

REMOVABLE SECTION FLOORING FOR CABLE ACCESS. COVERS TO BE SUITABLY LOAD RATED AND INSULATED/GASKETED/FIXED TO ENSURE WEATERTIGHT SEAL. COVER WEIGHT TO BE LIMITED TO 25KG FOR SAFE ONE MAN LIFTING, KEY SOCKET OR SIMILAR TO ASSIST LIFT

ARC VENT SCREEN PANELS

INSIDE FACE OF THE ENCLOSURE TO BE OF SUITABLY ROBUST MATERIAL TO ALLOW FOR THE SAFE FIXING OF ALL WALL MOUNTED EQUIPMENT

CLEARANCE:
X,Y AND Z DIMENSIONS
ARE TO AT LEAST MEET
THE CLEARANCES SET
OUT BY THE SWITCHGEAR
MANUFACTURER

FULL HEIGHT
PLANT ACCESS
DOORS

600X600 TOP-HINGED
OVERPRESSURE VENT PANELS AT
HIGH LEVEL WITH SECURITY GRILLE

SECTION B-B

(SHOWING FIXED TRENCH ACCESS PROVISION)

SECTION C-C

NOTES

GENERAL:

PLEASE NOTE THAT THIS DRAWING IS BASED UPON THE USE OF A MODIFIED 32' SHIPPING CONTAINER AS A BASIS FOR A 33KV SINGLE CIRCUIT METERED INDOOR CONNECTION. DO NOT SCALE THIS DRAWING. DRAWING IS TO BE READ IN CONJUNCTION WITH WPD 33KV CONNECTION GUIDE. WORKMANSHIP AND MATERIALS TO CONFORM WITH THE LATEST EDITION OF THE RELEVANT CODES OF PRACTICE OR BRITISH STANDARDS AND EUROCODES. ALL PROPRIETY PRODUCTS TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

THERMAL PERFORMANCE / INSULATION:

THE ENCLOSURE SHALL BE DESIGNED TO LIMIT HEAT LOSSES THOROUGH THE FABRIC OF THE BUILDING. COMPOSITE U-VALUES FOR ROOF WALLS AND FLOOR TO BE 0.45 W/m².K

FIRE RESISTANCE:

THE BUILDING MUST BE DESIGNED TO ENSURE THAT IN THE EVENT OF FIRE THE STRUCTURE IS NOT MATERIALLY IMPAIRED AND THE SPREAD OF FIRE (AND SMOKE WHERE APPLICABLE) IS RESTRICTED OVER INTERNAL SURFACES AND TO OTHER BUILDINGS / ADJACENT STRUCTURES. ALL DOORS, FRAMES AND FITTINGS SHALL BE DESIGNED TO PROVIDE A MINIMUM FIRE RESISTANCE OF 1 HOUR.

PAINTING AND DECORATING (INTERNAL):

PREPARE SURFACES OF RIGID SHEET CEILING LINING AND PERIMETER COVER STRIPS TO WALL PLATE AND APPLY ONE MIST COAT AND TWO FULL COATS OF EMULSION PAINT. PREPARE SURFACES OF CONCRETE BLOCKWORK WALLS AND APPLY ONE MIST COAT AND TWO FULL COATS OF EMULSION PAINT. SUBJECT TO DOOR MANUFACTURER'S RECOMMENDATIONS - PREPARE INTERNAL SURFACES OF EXTERNAL DOORS, FRAMES, SILLS AND THE LIKE AND APPLY APPROVED PROTECTIVE COATING / FINISH. PREPARE SURFACE OF SWITCHGEAR / CONTROL ROOM FLOOR SLAB AND APPLY APPROVED SLIP RESISTANT EPOXY SEALANT / COATING.

KEY TO WPD EQUIPMENT

INDICATIVE AND WILL BE DETERMINED ON A PROJECT-SPECIFIC BASIS

① 110V DISTRIBUTION BOARD

② 110V BATTERY & CHARGER

③ TELECONTROL PANEL

④ TELECONTROL BATTERY AND CHARGER

⑤ TELECONTROL DISTRIBUTION BOARD

⑥ TELECONTROL DISTRIBUTION BOARD

⑦ INTERTRIPPING PANEL

⑧ TELECONTROL/ MULTIPLEXER PANEL FOR INTERTRIPPING

KEY TO LVAC SYMBOLS

LVAC LV METALCLAD 10 DISTRIBUTION BOARD WITH 4NO SPARE 20A MCB WAYS RESVRD FOR WPD USE

13a TWIN SWITCHED SOCKET OUTLET

BT MASTER SOCKET (DEDICATED EXT LINE)

