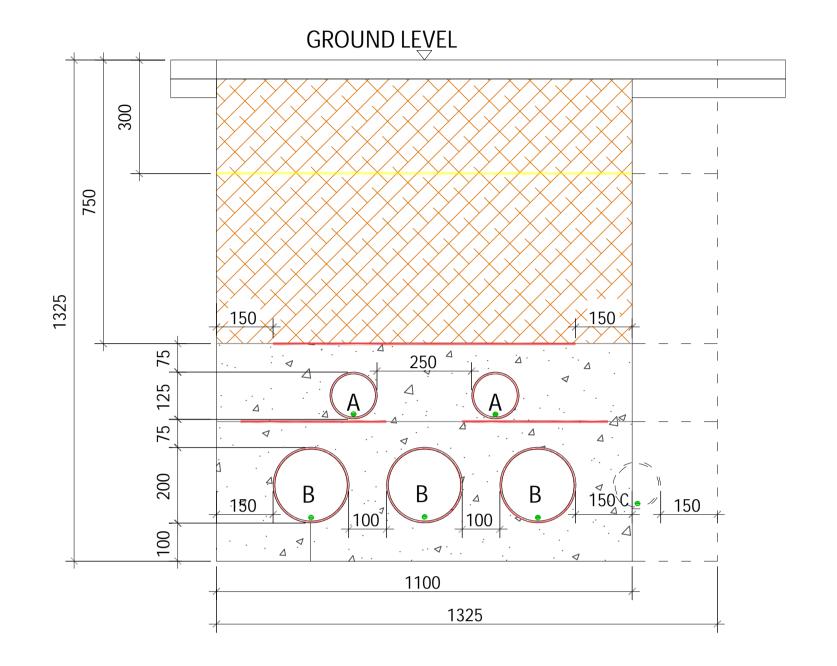


Section Through Cable Trench in Road

Scale : 1:10



Section Through Cable Trench in Grassland

Scale: 1:10

ELECTRICAL CABLE DUCT 220KV HV DUCTING AND JOINTS(OR SIMILAR AND APPROVED)

MAIN CABLE DUCT (110MM OD) - SHALL BE 110MM OD - SDR17.6 HDPE (ESB APPROVED RED) ELECTRIC CABLE DUCT SMOOTH WALL DUCT IS MANUFACTURED FROM POLYETHYLENE (PE) IN ACCORDANCE WITH BS EN50086-2-4 (BS EN 61386-24:2010) AND CONFORM TO ESB CONFORM SPEC 16113 AND EIRGRID SPEC FOR POWER DUCTING.

JOINTS - THE MAIN CABLE DUCT TO BE JOINED USING COMPATIBLE AND APPROVED MECHANICAL FITTINGS/PUSH-FIT COUPLERS. DOUBLE RING-AIRTIGHT SEAL COUPLERS CONNECTION TO EN 1401-1:1998/BS EN 681-1 TYPE WA

DIMENSIONS -O.D. MIN-MAX 110.0-111.0MM,MIN. WALL THICKNESS INCLUDING SKIN 11.9-13.2MM, OVALITY MAX 3.0MM

LENGTHS - -12M OR 6M, 9M, 13.5M AS PER ORDER.

MARKING -PRINTLINE SHALL READ E.G. "DANGER ELECTRICITY CABLES - RADIUS 200MM SDR21 - 200J - DANGER ELECTRICITY CABLES - ESB SPEC 16113 REV8 - BATCH NUMBER - LINE NUMBER"

TELECOMMUNICATION AND EARTH BOND DUCTING AND JOINTS. (OR SIMILAR AND APPROVED)

MAIN CABLE DUCT (110MM OD) -110MM OD HDPE SMOOTH INNER WALL DUCT TO BSI KITEMARK, BBA APPROVED, ENA TS 12-24 CERTIFICATION/BS

JOINTS- DUCTING TO BE JOINED USING COMPATIBLE AND APPROVED MECHANICAL FITTINGS/PUSH-FIT AIRTIGHT -SEAL COUPLERS AS PER MANUFACTURES DATA.

