

**FRONT ELEVATION ON TEE BRACKET TYPE 1**

17No. REQUIRED (WEST PARAPET)  
31No. REQUIRED (EAST PARAPET)  
APPROX. WEIGHT = 6.6kg  
SCALE 1:5

**SIDE ELEVATION ON TEE BRACKET TYPE 1**

SCALE 1:5

**PLAN ON 10mm THICK STEEL BASE PLATE TYPE 1**

SCALE 1:5

**FOR BRACKETS ANGLES AND FRP PANEL LOCATIONS REFER TO DRAWING 11**

**PLAN ON 5mm THICK STEEL REAR COVER PLATE TYPE 1**

4No. REQUIRED (EAST PARAPET)  
APPROX. WEIGHT = 1.4kg  
SCALE 1:2

**FRONT ELEVATION ON 5mm THICK STEEL REAR COVER PLATE TYPE 1**

SCALE 1:5

**Legend/Notes**

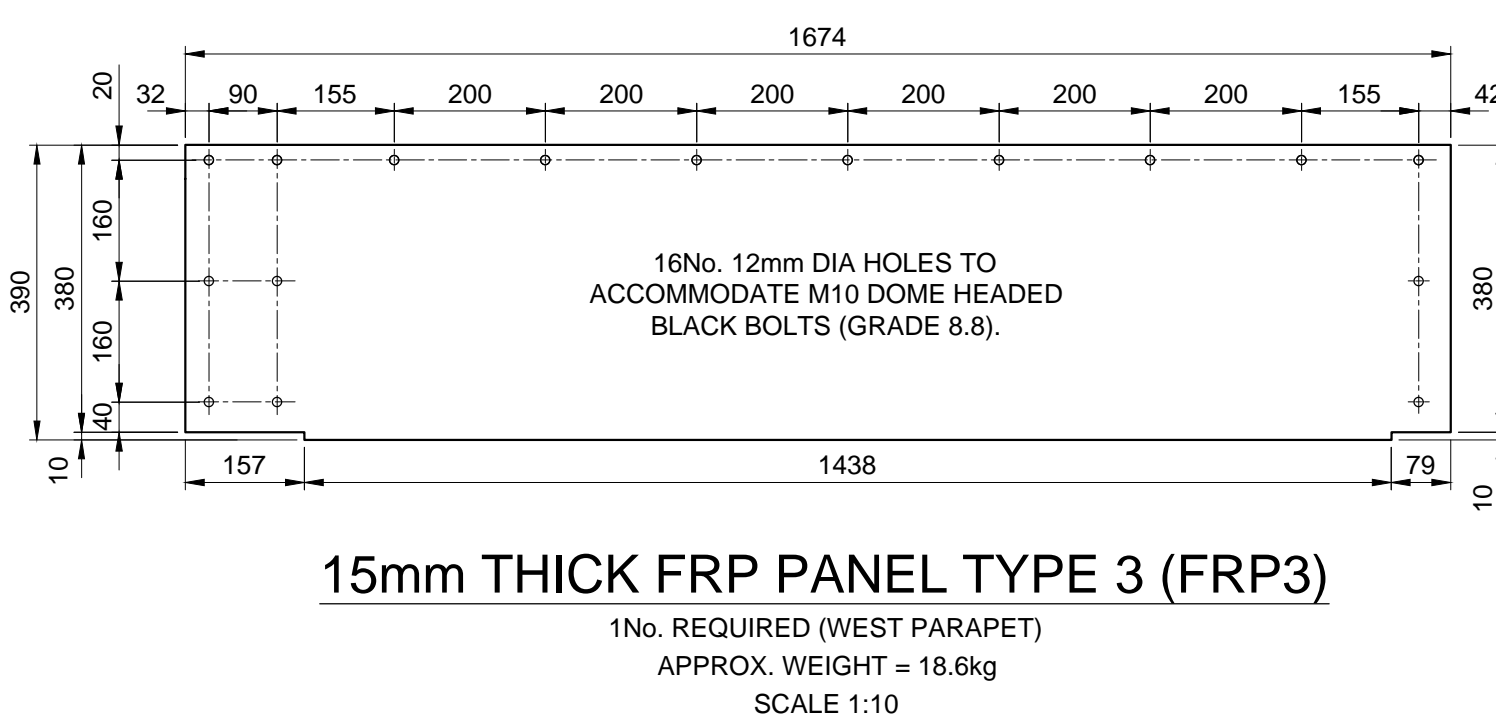
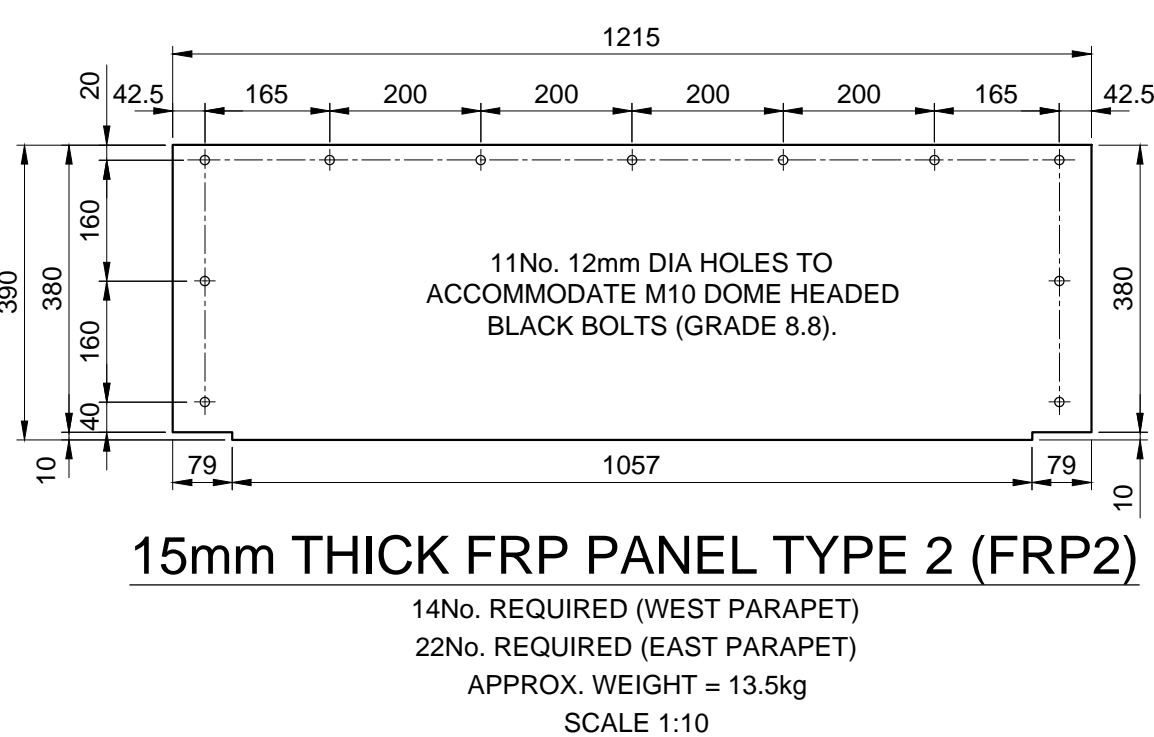
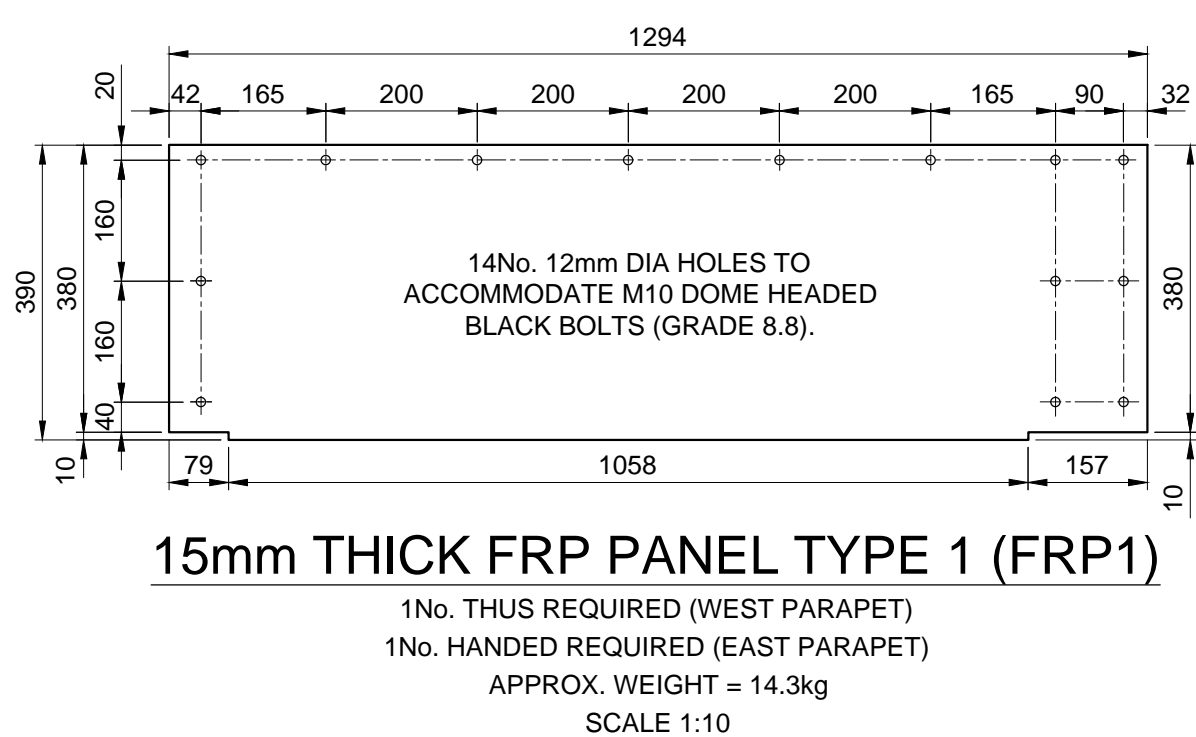
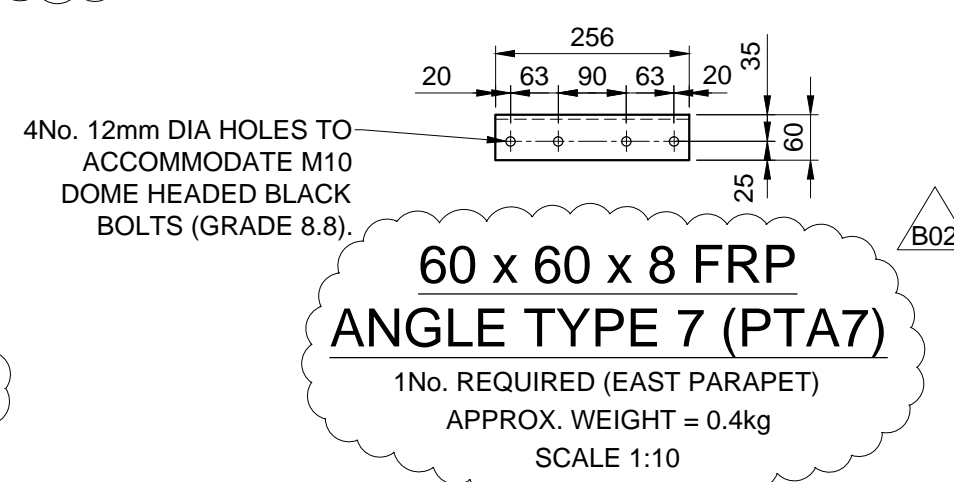
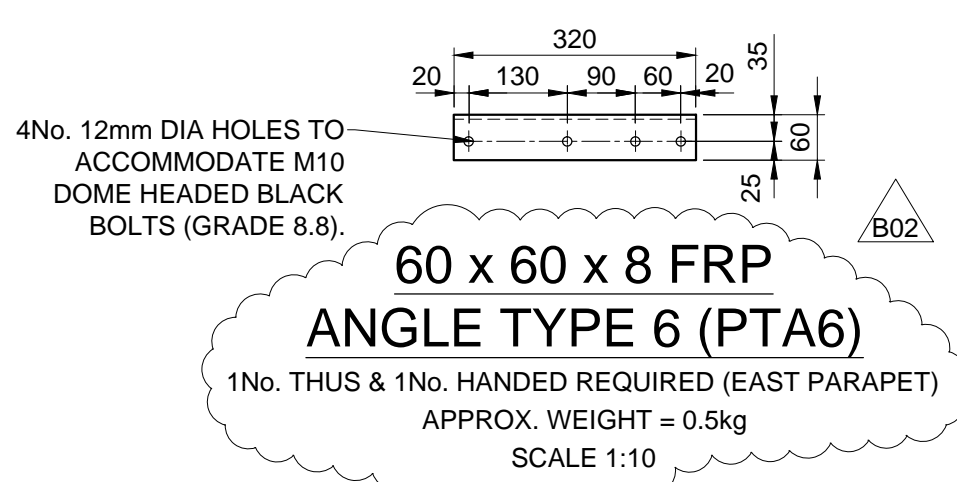
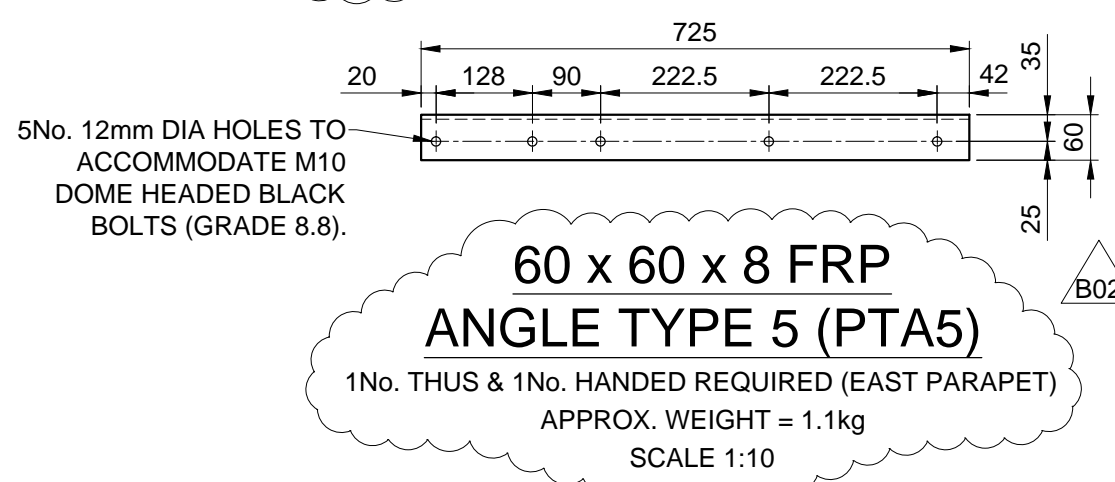
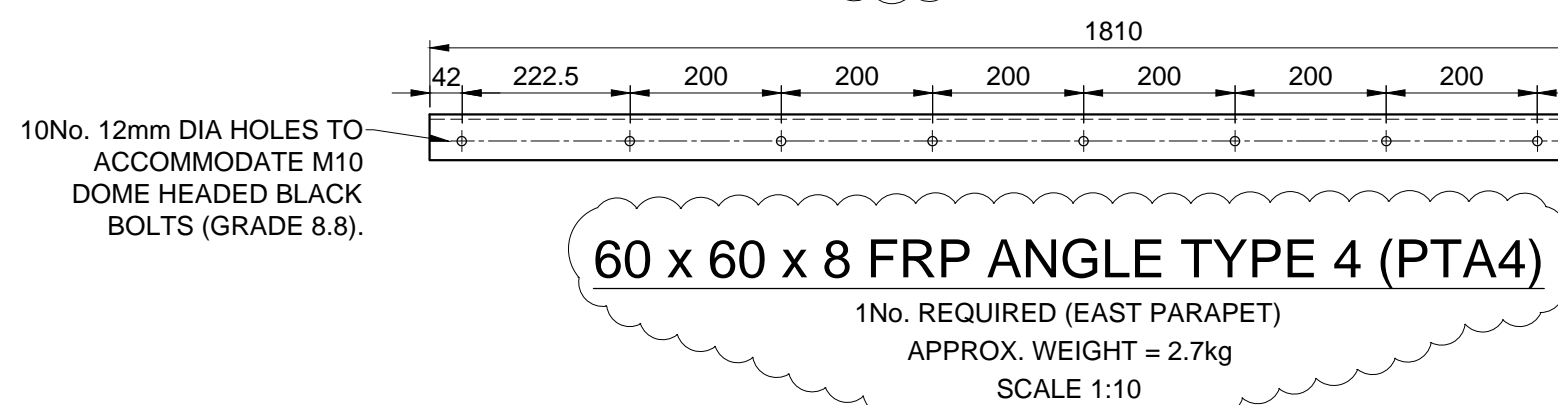
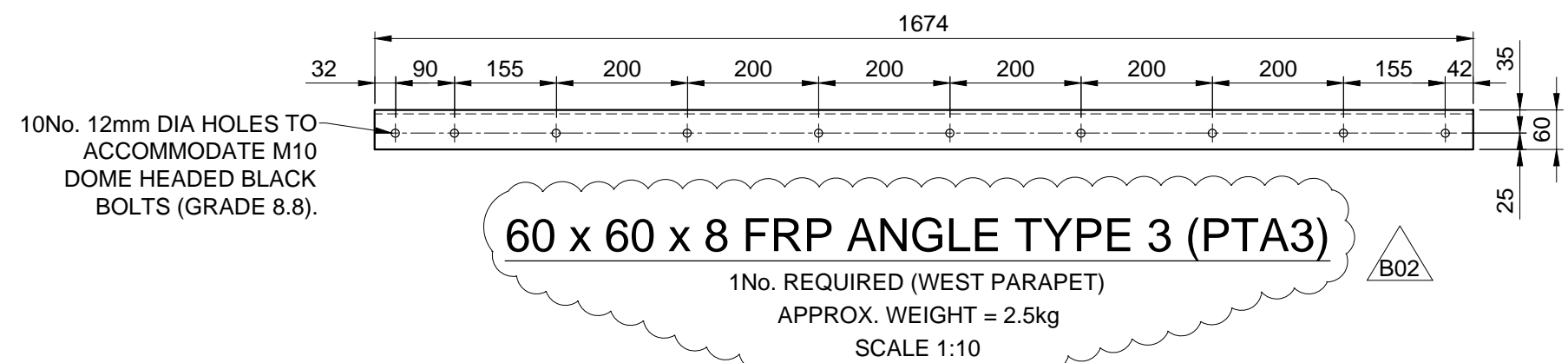
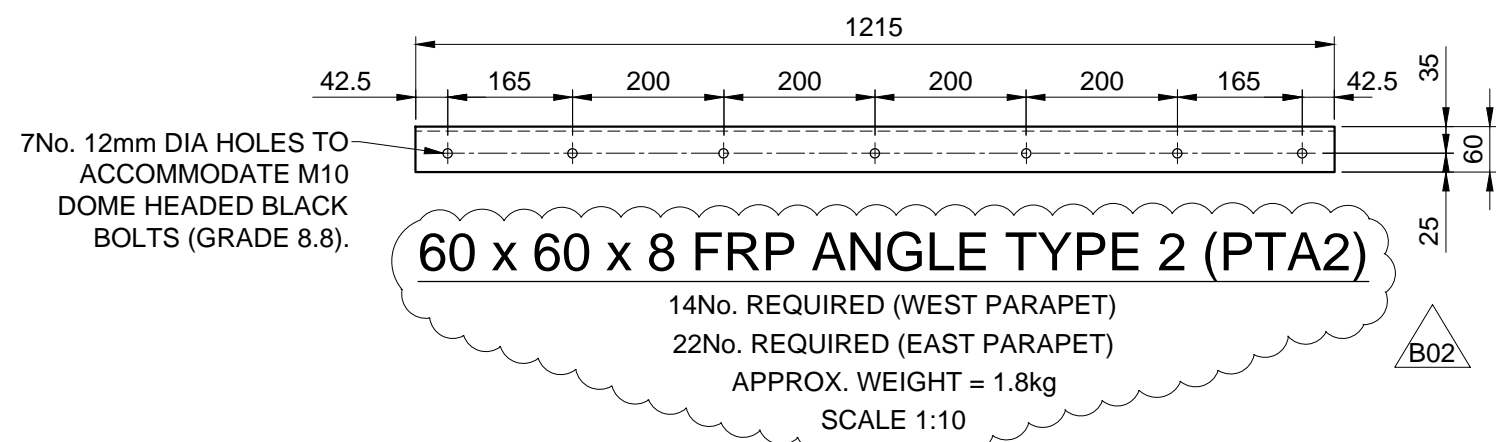
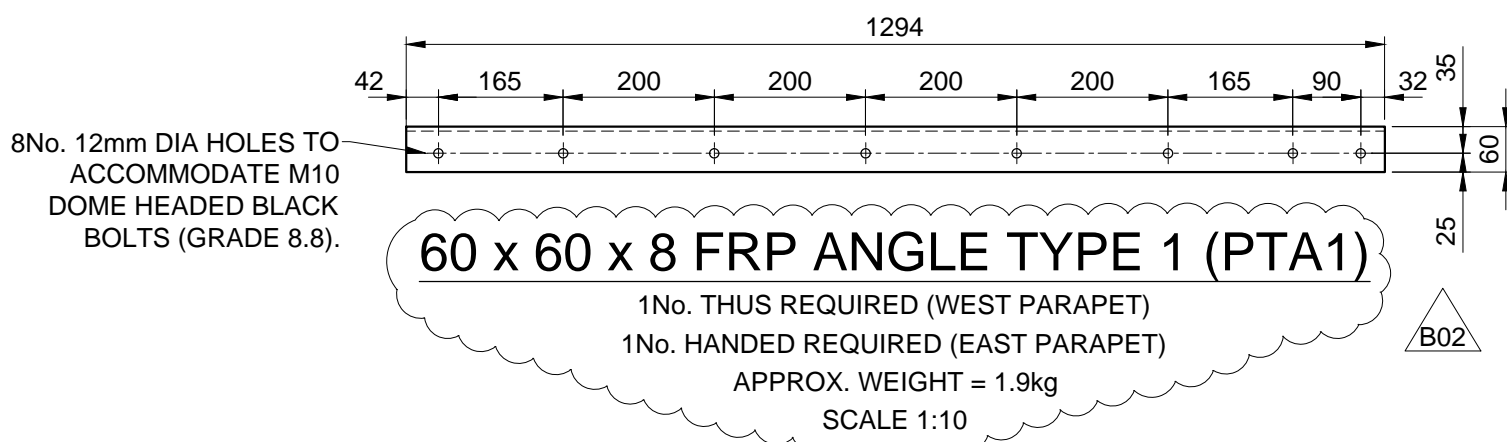
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
