



- ### HEALTH, SAFETY & ENVIRONMENTAL INFORMATION
- IN ADDITION TO THE HAZARDS TYPICALLY ASSOCIATED WITH THE WORKS SHOWN ON THESE DRAWINGS - THE FOLLOWING HAZARDS HAVE BEEN IDENTIFIED AS REQUIRING PARTICULAR CONSIDERATION
- WORKS TO BE CARRIED OUT ADJACENT TO A HIGH VOLTAGE ENVIRONMENT. ALL WORKS TO PROCEED IN ACCORDANCE WITH HSG 47 (UNDERGROUND CABLES) & TSE (OVERHEAD LINES) & SCOTTISH POWER ELECTRICAL & MECHANICAL SAFETY RULES HANDBOOK 8th EDITION. TREAT ALL CABLES AS LIVE UNTIL PROVEN OTHERWISE. LOCATION OF THE KNOWN EXISTING SERVICES IS SHOWN FROM EXISTING INFORMATION AND GPR SURVEY RECORDS AND IS THEREFORE INDICATIVE ONLY. CARE IS REQUIRED SINCE UNKNOWN SERVICES MAY EXIST. THE ACTUAL LOCATION OF THE SERVICES SHOULD BE CONFIRMED BY THE CONTRACTOR. PARTICULAR CARE IS REQUIRED WHILE WORKING IN THE SURROUNDING AREA TO THE EXISTING 400kV 2V OHL ROUTE.
 - PARTICULAR CARE IS REQUIRED WHEN WORKING AROUND THE 2 KNOWN EXISTING SCOTTISH WATER PIPES RUNNING WITHIN THE FIELD PARALLEL TO B7078. CONTRACTOR TO FOLLOW AND ADHERE TO APPROPRIATE SCOTTISH WATER DOMS PROCEDURES IN PLACE FOR THE SCHEME AT ALL TIMES. LOCATION OF SW ASSETS IS SHOWN BASED ON EXISTING INFORMATION AND GPR SURVEY RECORDS AND IS THEREFORE INDICATIVE ONLY. THE ACTUAL LOCATION OF THE PIPES SHOULD BE CONFIRMED BY THE CONTRACTOR AS PER SCOTTISH WATER REQUIREMENTS (i.e. USE OF SW APPROVED CONTRACTOR).
 - EXCAVATIONS SHOULD BE ADEQUATELY SUPPORTED AND PROTECTED DURING CONSTRUCTION. EXCAVATION MAY BE REQUIRED BENEATH GROUND WATER LEVEL. THE CONTRACTOR SHOULD DEVELOP APPROPRIATE MITIGATION SUCH AS SUMP AND PUMP AS WHEN REQUIRED.
 - STEEP GROUND - CARE TO BE TAKEN WHEN MOVING AND OPERATING MACHINERY. ALL VEHICLES AND MACHINERY TO BE APPROPRIATE FOR THE CONDITIONS.
 - SURFACE WATER SHOULD BE MANAGED AT THE SITE DURING THE EXCAVATION PROCESS EITHER WITH THE INSTALLATION OF THE PERMANENT OR TEMPORARY DRAINAGE SYSTEM TO HELP PREVENT SLURRING IN THE SLOPE AND TO MAXIMISE THE MATERIAL FOR REUSE.
 - CARE SHOULD BE TAKEN TO PREVENT ANY CONTAMINATION OR SILT RUN-OFF FROM ENTERING ANY ADJACENT WATERCOURSES OR DRAINAGE SYSTEMS. 10m BUFFER SHALL BE LEFT TO EXISTING WATERCOURSES AT ALL TIMES.
 - CARE SHOULD BE TAKEN WHEN WORKING ADJACENT TO EXISTING EQUIPMENT STRUCTURES TO PREVENT ANY DE-STABILISATION OF FOUNDATIONS/STRUCTURES BY CONSTRUCTION, EXCAVATION OR EQUIPMENT MOVEMENT.
 - LOCATIONS FOR STORAGE OF EXCAVATED MATERIAL TO BE REVIEWED BY CONTRACTOR FOR SLOPE STABILITY AND AGREED WITH THE SPEN CONSTRUCTION MANAGER.
- ### NOTES:
- ALL DIMENSIONS AND LEVELS ARE IN METRES UNLESS OTHERWISE NOTED.
 - DIMENSIONS SHALL NOT BE SCALED FROM THIS DRAWING.
 - INFORMATION REGARDING THE LOCATION AND DEPTH OF EXISTING SERVICES ARE BASED ON EXISTING INFORMATION AND ARE INDICATIVE ONLY. THE CONTRACTOR SHALL CARRY OUT ADEQUATE SURVEYS OF EXISTING CABLES AND HAND DIG TRIAL PITS AS NECESSARY.
 - THE CONTRACTOR SHALL TAKE SPECIAL CARE WITH EXISTING SERVICES BOTH SURFACE AND UNDERGROUND, IN THE WORK AREA. IF IT IS NECESSARY TRIAL PITS WILL BE DUG TO VERIFY THE LOCATION OF SERVICES IN ACCORDANCE WITH SP SAFETY RULES & HSG47.
