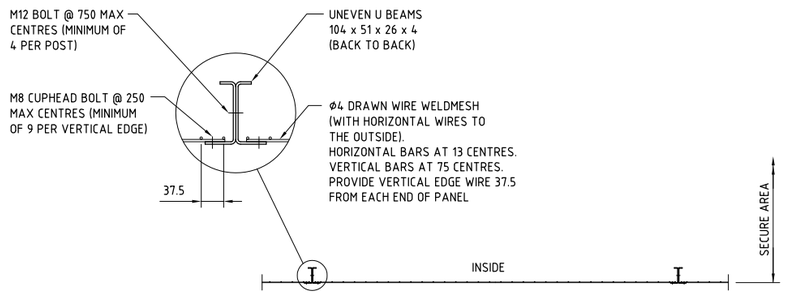
A1

THIS DRAWING MAY ONLY BE USED IN THE COURSE OF AND FOR THE PURPOSE OF CREATING SYDNEY WATER ASSETS. USE THIS DRAWING WITH CARE. THE USER IS RESPONSIBLE FOR THE CORRECT APPLICATION OF THIS DRAWING.



SECTIONAL PLAN

NOTES

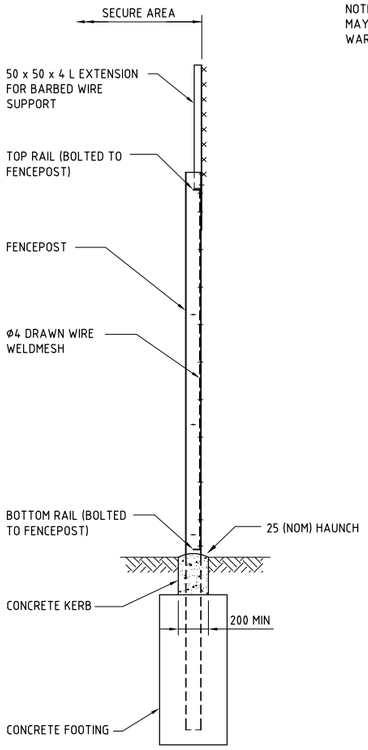
MISCELLANEOUS

M1. ALL WELDS SHALL BE 6 CONTINUOUS FILLET U.N.O. IN ACCORDANCE WITH AS 1554 PART 1.

