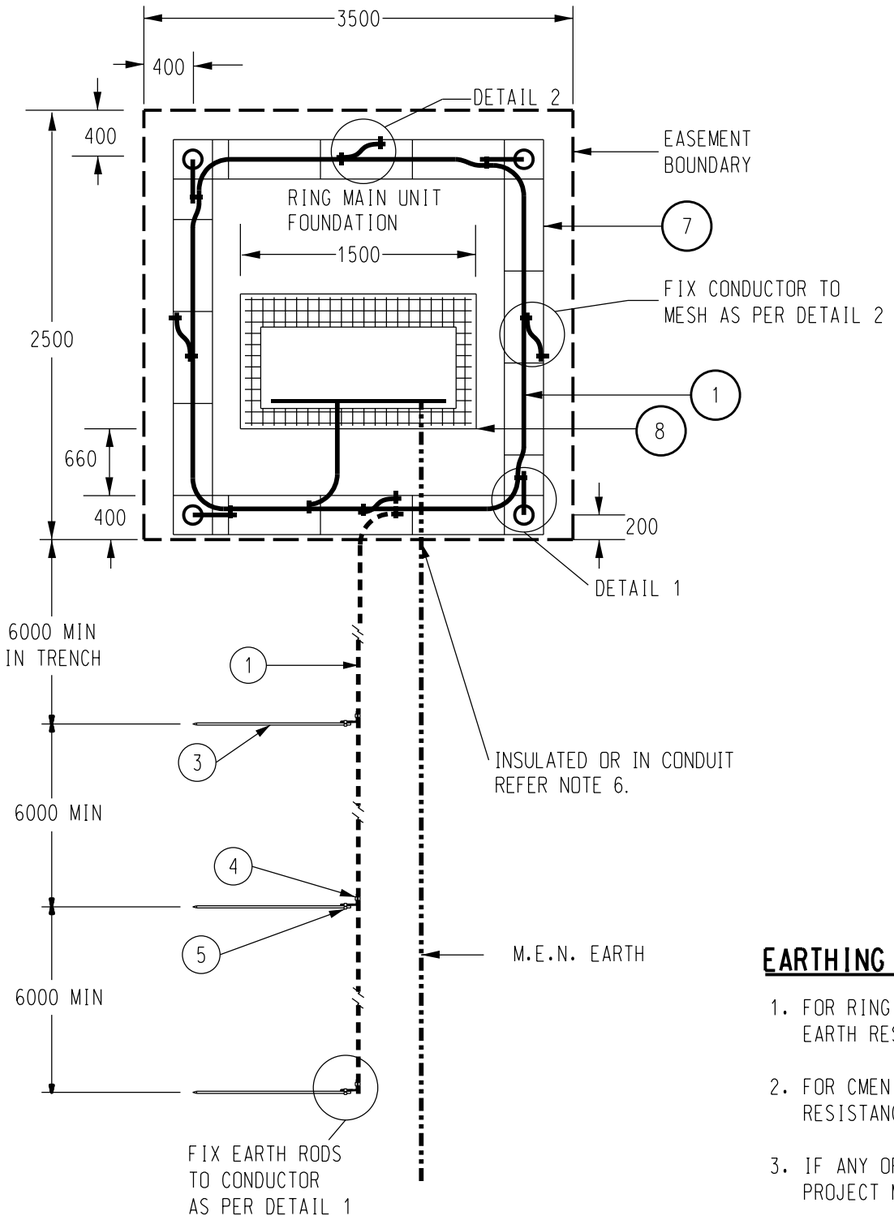
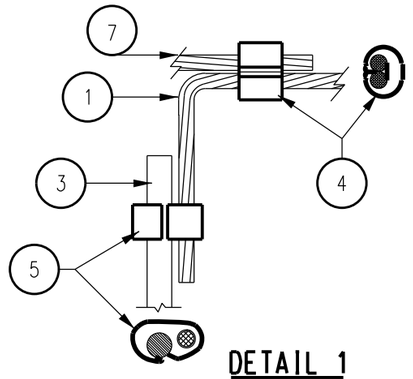
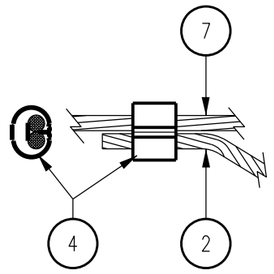




DETAIL 1

FIXING EARTH ROD TO CONDUCTOR



DETAIL 2

FIXING MESH TO CONDUCTOR

NOTES:

1. MINIMUM EARTHING FOR RING MAIN UNIT CONSISTS OF FOUR EARTH ELECTRODES IN THE EASEMENT AND THREE EARTH ELECTRODES IN THE CABLE ENTRY TRENCH.
2. IN THE EASEMENT: FOUR BORE HOLES TO BE DRILLED AT CORNERS FOR EACH HOLE:
   - AUGER DIAMETER TO BE USED SHOULD NOT BE GREATER THAN 150mm.
   - BORE DEPTH IS 3m.
   - EARTH ELECTRODE SHALL BE MADE FROM EITHER BARE 70 SQMM COPPER CONDUCTOR OR 70SQMM BARE COPPER CONDUCTOR WITH AN EARTH STAKE ATTACHED VIA A PROFILE "6" COMPRESSION CONNECTOR BEFORE LOWERING THE STAKE INTO THE BORE HOLE. ATTACH THE 70SQMM COPPER CONDUCTOR TO THE EARTH GRID AS SHOWN IN DETAIL 1.
   - BACKFILL BORE HOLE FIRST WITH WATERED SLURRY MIXTURE OF ONE BAG OF EARTHING COMPOUND (S/C 400915 REFER TO DWG S02-1-5-02) AND SOIL AT 1:1 RATIO, THEN TOP UP WITH EXISTING SOIL.
3. THREE ADDITIONAL EARTH ELECTRODES ARE TO BE INSTALLED AT THE BOTTOM OF THE CABLE ENTRY TRENCH WITH A DISTANCE OF 6M BETWEEN ELECTRODES AND TO A DEPTH OF 3M. A HAMMER CAN BE USED TO DRIVE CONNECTED EARTH RODS INTO THE GROUND, OR ALTERNATIVELY THE EARTH ELECTRODES CAN BE AS PER NOTE 2. DO NOT LET ANY OTHER EARTHING SYSTEM MAKE CONTACT WITH THE LOCAL GRID EARTH.
4. EQUIPOTENTIAL EARTH MESH OF 400mm WIDTH MINIMUM TO BE LAID ACROSS USING CONCRETE MESH CHAIRS AND CONNECTED TO FOUR EARTH ELECTRODES IN THE EASEMENT AS SHOWN BEFORE FORMING THE CONCRETE APRON FROM THE EASEMENT BOUNDARY TO THE RING MAIN UNIT FOUNDATION.
5. CABLE EARTH SCREENS TO BE CONNECTED TO EARTH BUS BAR IN FRONT OF ENCLOSURE.
6. M.E.N. EARTH (FROM DISTRIBUTION SYSTEM) MUST NOT BE BROUGHT INTO ELECTRICAL CONTACT WITH FOUNDATION SO THAT TESTING CAN CAN BE CARRIED OUT. M.E.N CONDUCTOR SHALL BE LABELLED "MEN" WITH CRITCHLY LABEL WHERE IT IS ATTACHED TO THE EARTH BUS BAR.
7. TRAFFIC BOLLARDS, IF REQUIRED, SHALL BE CONNECTED TO PERIMETER EARTHING CONDUCTOR BY 70sq.mm COPPER CONDUCTOR WHICH WILL BE SET INSIDE THE POST AND LUGGED OFF ONTO A BARRIER BOLT.
8. EARTH BUS BAR TO BE LOCATED IN THE FRONT OF THE RMU ENCLOSURE. EARTH BUS BAR SHALL BE 50x6 COPPER BAR WITH 16 HOLES 14MM IN DIAMETER SPACED 75 MM APART AT CENTERS. ALL BOLTS SHALL BE M12 CLASS 8.8 STAINLESS STEEL TIGHTENED TO 35-40NM.
9. REFER TO S02-2-6-34 FOR RMU FOUNDATION DETAILS.
10. WHERE THE LOCAL GRID EARTH IS CONNECTED TO THE EARTH BUS BAR IS SHALL BE LABELLED "GRID" WITH CRITCHLEY TYPE LABELS.

EARTHING REQUIREMENT

1. FOR RING MAIN UNIT, WITH ONLY RMU EARTH GRID, THE RECORDED EARTH RESISTANCE VALUE SHOULD NOT BE GREATER THAN 30 OHMS.
2. FOR CMEN EARTH, (ALL EARTH & NEUTRALS CONNECTED), THE RECORDED EARTH RESISTANCE VALUE SHOULD NOT BE GREATER THAN 1 OHM.
3. IF ANY OF THE ABOVE VALUES CANNOT BE ACHIEVED, REFER TO THE PROJECT MANAGER.

TAG NO	QTY	DESCRIPTION	STOCK CODE	DRG REF
8	1	RING MAIN UNIT FOUNDATION	-	S02-2-6-34
7	4	EQUIPOTENTIAL EARTHING MESH	288415	-
6	4	EARTHING COMPOUND	400915	S02-1-5-02
5	7	COMPRESSION CONNECTOR, "6" PROFILE	257394	S01-1-5-08
4	17	COMPRESSION CONNECTOR, "C" PROFILE	255786	S01-1-5-08
3	7	EARTH ROD - 14mm DIA.	414060	S01-1-5-01
2	AS REQ	70sq.mm INSULATED COPPER CONDUCTOR Y/Gr	401059	S02-1-1-23
1	AS REQ	70sq.mm BARE COPPER CONDUCTOR	9803	S01-1-5-05

MATERIAL SCHEDULE

NO	DESCRIPTION	DRN	DATE	CKD	APPD
1	NOTE 4 AMENDED	K.T.	MAY'16	I.B.	B.C.
0	ISSUED FOR CONSTRUCTION.	A.T.	JUN'14	B.C.	B.C.

AMENDMENTS

PowerWater

DES	C. FOO
DRN	A.TAYLOR
CKD	B.CHEUNG
APPD	B.CHEUNG
SCALE	N.T.S.
ISSUED	MAR'14
ALL DIM. IN mm	

POWER STANDARD DRAWING

EARTHING DRIESCHER MINEX (GREENFIELD) RING MAIN UNIT (RMU) CONSTRUCTION DETAILS

A3 DRAWING NUMBER S02-2-5-12

1 AMDT

DRAFTING STANDARD TO A.S.1100

CAD PRODUCT - DO NOT AMMEND MANUALLY

A3 297 X 420