 - IF DURING EXCAVATION THE CONTRACTOR DISCOVERS ANY STRUCTURES OR SERVICES ON SITE WHICH ARE NOT SHOWN ON THE DRAWINGS, HE SHALL IMMEDIATELY INFORM THE SP ENERGY NETWORKS SITE SUPERVISOR, WHO SHALL DECIDE WHAT ACTION TO TAKE AS DEFINED IN NGTS 3.10.03. THIS IS A HOLD POINT.
 - THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE BASIS OF DESIGN REPORT, EARTHWORKS SPECIFICATION AND ALL OTHER RELEVANT DOCUMENTATION, DRAWINGS AND STANDARD DETAILS.
 - CONTRACTOR IS RESPONSIBLE FOR SUBMITTING AN EARTHWORKS PLAN FOR THE PROPOSED WORKS AND SHOULD INCLUDE METHODOLOGY FOR STORING AND REMOVAL FROM SITE OF EXCAVATED MATERIAL.
 - STRIPPING AND STORAGE OF TOPSOIL AND SUBSOIL SHALL BE UNDERTAKEN BY THE CONTRACTOR IN ACCORDANCE WITH BS4428. STRICT PRECAUTIONS SHALL BE TAKEN TO PREVENT THE MIXING OF TOPSOIL AND SUBSOIL.
 - TOPSOIL MUST BE STORED IN HEAPS NOT EXCEEDING 1.5M IN HEIGHT AND 3.0M WIDTH. PREVENT COMPACTION AND CONTAMINATION OF STORAGE HEAPS BY FENCING AND COVERING AS APPROPRIATE.
 - ALL EARTHWORKS SHALL BE IN ACCORDANCE WITH SP ENERGY NETWORKS' ENGINEERING SPECIFICATION AND DRAWINGS.
 - THE CONTRACTOR SHALL AVOID MULTIPLE HANDLING OF EXCAVATED MATERIALS WHERE POSSIBLE.
 - LEVEL INFORMATION FOR GROUND CONDITIONS ARE EXTRAPOLATED BETWEEN LIMITED AVAILABLE EXPLORATORY HOLES TO COVER THE SITE AREA. ACTUAL GROUND CONDITIONS MAY VARY LOCALLY AND MAY BE DIFFERENT TO WHAT IS SHOWN ON THE SECTIONS. DURING CONSTRUCTION THE CONTRACTOR SHOULD CONSTRUCT THE SLOPES BASED ON THE MATERIAL ENCOUNTERED FOLLOWING THE METHODOLOGY OF THE DESIGN DRAWINGS.
 - TEMPORARY CONTRACTOR'S COMPOUND DRAINAGE INFRASTRUCTURE SHOWN IS INDICATIVE ONLY. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION DRAINAGE PLAN TO SP ENERGY NETWORKS FOR APPROVAL PRIOR TO COMMENCEMENT OF WORKS.
 - WHERE CONSTRUCTION RUN OFF IS DISCHARGED TO GROUND OR WATERCOURSE THE NECESSARY PERMITS SHALL BE OBTAINED AND CARRIED OUT IN ACCORDANCE WITH SEPA BEST PRACTICE.
 - CONTRACTOR SHALL PROTECT EXISTING SERVICES AND SCOTTISH WATER ASSETS AT ALL PROPOSED CROSSING POINTS AS PART OF THEIR TEMPORARY WORKS. CROSSINGS OF EXISTING SERVICES SHALL BE KEPT TO THE MINIMUM REQUIRED.
 - CONFLICTING INFORMATION SHOWN ON THE DESIGNERS DRAWINGS OR DISCREPANCIES BETWEEN THE INFORMATION GIVEN BY THE SP ENERGY NETWORKS ENGINEER AND THAT PROVIDED BY OTHERS MUST BE REFERRED TO THE SP ENERGY NETWORKS ENGINEER BEFORE THE WORKS COMMENCE.
 - TEMPORARY WORKS DESIGN ASSOCIATED WITH THE CONSTRUCTION OF THE WORKS SHALL BE RESPONSIBILITY OF THE CONTRACTOR.
 - THE PROPOSED TEMPORARY ROAD ALIGNMENT AND ASSOCIATED CONSTRUCTION DETAILS ARE PROVIDED AS A PRELIMINARY DESIGN DUE TO THE SITE CONSTRAINTS AND SERVICES IN THE AREA. THIS DESIGN SHALL BE ASSESSED AND INVESTIGATED BY THE CONTRACTOR AS PART OF THEIR TEMPORARY WORKS DESIGN AND CONSTRUCTION WORKS MANAGEMENT RESPONSIBILITIES.
 - MINIMUM EXCAVATION LEVEL TO EARTHWORKS FORMATION LEVEL TO BE 370mm BELOW EXISTING GROUND LEVEL. EXCAVATION TO THE EARTHWORKS FORMATION LEVEL TO FOLLOW EXISTING TOPOGRAPHY.
 - EXISTING SERVICES SHALL BE SPLIT DUCTED (IF NOT ALREADY IN DUCTS OR A PIPE IN PLACE) UNDER HARDESTANDING OR TRAFFICKED AREAS. THEY ALSO SHALL BE ENCASED IN (MIN. 150MM) C32/40 CONCRETE FOR THE LENGTH UNDER THE HARDESTANDING/TRAFFICKED AREA PLUS AN ADDITIONAL 1.5M EITHER SIDE.

