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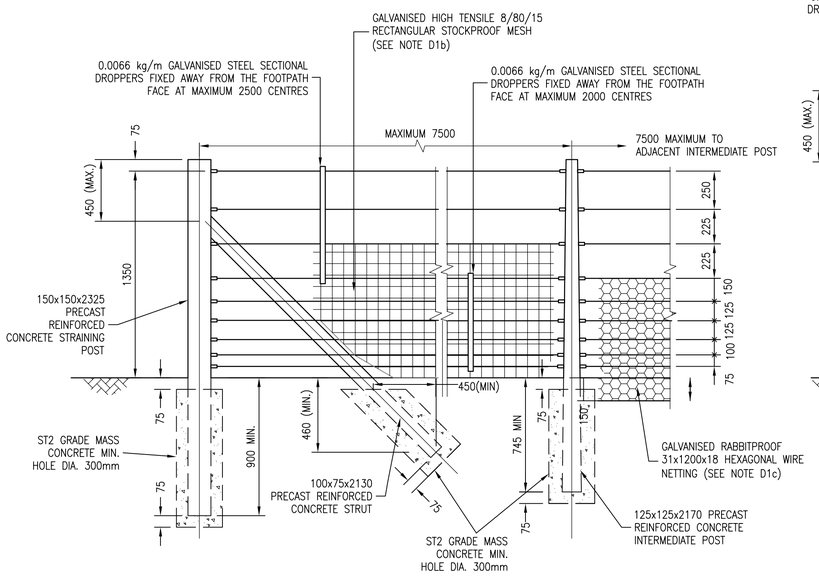
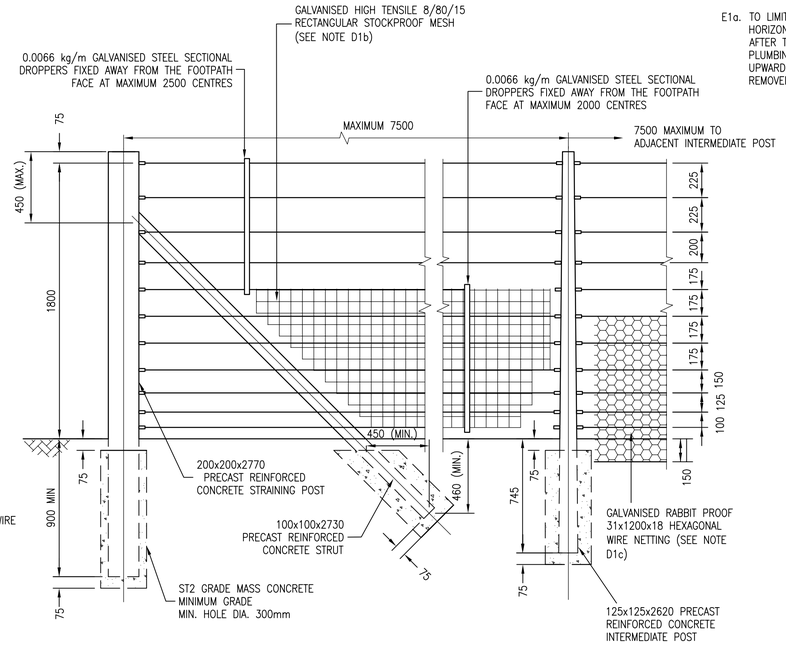


1.35m STRAINED WIRE FENCING

SCALE 1:20



1.80m STRAINED WIRE FENCING

SCALE 1:20

D1d THE TENSION IN STRAINED WIRES SHALL BE A MINIMUM OF 1600N BETWEEN STRAINING POSTS AT 100m WHEN MEASURED WITHIN 14 DAYS.

E INSTALLATION GUIDANCE: PALISADE FENCING

E1a. TO LIMIT DEFLECTION IN FENCE RAILS, THE BOTTOM HORIZONTAL RAIL SHALL BE SUPPORTED SO THAT AFTER TIGHTENING OF THE BOLTS, ALIGNING AND PLUMBING TO THE FENCE THERE IS A SLIGHT UPWARD CAMBER. THIS SUPPORT SHOULD BE REMOVED ONLY ONCE THE CONCRETE HAS SET.

B3 TIMBER FENCING

B3a ALL POST DIA. ARE MINIMUM TOP DIAMETER. TIMBERS ALL PRESSURE TREATED PEELED OR SAWN PINE OR LARCH ONLY. MACHINE ROUNDS NOT PERMITTED.