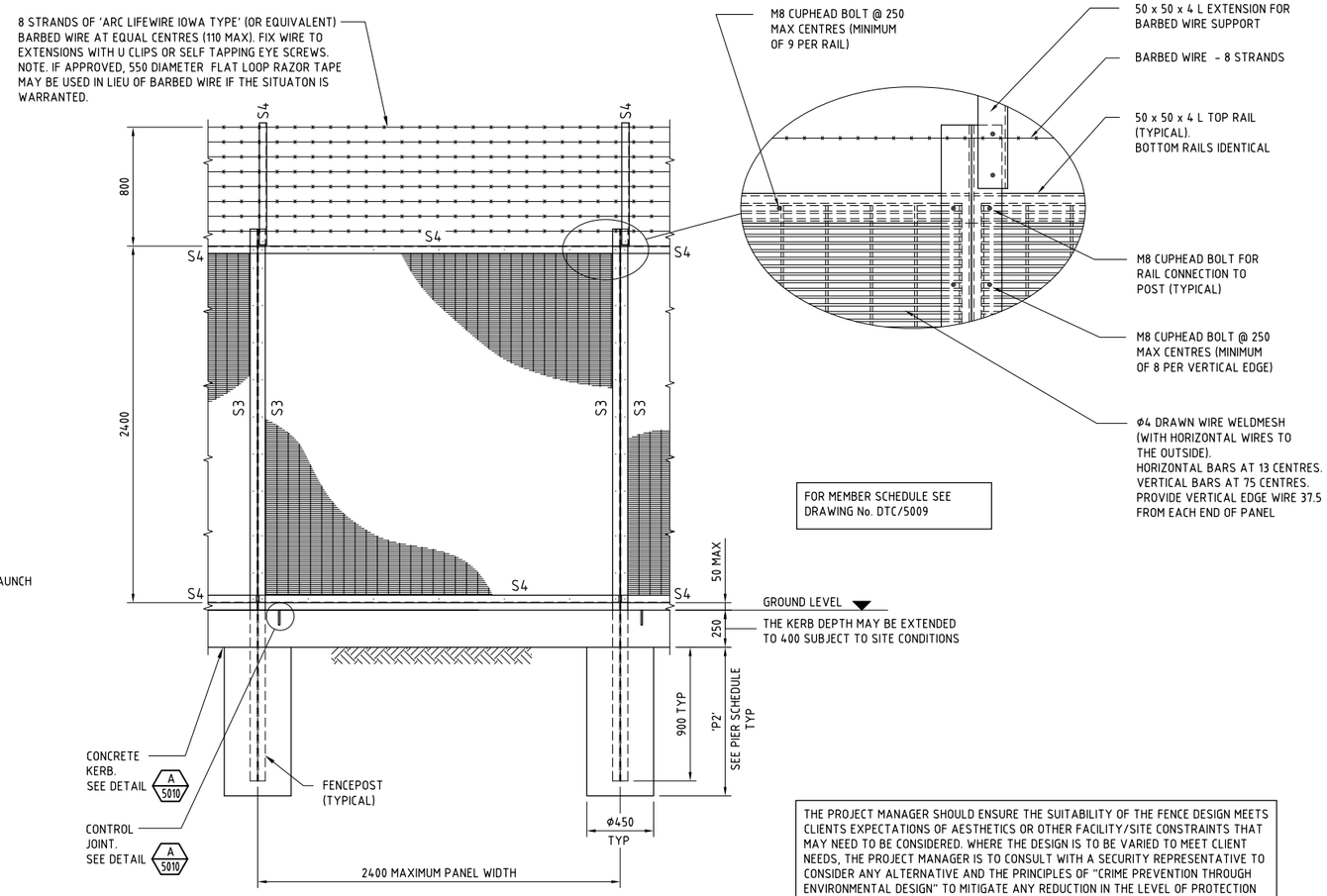
M2. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 & AS 4100.

M3. CONCRETE QUALITY (TO AS3972):
CLASS GRADE N25
MAXIMUM AGGREGATE SIZE 10 mm

M4. WHERE ELECTRO-MECHANICAL STRIKE MECHANISMS ARE INCORPORATED INTO THE DESIGN, RELEASE MECHANISMS SHALL BE SHROUDED TO PREVENT TAMPERING.



END ELEVATION



FOR MEMBER SCHEDULE SEE DRAWING No. DTC/5009

ELEVATION

TYPICAL FENCE PANEL

(VIEWED FROM OUTSIDE SECURE AREA)

SCALE 1:20

THE PROJECT MANAGER SHOULD ENSURE THE SUITABILITY OF THE FENCE DESIGN MEETS CLIENTS EXPECTATIONS OF AESTHETICS OR OTHER FACILITY/SITE CONSTRAINTS THAT MAY NEED TO BE CONSIDERED. WHERE THE DESIGN IS TO BE VARIED TO MEET CLIENT NEEDS, THE PROJECT MANAGER IS TO CONSULT WITH A SECURITY REPRESENTATIVE TO CONSIDER ANY ALTERNATIVE AND THE PRINCIPLES OF "CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN" TO MITIGATE ANY REDUCTION IN THE LEVEL OF PROTECTION OFFERED BY THE STANDARD DESIGN

THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING No.'s DTC/5009 & 5010

NOTES

WELDMESH

W1. WELDMESH PANELS SHALL BE FABRICATED FROM Φ4 HARD DRAWN WIRE, WITH A MINIMUM YIELD STRENGTH OF 210 MPa & A MINIMUM TENSILE STRENGTH OF 500 MPa.

