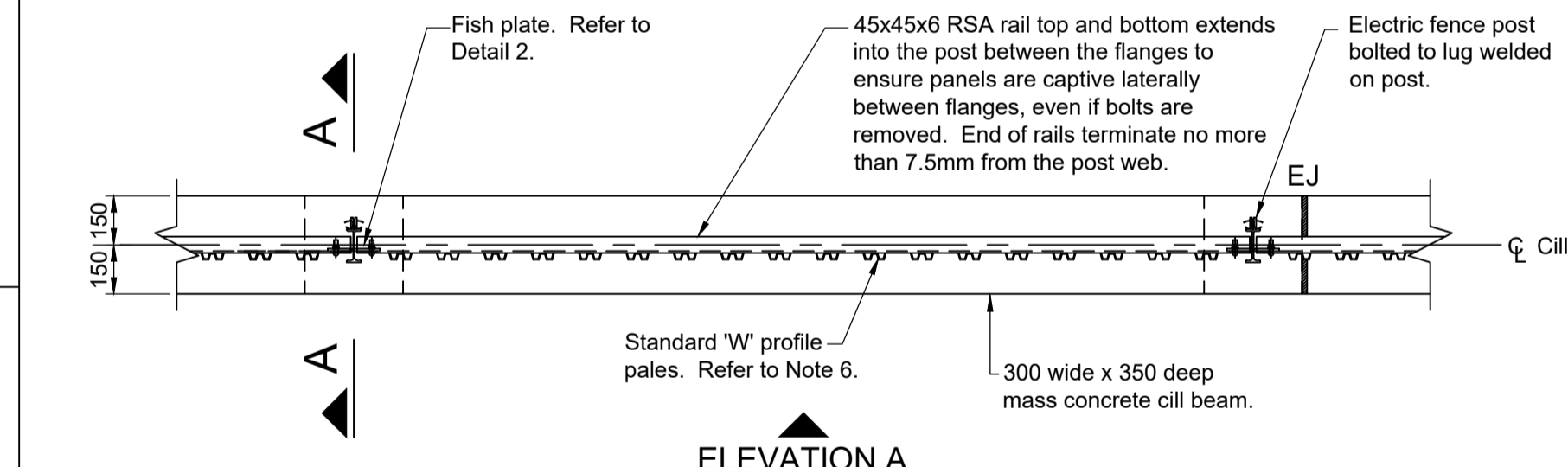


ELEVATION A
Scale 1:20

SECTION A-A
TYPICAL INTERMEDIATE POST
Scale 1:20

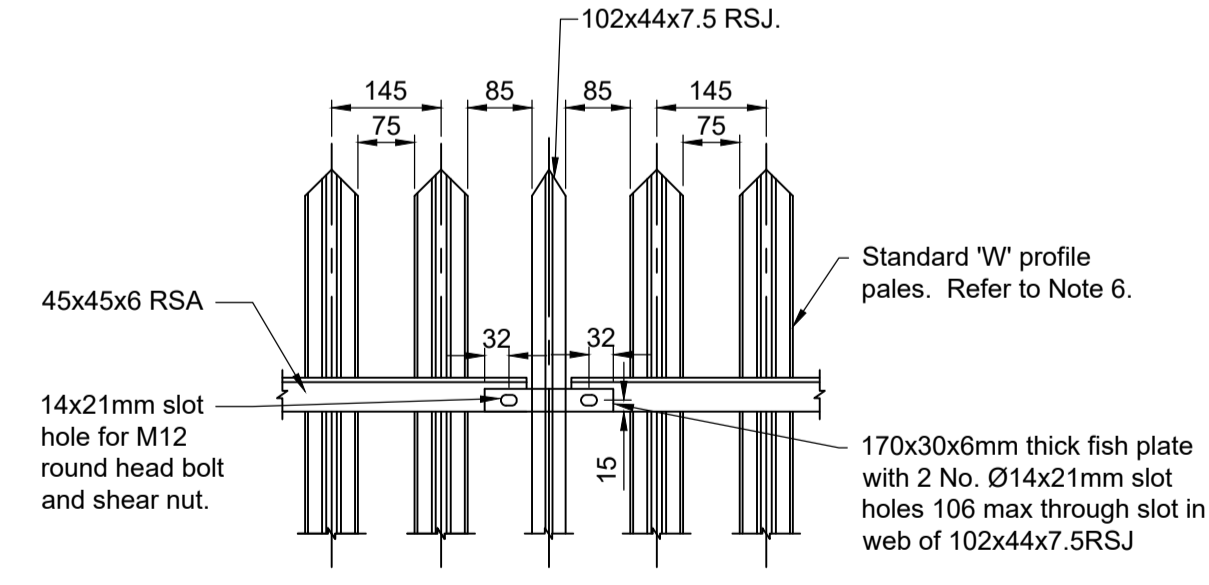
TYPICAL STRAIN POST - ELEVATION
Scale 1:20