C ASSUMPTIONS:

C1 THE PALISADE FENCING SHALL ONLY BE REQUIRED TO TAKE ACCOUNT OF AN APPLIED WIND LOAD OF 900 N/m^2 EMPLOYING A SHAPE FACTOR OF 1.9 OVER THE NET AREA PRESENTED TO WIND IN ACCORDANCE WITH CP3–V–2 AND DEFINED IN BS 1722–12:1999 CLAUSE 1 NOTE 1.

D INSTALLATION GUIDANCE: STRAINED WIRE FENCING

D1a STRAINED LINE AND BARBED WIRE SHALL BE ATTACHED AND STAINED TO FENCE POST USING WINDING BRACKETS OR EYEBOLT STRAINERS IN ACCORDANCE WITH BS 1722 : PART 2 CL 5.3 & 5.4.

D1b WHERE HIGH TENSILE STOCKPROOF MESH IS SPECIFIED IT SHALL BE CUT TO SUIT OBSTRUCTIONS, BE ATTACHED TO THE LINE WIRES AT 450mm CENTRES AND EXTEND A MINIMUM 900mm ABOVE GROUND LEVEL IN ACCODANCE WITH BS 1722 : PART 2.

D1c WHERE RABBIT FENCING IS SPECIFIED IT SHALL BE CUT TO SUIT OBSTRUCTIONS, BE ATTACHED AT 450mm CENTRES. IT SHALL EXTEND A MINIMUM 750mm ABOVE GROUND LEVEL AND A MINIMUM 150mm BELOW GROUND LEVEL WITH A 150mm RETURN IN THE DIRECTION OF THE RAILS.

TABLE 1

SAFETY, HEALTH & ENVIRONMENT RISK ASSESSMENT

DESIGNERS' NOTE – CDM REG. 13(2)(b)

THE FOLLOWING ARE SIGNIFICANT HAZARDS WHICH MIGHT AFFECT THE HEALTH AND SAFETY OF THOSE UNDERTAKING THE WORKS OUTLINED IN THIS SET OF DRAWINGS ON RAILWAY STRUCTURES OR THOSE AFFECTED BY THESE ACTIVITIES. A SITE SPECIFIC RISK ASSESSMENT SHOULD ALWAYS BE UNDERTAKEN PRIOR TO COMMENCING ANY OF THE WORKS DESCRIBED ON SITE.

IT IS ASSUMED THAT A COMPETENT CONTRACTOR IS AWARE OF THE RISKS ASSOCIATED WITH GENERAL CONSTRUCTION ACTIVITIES UNDERTAKEN WITHIN THE RAILWAY ENVIRONMENT.

RISK	STAGE	MITIGATING MEASURES
CONTACT WITH OVERHEAD WIRES OR BURIED SERVICES	C	SPECIFIC METHOD STATEMENT AND RISK ASSESSMENT TO IDENTIFY AND DETAIL PROTECTION TO ALL SERVICES, BURIED AND OVERHEAD.
DAMAGE TO ROOTS OR PROTECTED TREES	C	SPECIFIC METHOD STATEMENT TO DETAIL PROVISION FOR ROOT PROTECTION OF TREES DURING WORKS.
INJURY TO ADJOINING LANDOWNERS	C	ADJOINING LANDOWNERS TO BE INFORMED AHEAD OF WORKS.
FAILURE OF FENCE DUE TO SUB–STANDARD MATERIALS	D/C	CERTIFICATE OF CONFORMITY IN ACCORDANCE WITH BS 1722 TO BE PROVIDED BY FENCE MANUFACTURER.
FAILURE OF FENCE DUE TO SUB–STANDARD INSTALLATION	D/C	CERTIFICATE OF CONFORMITY IN ACCORDANCE WITH BS 1722 TO BE PROVIDED BY FENCE INSTALLER.

NOTE : C=CONSTRUCTION, D=DESIGN, O=OPERATION

NOTES

A GENERAL NOTES:

A1 ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.

A2 ALL WORKS TO BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF NETWORK RAIL COMPANY PROCEDURES
1. NR/SP/OHS/011: PREVENTION OF DAMAGE TO AND DANGER FROM SURFACE AND BURIED SERVICES.
2. NR/PRC/MPI/CI0024: CONTROL AND USE OF METAL PINS AND SPIKES ON NETWORK RAIL INFRASTRUCTURE
3. NR/PRC/MPI/CI0026 PROCESS: FOR LOCATING BURIED SERVICES PRIOR TO GROUND PENETRATION.