  - DO NOT SCALE FROM THIS DRAWING.
  - THIS DRAWING IS BASED ON AVAILABLE NETWORK RAIL RECORD INFORMATION AND A BASIC DIMENSIONAL SITE SURVEY.
  - THE CONTRACTOR SHALL CONFIRM ALL DIMENSIONS PRIOR TO FABRICATION AND CONSTRUCTION.
  - ABSOLUTE MINIMUM HEIGHT OF PARAPET IS TO BE 1850mm FROM STANDING SURFACE OR ANY FOOTHOLD WITHIN 6m OF THE RUNNING RAIL.
- STEELWORK NOTES**
- STEEL GRADES IN ACCORDANCE WITH BS EN 10025 2004 PARTS 1-6, TO BE S275 J0.
  - ALL WELDING SHALL BE IN ACCORDANCE WITH BS EN 1011-1:1998 AND AMENDMENT NO.1; 2002, BS EN 1011-2, BS EN 729 AND THE SPECIFICATION. ALL WELDERS SHALL BE APPROVED TO BS EN 287 PART 1 AND BS EN 1418.
  - ALL BOLTS AND ANCHORAGES DAMAGED/CUT DURING IMPLEMENTATION TO BE TOUCHED UP WITH GALVAFROID.
  - PROTECTIVE TREATMENT OF NEW STEELWORK ELEMENTS TO BE HOT DIP GALVANISED TO BS EN ISO 1461:2009 AND NR/GN/CIV/002
  - ALL DIMENSIONS OF NEW STEELWORK/FRP ELEMENTS AND BOLT LOCATIONS TO BE CONFIRMED PRIOR TO FABRICATION BY CONTRACTOR BY UNDERTAKING A SITE SURVEY.