ACCESS ROAD SETTING OUT COORDINATES				
POINTS	EASTING	NORTHING	LEVEL	NOTES
01	287299.32	627129.67	278.74m	
02	287324.168	627133.254	278.57m	
03	287337.592	627154.469	282.00m	
04	287341.171	627181.339	285.49m	
05	287341.876	627186.417	286.11m	
06	287342.555	627191.493	286.70m	
07	287343.307	627197.119	287.40m	
08	287342.061	627206.974	288.79m	
09	287337.573	627213.628	289.88m	
10	287222.021	627302.271	301.33m	
11	287254.327	627284.432	301.44m	
12	287337.902	627220.401	290.47m	
13	287342.299	627216.661	289.76m	
14	287345.716	627212.01	289.17m	
15	287346.234	627211.764	289.14m	
16	287346.643	627212.166	289.23m	
17	287353.228	627247.471	293.56m	
18	287348.585	627263.621	295.87m	
19	287337.993	627276.025	297.97m	
20	287281.214	627319.526	301.55m	
21	287284.559	627323.892	301.66m	
22	287341.338	627280.391	298.08m	
23	287349.369	627272.431	298.07m	
24	287355.139	627262.706	295.58m	
25	287355.653	627262.408	295.36m	
26	287356.089	627262.813	295.34m	
27	287364.471	627307.754	300.12m	
28	287362.08	627333.966	301.48m	
29	287346.326	627355.052	301.72m	
30	287322.448	627373.346	301.95m	
31	287325.793	627377.712	301.98m	
32	287349.671	627359.418	301.83m	
33	287367.215	627335.936	301.59m	
34	287369.878	627306.746	300.23m	
35	287348.24	627190.733	286.84m	
36	287347.37	627185.683	286.22m	
37	287346.621	627180.613	285.60m	
38	287341.386	627141.353	280.32m	
39	287345.43	627121.916	278.23m	
40	287360.719	627109.255	278.08m	
41	287225.366	627306.637	301.49m	

