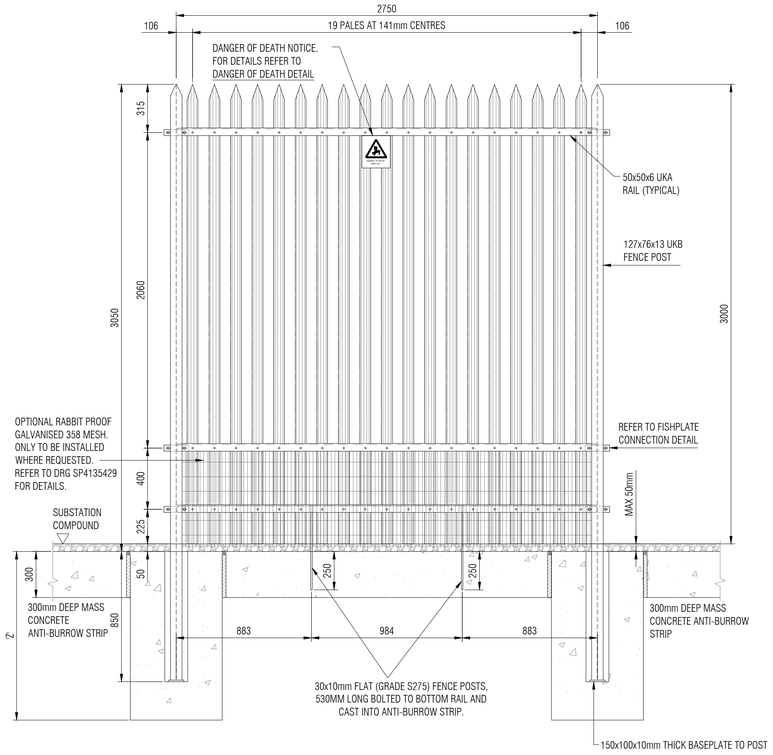
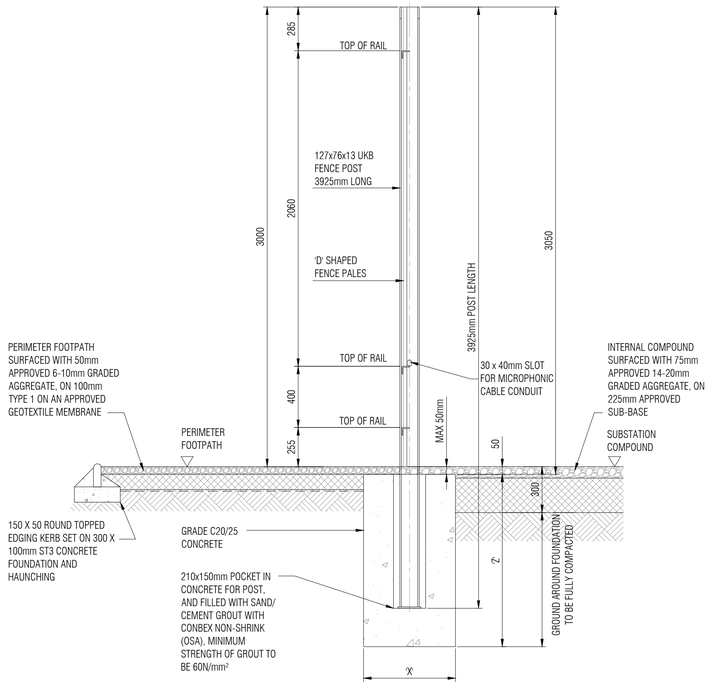