**FRP NOTES**

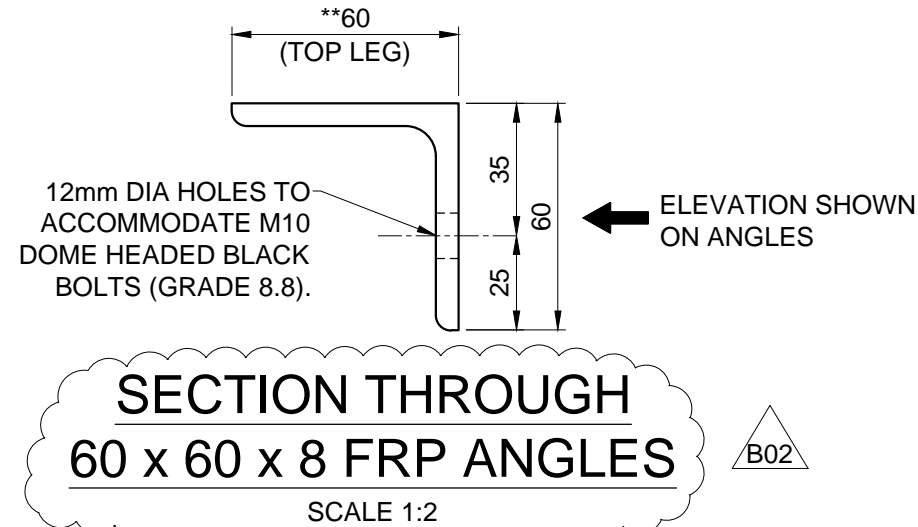
- CONTRACTOR TO CONFIRM ALL BOARD DIMENSIONS AND HOLE LOCATIONS PRIOR TO CUTTING THE FINAL LENGTHS.
- FRP PANELS ARE TO BE FABRICATED FROM FIBREGLASS FRP PLATES BY SMYTH COMPOSITES LTD OR SIMILAR APPROVED, COLOUR TO BE NIMBUS GREY FOR EAST PARAPET, REF: 10.A.07 TO BS 5252, AND COPPER BROWN, REF: RAL 8004 FOR WEST PARAPET.
- ALL FRP BOARDS AND COMPONENTS ARE TO BE STORED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATION.
- ALL FIELD CUT & DRILLED EDGES, HOLES & ABRASIONS FOR FRP SHALL BE SEALED WITH A CATALYZED RESIN AS RECOMMENDED BY MANUFACTURERS. THE SEALING OF THE EDGES SHALL PREVENT PREMATURE FRAYING OF THE FIELD CUT EDGES.
- ALL GAPS BETWEEN FRP ELEMENTS TO BE FILLED WITH 2 PART POLYSULPHIDE SEALANT OR SIMILAR APPROVED.