W2. ALL WIRES SHALL BE WELDED AT EACH INTERSECTION, TO A MINIMUM 75% OF WIRE TENSILE STRENGTH.

W3. PANELS SHALL BE COATED USING A ZINC ALLOY WITH A MINIMUM 260 gms PER SQ. METRE, TO AS NZS 4534 CLAUSE FS.1.3.

W4. PANELS SHALL BE FIXED TO POSTS & RAILS USING :
- M8 GALVANISED HARDENED STEEL CUP HEAD BOLTS & Φ2.5 GALVANISED U CLIP SECURITY WASHERS.
- M8 GALVANISED TAMPER PROOF SHEAR NUTS WITH A SHEAR TORQUE OF 16-22 Nm.

FENCE POSTS

F1. POSTS SHALL BE FABRICATED FROM 104 x 51 x 26 x 4 UNEVEN U BEAM (CHANNEL), GRADE 300 PLUS.

F2. POSTS SHALL BE SUPPLIED CUT TO LENGTH (INCLUDING THE APPROPRIATE FOOTING DEPTH) WITH :
- THE FRONT EDGE PERFORATED WITH 25 x 10mm SLOTS, 10 mm FROM THE EDGE, AT A MAXIMUM OF 250 CENTRES.
- THE WEB TO INCORPORATE 13.5 x 44 mm SLOTS, AT A MAXIMUM OF 750 CENTRES.

F3. FENCE POSTS SHALL BE HOT DIP GALVANISED AFTER FABRICATION TO AS 4680.

RAILS

R1. RAILS SHALL BE 50 X 50 x 4 EQUAL ANGLES, GRADE 300 PLUS.

R2. RAILS SHALL BE SUPPLIED CUT TO LENGTH WITH :
- A 20 x 10 mm SLOT, NEAR EACH EDGE, FOR CONNECTION TO FENCE POSTS.
- 10 mm HOLES, ON THE SAME LEG, AT A MAXIMUM OF 285 CENTRES.

R3. RAILS SHALL BE FIXED TO POSTS USING M8 GALVANISED HARDENED STEEL CUP HEAD BOLTS, Φ2.5 GALVANISED U CLIP SECURITY WASHERS & SHEAR NUTS WITH A SHEAR TORQUE OF 16-22 Nm. .

THE WELDMESH SHALL BE FIXED TO IHE INSIDE OF THE TOP & BOTTOM RAILS, TO COVER RAKED & CUT SHEET EDGES.

R4. THE BOTTOM RAIL SHALL BE A MAXIMUM OF 50 FROM THE GROUND LEVEL & SHALL BE SLOPED TO FOLLOW GROUND CONDITIONS IF REQUIRED.

R5. RAILS SHALL BE HOT DIP GALVANISED AFTER FABRICATION TO AS 4680.

EXTENSIONS & TOPPINGS

E1. ALL EXTENSIONS SHALL BE 50 x 50 x 4 EQUAL ANGLES, GRADE 300 PLUS.

E2. ALL TOPPINGS (BARBED WIRE) SHALL BE STRAINED & PERMANENTLY SECURED TO THE EXTENSIONS.

E3. EXTENSIONS SHALL BE HOT DIP GALVANISED AFTER FABRICATION TO AS 4680.

GATES & LOCKING ARRANGEMENTS

G1. ALL GATES ARE TO OPEN OUTWARDS, SUBJECT TO NO OPERATIONAL OR SAFETY ISSUES.

G2. ALL JOINTS ARE TO BE FULLY WELDED JOINTS (STAGGERED WELDING IS NOT PERMITTED). TWO COATS OF APPROVED ZINC RICH PAINT ARE TO BE APPLIED IN ACCORDANCE WITH AS 4680 TO ANY SURFACES DAMAGED DURING ERECTION.