A3 FENCES JOINED TO EXISTING FENCES, WALLS OR OTHER STRUCTURES TO PROVIDE A COMPLETE BARRIER TO PERSONS OR ANIMALS AS APPROPRIATE.

A4 FENCES SHALL BE ACCURATELY SET OUT AND ERECTED TO PROVIDE A SMOOTH ALIGNMENT IN PLAN AND ELEVATION, FOLLOWING THE CONTOURS OF THE GROUND AS CLOSELY AS IS PRACTICABLE.

A5 THE LINE OF THE FENCING SHALL BE CLEARED OF ALL IMPENDING VEGETATION AND TRIMMED TO REMOVE ANY IRREGULARITIES TO ENABLE FENCE INFILL PANELS TO BE ERECTED AT A CONSTANT DISTANCE FROM THE GROUND.

A6 ALL BEDDING CONCRETE FOR VERTICAL FENCE POSTS TO BE MASS CONCRETE MINIMUM GRADE ST2 TO BS 8500–1.

B SPECIFICATION:

B1 PALISADE FENCING

B1a ALL STEEL PALISADE FENCE SHALL BE SECURITY TYPE SP30 IN ACCORDANCE WITH BS 1722 : PART 12 AND HOT DIP GALVANISED IN ACCORDANCE WITH BS EN ISO 1461.

B1b ALL ROLLED STEEL SECTIONS SHALL BE OF STEEL GRADE S275 TO BS EN 10025 : 1993 UNLESS OTHERWISE SPECIFIED.

B1c ALL BOLTS SHALL COMPLY WITH BS 3692 AND SHALL BE STRENGTH GRADE 8.8. NUTS SHALL BE STRENGTH GRADE 8 AND WASHERS SHALL CONFORM TO BS 4320. ALL BOLTS, NUTS AND WASHERS SHALL BE ZINC COATED.

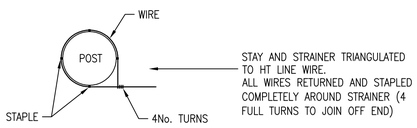
B1d ALL CONNECTIONS SHALL BE BOLTED IN ACCORDANCE WITH BS 1722 : PART 12.

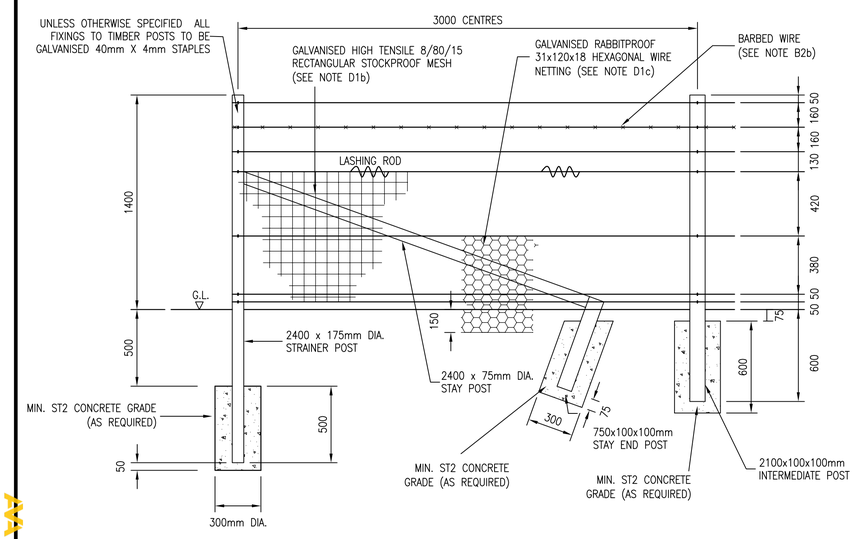
B1e OPTIONAL ITEMS REQUIRED FOR ADDITIONAL SECURITY ARE TO BE SPECIFIED IN A PROJECT SPECIFIC FORM A/B

B2 STRAINED WIRE FENCING

B2a LINE WIRE TO BE ZINC COATED 3.15mm DIA. HIGH TENSILE WIRE IN ACCORDANCE WITH BS 1722–2 : 2000 CL 6.1.