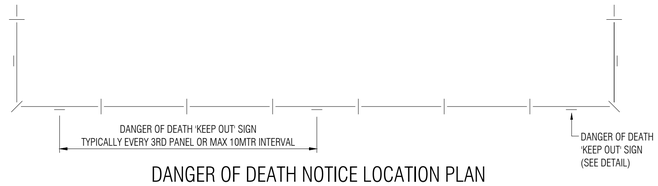
ELEVATION OF STANDARD PANEL

SCALE 1:20

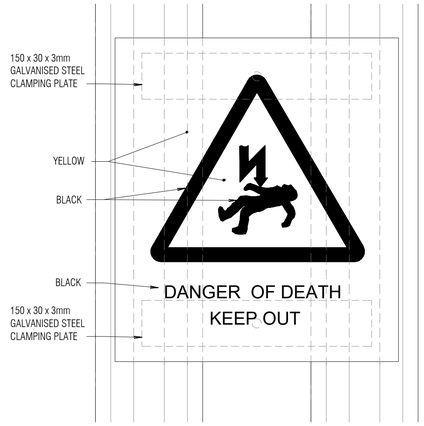


FENCE POST AND FOUNDATION

SCALE 1:20



DANGER OF DEATH NOTICE LOCATION PLAN



COLOURS :- BACKGROUND - YELLOW - TO B.S. 5252 OR B.S. 381C

MATERIAL :-
UV STABILISED 0.75mm THICK, LAMINATED, STOVED ALUMINIUM.
COMMODITY CODE : 30981883
UV STABILISED 3mm PVC. COMMODITY CODE : 30981845
UV STABILISED SELF ADHESIVE VINYL. COMMODITY CODE : 30982966

NOTE :- SIGNS TO BE CLAMPED TO IN POSITION - DRILLING GALVANISED PALES IS NOT PERMITTED

REFER TO SCOTTISHPOWER DRAWING No. 00033296 FOR FULL DETAILS

DANGER OF DEATH 'KEEP OUT' SIGN DETAIL

NOTES

PALES
HOT ROLLED SLIT COIL S275 BS EN 10025:1993 4mm THICK & 79mm WIDE, THIS IS THEN COLD FORMED INTO 'D' SECTION PALES 19 No PER STANDARD PANEL (2750mm POST CENTRES). THE PALES ARE HOLED TO SUIT SPECIFICATION AND ARE LOCKED INTO POSITION BY MEANS OF M8 x 25mm BOLTS & M8 ANTI-VANDAL NUTS.

INTERMEDIATE AND CORNER POSTS
127x76x13 UKB 3925mm LONG POINTED AT TOP AND SLOTTED TO ACCOMMODATE FISHPLATES AND TO ALLOW THE INSTALLATION OF A CABLE CONDUIT ALONG THE TOP RAIL.

HORIZONTAL SUPPORT RAILS
50mm x 50mm x 6mm RSA TO BS EN 10025-1 GRADE S275. HORIZONTALS HAVE 'V' SHAPED SLOTS ON THE TOP FLANGE TO ACCOMMODATE INSERTION OF THE PALES AND HAVE 10mm DIAMETER HOLES WHICH HAVE A 21mm DIAMETER COUNTERBORE ON THE FRONT FACE ALLOWING THE M8 BOLTS TO PASS THROUGH.

INTERMEDIATE RAIL SUPORTS
30mm x 10mm FLAT FIXED BETWEEN THE 6TH & 7TH PALE FROM EITHER END & BOLTED TO THE BOTTOM RAIL.

FIXINGS
M12 X 30mm CUP SQUARE BOLTS & M12mm SHEAR NUTS FOR FIXING THE RAILS TO THE POSTS & AT CENTRE REST POINTS M8 X 25mm CUP, SQUARE BOLTS & M8 SHEAR NUTS FOR FIXING PALES TO RAILS

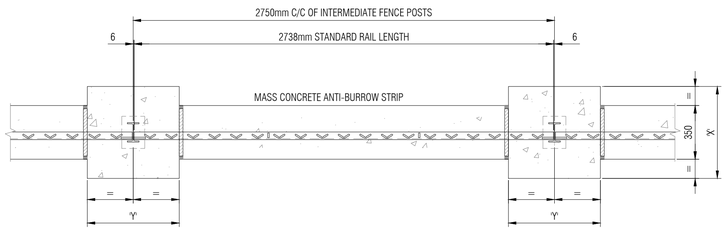
ALL THE BOLTS SHOULD THEN BE TIGHTENED UNTIL THE HEXAGONAL HEAD SHEARS OFF THUS LEAVING A DOME ON EITHER SIDE.

