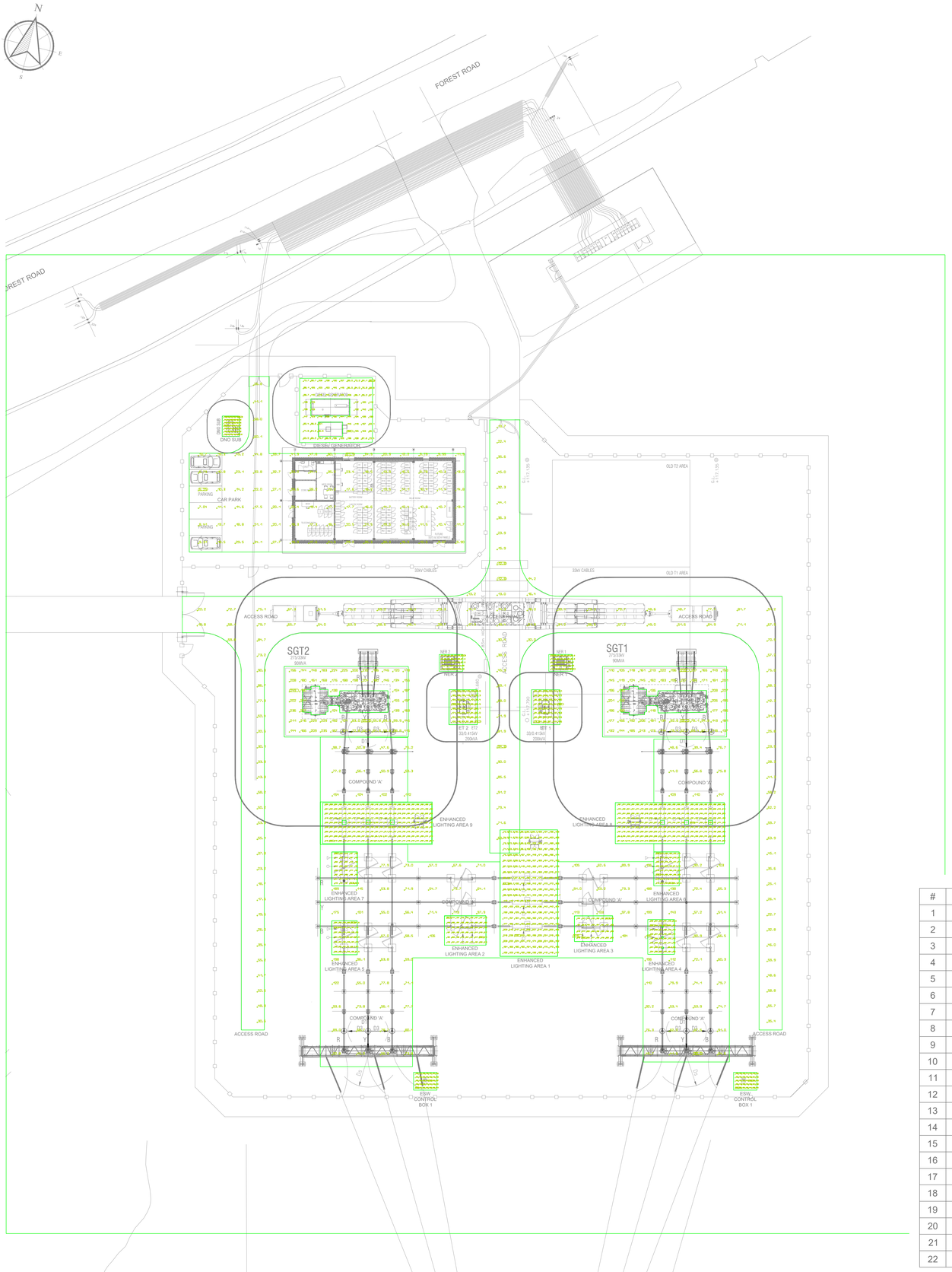
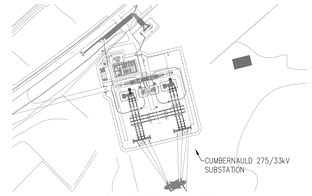


PLAN VIEW
Scale: 1 : 500

1:250 0 12.5m 25m



LOCATION PLAN
(SCALE 1:2500)