TWIN 58w BATTEN FLUORESCENT LUMINAIRE WITH INTEGRAL EMERGENCY

PIR PIR ACTIVATED 150w FLOOD LIGHT

E1 ILLUMINATED EMERGENCY EXIT SIGN

DEHU EBAC CD30E DEHUMIDIFIER WITH TRACE HEATED CONDENSATE DRAIN TO SUITABLE POINT OF DISPOSAL

SINGLE GANG LIGHT SWITCH (ONE FOR ALL EXT LIGHTING AND 1 FOR ALL INTERNAL WITH TEST SOCKET)

3.0kW 3.0kW CONVECTOR HEATER - NORMAL OPERATING TEMP 10°C WITH PUSH BUTTON BOOST TO 18°C (TIMED FOR 2 HOURS) DIMPLEX PLX RANGE

SA INTRUDER ALARM (SINGLE ZONE) WITH DOOR CONTACT ACTUATION FOR ALL WPD DOORS

NOTE: EXACT REQUIREMENTS FOR WPD SWITCHGEAR, AND ASSOCIATED SCADA (AND POTENTIALLY INTERTRIPPING EQUIPMENT) ARE TO BE AGREED ON A PROJECT SPECIFIC BASIS

VENTILATION:

PASSIVE VENTILATION / SECURE GRILLES (PROVIDING 8000mm² OF VENTILATION) SHOULD BE PROVIDED AS A DEFAULT

OVERPRESSURE VENTING:

THE SWITCHGEAR ENCLOSURE SHALL BE DESIGNED TO MEET MANUFACTURER'S REQUIREMENT FOR OVERPRESSURE VENTING.

IT SHOULD BE BORNE IN MIND THAT WITHOUT APPROPRIATE CONTROL MEASURES, AN OVERPRESSURE VENTING EVENT WITHIN THE ENCLOSURE MAY RESULT IN STRUCTURAL DAMAGE TO THE BUILDING SUPERSTRUCTURE. SUITABLE CONTROL MEASURES MAY INCLUDE (ALTHOUGH ARE NOT RESTRICTED TO):

- DEDICATED VENT POSITIONS LOCATED AT APPROPRIATE LOCATIONS ON THE SUPERSTRUCTURE. THESE SHOULD BE CAPABLE OF SAFELY YIELDING UNDER INTERNAL OVERPRESSURE IN A CONTROLLED FASHION BUT SHOULD NOT COMPROMISE THE LONG TERM SECURITY OF THE BUILDING FABRIC.

- OVERPRESSURE VENTING DIRECT FROM THE SWITCHGEAR POSITION VIA DEDICATED DUCTWORK TO A SAFE POSITION OUTSIDE THE BUILDING.