POST	-	TO BS 4 PART 1 AND BS EN 10025-1 GRADE S355
BOLTS AND NUTS	-	HEXAGONAL TO BS 4190 CUP AND COUNTERSUNK TO BS 325
PLAIN WASHER	-	TO BS 4320 TABLE 4
R.H.S. SECTIONS	-	TO BS 1:2005 OR BS EN 10210-2:1997
GALVANISING	-	TO BS EN ISO 1461

IN THE EVENT OF THE FENCE BEING USED IN CONJUNCTION WITH AN ELECTRIFIED FENCE, THE CONTRACTOR SHALL ARRANGE TO FIT THE REQUIRED ADDITIONAL SUPPORTS TO THE FENCE POSTS PRIOR TO THE STEELWORK BEING GALVANISED.

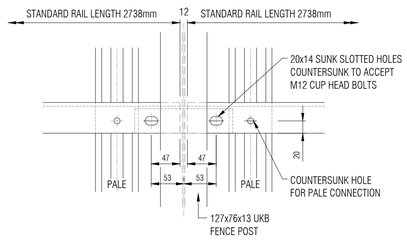
NON-STANDARD AND CLOSING PANELS
A STANDARD PANEL DENOTES 2750mm POST CENTRES WITH A 2738mm RAIL LENGTH.
CLOSING PANEL LENGTHS ARE STANDARD 2738mm RAILS WITH PALES REMOVED TO REDUCE LENGTH BY FACTORS OF 141mm E.G. 2596, 2455, 2314, 2173 ETC. RAILS FOR CLOSING PANELS TO BE NO LESS THAN 1186mm LONG.
AFTER CONSTRUCTION THERE SHOULD BE NO GAP BETWEEN PALES OR BETWEEN PALES & POST GREATER THAN 76mm

SLOPING PANELS
THE MAXIMUM GRADIENT A FENCE PANEL CAN ACCOMMODATE IS 300mm FALL OVER A SINGLE STANDARD PANEL LENGTH.
FOR STEEPER GRADIENT CONTACT THE MANUFACTURER FOR THE FABRICATION OF CUSTOM PANEL



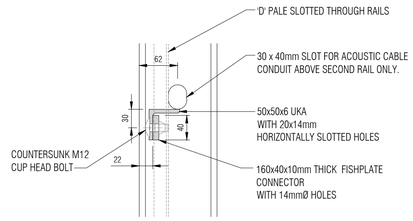
PLAN OF STANDARD PANEL

SCALE 1:20



FISHPLATE CONNECTION DETAIL ELEVATION

SCALE 1:5



FISHPLATE CONNECTION DETAIL SECTIONAL VIEW

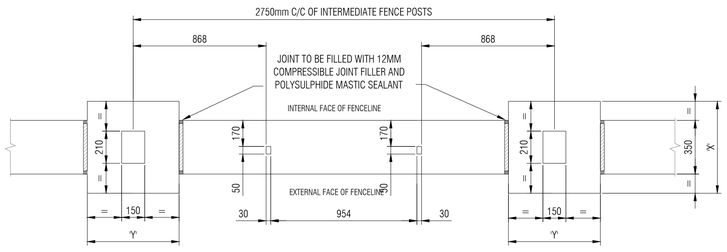
SCALE 1:5

FOUNDATION SIZES BASED ON WIND LOADS TO BS EN 1-4 AND DESIGNED TO DMRB - HA 66/95 AND BD 94/07

FENCE POST FOUNDATIONS

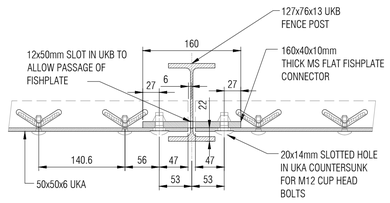
Site Elevation	Peak Velocity Force	Dimension 'X'	Dimension 'Y'	Dimension 'Z'	Concrete Volume	Push Test Load*
Up To 100m	0.95 kN/m²	600mm	600mm	1100mm	0.396m³	17kN
Up To 200m	1.13 kN/m²	600mm	600mm	1200mm	0.432m³	20kN
Up To 300m	1.33 kN/m²	700mm	700mm	1300mm	0.637m³	23kN
Up To 400m	1.55 kN/m²	800mm	800mm	1400mm	0.896m³	26kN**