G3. SINGLE LEAF GATES ARE TO BE FITTED WITH TWO SECURITY BOLT-ON BEARING HINGES, FITTED WITH GREASE NIPPLES (DOWNEE' MODEL T2200 OR EQUIVALENT).

G4. HINGES FOR SINGLE & DOUBLE LEAF GATES SHALL BE CAPABLE OF CARRYING THE FULL GATE LOAD PLUS A SUPERIMPOSED LOAD EQUAL TO 100 kg, APPLIED AT THE NOSE OF THE GATE, WITHOUT ANY DEFLECTION IN ANY POSITION DETRIMENTAL TO THE OPERATION OF THE GATE.

G5. SINGLE LEAF GATES ARE TO BE FITTED WITH A SLIDING BOLT. THE BOLT IS TO ENGAGE INTO A GATEPOST OR ADJACENT STRUCTURE. THE SLIDING BOLT IS TO BE SECURED USING A PADLOCK KEYED TO SYDNEY WATER'S KEYING SYSTEM. THE PADLOCK IS TO BE ENDORSED 'INTRUDER RESISTANT AREA' APPLICATION, AS LISTED IN THE COMMONWEALTH OF AUSTRALIA SECURITY EQUIPMENT CATALOGUE.

G6. DOUBLE LEAF GATES ARE TO BE FITTED WITH A TWO PART LOCKING MECHANISM. THIS INCLUDES A SLIDING BOLT WHICH ENGAGES INTO THE GATEFRAME & A PAIR OF TOWER BOLTS WHICH ENGAGE IN FERRULES FIXED INTO THE ROADWAY.
THE DESIGN & CONSTRUCTION OF THE LOCKING ARRANGEMENT SHALL BE SUCH THAT IT SHALL NOT BE POSSIBLE TO OPERATE THE TOWER BOLTS UNLESS THE PADLOCK IS UNLOCKED . THE PADLOCK SHALL BE KEYED TO SYDNEY WATER'S KEYING SYSTEM. THE PADLOCK IS TO BE ENDORSED 'INTRUDER RESISTANT AREA' APPLICATION, AS LISTED IN THE COMMONWEALTH OF AUSTRALIA SECURITY EQUIPMENT CATALOGUE.

POWDER COATING

C1. ALL FENCE COMPONENTS TO BE POWDER COATED AFTER GALVANISING BY:
HOT ALKALI DEGREASE & CLEAN.
CLEAN WATER RINSE (TWICE).
ZINC PHOSPHATE CONVERSION COATING TO AS 1627 PART 6.
HOT ACIDULATED FINAL RINSE.
POWDER COAT TO 75 +/- 10 MICRONS.
BAKE 10 MINUTES AT 200°C METAL TEMPERATURE.
AREA AROUND EARTHING HOLE TO BE BLOCKED FOR POWDER COATING.

TOUCH UP

T1. GALVANISED FINISH:
FOLLOWING INSTALLATION OF ALL FASTENERS, BREAK OFF POINTS SHOULD BE TREATED WITH A GENEROUS COATING OF ZINC RICH COLD GALVANISING PAINT.

T2. POWDER COAT FINISH:
AS ABOVE, WITH THE ADDITION OF A MATCHING COLOUR TOUCH UP PAINT.

Sydney WATER

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APPROVED

P. GILLMAN

MANAGER - E & ES

ENGINEERING & ENVIRONMENTAL SERVICES

LETTER	DETAILS OF ISSUE / AMENDMENT	APP'D	DATE
A	ORIGINAL ISSUE	PJG	01.03.13

DEEMED TO COMPLY DRAWINGS

INTRUDER RESISTANT PERIMETER BARRIER TYPE 3
WELDMESH SECURITY FENCE & GATES
SHEET 1 OF 3

DTC
5008

ISSUE	DATE
A	01.03.13