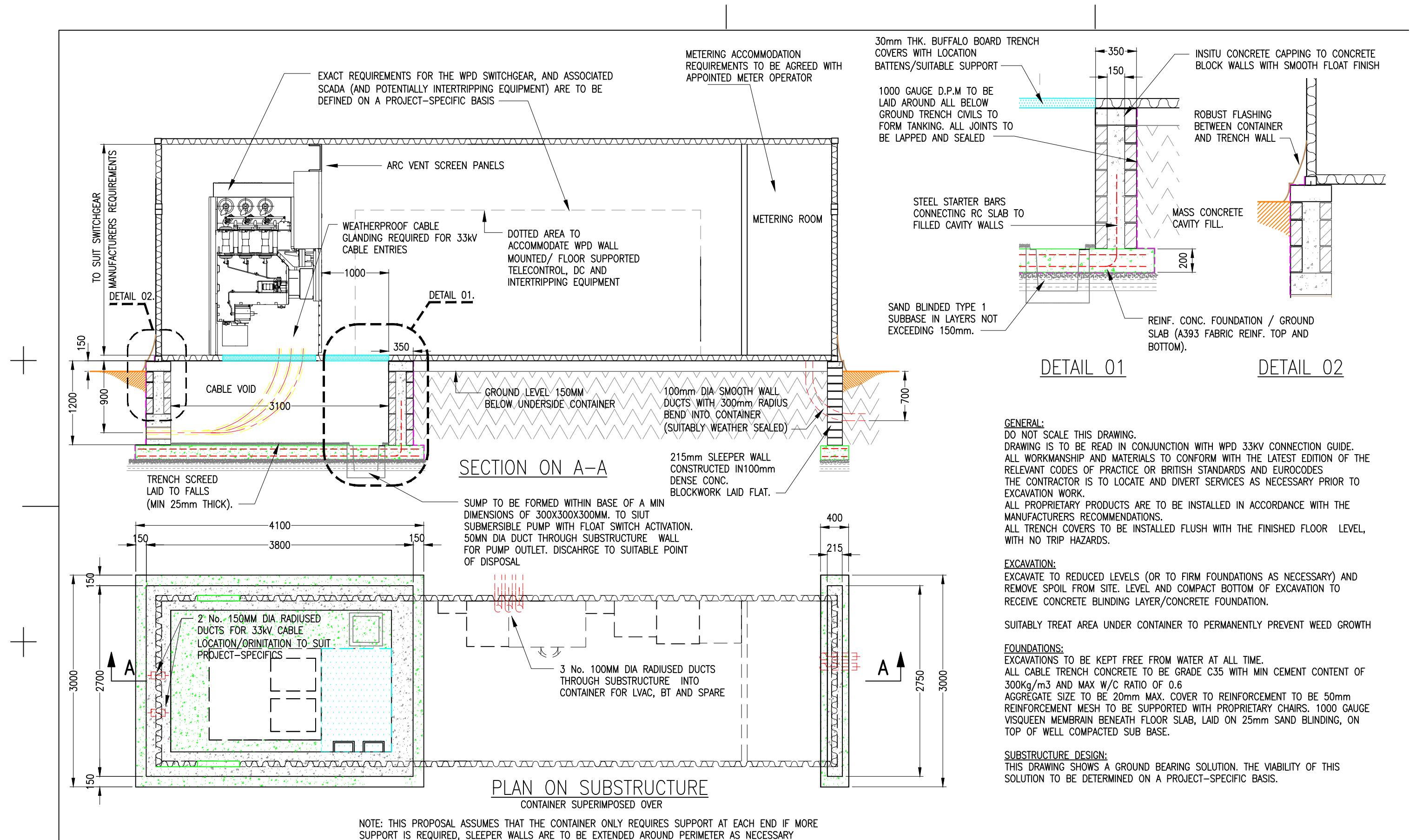
THIS DRAWING SHOWS THE FORMER SOLUTION, COUPLED WITH ARC VENT SCREEN PANELS TO SEAL THE GAP BETWEEN THE SIDES AND REAR OF THE SWITCHBOARD FROM THE OPERATOR POSITION AS MAY BE RECOMMENDED BY THE SWITCHGEAR MANUFACTURER

SECURITY:

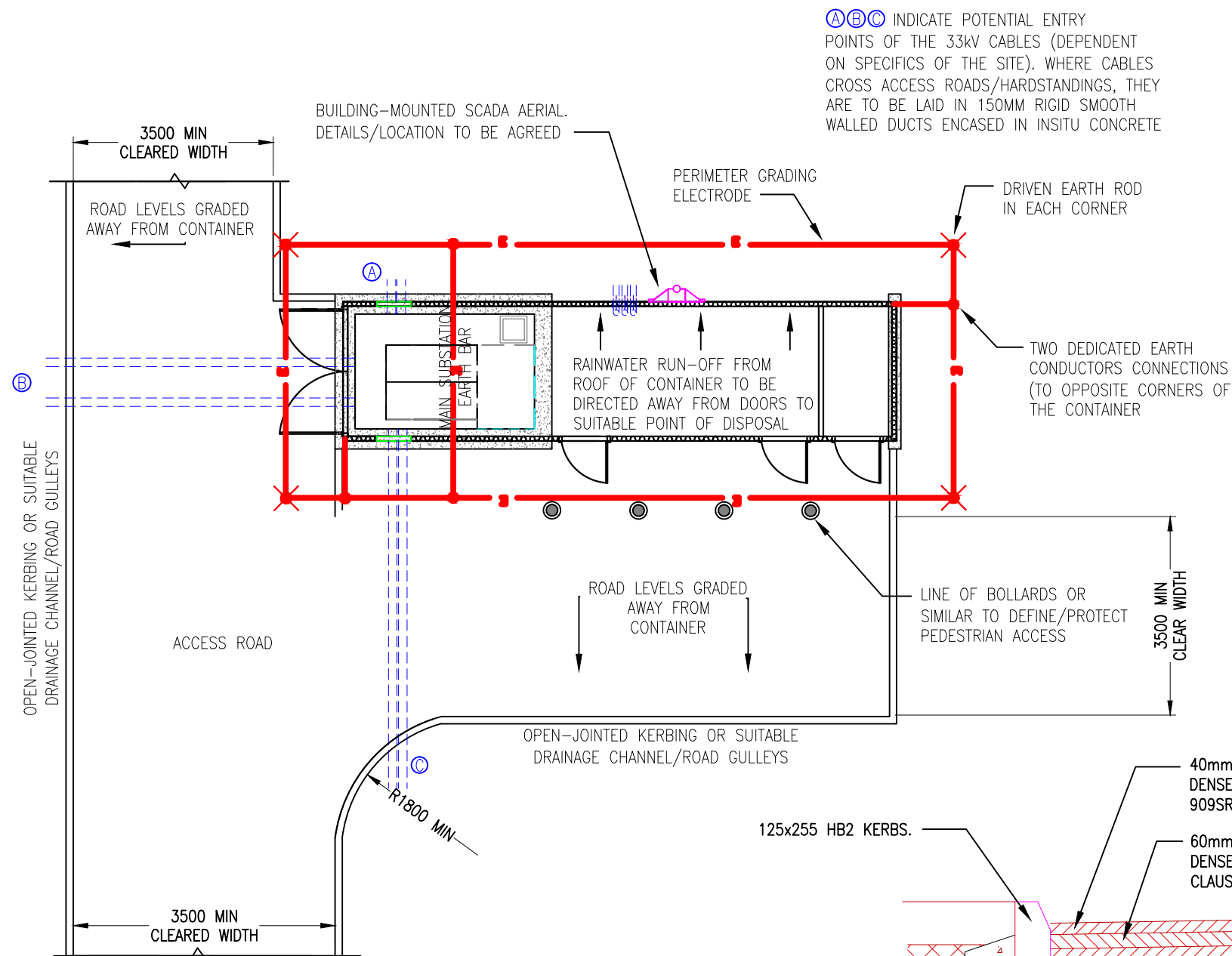
THE ENCLOSURE SHALL BE CONSTRUCTED WITH NO AREAS OF GLAZING AND DESIGNED TO PREVENT ANY UNAUTHORISED ENTRY OR ACCESS TO THE ELECTRICAL PLANT / EQUIPMENT. APPROPRIATE SAFETY / WARNING / DANGER SIGNS AND NOTICES SHALL BE PERMANENTLY DISPLAYED.

ALL DOUBLE / SINGLE LEAF ENTRANCE DOORS SHALL BE OUTWARD OPENING, OF ROBUST / VANDAL RESISTANT / DURABLE / MAINTENANCE FREE STEEL CONSTRUCTION AND FITTED WITH A SECURE LOCKING ARRANGEMENT OF A J-U8040-AS EXTERNAL ACCESS DEVICE HOUSING A ABLOY CY403PT RIM CYLINDER ASSEMBLY(WITH A 6-PIN TUMBLER)WITH AN INTERNAL DOUBLE FIXING J-U801-DMG PANIC BOLT.PLANT ACCESS DOORS TO ACCEPT SHROUDED WPD PADLOCK.

HEAVY DUTY DOOR RESTRAINTS SHALL BE FITTED AT THE HEAD OF EACH DOOR LEAF AND SHALL BE CAPABLE OF HOLDING THE DOORS OPEN AT 90 DEGREES.ALL DOOR HINGES SHALL BE VANDAL RESISTANT / HEAVY DUTY WITH CONCEALED FIXINGS.



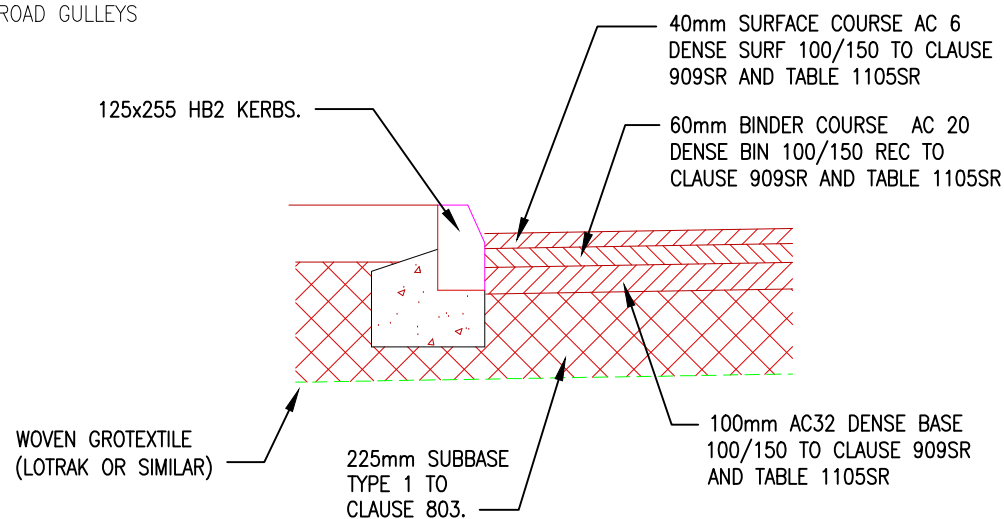
						ORIGINAL ISSUE	Date	WESTERN POWER DISTRIBUTION Design Department. Avonbank, Feeder Road, Bristol BS2 OTB Tel: 0117 933 2000 Fax: 0117 933 2001.		 WESTERN POWER DISTRIBUTION	
					Drawn	MOD	MAY 13				
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						Approved			Title TYPICAL CONTAINERISED 33kV METERING SUBSTATION SUBSTRUCTURE DETAIL & LONGITUDINAL SECTION	Drg. No. GCS0017 SHEET 2 OF 3	Rev No.
					SCALE:						
					AS NOTED @ A3						
Rev No.	Drawn	Chk'd	App'd	Date	Revision						