NOTES:-
1. FOUNDATION SIZES ARE ONLY SUITABLE FOR SITES GREATER THAN 1km FROM THE COAST AND NO HIGHER THAN 400m ABOVE ORDNANCE DATUM (AOD).
2. FOR SITES WITH ELEVATIONS ABOVE 400m OR WITHIN 1km FROM THE COAST, FOUNDATIONS TO BE DESIGNED TO MEET THE SITE SPECIFIC CONDITIONS.
3. WIND PRESSURE BASED ON Vb, map = 26m/s
4. IT IS ESSENTIAL THAT THE GROUND AROUND THE FOUNDATION IS FULLY COMPACTED TO NO LESS THAN 300mm FROM THE FINISHED COMPOUND SURFACE.
5. FOUNDATIONS DESIGNED TO HA 66/95 SHALL, AT THE ENGINEERS REQUEST, BE SUBJECT TO A SELECTION OF PUSHOVER TESTS IN ACCORDANCE WITH IEC GUIDANCE DOCUMENT.
6. MINIMUM 'X' DIMENSION ON FOUNDATIONS FOR REMOVABLE PANELS IS 1200mm.
7. TOPOGRAPHY HAS BEEN DISCOUNTED IN THE DESIGN.
8. * LOAD APPLIED 1m ABOVE FOUNDATION LEVEL
9. ** A SACRIFICIAL 152 x 89 x 16 POST AND FOUNDATION SHOULD BE USED WHEN APPLYING THE PUSH-OVER TEST FORCE



PLAN OF POCKETS IN FOUNDATIONS AND FOUNDATION CONTRACTION JOINTS

SCALE 1:20



FISHPLATE CONNECTION DETAIL PLAN VIEW

SCALE 1:5

ASSOCIATED DRAWINGS

STANDARD PANEL DETAILS	SP4107664
CORNER POST AND INSULATED PANEL DETAILS	SP4107665
DOUBLE LEAF GATE FOR ROADS WITH CAMBER	SP4107666
DOUBLE LEAF GATE FOR ROADS WITH CROSSFALL	SP4107667
PERSONNEL GATE DETAIL	SP4107668
FASTENING DETAIL FOR DOUBLE LEAF GATE	SP4107669
INWARD OPENING HANGING DETAIL FOR DOUBLE LEAF GATE (CAMBER)	SP4107670
INWARD OPENING HANGING DETAIL FOR DOUBLE LEAF GATE (CROSSFALL)	SP4107671
OUTWARD OPENING HANGING DETAIL FOR DOUBLE LEAF GATE (CAMBER)	SP4107672
OUTWARD OPENING HANGING DETAIL FOR DOUBLE LEAF GATE (CROSSFALL)	SP4107673
HANGING DETAIL FOR PERSONNEL GATE	SP4107674
FASTENING DETAIL FOR PERSONNEL GATE	SP4107675
REMOVABLE FENCE PANEL DETAILS AND EXTENSION OPTIONS	SP4135429
TYPICAL FENCE AND GATE EARTHING DETAILS	SP4135431
HIGH SECURITY PERSONNEL GATE DETAILS	SP4152742
HIGH SECURITY STRAINING AND CORNER POST DETAILS	SP4152754

Rev.	Date	Drawn	Reviewed	Approved	Reason / Description of changes.
4	26/02/2020	AJB	DC	AM	GENERAL UPDATE TO DETAILS
3	05/07/2018	AJB	DC	AM	FOUNDATION SIZES UPDATED AND GROUND CLEARANCE REDUCED TO 50mm
2	May 2016	SM	AJB	CR	UPDATED AND APPROVED
1	18/08/2015	EM	AJB	AJB	RAIL LENGTH UPDATED TO 2738mm
0	----------	-	-	-	COPIED FROM PREVIOUS NUMBERING SYSTEM

SP ENERGY NETWORKS

Status Stamp:

Project: 3m HIGH ENHANCED SECURITY FENCE

Location: TRANSMISSION SUBSTATIONS

Status Stamp:

Drg. Title: 3m HIGH LOCHRIN-BAIN COMBI SECURITY FENCE

Drawn	Rev'd	App'd

Drg. No.: SP4107664
Sheet: Next:
Rev: 4
SPEN Ref. No. : ####
Scale: AS SHOWN
Size: A1

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