SECTION B-B
TYPICAL STRAIN POST
Scale 1:20

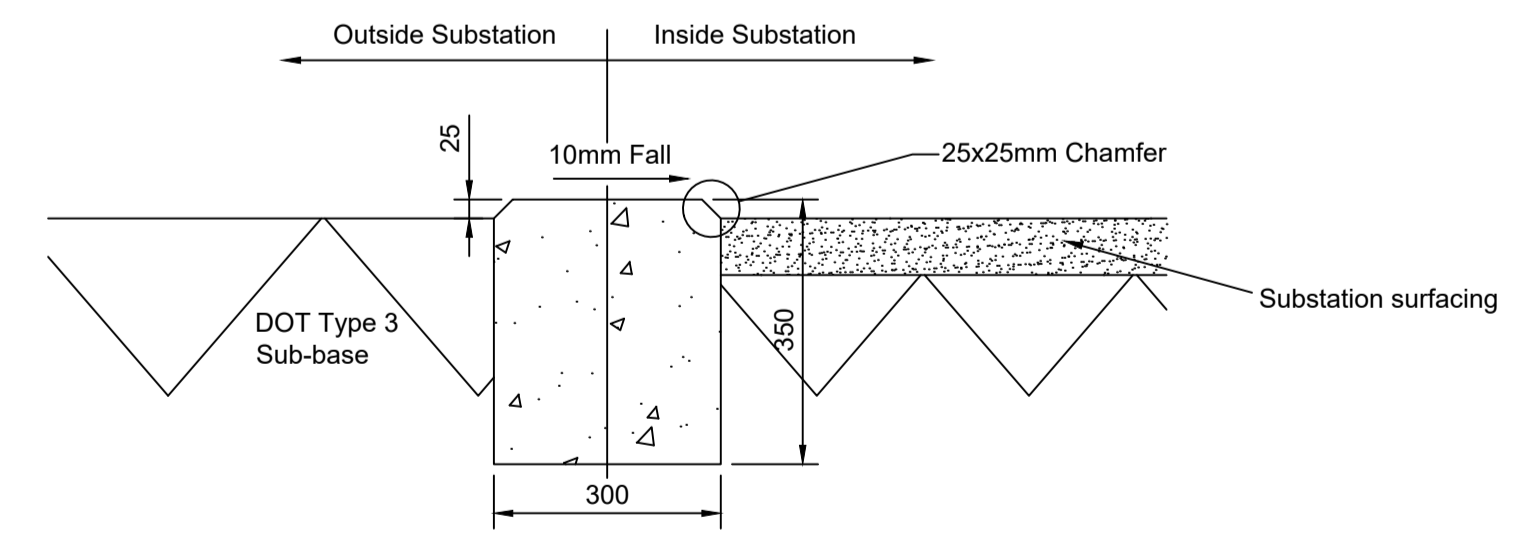


ELEVATION A

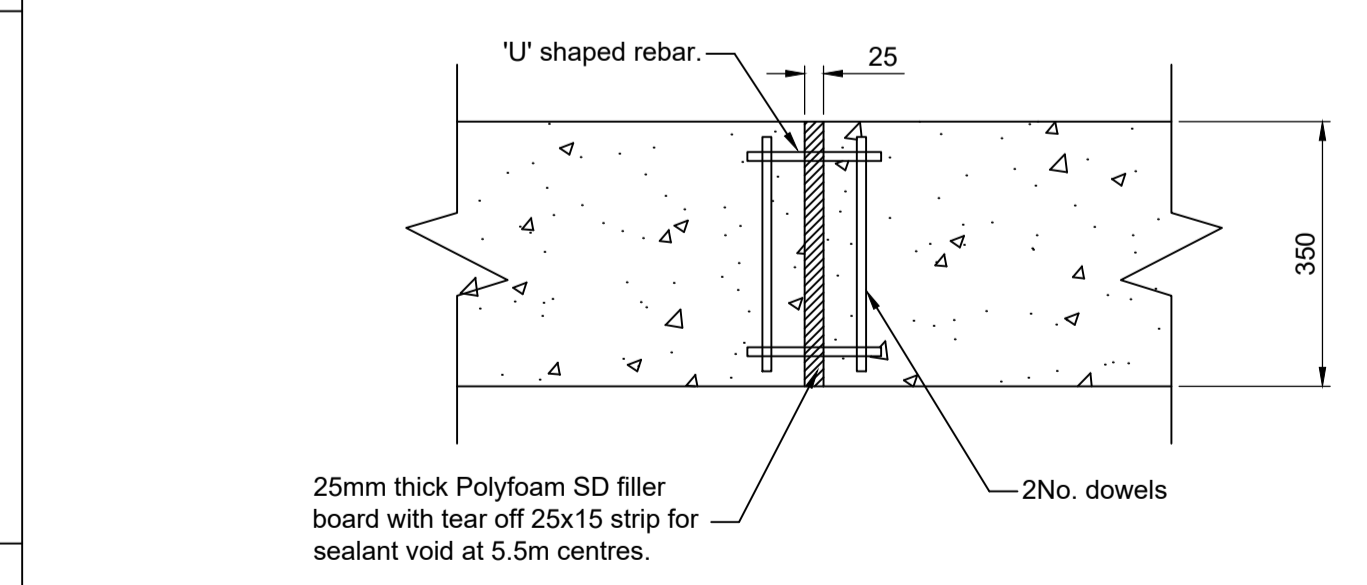
TYPICAL STANDARD PANEL - PLAN
Scale 1:20



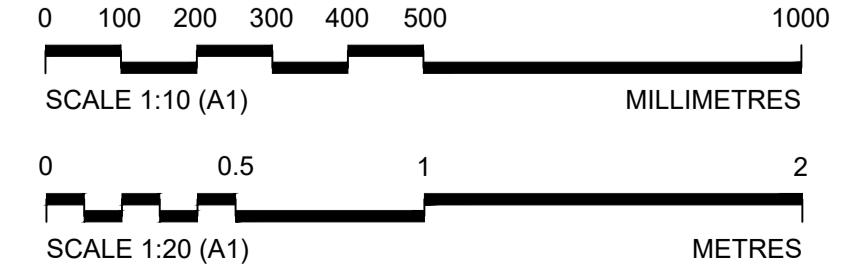
DETAIL 2 -
FISH PLATE CONNECTION
Scale 1:10