LENGTHS STANDARD PIPE OR COIL LENGTHS

MARKING -DUCT MARKING FOR EARTH BOND AND TELECOMMUNICATIONS ELECTRICITY IS PRINTED "ELECTRIC CABLE". ENATS C2 IS PRINTED IN ACCORDANCE TO ENA TS 12-24

ELECTRICAL INSTALLATION AND TESTING

ALL ELECTRICAL WORKS INCLUDING EARTH BONDING SHALL BE AS PER ELECTRICAL ENGINEER DESIGN

- A. ALL PRODUCTS TO BE UTILISED DURING CONSTRUCTION TO COMPLY WITH EIRGRID FUNCTIONAL SPECIFICATION, TII SPECIFICATION FOR ROAD WORKS AND ALL RELEVANT IRISH (EUROPEAN) AND BRITISH
- B. 300mm MINIMUM VERTICAL AND HORIZONTAL CLEARANCES TO BE OBSERVED BETWEEN CABLE DUCTS AND THIRD PARTY SERVICES (e.g. GAS PIPES (600mm MIN CLEARANCE), WATER MAINS, CULVERTS etc.) IN THE CASE OF HIGH RISK 3RD PARTY SERVICES, GREATER CLEARANCES MAY BE REQUIRED. DESIGNER TO CONSULT 3RD PARTY SERVICE OWNERS FOR GUIDANCE.
- C. STEEL PLATES MUST COVER DUCTS. NO OVERLAP IS REQUIRED HOWEVER STANDARD DIMENSIONS MAY RESULT IN AN OVERLAP. SPACING OF 25mm TO BE MAINTAINED BETWEEN STEEL PLATES TO PREVENT THE TRANSFER OF STRAY CURRENT.
- D. THE MINIMUM CLEARANCE BETWEEN ALL HV AND COMMUNICATION DUCTS IS 75mm, BUT INCREASED SPACING MAY BE REQUIRED IN ORDER TO ACHIEVE THE CABLE RATING (TO BE CONFIRMED BY ELECTRICAL DESIGNER CABLE RATING CALCULATIONS).
- 75mm/100mm WIDE CONCRETE SPACERS (OR SIMILAR APPROVED) TO BE USED DURING DUCT INSTALLATION IN WET CONCRETE.

E. DRAWING IS INTENDED FOR PLANNING PURPOSES ONLY.

G. HAND DIG WITHIN 500mm OF EXISTING SERVICE. H. EARTH CONTINUITY CONDUCTOR IS A MIN 110mm DUCT TO BE INSTALLED OUTSIDE OF PHASE DUCT. I. IF EXISTING SERVICE MARKER TAPE IS NOT PRESENT THE YELLOW MARKER TAPE SHOULD BE INSTALLED A

F. TEMPLATES ARE TO BE USED AT 5m INTERVALS DURING DUCT INSTALLATION IN CBGM. PRE-MADE

MAXIMUM OF 300mm BELOW FINISHED SURFACE LEVEL. J. IN BITUMINOUS AND CONCRETE ROAD SURFACES AND FOOTWAYS, THE TRENCH LINES SHALL INITIALLY BE CUT USING A ROAD SAW, CONCRETE SAW OR EQUIVALENT MECHANICAL MEANS TO THE FULL DEPTH OF THE BITUMINOUS OR CONCRETE MATERIAL PRIOR TO ANY EXCAVATION WORKS

A= 110mm O.D. HDPE DUCT FOR COMMUNICATIONS, SDR=17.6 B= 110mm O.D. HDPE DUCT FOR HV CABLE, SDR=21

RED MARKER STRIP YELLOW MARKER WARNING TAPE

RAPID HARDENING WET CONCRETE C25/30 CBGM B (CL. 822). COMPACTED TO CL 813.10

BACKFILL COMPACTED (CL. 804 OR ACCEPTABLE MATERIAL)

TOP SOIL

ACCEPTABLE REINSTATEMENT MATERIAL

FOR PLANNING

AECOM

SUBSTATION

CLIENT

CONSULTANT

Adelphi Plaza

Dun Laoghaire County Dublin

LEGEND

Georges Street Upper

T +353 (0)1 2383100 www.aecom.com

> DRAWING IS FOR PLANNING ONLY AND SHOULD NOT BE USED FOR DETAILED DESIGN, EQUIPMENT

WITH RELEVANT DRAWINGS, SPECIFICATIONS AND

DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED

DIMENSIONS MAY CHANGE ONCE EXACT

4. THIS DRAWING IS NOT TO BE SCALED.

P1 20/06/2023 FOR PLANNING

I/R DATE DESCRIPTION

P0 09/11/2022 FIRST ISSUE FOR PLANNING

OTHERWISE

ISSUE/REVISION

AECOM

CULMULLIN 220 kV

ENERGIA SOLAR

HOLDINGS LTD.

energia

PROJECT NUMBER

SHEET TITLE

CULMULLIN 220 kV SUBSTATION 220 kV UNDERGROUND CABLE TRENCH CROSS SECTIONS TYPICAL DETAILS

SHEET NUMBER

60657534-ACM-DWG-517

SCALE

1:10 @A1