NOTES

1. THIS DRAWING SHALL BE READ IN CONJUNCTION ALL OTHER DRAWINGS AND DOCUMENTS RELATING TO THIS PROJECT.
2. DO NOT SCALE FROM THIS DRAWING.
3. THE COMPLETE ELECTRICAL SERVICES INSTALLATION SHALL COMPLY AND BE CARRIED OUT IN ACCORDANCE WITH BRITISH STANDARDS INCLUDING BUT NOT LIMITED TO:
   - BS 7671:2018+A3:2024 (REQUIREMENTS FOR ELECTRICAL INSTALLATIONS 18TH EDITION) AND ALL RELEVANT GUIDANCE NOTES.
   - BS5266 PT 1 2025 CODE OF PRACTICE FOR THE EMERGENCY LIGHTING OF PREMISES.
   - BS EN 1838: 2024 LIGHTING APPLICATIONS EMERGENCY LIGHTING.
   - BS7430 2011 +A1:2015 CODE OF PRACTICE FOR PROTECTIVE EARTHING OF ELECTRICAL INSTALLATIONS.
   - SP ENERGY NETWORKS: SUB-03-034 - GENERAL SPECIFICATION FOR THE CIVIL ENGINEERING AND BUILDING DESIGN AND CONSTRUCTION OF 275kV & 400kV SUBSTATION.
4. EXTERNAL COLUMN LUMINAIRES TO BE WIRED USING XLPE/SWA/LSOH CABLING AND 2C SWA LSOH LIGHTING CONTROL CABLE DRAWN THROUGH DUCTS.
5. THE EXTERNAL LIGHTING DESIGN WILL COMPLY WITH ILP GUIDANCE NOTE 01/21 AND THE SCOTTISH GOVERNMENT GUIDANCE NOTE ON CONTROLLING LIGHT POLLUTION AND REDUCING LIGHTING ENERGY CONSUMPTION AND LTP GUIDANCE NOTE 08/18 BATS AND ARTIFICIAL LIGHTING IN THE UK.
6. THE EXTERNAL LIGHTING WILL COMPLY WITH SP ENERGY NETWORKS SUB-03-034 WITH THE FOLLOWING LIGHTING LEVELS:
   - FOR SAFE ACCESS AND EMERGENCY EGRESS FOR PERSONNEL: MAINTAINED AVERAGE OF 6.0LUX, MINIMUM OF 2.5LUX.
7. THE EXTERNAL LIGHTING INSTALLATION WILL COMPLY FULLY WITH BS7671: 2018 + AMD 3 18TH EDITION OF THE IET REQUIREMENTS FOR ELECTRICAL INSTALLATION.
8. THE ELECTRICAL CONTRACTOR WILL SUPPLY AND INSTALL ALL IDENTIFICATION AND NOTICE LABELS INLINE WITH THE REQUIREMENTS OF THE BS7671:2018 AMD 3. ALL EQUIPMENT WILL BE LABELLED USING REVERSE ENGRAVED TRAFFOLYTE LABELS.
9. CABLES TO BE LABELED AT BOTH ENDS, CHANGES IN DIRECTION AND AT EACH SIDE OF WALL PENETRATIONS USING CRITCHLEY MARKERS.
10. ALL EXTERNAL LUMINAIRES TO BE IP65 RATED AND BE FOLD DOWN WITH HINGE LOCATED AT THE MID POINT OF THE COLUMN. INSTALLER TO ENSURE THAT THE COLUMN CAN FOLD DOWN UNHINDERED TO LEVEL.
11. THE PROPOSED LIGHTING COLUMNS SHALL BE COMPLETE WITH A CROSSARM, BOLT DOWN BASE AND LOCKABLE BASE COMPARTMENT. THE FLOODLIGHT COLUMNS AND CROSSARMS SHALL BE GALVANISED TO BS EN 1461 AND SHALL COMPLY WITH BS 5649.
12. ALL EXTERNAL COLUMN MOUNTED LUMINAIRES SHALL BE SUPPLIED VIA UNDERSLUNG DUCTING.
13. CABLING AT COLUMNS WILL BE TERMINATED IN SUITABLY RATED FUSED CUTOUTS LOCATED BEHIND CABLE ACCESS PANEL.
14. REFER TO CIVIL & STRUCTURAL DRAWING FOR DETAILS OF DUCTS AND FOUNDATION DETAIL FOR COLUMNS.
15. COLUMNS WILL BE SUPPLIED IN ACCORDANCE WITH EN40 STANDARD AND AS DESIGNATED IN PD 6547 TABLE A.1
16. THE LIGHTING COLUMNS SHALL BE INSTALLED 2m CLEAR OF FENCES TO AVOID BECOMING A "CLIMBING AID" AND TO MAINTAIN SEPARATION FROM THE FENCE EARTHING SYSTEM. ALL EXPOSED METALWORK OF THE FLOODLIGHTING COLUMNS AND THE ASSOCIATED CROSSARMS SHALL BE BONDED TO THE SUBSTATION EARTH IN ACCORDANCE WITH EART-03-002.
17. THE LIGHTING COLUMNS SHALL BE ERECTED IN SUCH A WAY THAT THEY DO NOT INFRINGE SAFETY DISTANCE OF THE LIVE APPARATUS. TOPPLE ZONES ARE SHOWN FOR THE COLUMNS.