B2b BARBED WIRE TO BE 2 PLY HT GALVANISED IN ACCORDANCE WITH BS 1722–2 : 2000 CL 6.1.3. AND MAY BE USED ONLY WITH ADJACENT OWNERS PERMISSION ON TOP THREE WIRES WHERE NO HAZARD IS POSED TO THE GENERAL PUBLIC.





'EXETER' TYPE TIMBER POST & H.T. STOCK NET FENCE

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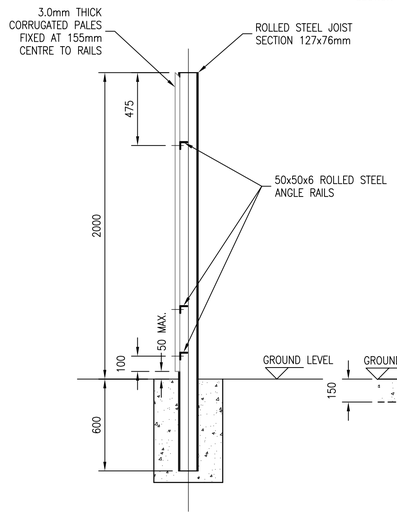

SECTION A–A

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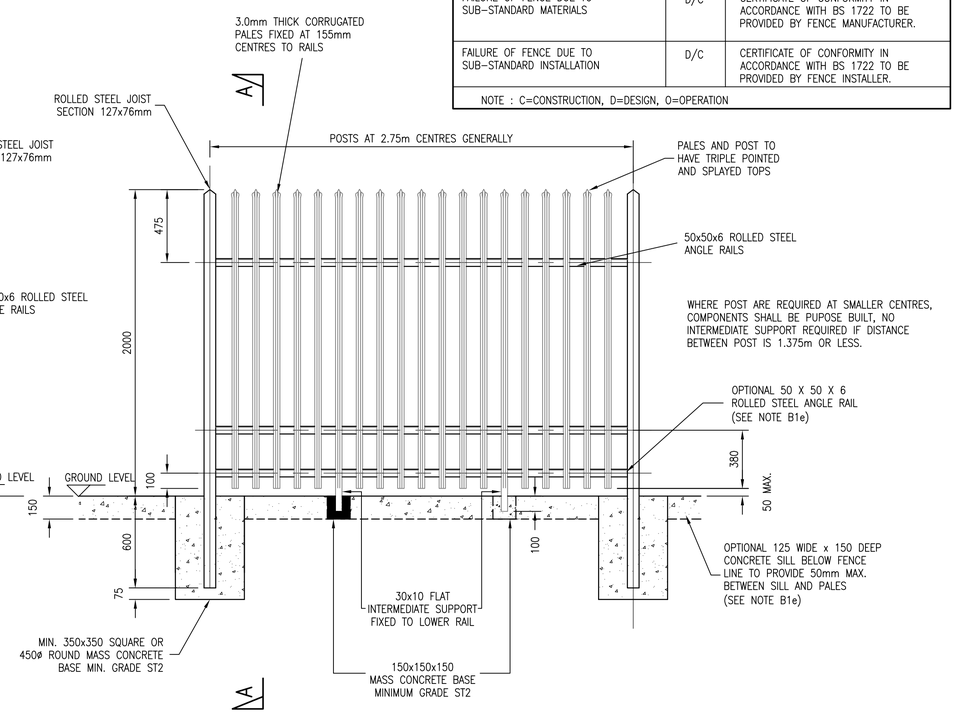

2.0m SECURITY PALISADE FENCE DETAIL (TO BS 1722: PART 12)

SCALE 1:20

Rev	Date	Description of revision	Design'd	C'kd
A	08.08.06	FIRST ISSUE	GPR	NGAY
P3	04.08.06	REVISED FORM B	GPR	NGAY
P2	02.06.06	FORM B	GPR	NGAY
P1	15.03.06	FORM A	GPR	NGAY

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Master copy with original signatures held by Network Rail HQ
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EARTHWORKS AND ASSOCIATED DRAINAGE

BOUNDARY FENCING 2.0m PALISADE 1.35/1.80m HTSTRAINED WIRE "EXTER" TYPE HT WIRE

Scale	AS SHOWN
Drawing Number	NR/CIV/SD/380
REV.	A

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