**RESIDUAL RISKS**

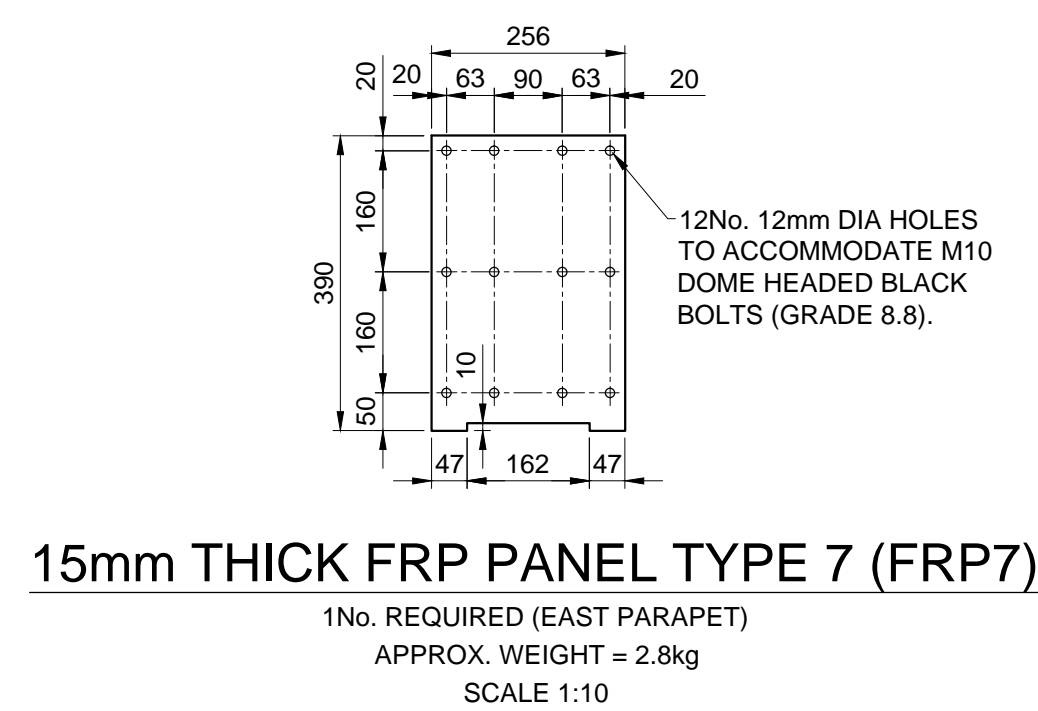
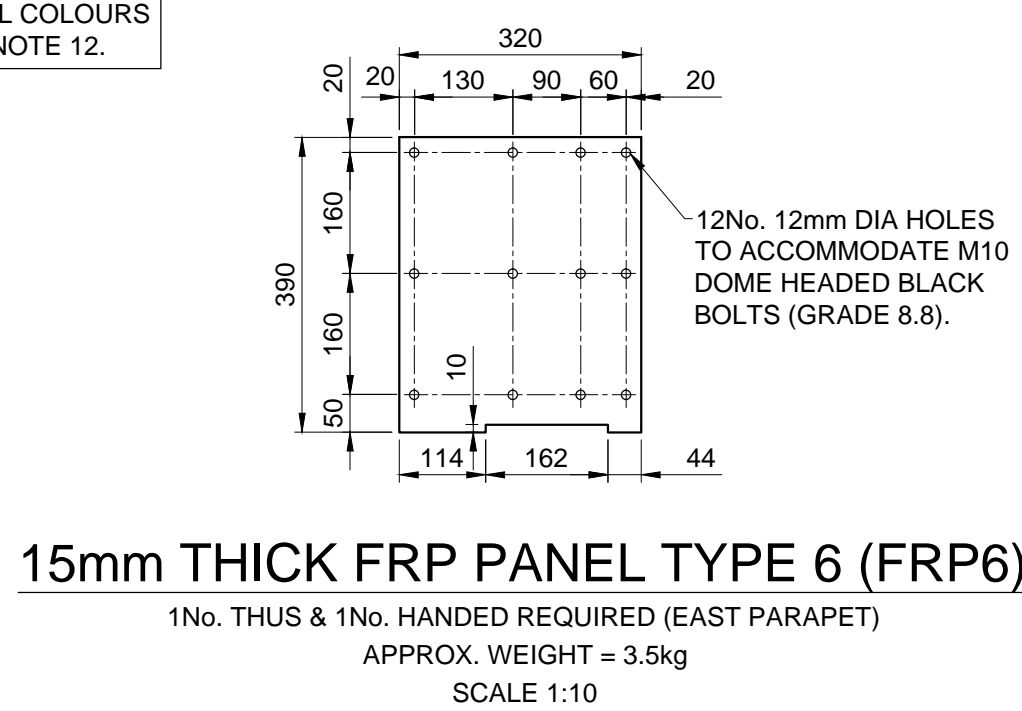
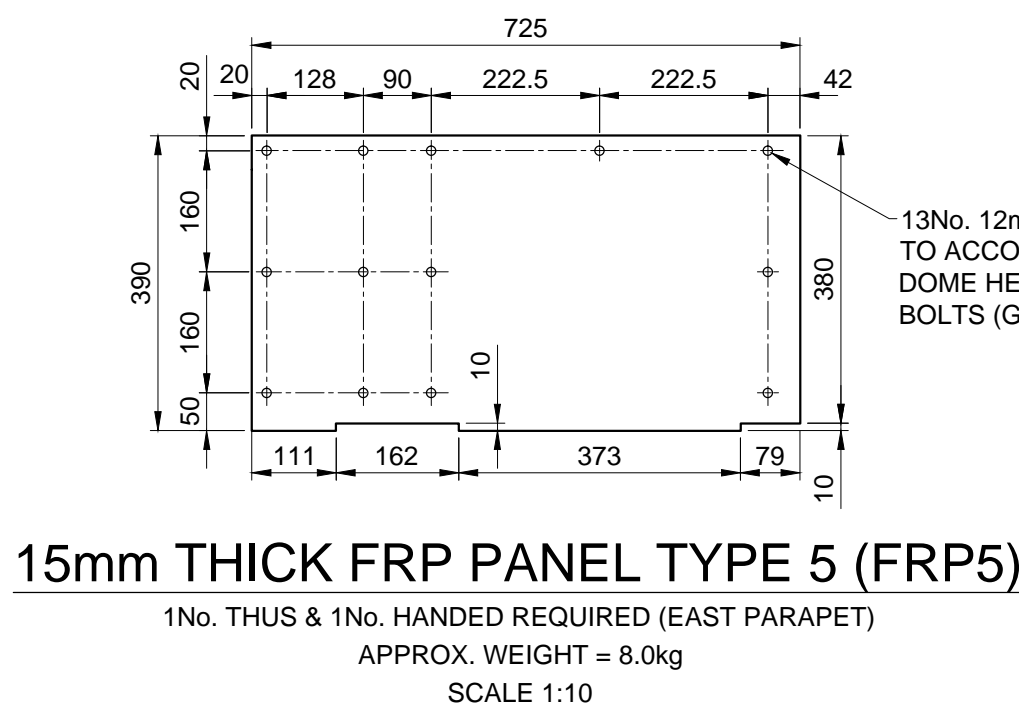
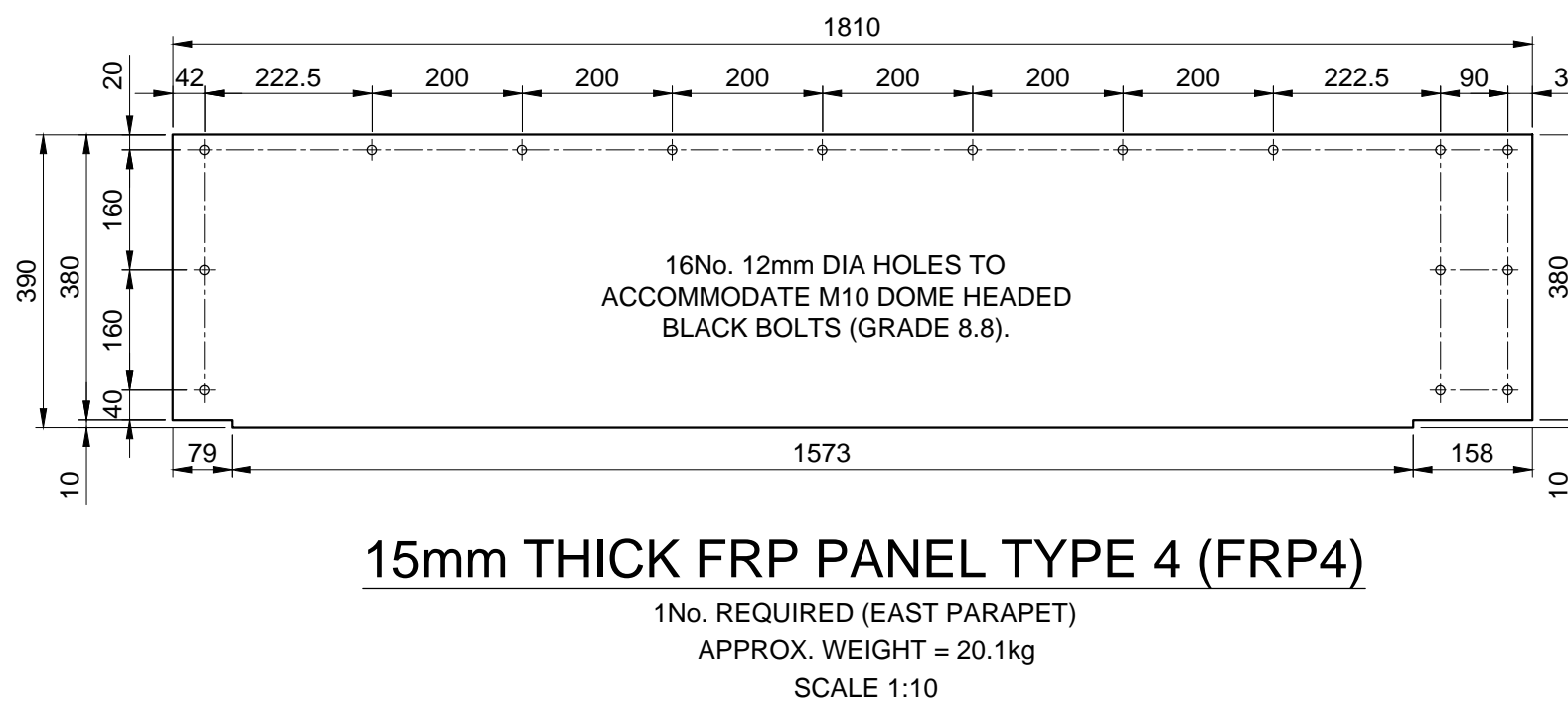
- INJURY DUE TO WORKING WITH POWER TOOLS.
- INJURY DUE TO MANUAL HANDLING.
- DRILLING THROUGH REINFORCED CONCRETE / DAMAGE.
- ILLNESS DUE TO CHEMICALS WITHIN PAINT SYSTEMS AND SEALING RESIN.
- LIGHTING CABLES FOR PUBLIC HOUSE SIGNAGE ATTACHED TO NORTH EAST RETURN WALL.
- EXPOSURE TO FRP FIBRES FROM FIELD CUT EDGES.
- WELDING OPERATIONS.