INDICATIVE PLAN ON SUBSTATION

PLEASE NOTE THAT SPECIFIC ARRANGEMENTS WILL BE DETERMINED BY SITE CONDITIONS

WHERE INTERCONNECTION BETWEEN THE WPD EARTHING SYSTEM AND THE CUSTOMER EARTHING SYSTEM IS PROPOSED, THE CUSTOMER EARTHING INSTALLATION SHALL BE REQUIRED TO MEET WPD CRITERIA



TYPICAL CROSS SECTION THOROUGH ROAD KERB CONSTRUCTION

SCALE 1:20

NOTES

WPD ACCESS REQUIREMENTS:

WPD WILL REQUIRE UNRESTRICTED 24 HOUR ACCESS TO THE ENCLOSURE ALL OTHER SITE ACCESS GATES AND THE LIKE ARE TO BE PROVIDED WITH DUAL LOCKING FACILITY, INCORPORATING A WDP SUBSTATION SECURITY LOCK, OR ARE TO BE OPENED BY 24 HOUR ON SITE SECURITY.

EARTHING NOTES:

REFER TO TECHNICAL SPECIFICATION EE:SPEC 89

USE BARE COPPER FOR EARTHING SYSTEM UNLESS NOTED OTHERWISE SIZES:

MINIMUM CROSS SECTIONAL AREA FOR EARTHING SYSTEM (BELOW GROUND EARTH ELECTRODE, ABOVE GROUND EARTHING CONDUCTOR AND BONDING CONDUCTORS WHICH MAY CARRY FAULT CURRENT) = 200 sq. mm

USE 50 x 4 mm BARE COPPER TAPE

MINIMUM CROSS SECTIONAL AREA FOR BONDING CONDUCTORS WHICH ARE NOT REASONABLY LIKELY TO CARRY FAULT CURRENT = 50 sq. mm C.E.

USE FLEXIBLE COPPER CONDUCTOR FOR DOORS TO CONTAINER BONDS

JOINTS:

ALL EARTH ELECTRODE JOINTS TO BE BRAZED OR WELDED

ALL JOINTS TO BE MEASURED USING MICRO-OHM METER TO VERIFY LESS THAN 50 MICRO OHMS OR IN ACCORDANCE WITH ST:TP210/2

PROVIDE DUPLICATE INDEPENDENT CONNECTIONS TO THE MESH WHERE CONNECTIONS ARE CRITICAL.

ENSURE CABLE SHEATHS ARE BONDED TO SUBSTATION EARTHING SYSTEM UNLESS NOTED OTHERWISE DEPTH:

MAIN EARTH ELECTRODE AND SPUR CONNECTIONS TO BE LAID 600mm BELOW FINISHED SITE LEVEL UNLESS NOTED OTHERWISE SURFACE COVERING LAYER:

ANCILLARY METALWORK:

NO METALWORK TO BE INSTALLED OUTSIDE THE EARTHING SYSTEM

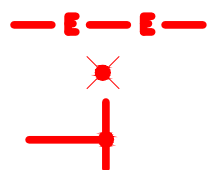
ALL ANCILLARY METALWORK TO BE BONDED WHERE A TOUCH HAZARD COULD ARISE

KEY:

PROPOSED COPPER EARTH TAPE BELOW GROUND LEVEL

PROPOSED VERTICAL DRIVEN EARTH ROD

PROPOSED CONNECTION TO EARTH GRID



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