TYPICAL CILL BEAM SECTION
Scale 1:10



DETAIL 1 -
EXPANSION JOINT
Scale 1:10



NOTES

- All dimensions are in millimetres unless noted otherwise.
- All civil works are carried out in accordance with Civil Engineering Specification for the Water Industry (CESWI) 6th edition supplemented by NGTS 3.10 General Technical Specification for Civil Engineering Works and Electricity Substation Civil, Structural and Building Engineering Design Handbook 10 Issue 4.
- Fence is a Category 2 steel palisade type in accordance with NGTS 2.22 Perimeter Security Fencing for New Substations and Extensions to Existing Substations and BS 1722-12:2006.
- All steel components minimum S275 grade steel hot dip galvanised to BS EN ISO 1461:2009. Minimum thickness 85 microns.
- All welds are 6mm continuous fillet welds.
- Pale types are corrugated 'W' profile for SP fences with minimum face to view (width) of 70mm and a nominal thickness of 3mm. Pale top shape type 4 of Figure 1 BS 1722-12:2006. Pales fitted @ 145mm centres (150mm maximum), to give maximum horizontal clear gap in any part of the palisade fence of 85mm. Extra wide pales used to reduce gap widths.
- Pale to rail fixings 8mmØ swaged collar grooved rivets to BS 7805-1:1995, with proprietary elongated heads, shaped to suit the troughs of the 'W' pales.
- Rail fixings to fish plate and steel plate are 12mm Ø galvanised round head bolts & shear nuts. Sheared faces touched up with an approved protection corrosion system in accordance with NGTS 3.10.14.
- All bolts min strength grade 8.8. All nuts strength grade 8.
- Fence panel anchored to the cill on the centre line with 2 No. pale extensions at 1/3rd points along the panel length. These pales extend 250mm into the cills.
- Minimum 4 No. 4mm thick lugs welded onto the back of the fence post to mount the electric pulse fence. Top of lugs sloped at 50° from the horizontal to hinder foot holds.
- Electric pulse fence installed to the back of the palisade fence and extend from ground level to 1.0m above the top of the palisade fence pales.
- Electric pulse fence in accordance with BS 1722-17:2006.
- Electric fence manufacturer/installation company inspected, tested and provided certificate of compliance after installation.
- All concrete designed to BS EN 1992:2004 and supplied as designed concrete in accordance with relevant clauses of BS 8500-2 and the limiting values of composition as below:
 - Compressive strength class : C28/35
 - Allowable cement/combination types : IIB+SR, IIIB+SR
 - Maximum water cement ratio : 0.50
 - Minimum cement content : 340kg/m³
 - Slump class : S3
- 25 x 25 concrete chamfer formed on all exposed arises unless noted otherwise in the finished works.
- Expansion joint provided to cill beam @ 5.5m c/c i.e every other fence panel.
- All concrete cill beams are mass concrete.
- All reinforcement type B500B reinforcing bars in accordance with BS 4449:2005.
- Cover to embedded galvanised components 75mm min.
- Concrete post foundation and cill beam have a nominal fall away from embedded posts and pales formed in the top surface of the concrete to aid water run-off.
- Concrete finishes:
 - Top of cill and post foundations - wood float finish in accordance with CESWI Cl 4.21.
 - Side of cill beam - fair finish in accordance with CESWI Cl 4.22.
 - Buried post foundation - rough finish in accordance with CESWI Cl 4.22.
- Fence is connected to a separate earth system from substation earthing through rod electrodes. Each fence gate post provided with 2 Nos. 140mm holes in their back (internal) face on each post @ 44.5mm vertical centres min 100mm above concrete cill. Gate posts have additional 2 nos. 140mm holes to facilitate cross connection with the other gate post using a copper tape.
- Warning signs provided in compliance with The Electricity Safety, Quality and Continuity Regulations 2002 and BS1722-17 Fences - Part 17: Specification for Fences: Design - Installation & Maintenance and TS 2.22.

LEGEND

- EJ Expansion Joint FSL Finished substation level

JACOBS
FOR APPLICATION SUBMISSION

P01	PLANNING APPLICATION SUBMISSION	RM	RB	RC	25.04.22
Rev	Description	Cre'd	Chk'd	App'd	Date

nationalgrid

Master Scheme No:	Sub-Scheme No:	Site:
21847	XX	TWINSTEAD

Scheme Name:
PROPOSED GRID SUPPLY POINT SUBSTATION, OFF THE A131 BETWEEN BUTLER'S & WALDEGRAVE WOODS

Document Title:
PLANNING
TYPICAL FENCE DETAILS

Created by:	Date:	Checked by:	Date:	Approved by:	Date:
RM	14.04.22	RB	25.04.22	RC	25.04.22

Development Eng:	Document Type:	Scale:	Format:	Sheet(s):	Rev:
RJ	DWG	As indicated	A1	1	P01

National Grid Drawing Number:
PDD-21847-CIV-021
Originator Drawing Number:
B31000F9-JAC-ZZ-XX-DR-021