\*\*TOP LEGS OF ANGLE TYPES 5, 6 AND 7 TO BE CUT DOWN TO SUIT CURVATURE OF PARAPET TO NORTH EAST CORNER, MIN 5mm GAP TO BE LEFT AND FILLED WITH 2 PART POLYSULPHIDE SEALANT



FOR FRP PANEL COLOURS REFER TO NOTE 12.



Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B02	06/05/16	SECOND ISSUE	RD	RB	TC
B01	18/12/15	FIRST ISSUE	RD	HD	TC

Status  
**F003 - DETAILED DESIGN**

Designers

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Project

**LIVERPOOL TO MANCHESTER DSE LINE ELECTRIFICATION WORKS**

Drawing Title

**DSE/39B QUEENS DRIVE  
PROPOSED DETAILS  
SHEET 1 OF 2  
(AREA 3)**

Designer	R. TURNER	Signed	<i>R. Turner</i>	Date	18/12/2015
Drawn	R. DIVILLY	Signed	<i>R. Divilly</i>	Date	18/12/2015
Checked	H. DAS	Signed	<i>H. Das</i>	Date	18/12/2015
Approved	T. CHEETHAM	Signed	<i>T. Cheetham</i>	Date	18/12/2015

Scale(s) at A1 Sheet Size A1 594 x 841  
AS SHOWN ELR : DSE 3m 0440yds

Drawing Number  
**LNW-124384-ECV-DRG-IAB-DSE-39-12**  
Revision  
**B02**