#	Name	Parameter	Min	Max	Average	Min/average	Min/max
1	Access Road	Perpendicular illuminance	14.0 lx	103 lx	47.4 lx	0.30	0.14
2	Enhanced Lighting Area 1	Perpendicular illuminance	63.2 lx	232 lx	146 lx	0.43	0.27
3	Enhanced Lighting Area 2	Perpendicular illuminance	63.2 lx	220 lx	174 lx	0.36	0.29
4	Enhanced Lighting Area 3	Perpendicular illuminance	55.8 lx	220 lx	167 lx	0.33	0.25
5	Enhanced Lighting Area 4	Perpendicular illuminance	50.7 lx	245 lx	185 lx	0.27	0.21
6	Enhanced Lighting Area 5	Perpendicular illuminance	64.7 lx	215 lx	152 lx	0.43	0.30
7	Enhanced Lighting Area 6	Perpendicular illuminance	65.0 lx	240 lx	174 lx	0.37	0.27
8	Enhanced Lighting Area 7	Perpendicular illuminance	72.7 lx	296 lx	187 lx	0.39	0.25
9	Enhanced Lighting Area 8	Perpendicular illuminance	82.2 lx	245 lx	175 lx	0.47	0.34
10	Enhanced Lighting Area 9	Perpendicular illuminance	61.8 lx	325 lx	163 lx	0.38	0.19
11	SGT1	Perpendicular illuminance	62.7 lx	239 lx	158 lx	0.40	0.26
12	SGT2	Perpendicular illuminance	50.5 lx	257 lx	159 lx	0.32	0.20
13	ET2	Perpendicular illuminance	77.3 lx	188 lx	119 lx	0.65	0.41
14	ET1	Perpendicular illuminance	81.1 lx	186 lx	120 lx	0.68	0.44
15	DNO Sub	Perpendicular illuminance	98.2 lx	151 lx	127 lx	0.77	0.65
16	Diesel Generator	Perpendicular illuminance	56.6 lx	154 lx	110 lx	0.51	0.37
17	ESW Control Box	Perpendicular illuminance	100 lx	158 lx	133 lx	0.75	0.63
18	ESW Control Box	Perpendicular illuminance	101 lx	155 lx	130 lx	0.78	0.65
19	NER 2	Perpendicular illuminance	71.3 lx	124 lx	96.2 lx	0.74	0.57
20	NER 1	Perpendicular illuminance	73.3 lx	129 lx	104 lx	0.70	0.57
21	Compound A	Perpendicular illuminance	38.8 lx	215 lx	88.4 lx	0.44	0.18
22	Car Park	Perpendicular illuminance	6.44 lx	62.1 lx	25.2 lx	0.26	0.10

DRAWING TO BE PRINTED IN COLOUR

Rev.	Date	Drawn	Reviewed	Approved	Reason / Description of changes.
P01	06.03.2026	RH/DW	SM	SH	ISSUED FOR REVIEW

SP Energy Networks | MORGAN SINDALL INFRASTRUCTURE | Baker Hicks

Location: CUMBERNAULD

Project: DWNO - DENNY TO WISHAW NETWORK OPTIMISATION

Status Code: S3 | Description: REVIEW & COMMENTS

Drg. Title: STAGE 1B 400/132/33kV ELECTRICAL SUBSTATION LAYOUT EXTERNAL LIGHTING PLOT LAYOUT

Drg. No.: 22119-BHK-CUMB-SUB-D-E-000702 | Rev: P01

SPEN Ref. No. : | Scale: AS SHOWN | Sheet: - | Next: - | Size: A0

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