



HEALTH, SAFETY & ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARD RISKS 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 1850 47 (UNDERGROUND CABLES) & 1850 48 (OVERHEAD LINES) & SCOTTISH POWER ELECTRICAL & MECHANICAL SAFETY RULES HANDBOOK 9th EDITION. TREAT ALL CABLES AS LIVE UNTIL PROVEN OTHERWISE. LOCATION OF THE KNOWN EXISTING SERVICES IS SHOWN FROM EXISTING INFORMATION 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 ZV OHL ROUTE.
- PARTICULAR CARE IS REQUIRED WHEN WORKING AROUND THE 2 NO EXISTING SCOTTISH WATER PIPES RUNNING WITHIN THE FIELD PARALLEL TO B7078. CONTRACTOR TO FOLLOW AND ADHERE TO APPROPRIATE SCOTTISH WATER DMS 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 SURGE 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.

REFERENCE DRAWINGS:

FOR TYPICAL DRAINAGE DETAILS, REFER DRAWINGS BT3423-2-1100-DO-AECOEC-1051 & 1052.
FOR MANHOLE SCHEDULE, REFER DRAWING BT3423-2-1100-DO-AECOEC-1053.
FOR DRAINAGE SPECIFICATION INCLUDING INFODRAINAGE MODELLING OUTPUT REPORT, REFER DOCUMENT BT3423-2-1100-ST-AECOEC-0007.
FOR PROPOSED SUBSTATION ACCESS ROAD, REFER DRAWING BT3423-2-1100-DO-AECOEC-1020.
FOR CONCRETE SPECIFICATION, REFER DRAWING BT3423-2-1100-DO-AECOEC-1033.

NOTES:

- PLATFORM AND ACCESS ROAD SURFACE WATER DRAINAGE TO BE INSTALLED BY ENABLING WORKS CONTRACTOR, AS SHOWN.
- OIL CONTAINMENT DRAINAGE ASSOCIATED WITH TRANSFORMER BUNDLS TO BE INSTALLED BY MAIN CIVILS CONTRACTOR, AND IS SUBJECT TO CHANGE BASED ON SELECTED TRANSFORMERS AND FINAL DESIGN OF TRANSFORMER BUNDLS (BY SPEN).
- FOUL DRAINAGE TO BE INSTALLED BY MAIN CIVILS CONTRACTOR, AND IS SUBJECT TO CHANGE BASED ON FINAL DESIGN OF GIS BUILDING LAYOUTS (BY SPEN).
- ANT PIPES THAT CROSS UNDER ROADS SHOULD BE ENCASED IN CONCRETE, AS PER TYPE 'Z' INSTALLATION (REFER DRAWING BT3423-2-1100-DO-AECOEC-1052).
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH RELEVANT DRAWINGS, SPECIFICATION, AND IN APPENDIX 9/1 MCHV VOLUME, SERIES 0009. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- ALL DIMENSIONS AND LEVELS TO BE CHECKED PRIOR TO COMMENCEMENT OF WORKS.
- ALL STRUCTURAL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH ALL CURRENT H&S GUIDANCE NOTES (SDS PART 1-4 INCLUDING AND BRITISH STANDARDS).
- THE CONTRACTOR IS TO SUPPLY ALL TEMPORARY WORKS AND A RISK ASSESSMENT PRIOR TO COMMENCEMENT OF WORKS.
- ALL DIMENSIONS ARE IN MILLIMETRES, UNLESS NOTED OTHERWISE.

KEY

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SURFACE WATER DRAINAGE (UPVC PERFORATED PIPE) - TYPE 'M'

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SURFACE WATER DRAINAGE (UPVC SOLID PIPE) - TYPE 'S'

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SURFACE WATER DRAINAGE UNDER MAIN ROAD - TYPE 'Z'

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MANHOLE / CATCH PIT

—●—

RODDING EYE

—●—

FILTER DRAIN (ALONGSIDE ACCESS ROAD)

—●—

FOUL DRAINAGE

—●—

FOUL MANHOLE

—●—

SEPTIC TANK

ALL FOUL DRAINAGE TO BE INSTALLED BY MAIN CIVILS CONTRACTOR, AND IS SUBJECT TO CHANGE BASED ON FINAL BUILDING ARRANGEMENT.

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SURFACE WATER DRAINAGE TO BE INSTALLED BY ENABLING WORKS CONTRACTOR. REFER TO DRAWING BT3423-2-1100-DO-AECOEC-1052 FOR FURTHER DETAILS ON PIPE TYPES.

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CUT-OFF DITCH (FOR DETAILS, REFER DRAWING BT3423-2-1100-DO-AECOEC-1052)

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PRECAST CONCRETE HEADWALL

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HERRING BONE DRAINAGE ON CUT SLOPE TO CAPTURE PERCHED WATER. FOR DETAILS, REFER DRAWING BT3423-2-1100-DO-AECOEC-1052.

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ATTENUATION FEATURE

—●—

PLANNING BOUNDARY (20.645 Ha)

Rev

Date

Drawn

Reviewed

Approved

Reason / Description of changes

01

24.04.25

JM

EP

RQ

TENDER DESIGN REISSUE

02

27.02.25

EP

JM

RQ

TENDER DESIGN REISSUE

03

13.02.25

TG

EP

RQ

TENDER DESIGN REISSUE

04

20.12.24

EP

JM

RQ

TENDER DESIGN ISSUE

05

08.11.24

JM

EP

RQ

OUTLINE DESIGN ISSUE

06

30.10.24

JM

EP

RQ

OUTLINE DESIGN ISSUE

07

03.10.24

EP

JM

RQ

OUTLINE DESIGN ISSUE

08

18.09.24

EP

CGY

RQ

OUTLINE DESIGN ISSUE

SP ENERGY NETWORKS

FOR INFORMATION

STATUS STAMP

Project:

REDSHAW 400/132KV SUBSTATION ENABLING WORKS

Location:

REDSHAW

Drg. Title:

PROPOSED DRAINAGE LAYOUT

Drawn

Rev'd

App'd

Drg. No.

EP

CGY

RQ

BT3423-2-1100-DO-AECOEC-1050

SPEN Ref. No.:

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Sheet:

01

Scale:

1:1000

Size:

A1

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