	ROAD VOLUMES	INFILL AREA VOLUMES	TOTAL
SOFT STRIP	4,650m3	535m3	5,185m3
GRANULAR CUT	265m3	0m3	265m3
ROCK CUT	0m3	0m3	0m3
FILL REQUIRED	103,000m3	59,100m3	162,100m3

NOTE:
VOLUMES STATED ARE FOR ACCESS ROAD EARTHWORKS AND INFILL AREAS ONLY.
REFER TO SPECIFIC DRAWING FOR PLATFORM AND TEMPORARY COMPOUND EARTHWORKS.

NOTE THAT VOLUMES SHOWN ARE NET, AND NO BULKING FACTOR HAS BEEN APPLIED.

REFER TO INDICATIVE CUT & FILL DEPTHS DRAWING (BT3423-2-1100-DO-AECOEC-1040) AND EARTHWORKS CUT & FILL ANALYSIS DOCUMENT BT3423-2-1100-RN-AECOEC-0003 FOR FURTHER DETAILS.

- KEY:**
- FILL SLOPE (GENERALLY 1:2 GRADIENT)
 - PLANNING BOUNDARY (20.645Ha)
 - EXTENT OF PROPOSED ACCESS ROADS
 - AREAS TO BE INFILLED WITH SURPLUS GRANULAR MATERIAL AND USED AS LAYDOWN SPACE

REFERENCE DRAWINGS:
FOR BEARING TEST LOCATIONS, REFER DRAWING BT3423-2-1100-DO-AECOEC-1017.
FOR LONGITUDINAL SECTIONS, REFER DRAWING BT3423-2-1100-DO-AECOEC-1021.
FOR CROSS-SECTIONS, REFER DRAWING BT3423-2-1100-DO-AECOEC-1022.
FOR ROAD CONSTRUCTION DETAILS, REFER DRAWING BT3423-2-1100-DO-AECOEC-1024.
FOR JUNCTION BELLMOUTH, REFER DRAWING BT3423-2-1100-DO-AECOEC-1026.
FOR JUNCTION VISIBILITY SPLAYS, REFER DRAWING BT3423-2-1100-DO-AECOEC-1025.

- NOTES:**
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OG	28.02.24	EP	JM	RQ	TENDER DESIGN REISSUE
OF	21.02.24	EP	JM	RQ	TENDER DESIGN REISSUE
OE	19.12.24	EP	JM	RQ	TENDER DESIGN ISSUE
OD	07.11.24	JM	EP	RQ	OUTLINE DESIGN ISSUE
OC	25.10.24	JM	EP	RQ	OUTLINE DESIGN ISSUE
OB	03.10.24	EP	JM	RQ	OUTLINE DESIGN ISSUE
-	18.09.24	EP	JM	RQ	OUTLINE DESIGN ISSUE

FOR INFORMATION

Status Stamp

Project: REDSHAW 400/132kV SUBSTATION ENABLING WORKS

Location: REDSHAW

Org. Title: SUBSTATION ACCESS ROAD LAYOUT

Drawn: EP

Rev'd: JM

App'd: RQ

Org. No.: BT3423-2-1100-DO-AECOEC-1020

SPEN Ref. No.: ###

Sheet: 06

Scale: 1:500

Size: A1